CHAPTER

II

SURVEY OF RELATED LITERATURE

2.1 Introduction

"The review of the literature in educational research provides one with means of getting to the frontier in a particular field of knowledge" It involves locating, realizing and evaluating reports of research as well as reports of casual observation and opinions that are related to the individual's planned research project. The review of the literature is a must for scientific approach and is reported to by and large, by all investigators in all areas of scientific research. Through review of research work, the investigator can have an understanding of the previous work, related to his problem of study, that has been done. One can not develop an insight into the problem to be investigated, unless and until one has learnt what others have done and what remains to be done in a particular area of his own interest. Thus, the related literature forms the foundation upon which all work can be built and survey of related literature, besides forming one of the early chapters in a research report for orienting the readers, serves one other purpose. Good, Barr and Scates analyse these purposes as:

2

1. To show whether the evidence already available solves the problem adequately without further investigation and thus to avoid the risk of duplication.
2. To provide ideas, theories explanations or hypothesis valuable in formulating problem.
3. To suggest methods of research appropriate to the problem.
4. To locate comparative data useful in the interpretation of results, and
5. To contribute the general scholarship of the investigator.

In the present study whatever related literature has been studied, has considerable bearing directly or indirectly on the problem under investigation. For the construction of the research design, a vast number of documents, books and other related literature has been consulted and it was found that the literature provided a good foundation to crystallize the present idea but could not fulfil the aims as per mentioned and a vis-a-vis relationship to Indian conditions. Therefore, the problem under study has been so reframed that it may serve the indegineous purpose and may high light the significant findings which may help the investigator and the researchers to come to certain conclusion which may help them to frame certain policies. Having reviewed the past researches, it was felt that no such title related to the students of

3

education has not so far been tackled in the country in general and the state of Orissa in particular. Therefore, this study as such would speak of its merits and it is expected that results would be contributing to the new body of knowledge.

Considering the title of the study, it is observed that a few attempts have been made in the West, taking one of two dimensions independently or coupled together for different kinds of samples, but research in the area of achievement motivation, personality needs, anxiety, intelligence and performance etc., appeared in a number of journal monographs and books. McClelland, Atkinson and others contributed to the wealth of literature in the area of achievement motivation, fear of failure, risk-taking behaviour and other general dimensions related to the achievement motivation models and later on, followed by Birney, R.C. Teevan, R.C. and Kalinger, Henry etc., who worked on different issues and brought forth significant results. However, these researches in this field were mainly confined to business and industry in the initial stages but it has slowly found its way into education also. The studies conducted, can be classified under the following heads:

1. Methods of measurement, n-Ach. and validation of tools.
2. Basic nature of n-Ach.
3. Empirical studies in n-Ach.

4
2.2
Other studies in Related Areas

4. Measurement of n-Ach. and use of EPPS,

5. Anxiety and its use for prediction of personality needs.

6. Performance, intelligence and other related issues.

On the basis of the idea worked up as mentioned earlier, the present investigator scanned out all the related literature and could put with the following research studies which have some relevance to support the present findings. The same have been summarized as under:-

2.3
Section A: Studies in Achievement Motivation

Introduction

Research in achievement motivated has been traced back by Heckhausen (1967), to Arzissah (1910) and Lewin (1926), who utilized the concept of determining tendency and "quasi-needs". Murray (1938) for the first time referred to it as "need for achievement". However, it was only with the advent of McClelland (1946, 47) at the University of Michigan and Wesleyan that the concept caught momentum and attention so much so that during the fiftees to seventees a large number of studies have been reported in the various journals of psychology, sociology and education. McClelland and Friedman (1952) established that the Thematic Apperception Test (TAT) was the most reliable and valid single instrument for the measurement of human motives, including

achievement motivation. This method has been used by many researchers as enumerated in the studies of McClelland et.al. (1953), McClelland, Rindlishhbacher and DeCharms (1955), Atkinson (1958, 1964), and McClelland (1961,1965). Besides TAT, a number of other measures have been tried such as Edward's Personal Preference Schedule (1954), Lowa Picture Interpretation Test of Johnston (1957), French's Test of Insight (French, 1955), Questionnaire Schedules of Allport and Haber (1960), Carney's Questionnaire Index (1964), California Psychological Inventory (Gough, 1957), Achievement Motivation Inventory (Atkinson and O'Connor, 1966) and Personality Research Form (Jackson, 1967). These instruments have not been very successful and are questionable substitues for the projective type measures. Recent in these series have been Mehrabian (1968, 1969) and Berman (1969, 1970). There has also been an attempt to blend the projective and objective type of measures as in Gumpgookies test for the young kids (Adkins and Ballife, 1972).

However, TAT type of measurement still dominates the science, and most of other scales validated their efficacy with reference to such measures. Research studies in these areas are mostly explorations, either of desirability of using other methods of need achievement or to study their reliability, validity and interrelationships etc.

6
2.3.1
Studies in Achievement Motivation

Methods of Measurement of n-Ach. and Validation of Tools

A great deal of research has been carried out in connection with the achievement motive. This seems to have two basic aspects, "motive to achieve" and approach motive, and motive to avoid failure - an avoidance motive. Most of the research has been conducted with a measure (n-Ach.) which seems to be primarily an index of 'motive to achieve.' This research suggests that the achievement motive is a drive which can be aroused experimentally, varies between people and is acquired (McClelland et. al., 1953; Atkinson, 1958). It is generally assumed that the two aspects of this drive are acquired through processes of reward and punishment. The achievement motivation has been assessed by TAT developed by Dr. McClelland (1948) and it has been established that the Thematic Apperception Test was the most reliable instrument for measuring n-Ach. and has been used widely by many researchers as emphasised by the works of Atkinson(1958, 1964), McClelland (1961, 1965), McClelland, Atkinson and et.al. (1953) and McClelland, Rindlishbocher and Dechams (1955). Besides Thematic Apperception Test other techniques of measuring n-Ach. have been developed by various researchers such as French (1955), Test of Insight, (FTI), Edwards (1954). Personal Preference Schedule (EPPS), Questionnaire Schedule like Allport and Haber's (1960), Achievement, Anxiety Test (AAT), Carneys (1964, 1965), Questionnaire Index (Achievement

Orientation) California Psychological Inventory (CPI) prepared by Gough (1957). All these tools have been used to measure the achievement motivation level of the respondents.

Of all the methods used, the TAT type of n-Ach. measure was strongly recommended by McClelland (1958- c.f. Atkinson 1966) on the ground that it has a 'trio of ventures' validity, flexibility and generality, McClelland, et. al. (1953), showed that discriminatory power of TAT is best under natural conditions and with pictures of moderate cue values. Murstein (1963) noted that medium achievement structured cards were most differentiating. The scores of n-Ach. secured through other methods of measurement often do not correlate significantly with TAT type measures. Morrison (1964) concluded that measurement of n-Ach. with sentence completion test is not much feasible and the correlation coefficient between the two was .03. Black (1964) while investigating correlates of a projective measure of n-Ach. with a sample of physically disabled, questions the contention that projective technique in social and industrial research is useful, since, it is not threatening to the subject. He found some subjects experiencing high anxiety and felt nervous at the time of taking projective test. Regarding the relationship between various measures of n-Ach., there is enough evidence to support McClelland's contention that the three methods of measuring

human motivation (indirect observation, self-rating, and projective method) yield essentially uncorrelated results and it would, therefore, seem wise for research worker to employ terminology which will communicate immediately which method of measurement they are using (McClelland c.f. Atkinson, 1966, p. 49). Reiter (1962) did not find any substantial inter-correlation between the three measures of n-Ach., viz., n-Ach., scale of EPPS, achievement imagery scale of Iowa picture Interpretation Test and the achievement scale of the page Fantasy Scale Studying the inter-correlation between the measures of n-Ach. on TAT, EPPS and SCT, Pandey (1972) found SCT, EPPS and TAT have significant correlation but they were not high enough to justify the conclusion that they are equivalent measures of n-Ach. The low correlation indicated that these measures may not be measuring the same achievement motives, rather measuring the different aspects of the same motive state. He, therefore, concluded that motivation is not a unitary but a multi-dimensional construct.

Relationship between TAT and SCT measures of need Achievement has been investigated in few other studies also. Morrison (1964) obtained a small correlation of 0.3 between these two measures and thus, concluded that measurement of need achievement is not feasible with SCT. However, SCT continued to be used as a measure of need achievement along with TAT. The investigators like Irvin (1967), Mukherjee(1968) and Dunham (1972) chose to use the SCT with items similar to

those by Peek and McGuire (1969). Mukherjee (1972) however, came to the conclusion that self-reporting measures which have been claimed in the past as the measures of achievement motive reflect very little of the dimensions covered by need achievement measures.

Several other studies have been conducted to study the factors affecting Thematic Apperceptions and Social Achievement Imagery.

McClelland and Atkinson et. al. (1953), Atkinson (1958), Veroff (1961) have pointed out the effect of cultural and situational factors on Thematic Apperception Test. Mehta (1969) has also found different cue values for different pictures in his study with Indian students.

In a TAT type picture containing a child and a parent figure facing Vs inverted position of the child vis-a-vis the parent figure was found to be influencing the achievement imagery in a study by Alper et. al. (1967), who noted that under both tasks and achievement oriented conditions, achievement imagery was significantly more evoked by facing than by inverted pictures. This effect remains true irrespective of the sex of the parent figure.

Orso (1969) found female n-Ach. scores increase significantly after affiliated arousal conditions and decrease significantly after achievement arousal conditions. However, no such effect was found with male subjects.

10

The opinions and observations of several researchers about the use of different tools for the measurement of n-Ach. are divergent. In the circumstances the investigator choose to use TAT technique to measure n-Ach. level which alone has received the universal approval as an efficient instrument. Secondly, the present instrument was standardized on Indian population by Mehta (1969) and hence, its use in this study is justified.

2.3.2

Achievement Motive Research

During the past one decade, several Indian studies of various motivational variables have been reported. These studies have used different methods of assessment. Mukherjee (1965) has prepared a sentence completion test (SCT) consisting of 50 forced choice traids. This has been used in several studies, e.g., in Mukherjee (1969), Deaand Khan (1969), Gokulnathan (1970), De and Priya (1972), Jawa (1972) and Lahiti (1969). These studies have sought to measure achievement, anxiety and its relation with variables like school achievement, anxiety and risk-taking. Some other studies like Bhatnagar (1966), Basumallik and Banerjee (1967), have used Edward's Personal Preference Schedule (EPPS). They have tried to relate the results to ~~relate~~ sex, culture, and risk-taking. Dhaliwal (1971) used EPPS for assessing achievement motive as a non-intellectual predictor of scholastic attainment. Pandey and Singh (1971) have used the Bending's achievement motive scale to study

11

the relationship of achievement motivation with religious beliefs and practices. Bendig's Achievement Motivation Questionnaire consists of twenty items. It requires the S to check any one of the three alternative answer 'yes', 'No', or '?'. Eight of the items of the scale measure what Bendig (1964) calls Personal Need Achievement (PNA) and the remaining twelve items are supposed to reflect one's Social Need Achievement (SNA). The reliability of PNA and SNA scales were found to be approximately .61 and .67 respectively. Several other studies have used a semi-projective TAT type technique. The present review is confined only to the latter group of studies. They have been reported from various parts of the country and are comparable in several ways. The review focuses on development of methodology, level of n Achievement, its relation with performance, social implications of the obtained results, and on the attempts designed to develop motivation. It also brings out certain questions for further research.

2.3.3

Measurement of Motivation

Work on the measurement of human motive is of recent origin. Psychologists had been interested in experimental analysis of animal learning ever since Darwin's theory of evolution, but not till the nineteen-forties was the problem of measuring human motivation taken up. The work initiated by McClelland and co-workers (1948) on

achievement motivation and the work of S-R theories led to a combination of the study of individual difference with the study of processes of motivation. The first major report of the experimental work on measurement of human motivation, particularly the achievement motive appeared in 1953. Atkinson (1958) later edited further research which employed thematic apperception as the technique for the measurement of human motivation. McClelland argued that the achievement motive, like other forms of human motivation, could best be studied in the realm of fantasy. Fantasy is 'free' in the sense that conditions of testing do not place external constraints on the responses that are possible. The subject can think about anything - "about killing some one, committing suicide, touring the South seas on a pogo stick, having an illegitimate child, and so forth. Anything is symbolically possible" (McClelland, 1961).

The study of human motivation in the realm of fantasy is widely recognized as promising. Freud believed that basic motivations are revealed in fantasy in day-dreams and night-dreams. Projective tests, also, such as Murray's TAT and the Rorschach, depend upon imaginative content.

McClelland and his associates (1953) adapted Murray's TAT technique (1938) for the measurement of human motivation. In this technique, certain pictures are used to obtain stories from the subjects for analysis of their motivation. Stories obtained for the purpose of measurement

of achievement motivation are scored in a particular way, following a scoring system developed by McClelland and his associates (1953).

On the lines of McClelland's work, Mehta (1969) developed a test of achievement motivation, specifically, for use with children. Four sets of six pictures each were tested on various criteria in a series of try-outs. The pictures were semi-structured and drawn in semi-vague lines. Finally six pictures were selected on the basis of their discrimination power, evokability of achievement imagery, correlations with school marks and interscorer reliability. The test-retest reliability of this set of pictures after an interval of four months was found to be 56 (N = 22) in one case, and .73 (corrected, N=42) in another. In a later replication, Chaudhary (1971) found a test-retest reliability of .70 (M = 100) after an interval of one month and a split-half reliability of .54 (N=100), corrected. In similar studies Lowell (1952) obtained r = .22 (N = 40, non-significant after a week's interval, French (1955) found it to be .45 (N = 300), Haber and Alpert (1958) obtained correlations ranging from .36 to .59 after an interval of three weeks, Feld (1960) obtained a test-retest reliability of .38 after an interval of six years and Atkinson (1956) reported a split-half reliability of .64 (uncorrected). The obtained reliability of the Indian set of pictures, therefore, compared very well with other similar results.

14

Theoretically as proposed by Atkinson and Litwin (1960), Ss classified high on n achievement and low on motive to avoid failure are likely to show greater performance at a competitive task than those low on one and high on the second. Such a conception was confirmed by results obtained on TAT and the AVAI (Mehta,1969). This provided some theoretical validation for the TAT measure. Chaudhary (1971) checked its construct validity against a measure of persistence and found a r = .44 (N = 100, p .01). She found that Ss classified as high on n achievement persisted more on the task (Alexander's pass along test, item 8) than those classified as Low. The difference was highly significant (Z = 5.26, N = 100, p .00005).

Pandharipande (1972) once again checked the validity of Mehta's TAT and the EPPS against teachers assessment. Teachers kept day to day observations of students behaviour in a diary. The TAT and EPPS were administered to 5 top and 5 low n-Ach. students. The CR was found to be significant for TAT (p .01) but not for EPPS.

Studies suggested that TAT type instrument, developed specifically for use with Indian Ss possesses good reliability and validity. However, it should be pointed out that it is not a psychometric tool. It does not suggest any norms, for revaluation and comparison. It has been developed mainly for research purposes. It has widely used for research in the country.

15

The TAT type pictures were initially used to survey the level of n Achievement in Delhi school children. The children-all boys - were pupils of class IX in secondary and higher secondary schools. The results were then studied in relation to: children's socio-economic status, school's socio-economic and achieving status, pupil's perceived academic and vocational expectations of them achievement values, anxiety, school performance, perceived qualities in peers, teachers and parents (Mehta, 1969). Several other studies have been conducted on more or less the same variables, using similar samples of subjects following the same methodology and techniques of data collection, We present below a brief survey of such studies.

2.3.4

Level of n Achievement

The scoring system provides for eleven scores on each story thus yielding a maximum 66 scores for a set of six stories. It can yield a score of -6, -1 for each unrelated story. All stories could be scored as unrelated depending upon the nature of imagery it contains. The Delhi school children (N = 975) showed a mean n Achievement score of 7.14. The data (TAT stories) were collected in October, 1964 (Mehta, 1969). The other comparable results (in mean scores) obtained on similar samples of school children using the same set of TAT pictures were 4.48 in Assam (Gokulnathan and Mehta, 1972); 6.1 in Gujrat (Desai, 1970); 7.56 in Punjab (Chaudhary, 1971). Mohta (1973) obtained a mean of 4.76

16

for college students in Rajasthan. The results are summarised in Table. It is interesting that children in Delhi and Punjab showed almost the same level of n Achievement and greater than those from Assam and Rajasthan. The level obtained in Gujrat was a little higher than that found in Rajasthan and Assam but slightly lower than that in Delhi and Punjab. The results may be suggestive of achievement climates prevailing in respective states.

TABLE 2.1

Level of n Achievement in Five States

N Ach

Scores	A		B	C		D		E	
Year of data collection	Delhi 1964		Assam 1969	Gujrat 1969		Punjab 1969		Rajasthan 1973	
	Boys	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Mean	7.14	4.48	5.80	6.01	5.48	7.56	9.99	4.78	7.21
SD	5.73	5.79	7.08	**	**	6.04	6.81	6.24	6.78
N	974	294	89	735	265	200	229	58	51

Groups	t	P
A & B	6.92	.01
B & E	0.33	ns
B & D	6.21	.01
A & D	1.03	ns

*Stories written in response to Indian TAT type pictures.

**SD not available

17

2.3.5.

n Achievement and Performance

The relationship between n achievement and performance particularly school performance has always been a tricky question. The results have varied from study to study. The NCERT study (Mehta, 1969) obtained low positive correlations of n Achievement with marks in various school subjects at the annual examinations. The correlations varied with subjects such as with : English (r = .118, N = 844, p .005), Hindi (r = .097, N = 553; p .05); Mathematics (r = .118, N = 844, p. = .005). Science group(r = .134, N = 344, p .01) and non-science total (r= .085, N= 894, p .05). The correlation with the total school marks was .179. It is interesting that all correlations were positive and significant. The marks were obtained from 30 secondary schools and were pooled together for above correlations. The partial correlation (after taking out the factor of intelligence) showed a trend toward prediction of performance. Another interesting finding was that children from poor homes as indicated by their fathers' low education but having high n Achievement showed school achievement comparable with other children coming from better homes. This was not true of similar children (from poorer homes) with low n Achievement. This suggested that n Achievement helped such children to improve school performance.

18

Desai (1970) found significant positive correlations between n Ach. and academic performance in four out of 31 schools. Another 15 schools showed low negative correlations. In a study of achievement related motivation (n = Ach. and anxiety) and educational achievement among secondary school pupils of Assam, Gokulnathan (1971) found no relationship between n Ach. and academic achievement. Mohta (1973) found N Ach. scores on Mehta's TAT to be positively and significantly (p .01) correlated with academic achievement. The correlation was .41 and the sample was 109 post-graduate activist and non-activist students. The marks in the previous semester were taken as measure of Ss academic achievement.

Sinha (1970) investigated the relationship between n Ach. and academic achievement of 400, 10th and 11th grade boys (age range 12 to 16 years) equally divided among high and low achievers. Two consecutive school final examination scores provided the basis for their grouping into high (55% of more) and low (below 30%) achievers. McClelland's n Ach. test was administered to the group under neutral instructional set. Results showed n Ach. was significantly and positively correlated with academic achievement. The obtained phi-coefficient of .41 was significant at .01 level. The findings suggested that an intensive study of n.Ach. under different experimental conditions should be made to find out the criterion for predicting academic achievement.

19

Laxmi (1967) found significant (p .01 level) difference between slow and fast learner's n Ach. scores. Fast learners showed greater need for achievement (insignificant, though positive). The rate of learning was measured by the number of trials taken in a slot maze.

The studies thus, do not suggest a clear picture of relationship between n Achievement and performance. The results have been erratic. May be, n Achievement does not uniformly relate to school achievement in all children. Those coming from poorer homes may find this concern as a more positive factor in their school performance than other children.

2.3.6

n Achievement and Social and Cultural Stratification

Gokulnathan and Mehta (1972) found tribal high school children showing higher n Achievement than non-tribal children (p .10). The study also revealed a similar trend of difference (p .10) between rural and urban children. An interesting and significant result, however, appeared in case of urban based tribal and non-tribal boys. The rural based boys showed non difference in their level of n Ach., whereas the urband did. The tribal boys who had migrated from a village to some urban area and were studying in some urban based school showed significantly greater (p .02) n Achievement than his non-tribal counterpart. An earlier study at NCERT (1970) obtained similar trends in favour of trials.

TABLE 5.17

Means and S.D.s and significance of Difference of means of scores of 15 E.P.P.S. Dimensions in relation to Intelligence level of Teacher Trainee

N = 608

Independent Variable INT with dependent E.P.P.S.															
Category No.		1	6	11	2	7	12	3	8	13	4	9	14	5	10	15
Levels		Ach.	Aff.	Nur.	Def.	Int.	Chg.	Ord.	Suc	End.	Exh.	Dom.	Het.	Aut.	Aba	Agg.
High INT	Mean	13.917	14.042	15.725	15.017	15.083	15.750	15.150	13.492	14.292	12.917	13.542	10.608	12.983	14.792	12.817
N = 120	S.D.	3.485	3.834	3.662	3. 144	3.250	3.612	3.395	3.469	3.406	3.209	3.279	6.109	3.405	6.022	3.165
Average INT	Mean	14.021	14.144	15.571	14.600	14.723	15.021	14.616	13.101	14.629	13.112	14.141	11.904	13.101	14.229	13.120
N = 375	S.D.	3.096	3.327	3.537	3.059	3.344	3.378	3.711	3.817	3.568	3.218	4.006	5.109	3.495	3.214	3.376
Low INT	Mean	14.549	13.796	15.168	14.876	14.310	15.212	15.230	12.611	14.664	13.283	14.124	11.823	12.920	13.345	14.027
N = 113.	S.D.	3.273	3.279	3.394	3.508	2.910	3.764	3.485	3.416	3.332	3.010	3.328	5.209	2.964	3.153	3.078
High INT/ Average INT D.F. = 493	t-values	0.312	0.282	0.412	1.290	1.035	2.022*	1.400	0.996	0.912	0.579	1.488	2.302*	0.324	1.316	0.869
Average INT/ Low INT D.F. = 486	t-values	1.566	0.977	1.070	0.812	1.184	0.513	1.563	1.227	0.091	0.503	0.042	0.147	0.499	2.575*	2.552*
Low INT/ High INT D.F. = 231	t-value	1.425	0.523	1.202	0.322	1.910	1.113	0.178	1.952	0.842	0.898	1.345	1.629	0.150	2.276*	2.955*

* significant at .05 level (1.97)

** Significant at .01 level (2.59)

20

Another interesting result of the Gokulnathan and Mehta study, was that there was no tribal non-tribal difference in the level of n Achievement as far as the girls were concerned. On the other hand, the tribal boys showed significant difference (p .02) with the non-tribal boys. Within the tribal group, there was no sex difference. On the other hand the non-tribal girls showed significantly greater n Ach. than the non-tribal boys (p .01). On the whole, girls showed significantly greater n Ach. than boys (p .05). They concluded, "The respondents, therefore, tribal girls and the non-tribal girls with greater n Achievement level formed the first group. While the non-tribal boys with significantly lower level of n Achievement formed the second group"(Gokulnathan & Mehta, 1972, p. 70).

Mehta (1969) has earlier found that the SES of pupils as such was not significantly related to n Achievement. However, significant trends appeared when father's educational level, and occupational group were considered separately. Both these factors in the pupils' home background showed significant relationship at .01 level. Fathers' income did not show such relationship. The significant relationships were clearly curvilinear, with High and Low fathers' education groups showing significant difference (p .001) with secondary educating group. Children of fathers in professional and semi-professional group, particularly the

latter consistently showed higher level of n Achievement than children from the other group. Children of small shopkeepers, showed about the lowest level. The difference between n Achievement of children of skilled workers and those of shopkeepers was quite significant (p .01). Within the lower middle class group (clerical, petty shopkeepers and shop-employees group) education showed positive relationship with n Achievement. On the other hand, children of skilled workers with low education showed significantly greater n Achievement than those of lower middle class fathers also with low education. Both, i.e., fathers' education and occupation, suggested depression in n Achievement of children in the middle ranges of the fathers' education continues as well as in the occupational ladder (if at all such a ladder can be conceived).

In the Gokulnathan and Mehta's study (1972) the tribal Low EL boys (i.e., of fathers with low education) showed significantly greater n Achievement than non-tribal low EL boys (p .001). Within tribal and non-tribal groups neither fathers' education, nor occupation, nor income showed significant relationship with children's n Achievement. The results only confirmed the importance of the tribal or non-tribal family background.

In the Gujarat study (Desai, 1972) the father's ~~complet~~ composite SES did not show significant relationship with children's n Achievement. Chaudhary (1971) found these two to be positively related. She also found the girls showing

significantly greater n Achievement than boys, working on 200 boys and 229 girls of higher secondary schools in Punjab. Desai, however, found the boys to show higher n Achievement. His sample consisted of 735 boys and 265 girls, studying in secondary schools of Kaira district of Gujarat. Namdeo (1972) also found boys of Jabalpur, Madhya Pradesh, showing greater n Achievement than girls. However, Mohta (1973) found female college students having greater n Achievement.

The results, therefore, are not very conclusive. They do, however, suggest that disadvantaged groups, whether socially, culturally or economically, such as women irrespective of SES, tribals irrespective of residence and those from relatively poorer homes tend to show a greater urge to improve resulting in their greater n Achievement.

2.3.7
Some other Important Results

Achievement Motivation and Intelligence

Mehta (1969) found low positive significant correlation between n Ach. and score on a verbal group test of intelligence. Desai (1970) also found a positive correlation (N = 1000, r = .248). Chaudhary's (1971) hypothesis that n Ach. and intelligence is significantly and positively correlated, was not supported by her study on 429 higher secondary students of Punjab. Reven's Standard Progressive Matrices were used to assess intelligence.

23

Muthayya and Rejeshwari (1968) found backward children to have lower mean n Ach. score than the normals. The mean difference was, however, not significant. They also used Raven's progressive Matrices for Intelligence and Murray's TAT cards IBM for measuring n Ach. The study was conducted in Madras on 14 to 16 years old, 26 normal and 16 backward children. Achievement Motivation and Level of Aspiration.

Muthayya and Rajeshwari (1969) studied personal aspiration and its relation to achievement motive in 57 female secondary grade trainees. They used a pictorial non-verbal 10 point ladder scale as a measure of aspiration. The subject described her present, past and future standings where 0 step represented the worst possible life. Murray's TAT cards (7BM) were used as a measure of achievement motivation Coefficient of correlations were computed between goal discrepancy scores and n Ach. scores. Means, SDs and CRs were calculated for high n Ach. group and low n Ach. group with regard to the absolute standing on the ladder presently in the past and expected future.

None of the correlations were significant showing the absence of relationship between achievement motive and level of aspiration. No differences were observed between the high and low achievement groups in the time dimension.

Nijhawan and Chaudhary (1970) found that the high n Ach. Low anxious group was realistic while anxiety-low n Ach. group was unrealistic regarding vocational choice.

Using sample of 113 boys and 116 girls of Punjabi Higher Secondary Schools, it was found that n Ach. influences vocational aspiration and choice.

2.3.8

Achievement Motivation and Some Personality Variables

Muthayya (1965) found predominant extrapunitive reactions for High and impunitive reactions to frustrations in Low n Ach. groups. Obstacle dominance was found as a characteristic of High and ego defence as a characteristic of Low n Ach. groups. In another study, using modified traditional family ideology scale and Indian adaptation of Murray's TAT cards, Muthayya (1963) found autocrats to have lower n Ach. than democrates. Democratic attitudes were characterized by a higher n Ach. This was somewhat different from his previous findings in whehi which obstacle dominant subjects were found to have higher n Ach. score than the egodefensive subjects. Later he (muthayya, 1968) found no significant mean difference in the n Ach. of extroverts, introverts, neurotics and normals, suggesting that these personality dimensions have no direct bearing on one's level of n Ach. In the same study, introverts were found to have slightly higher n Ach. score than extroverts. Following this study, in the same year Muthayya and Rajeshwari (1968) found contradictory results, extroverts being more achievement-oriented. The mean differencs were, however, not significant in both the studies.

Siddiqui and Akhtar (1969) in Aligarh Muslim University found that disciplined students scored high on

n Ach. than the in-disciplined students. Greater variability was observed in disciplined than in the indisciplined students, being 20 in number. They sued Symond's picture test adapted and standardized by Kureshi to measure n Ach. Mohta in a study (1973) found the student activities showing significantly greater mean n Ach. than the non-activist university students.

The results of the above studies tended to suggest that niether high intelligence, nor high aspiration nor so called discipline are necessary correlates of n Achievement. On the other hand n Achievement seemed to be associated with realistic aspiration as well as realistic unrest (as indicated by student activism).

2.3.9
Motive Acquisition

The first experiment in motive acquisition in the context of education was conducted at Jaipur in 1965, under the auspices of the National Council of Educational Research and Training. It was a two tier programme. The teachers were trained with a view to raising their motivation to achieve and to equiping them to creat suitable support climate in their classrooms. A specific classroom motivation development curriculum was prepared for use by the trained teachers in the respective classrooms, Details about the training techniques, training imputs, classroom materials, experimental design and the results of the experiment as well as the follow up have

been reported in several publications (Mehta, 1968, 1969; Mehta and Kanade, 1969; Mehta, 1974).

The results of the experiments, can be summarised as follows: 1) The psychological training helped the teacher strengthen his achievement motivation. He was also helped in improving his image of pupils. He probably started expecting 'better' performance of them. However, the psychological gains, particularly the gain in achievement motivation was found to show a tapering effect two years after the original training. 2) The children gained in achievement motivation and in sense of responsibility, team spirit, tendency to work hard and probably in punctuality. Such gains, specifically achievement motivation showed the same tapering effect some two years after the original training. 3) The classroom goal setting exercises alone were not found to be effective in strengthening achievement motivation. 4) The scholastic results revealed unclear trends immediately after the programme. The bright under achieving experiments seemed to have done slightly better. The low SES re-cipients of classroom motivation development curriculum also appeared to show slightly better scholastic performance. The results appeared clearer in the second follow-up study. Longitudinally, the experimental children, particularly those who had received both the treatments, the classroom curriculum and the goal setting exercises, more certainly showed significantly greater performance than their non-experimental classmates at

the final school leaving examination. The recepients of the goal setting exercises alone did not show any significant difference. 5) The primary school children were tested for performance in four school subjects. The experiments showed significant difference only in two subjects. The results were, therefore, erratic.

How do we understand the gains of psychological training of teachers and their pupils? The programme seemed to have made a difference in the mind of the teacher. The various training inputs seemed to have changed teacher's self-image, his image of pupils and probably his approach to work. His desire to succeed and his hope of success were also strengthened. The same changes seemed to have appeared in pupils. He thought better of himself, his teacher (the 'motivation' teacher in particular), his classroom group and his studies. He strengthened his desire to succeed and increased his hope of success.

The first activity in the sequence of the programme was the teachers motivations development laboratory. The very basis of such a programme is the belief that it is possible to develop teachers' motivation and change them for the better. Besides the various training inputs, the training directors and the consultants expect the participants not only to change but also to behave in certain different ways in their classrooms. A feeling is developed that they are capable of doing better and that they can do it. Thus, not only their desire

to compete for success in heightened but they are confronted with a challanging task, i.e., the implementation of the classroom curriculum.

The classroom motivation development curriculum promotes mutually satisfying interaction between the teacher and his pupils. The teacher now expects better of their pupils. The various inputs strengthen the pupils achievement motivation. His self-image also improves. The teacher delegates considerably freedom and responsibility to the pupils. He tends more now to accept student feelings and ideas. The pupils carry out several exercises on their own. They think about their goals, success and failure. These activities generate new power and social relationships in the class group. The new pattern of interaction during the motination curriculum tends to satisfy two psychological needs of both, the teacher and his pupils. They come closer to each other in a friendly relationship. This gratifies their need for affiliation. The teacher's indirect influence over pupils increase which in turn increases his indirect contorl over them. This is different from the usual assertion of direct power in the classroom. Such an indirect control satisfies another need-the need for power. The greater participation in classroom decision making as well as several self-study and group exercises provides gratification of the pupils' need for power. This social relationshipgive a new structure to the classroom group. It becomes more cohesive. The classroom trust increases. The enhanced openenss promotes further interaction and involvement. The increased social acceptance promotes positive self-image.

29

2.4
Academic Performance

In the motivation programmes there was no input directly related to performance. There was no attempt to provide any help either to the teacher or to the pupils for improvement in performance. The teacher's desire to do things in a better way was heightend. It was assumed that he would actually start trying to do it better. The improvement in self-image would enable the teacher to try for better standards. The change in his image of his pupils would lead him to expect more from his pupils, pay more attention to them, give them more help, which in turn would help the pupils to do better. Similarly, the strengthening of pupils' achievement motivation and self-image would lead him to try for better performance. These may lead to improvement in his study behaviour. The interaction of these two, the teacher's desire to do better and his enhanced expectation of pupils on one hand and the pupils' desire to do better and their self-expectation is likely to improve school performance.

The model did not provide for certain that the 'motivation' teachers also teach the school subjects in which the pupils were later tested. It might have been so in the primary school programme where one teacher teaches several subjects in a class. One of the assumptions could have been that the 'motivation' teacher would do a better job of teaching (other things being equal) thus promoting

academic performance in his pupils. However, in the class room goal setting programme, the subject teachers were involved in setting the classroom tests and in giving comments and the feedback. The results however, did not show any appreciable improvement in academic performance of such pupils. On the other hand the pupils in the classroom motivation curriculum tended to show significantly better school performance. It seems, therefore, that whatever improvement occurred, could have obtained by dint of pupils own effort. The programme directors and the classroom motivation teachers, expected better performance of the pupils. Such expectation, and more certainly the teachers' new images, the new social relationship and the changed classroom climate might have provided the much needed spark to the pupils' academic efforts.

2.4.1

Interest in School Work

Academic achievement continues to be the most important objective of education. However, there are several objectives in the affective domain which are also important. Scientific temper, tolerance of other faiths, team spirit, sense of responsibility, confidence in oneself and in the nation's future are some such qualities. The education Commission has talked of such qualities and about the reshaping of education as an instrument of national development. One of the earliest things that need to be done

is to make education, particularly the primary school, a little more attractive. The commission has suggested a number of structural and curricular steps in this direction. They have also discussed the need for motivating human agencies in this regard. Strengthening motivation to achieve, hope of success and the desired classroom climate may initiate a chain of desired behaviours in the motivated teachers and pupils. The motivated teacher is likely to act upon the school environment and make it more rewarding (to him) and interesting for the pupils. The equally motivated pupil is likely to actively contribute to this process. The probable increase in children's punctuality perhaps indicated their increased interest in school activities. Such an enhanced interest can work as a strong antidote to wastage and stagnation.

2.4.2
The Administrator's Role

Some school administrators, particularly some principals have participated in motivation development laboratories. There are reports that such school principals have introduced a number of activities in their schools. They have also tried to motivate their teachers, thereby producing a multiplication effect. Such attempts await documentation. Systematic attempts are needed to motivate the entire school system through the top management. As interaction, between motivated teacher with positive image of self as well as of pupils with similarly helped children,

generates a new sense of purpose. His interaction with similarly motivated administrator is likely to yield productive results.

2.4.3
The Tapering Effect

The results of the follow-up studies suggested a tapering effect in achievement motivation scores two years after the training. Such a tendency could gradually nullify the training effect on motivation. However, the academic gains were better two years later in class XI, than those in class IX where the training was given. The gain in achievement motivation and other implied psychological gains might have stimulated greater efforts, as mentioned earlier, resulting in greater scholastic achievement at an examination which came a little later. Will the tapering effect on achievement motivation lead to a similar effect on other aspects of participants' behaviour? Alternatively, will competitive situations, like the one presented by an examination of a Board of Secondary Education, continue to challenge the students (and also the teachers)? The later possibility underlines, the importance of school organization and the role of the administrator in educational development and change. It is necessary to activise the entire school organization so that reasonably competitive and interesting educational and classroom activities could be organized on a continuing basis. A motivated and committed administrator interacting with similarly activised teachers

can release a chain of creative school programmes and classroom activities. The arrangement and rearrangement of the school and the classroom environment may provide positive reinforcement to sustaining achievement motivation and other gains of the psychological training. In the absence of such reinforcement and support, the gains may gradually disappear and the participants in the change programmes are not likely to show sustained results without proper support from the top management and positive structural reinforcement.

The failure of the classroom goal setting programme to produce the desired improvement in academic performance suggests another important implication. A mere new activity may not be successful unless corresponding attempts are made to strengthen motivation as well as certain related behavioural characteristics in teachers as well as children. Since independence a number of educational reforms have been initiated. It is common experience that several of them have not yielded the desired results. We often hear people saying: such programmes fail at the implementation stage. One of the reasons for such failures could be lack of readiness and commitment on the part of the implementors. That is why, perhaps, the Education Commission (1964.66) talked about the need for motivating human agencies. Structural changes concerning wages, working conditions, teaching methods, curriculum and courses, examinations, etc. are very much needed to modernise our education and to make it an

instrument of national development. Alongwith such changes, as well as to make them more effective, simultaneous programmes are needed to strengthen motivation and commitment for improvement in the concerned people.

2.5

Risk-Taking Behaviour and the n-Achievement Motivation

An achievement is a key factor in accounting for the behaviour of entrepreneurs, particularly business entrepreneures who play a large part in determining the extent of economic development. One of the striking characteristic entreprenures is their willingness to take calculated risk, to innovate in ways that have reasonable chance of success. The rationale for predicting such a linkage runs something like this: In an extremely safe undertaking at which any one can succeed, the person with high n-Achievement can get little achievement satisfaction out of accomplishing his objective. The esperiments have shown that subjects with high n-achievement do infact tend, more than subjects with low n-achievement, to like those occupations, which involve some risk or which are part of the entrepreneurial role. This preference exists apparently in male subjects over an age range of roughly 18 - 45, both in Germany and America.

In one of the studies - ring-toss, Atkinson has reported: In the kindergarton study one of the origional

Lewin "level of aspiration" tasks was used in which the subject is simply given a rope-ring and asked to try and throw it over a peg placed on the floor. The subject is allowed to stand where ever he wants to and can, of course, stand right next to the peg or as far many as six or seven feet. He was given ten trials and the distance at which he stood for each trial was recorded. Obviously, this risk of failure increases the further he stands from the peg studies like this have revealed significant results which can be summarized as under: In this experiment one might expect that the subjects with high n-Achievement might be more influenced by the actual success that they were having and might tend to gravitate toward a central tendency of the successful throws below such a mid point the success would be easier but less satisfying, while above it, success would be more satisfying but too rare, indicating that the higher the subjects' n-achievement, the closer he tended to approximate in his risk-taking the central tendency of the successful throws, and it was also concluded that the more intelligent the child is, the more likely he is to take moderate or sensible risks in setting tasks for himself. Atkinson reports the study concerning the relationship of n-Ach. to risk-taking behaviour in two troups of boys and girls, one consisting of 26 children in Kindergarten, the other of 32 in third grade. The method of measuring n-Achievement involved technique of scoring doodles developed by Aronson, which turned out to be

applicable to younger children. The method of assessing achievement motivation seemed to reasonably adequate. Since it showed: internal consistency, mean increase in determinant scores with age, no relationship to I.Q.: in both groups tested a significant relationship to risk-taking as predicted from previous research and theory on the achievement motive, and the capacity to discriminate with those subjects who did well in a card sorting task from those who did not.

With both groups of subjects, individuals with high n-Ach. tended to take moderate risks while subjects with low n-Ach. preferred significantly more often either very safe or very speculative enterprises.

Atkinson and others while discussing motivational determinants of risk-raking behaviour have shown that incentive value of success is a positive linear function of difficulty as interred from the subjective probability of success; and negative linear function of difficulty. The major implications of the theory are a) performance level should be greatest when there is greatest uncertainty about the outcome, i.e., when subjective probability of success is .50, whether the motive to achieve or the motive to avoid failure is stronger within an individual; but b) persons in whom the achievement motive is stronger should prefer intermediate risk while persons in whom the motive to avoid failure is stronger should avoid intermediate

risk and prefer instead either very easy and safe undertakings or extremely difficult and speculative undertakings. Results of several experiments are cited, and the implications of the theoretical model for research on probability preferences in gambling and studies of social mobility aspirations are briefly discussed.

McClelland in his study observed in the risk-taking preferences of young children: those who were high in n-Achievement showed a greater preference for "intermediate risk" than those who were low in n-Achievement. And earlier experiments which have dealt with verbally stated levels of aspirations have shown that the "typical" or most frequent results among students in Western societies is to select an intermediate level of aspiration falling some where between what is obviously so easy that success is assured and obviously so difficult that success is so difficult.

Verof et.al. (1960) which included a thematic apperceptive measure of n-achievement showed that n-Achievement is significantly higher among men and women who have attended college than among the rest of the population.

In addition to explaining the risk-taking preferences that McClelland had observed, this conception of the determinants of the tendency to approach success also explains why the level of performance was greatest when probability of winning a monetary prize was 1/2.

Therefore, the tendency to approach, the success should always be stronger and motive to achieve is strong than when motive to achieve is weak, no matter what the expectancy of success at the task. It is supported by all the results which show achievement oriented performance (or some indicator of strength of motivation like recall of interrupted tasks) to the greater when n-achievement scores are low. The further implication that the difference in tendency to achieve success attributable to high vs low n-Achievement will be slight when tasks are very easy or very difficult, coupled with the lack of specification of degree of difficulty of tasks in many early experiments on n-achievement, may account for some instances of failure to find a substantial relationship between n-achievement and performance.

2.5.1
Risk Preference, Performance and Persistence

Atkinson and Litwin (1960) employed measures of individual differences in n-achievement and test anxiety in a study designed to reproduce the kinds of relationship that other studies had already shown between n-achievement and risk preference, level of performance and persistence in achievement oriented activity in separate investigations of each. It was predicted that n-achievement would be positively related and test anxiety negatively related to preference for intermediate risk, level of achievement oriented test performance and persistence in achievement oriented activity before clear knowledge of

results had been attained.

Furthermore, it was predicted that when subjects were - simultaneously classified high above the median and (low below the median) on both tests, the greatest differences should be evident when the group classified high in n-achievement but low in test anxiety was compared with the group classified low in -achievement but high in test anxiety.

Atkinson and Litwin (1960) further concluded that if n-achievement and test anxiety are uncorrelated, a group of persons who score the top 20% on test anxiety will have the same average n-achievement score as a group which scores in the bottom 20% on test anxiety. This means that the disposition to be anxious is virtually absent in the low anxiety group, which is otherwise as highly motivated to achieve as the high anxiety group. Therefore, subjects classified low in anxiety, in most of the anxiety studies, are persons in whom the resultant tendency to approach success should be relatively strong. Subjects classified high in anxiety are persons in whom resultant tendency to approach success is either very weak or what is more likely since only those with the highest 20% of anxiety scores are normally employed, the resultant tendency is avoidant.

In addition to those already mentioned, studies by Clark, Teevan, and Riccinti (1956), Litwin (1958), Vitz (1957) Atkinson, Bastian, Earl, and Litwin (1960),

and Mohone (1960) show that risk preference or level of aspiration in achievement oriented activities is related to n-Achievement and/or Test Anxiety as described above. In one of these studies (Atkinson et.al., 1960), there was also same evidence of probability preferences in gambling of this sort reported earlier by Edwards.

Risk-taking and goal setting are not unrelated behaviours and so it is found that claims about the fear of failure (FF) in risk-taking are similar to the claims about levels of aspiration. The fear of failure, it is claimed, prefers either small risks with small pay-offs or high risks with high pay-offs. This point has been emphasized by Dr. McClelland in his book, "The Achieving Society"(1961). His argument is that in a properly functioning achieving society, people who prefer moderate risks are essential. In one of the investigations of the risk-taking propencities of fear of failure (FF), it was assumed that it made little difference whether the pure chance (Atkinson, Bastian, Earl, and Litwin 1960), and Litwin (1961) and Littig (1959)) indicate that claims about risk-taking are only appropriate for achievement settings.

Only five out of 20 correlations reached significance, Slovick concludes that risk-taking measures do not demonstrate convergent validity and is in agreement with Wallach and Kogan (1961) that conceptualization in the area is still inadequate-

"in 1967 Kogan and Wallach surveyed the literature dealing with the effect of individual difference variables on risk-taking. Their own work (1964) with personality self-descriptive scales had yielded a pattern of results that was not especially encouraging recognizing that no other personality variable has received the massive attention vis-a-vis risk-taking behaviour that has characterized the need-achievement and fear of failure dimensions, they are nevertheless forced to the conclusion that questions of incentive definition, social contexts and task-history have not been sufficiently controlled to permit a clear understanding of motivational effects on risk-taking."

One qualification has to be made to the general thesis that anxious persons perform more poorly than non-anxious persons in an achievement task: A study by Sarason (1961) showed that the poor performance of anxious subjects took place only when the task was presented as a threat. When the subjects were informed that the failure on the task was normal and expected, the high anxious subjects actually did better than the low anxious subjects. The findings of the study suggest that the fear of failure motive can serve the positive function of moving a person towards success when the implications of the failure have been softened. In any case, good or poor performances seem to be affected by the degree of failure threat in the achievement setting,

in combination with the degree of failure, concerns of the person.

Having received the research studies undertaken by above quoted authors it is observed that the risk-taking behaviour is connected with the achievement effects and the goal orientation, incentives and performance connected with anxiety level. This shows that the risk-taking behaviour and the aspiration level of individuals which are connected with the fear of failure motives. The achievement motivation(n-Ach.) and other dimensions have been worked out and emphasized by McClelland et. al. (1958), Atkinson(1961) and Sarason (1961) and it is observed that risk-taking behaviour as such is connected with people who have got moderate and high n-Ach. and inversely related with anxiety. Therefore, it can be safely concluded that the risk-taking behaviour can only be interpreted in group situations in relation to n-Ach., performance and anxiety state of the individuals.

As most of the tests available in this area are individual tests such as ring-toss and test of doodles etc., therefore, the present investigator could not administer any of these individually to the teacher trainees for his research. However, the ~~investigator~~ interpretations have been given on the basis of the results of n-Ach. academic performance and anxiety scores connected with the study as in hand.

43

2.6 Empirical Studies in n Ach.

The review made so far covered the development of n Ach. tools and the basic nature of the need for achievement (n Ach.) Controversies and criticisms are bound to arise in the social science researches. These controversies not only sharpen the theory and tools but also help to explore the field in all possible dimensions. This new field of research that has surfaced two and one half decades ago has attracted much attention. Studies conducted thus far may be classified under the following heads.

1. Effect of Environmental Factors on n Ach. such as:
   1) Ethnic Group,
   2) Social Background,
   3) Home conditions
2. Effect of Organic Factors on n Ach. such as:
   1) Sex,
   2) age
3. Effect of personality variables and Behaviour Patterns of an individual on n Ach.

2.6.1 Effect of Environmental Factors on n Ach.

(a) Ethnic group and n Ach.

Gokulnathan and Mehta (1972) studied the n Ach. of tribal and non-tribal school children of Assam. They found tribal high school children showed higher n Ach. than a non-

tribal children. This trend is evident in urban based children but not in rural based children. Another interesting factor that came up in this study was that there was no tribal, non-tribal difference in the n Ach. level of the girls. But the tribal boys showed significant difference from the non-tribal boys.

Minigione (1965) conducted two studies to compare the scores of Negro and White children on n Ach. In both the studies, whites scored significantly higher than the Negro children. However, in his later study (Minigione, 1968) with V and VII grade children in low SES area of a large New England city, he could not find any significant difference in n Ach. among Negros, Whites and the Puerto Rican children.

Morsback (1969) studying n Ach. of 247 African speaking and 199 English speaking whites found that English speaking whites were significantly higher in n Ach. and the African speaking Whites were significantly higher in achievement values.

A few studies also tried to analyse the nature of n Ach. in coloured South Africans and Turks. Cansever(1968) examined the level and nature of n Ach. in 282 Ss in Turkey. The mean n Ach. was found to be 2.94 and the content of the stories revealed concern over the means of reaching the goal; the obstacles to the path of success and need for some external force to initiate the motive to achieve. Similarly Lazarus, Kessal and Botha (1969) in their cross-cultural

study of whites and coloured South African adolescents found certain minority groups, which were subjected to discrimination have low n Ach.

(b) Social Background and n Ach.

Some studies seem to point out the effects of such factors as social status of an individual in a group and the surroundings in which he lives. Two studies mentioned below, represents this category.

Zandir and Forward (1968) studied the effect of an individual's position in a group, on his achievement motivation, measured in terms of level of aspiration. The study yielded the following results:

1. A member when in the central position developed a stronger drive for group success then when in a peripheral position.
2. When occupying a peripheral position a Ms Maf (Motive to approach success is greater than motive to avoid failure); person becomes more concerned about the group success than Ms Maf person.
3. When occupying a central position a Ms Maf person becomes as much concerned about the group's success as Maf Ms person (pp. 282-288).

Studies of Angelini and et. al. (1970) related to the effect of surroundings of one's n Ach. He observed a higher achievement motivation in industrially more advanced areas.

Sample of this study consisted of 494 males and female adolescents of age group 12 -18 years, who lived in four regions, which were characterized by different stages of industrilization of Brazil.

(c) Socio-Economic Status and n Ach.

Individuals are subjected to different experiences and situations because of several factors. Socio-economic status is undoubtedly one among those factors and certainly one of the major-factors. If the parents are of primary importance in the learning process involved in acquiring the n Ach., the SES may indirectly affect the n Ach. level of the child in the family because of the acceptance of values of the social class through the parents. Research has indicated that identification with the same sex parents leads to the acquisition of values similar to the parent and consequently similar to the SES. Different class of people place different emphasis on things as education, business, and occupational goals which have been known to develop the n Ach. of individuals. There are several studies which investigated the relationship of SES with n Ach. To quote a few:

Srivastava and Tiwari (1967) studied n Ach. in relation to SES and found that upper class people have n Ach. but middle class the highest n Ach. Mehta (1969) did not find, in his stidy, any difference in n Ach. levels because of SES. But at the same time he found highest level on n Ach. among the boys whose fathers were highly educated and engaged

in semi-professional works. Malatesha (1969) used TAT to measure n Ach. and studied the relationship between n Ach. and SES. He found no significant difference because of SES.

Vidhu Mohan and Vinod Kumar (1972) found significant difference in n Ach. levels because of parents educational level. Chowdhry (1971) found positive correlation between n Ach. and social class and observed that the social class has a significant relationship with n Ach. level.

Gokulnathan (1970) and Desai (1970) reported that boys belonging to high SES families have high n Ach. than the boys belonging to low SES and middle SES families. But Mehta (1967) did not support this finding. He found low SES group obtained high n Ach. score than the middle SES group.

Amita Choksi (1973) found that high SES subjects have significantly high n-Ach. than the low SES group. The subjects were 9th class students studying in Baroda city schools. Rekha Kapoor (1974) also studied n Ach. but found no significant difference because of SES.

Ten studies conducted in India have been reported here which have examined the relationship of SES to n Ach. Samples are different from one study to the other. The findings indicate no consistant trend. The reason for the erratic results, the investigator feels is that the age of the subjects interfers with the relationship of SES with n Ach. If age is controlled then one can hope consistant results. In addition to the Indian studies reported there

are several studies which have investigated the relationship of SES with n Ach.

The influence of social class on n Ach. and other variables is better understood when one looks at that the social class means. Here is given a short note on social class.

2.6.1.1
Social Class

Social class can be traced back to social thought. As stated by Barber (1957) social class refers to social stratification. Social stratification indicates that both the individual and groups of individuals are conceived as forming lower and higher classes on the basis of some specific characteristics. The dimensions of social stratification are power, occupation, prestige, income or wealth, education, family and ethnic group position and local community status. The social class of a person represents that group of individuals with whom he associates himself on more or less intimate terms. He shares common ideas, values, attitudes and ways of conduct with them. Cronbach (1954, p. 131) recorded that social structure is a pyramid with a few families having the privilege that goes with high social status and a great many families in the undistinguished and unprivileged lower classes. Social classes which are formed in terms of indices such as education, income, and occupation or some combination thereof, have their class culture. As observed by Warner (in Cronbach, 1954) the upper class is an established aristocratic group including

the oldest families and those who have been distinguished in the community for generations. It consists of a relatively small group of families with inherited wealth and position. The member of upper class maintains graceful styles of living that sets apart from other classes. Kahl (1957) maintained that working class man cannot expect much promotion in pay. He had little commitment to his job and more commitment to outside interests. He has little money and holds a job which requires little training and moves from job to job as opportunity offers. He does not seek distinction as an individual or as family. Miller and Reissman (1961) state stability and security, traditionalism and self-centeredness, pragmatism and anti-intellectualism are the characteristics, of working class sub-culture. Characteristics attributed to the middle class are concerned with individual development, acquiring wealth and property, deferred gratification, occupational success, morality, and advancement. Grass(1962) characterises a middle class sub-culture as emphasising the importance of nuclear family, child rearing, the husband's career and education in terms of contribution to career advancement. Cronbach (1954) reports that the striking difference among upper, middle and low class groups is in their value systems. He further states that these values refer to general tendencies and not to rigid characteristics of upper, middle and low class groups.

TABLE 5.25

Showing educationalification of theparents and the E.P.P.S. variables with means, S.Ds. and significance of difference of means of each level with different categories (Independent variable socio-economic status with dependent (EPPS)

		1 Ach.	6 Aff.	11 Nur	2 Def	7 Int	12 Chg.	3 Ord	8 Suc	13 End.	4 Exh.	9 Dom	14 Het	5 Aut.	10 Aba	15 Agg.
1 SES A	Mean	14.327	14.064	15.900	15.145	14.564	16.400	15.027	13.245	14.718	13.245	13.727	9.627	12.891	14.591	12.800
N = 110	S.D.	3.332	3.201	3.879	3.367	8.352	3.877	8.633	3.745	3.307	3.078	3.448	5.692	3.661	3.379	3.904
2 SES A	Mean	14.078	13.953	15.490	14.689	14.834	15.223	14.912	13.051	14.554	13.007	14.057	11.635	13.061	14.203	13.240
N = 297	S.D.	3.309	3.660	3.811	3.105	3.141	3.381	3.664	3.607	3.645	3.320	4.191	5.713	8.408	4.486	3.140
3 SES A	Mean	14.000	14.214	15.388	14.552	14.647	14.512	14.617	13.045	14.527	13.179	14.124	12.706	13.109	13.915	13.438
N = 201	S.D.	3.008	3.184	3.218	3.122	3.366	3.311	3.546	3.781	3.369	3.025	3.214	4.211	3.197	3.319	3.171
1/2 SES A D.F. 404	t-values	0.674	0.280	0.997	1.286	0.758	2.993**	0.282	0.479	0.413	0.656	0.738	3.150**	0.437	0.825	1.171
2/3 SES A D.F. 495	t-values	0.266	0.822	0.322	0.482	0.635	2.319*	0.893	0.018	0.083	0.589	0.191	2.272**	0.160	0.775	0.687
3/1 SES A D.F. 309	t-values	0.883	0.397	1.245	1.558	0.209	4.520**	0.967	0.449	0.481	0.184	1.015	5.425	0.547	1.705	1.560

* Significant at .05 level (1.97)

** Significant at .01 level (2.59)

In addition to Indian studies already reported , mention may be made about some more studies from the countries other than India.

A study by Rosen (1961) unilized the Holingshed Index of social position found that male children from the higher SES grouping scored significantly higher on projection test of n Ach. than did those of the lowest SES groupings. McClelland (1961) and Milstein (1956) obtained results in agreement with Rosen. There have been studies indicating low SES subjects scoring lower on n Ach. than do middle and upper SES individuals. The studies that report the above results were: Cameron and Storm (1965), Crockett(1962), Kahl (1957), McClelland, Rendlishbacher, and Decharms (1955), Rosen and D'Anderle (1959), Terrell, Durkin, and Weseley (1959) and Veroff, Atkinson, Feld and Guren (1960), Douvan and Adelson (1958) Litting and Yeracaris (1963, 1965), Carney and Mekeachie (1963), Nuttal (1964) and Morgan (1964).

Veroff (1960) obtained the estimates of n Ach. levels of various segments of American population from individual interview. He found higher level of education, higher occupational levels were positively correlated with n Ach. levels. Veroff further commented that SES seems to be of more importancefor determining n Ach. level at least today and in America than religion or ethnic origin. But according to Rosen (1959), Carney and Mekeachie (1963), Jews have appeared to possess a remarkable high n Ach. level even in the lowest social strata.

But Mcarthur (1955) found that middle class students at a public college scored higher in n Ach. than upper class students in Harward.

Again, Bruckman (1966) obtained positive and significant correlation between the social class and n Ach. with (9-11) years old age group subjects.

But Liberman (1968) found no significant difference between the n Ach. level of high and middle class subjects. The subjects were 125 upper class private school boys and 109 middle class public boys.

2.6.2

Effect of Organic Factors and n Ach.

(a) Sex and n Ach.

Basically, it can be hypothesized that males will have higher n Ach. than females. If the general definition of n Ach. which this study accepts as "Competition with a standard of excellence in an attempt to excel" is kept in mind and the theory that the n Ach. is learnt through particular experiences and situations is utilized then it may be seen how this hypothesis was developed through consideration of the experiences and situations to which males and females are differentially exposed. The tradition bound culture of India is strongly polarised in its treat of the two sexes. In the training of the male child, considerably more emphasis is placed on orientation to achievement producing behaviour.

With this background to understand sex the following studies were reviewed.

Gokulnathan and Mehta (1972) studied n Ach. in relation to sex and found that n Ach. level of tribal girls of Assam was significantly different from the n Ach. level of tribal boys. This result was supported by Gupta (1970), Choudhary (1971) and Mehta (1973). But in Desai's (1970) study boys were found to have higher n Ach. level than girls which was supported by Sinha (1967) and Namdea (1972).

Mukherjee (1965), Pathak(1973) and Choksi (1973) also studied n Ach. in relation to sex but found no significant difference between the two sexes.

From these Indian studies it is not possible to judge how sex of an individual contributes to his n Ach. level. The investigator is of the opinion that when the sex relationship to n Ach. is studied the age of the SS and the situation in which they are placed should be taken into consideration. Then only, perhaps it is possible to study the relationship of sex to n Ach.

Rosenblum and Haarman (1970) found that first born males were superior to first born females in n Ach. level. Frankalen and Murphy (1970) tried to find out the differential effect of continued success on high and low n Ach. males and females. It has come out from their study that high n Ach. (HA) men make the task more difficult to preserve the preferred ratio of 0.5 and that low n Ach. (LA) men optimise winning while winning and losing while they are losing. But women tend to move towards the target (to make the task easier) no matter what the ratio of hits to miss is. The

LA women tend to behave like HA men and HA women tend to behave like LA men.

Minigione (1965) found in one of his studies of Negro population that Negro girls scored significantly higher than boys.

Munz, Smouse, and Letchworth (1961) conducted two studies using non-projective instrument for measuring n Ach. This instrument's measures had two parts - one to measure need to be a success. In one study females scored higher than males on the second scale, while in the other study females scored significantly higher than males on both the scales.

French and Lesser (1964) had also found confirmation of their hypothesis that females would respond to arousal cues with heightened achievement motivation scores and high motivated performance relationship when the cues were related to a goal that was achieved oriented to them but not otherwise.

Baruch (1967) tested two more hypotheses regarding the nature of n Ach. in women:

- there is a temporal cycle of n Ach. associated with age and family situations, in women.
- high n Ach. is associated with return to paid employment.

These two hypotheses were tested against the TAT stories written by 137 Radcliffe alumnae and were found justified but a broader test with a nation wide sample of

763 women failed to confirm either of the hypotheses. The first relationship was obtained for only college women in the sample, and further analysis indicated that a true lag between increased n Ach. and increased participation was in paid employment.

Another study by Denny, et. al. (1968) found that females have higher n Ach. level than males.

A study by Dunham (1970) found that of a sample of freshman from a small private mid-west college males scored significantly higher than females in n Ach. as measured by Sentence Completion instrument developed by Peck and McGuire (1959) and modified by Irvin (1967).

McClelland (1953) stated that women did not respond as did men to achievement arousal conditions which he utilized while administering the TAT. This was verified by Veroff, Wilcose and Atkinson (1963) when they replicated McClelland's study.

A study by Lesser, Krawitz and Packard (1963) found that for males there was no overall increase in n Ach. level attributable to arousal conditions. Further they found that the TAT portrayals increased their n Ach. scores while for low female achievers the use of male characters in TAT portrayals resulted in high n Ach. scores.

Two more studies were reported which investigated the relationship of sex to n Ach. The sample was that of the students of education (B.Ed.) by Vijayavardhan (1975)

and he found that n Ach. level of women students was greater than the n Ach. level of men students. Prasada Rao (1974) studied n Ach. of Intermediate students of Andhra Pradesh and found n Ach. level as

(b) Age and n Ach.

Certain personality factors, attitude and motives are function of age. These factors seem to develop upto certain level and then stop. Bruckman (1966), Minigione (1968) and Stein (1971) studied n Ach. in relation to age. They found that n Ach. increases with age upto certain stage - from early childhood to young age. However, in a few studies like Mehta (1969), and Smith (1970) no significant relationship was found between age and n Ach. However, Lakhia(1971) studying 100 trained teachers from six different schools of city area found that the teachers falling under age group 26+ to 40 have higher n Ach. than those falling under the range of 21+ to 25 years, and 41+ onwards.

While explaining how n Ach. and risk-taking (R-K) behaviour develop in children at young and early age, Hodkingson (1955) observed the 'individual differences in n-Ach. have appeared by age 5. Individual differences in R-K also appeared by the age 5 and that n Ach. predispose children even at this age toward taking moderate risk.'

n Ach. score based on children's doodles will correctly predict which ones will tend to take moderate risks and which ones will swing between extremely safe and

extremely speculated undertakings.

Both n Ach. and R-K propensities seem to be developed so early in life but too early for them to be part of conscience.

2.6.2.1

Personality Correlates and n Ach.

Need for achievement, no doubt, is a behaviour construct and an individual's behaviour is related to his personality. In this connection, it can be assumed that n Ach. and certain personality correlates may have relationships. Persons with high n Ach. and low n Ach. have been found to have some basic characteristics as shown by various studies. Here some studies are reported.

Myers (1964) found that persons having high n Ach. prefer challenging jobs which allow for a feeling of accomplishment, responsibility and growth. John (1966) found high n Ach. persons scoring high on interest maturity scale. Muthayya (1967) found autocrates to have lower n Ach. than democrates. This observation is some what different from his previous findings in which obstacles dominant Ss were found to have higher n Ach. score that the ego-defensive Ss. Later on Muthayya (1968) concentrated on personality traits of the individuals and tried to see the relationship between n Ach. and different personality traits. He found no significant mean difference in the n Ach. levels of extroverts and introverts, neurotics and normals suggesting that these personality dimensions have no direct bearing on one's level of n Ach. Taking thread from this study Muthayya and Rajeshwari (1968)

investigated further and found contradictory results, extroverts being more achievement oriented, but the mean difference was, however, not significant. As the mean differences were not significant in both the studies cited above, it can be concluded that personality dimensions have no direct bearing on one's level on n Ach.

Siddiqui and Akhtar (1969), using Symond's picture test, adopted and standardized by Quaireshi to measure n Ach., studied disciplined and indisciplined students at Aligarh Muslim University. They found that disciplined students scored high on n Ach. than indisciplined students.

Mehta (1973) in a recent study found the students activist showing significantly greater mean n Ach. than non-activist university students.

Lazarus (1967) found creativity and curiosity related to achievement motivation and anxiety. Shanthamani and Hafeez (1969) tried to find out relationship between n Ach. and neuroticism but failed to find any significant correlation between the two variables. Lester (1970) studied n Ach. in relation to fear of death but failed to establish relationship between the two in any significant way. Mukherjee and Sinha (1967) related manifested anxiety to achievement orientation using 'Sentence Completion Test' and found that anxiety was strongly related with achievement orientation. Dave (1970) using KG children as subjects did not find any relationship between n Ach. and risk taking behaviour.

2.7
Other Factors and n Ach.

(a) Academic Performance and n Ach.

Motive is a latent disposition to strive for a particular goal, state or aim and achievement motive is associated with striving for some kind of excellence or competition with a standard of excellence, when n Ach. is present in an individual it should reflect in the same measure in the activity in which the individual is engaged. If an individual is, for example, engaged in an educational pursuit, his educational achievement is intimately connected with his n Ach. level. Studies are reported which investigated the relationship between academic performance and n Ach.

Efforts have been made in India to find out the relationship between n Ach. and academic performance but results vary from study to study.

Mehta (1969) in his NCERT (National Council of Education Research and Training) study obtained positive correlation of n Ach. with marks in various school subjects at the final examinations. The correlations varied with different subjects such as English ($r = .179$), Hindi ($r = .09$), Maths. ($r = .118$), Science total ($r = .134$ and non-science total ($r = .085$). The correlation with total school marks was ($r = .179$). All the coefficients of correlation were significant and positive. Desai (1970) also found significant correlation between n Ach. and academic performance.

In a study of achievement related motivation (n Ach. and anxiety) and educational achievement among secondary school students of Assam, Gokulnathan (1971) found no relationship.

Mehta (1973) found n Ach. significantly correlated with academic achievement. The correlation obtained was r = 0.41 and the sample was 189 post-graduate activist and non-activist students. Laxmi (1969) found significant difference in n Ach. scores between slow and fast learners. Fast learners showed greater need for achievement (not significant though positive).

Sinha (1970) investigated the relationship between n Ach. and academic performance of 400, 10th and 11th class boys equally divided into high and low achievers on the basis of the scores. McClelland's n Ach. test was administered to the groups under neutral conditions. Results showed that n Ach. was significantly and positively correlated with academic achievement. Other studies by Patel (1971), Rawal (1971), I.G. Patel (1972) and M.J. Desai (1972) supported the general findings that n Ach. and academic performance correlates significantly. Also Tamhankar (1967), Muthayya (1964), Singh (1965), Srivastava (1966), Chitra (1968) all showed the confirmation of the results already arrived.

Riccituti (1954) studied a sample of naval officer candidates and a sample of freshmen. He found that both yielded correlation coefficient of zero order between academic average and n Ach. scores. Later Riccituti and Sadacca (1955)

worked with high school population, used two nine-picture forms of the test and conducted cross-validation studies against both, pictures and scoring categories. The correlations obtained were .18 and .28 between n Ach. and grade average.

Mckeachi (1961 studied academic performance in relation to n Ach. Botha and Close (1965), Kight and Sassenrath (1966), Morgan (1951), McClelland, et. al. (1953), Rosen (1956), Clark and McClelland (1956), Strodtback (1956), Littig and Yeracaris (1965), McClelland (1958), Irvin (1967), Merril and Murphy (1969) Todd, et. al. (1962), Pierce and Bowman (1960), Caplehorn and Sultton (1965), Ester (1966), Holland (1959), Gough (1953) and Atkinson and Reitman (1956) reported positive correlation between n Ach. and academic achievement.

Studies conducted by Atkinson (1950), Parrish and Rethlingshafer (1954), Lazarus, et. al. (1957), Broverman, et. al. (1960), Cole, et. al. (1962, Sarasen (1963), Atkinson and Litwin (1960), Demos and Spolyar (1961), Shaw (1961), Heibrum (1962), Candall, et. al. (1962) and Longnecker (1962) revealed negative relationship between n Ach. and academic performance.

Silber, et. al. (1961), field, et. al. (1963) reported that it was possible to infer positive correlation between n Ach. score from TAT and academic performance.

Heckhausen (1967) study revealed that the relationship between n Ach. and academic performance was equivocal.

The results in all the studies discussed have pointed out that there is positive relationship between n Ach. and academic performance except in the case of few studies. In short, it can be summarised that the effect of n Ach. is reflected in the academic performance more predominantly when:

- n Ach. is defined as a need to do job well through one's own efforts.
- When academic performance is considered instrumental in future success, and
- The TAT pictures have the smallest number of achievement cues.

(b) Intelligence and n Ach.

Attempts to find out the relationship between intelligence and n Ach. reveal erratic findings. It appears this relationship was not systematically studied.

The results shown by McClelland, Atkinson, et al. (1953), French (1955), McClelland (1956), Mohone (1960) and Hayashi, Okamoto and Habu (1962) did not reveal any statistically significant correlations between the two variables. French and Thomas (1958) worked with air force recruits and selected only the highly motivated from the upper group and found a positive correlation of 0.36 between achievement motive and IQ. Robinson (1964) obtained a correlation of .04 for a group of 11 and 12 year old

children in the upper half of the intelligence distribution. Meyer, Heckhahusen, et. al. (1965) have found close relationship between the two variables. The obtained correlation is .52 with success motivation and .05 with success motivation and .05 with total motivation.

In India, Mehta (1969) obtained a significant partial correlation of .20 between n Ach. and scores on a verbal grouptest of intelligence. This finding was supported by Desai (1970). But Choudhary could not support the findings. Muthayya and Rejeshwari (1968) found backward children to have lower n Ach. score than the normals, however, the mean difference was not significant. They used Raven's Progressive Matrices for the measurement of IQ and Murray's TAT cards for measuring n Ach. The study was conducted in Madras on 26 normals and 16 backward children of the age group 14 to 16.

In other studies significant correlations were obtained between the two variables. Lakhia (1971), in his study of 400 trained teachers, reports a correlation of 0.68 and Raval (1971) in his study of 100 high school pupils reports a very high correlation of 0.73. In both the studies non-verbal test of intelligence was used to measure IQ, and TAT of Mehta for n Ach. scores.

Pathak (1973) studied IQ in relation to n Ach. of the school pupils and found a significant correlation between them (r = .86). Haun (1964) studied IQ in relation to n Ach. and found no correlation. This finding provided one of the few instances of achievement imagery measure clearly unfounded

with IQ.

Since the results are not able to give any conclusive trend it needs further investigation with proper controls on the intervening variables.

(c) Parents' Education and n Ach.

Male parent is the symbol of authority and model for the development of certain achievement oriented qualities in the children. Some individuals emphasise certain characteristics. Studies are available wherein it was investigated whether father's education has got any relationship with the n Ach. of the child. McClelland, Sturr, Knopp and Wendt (1958) found no significant relationship between father's education level and child's n Ach. level. But the study of Gokulnathan and Mehta (1972) of tribal children found that the n Ach. of tribal children whose parents were low educated have higher and significantly different n Ach. than that of the non-tribal children whose parents were low educated. In another study by Mehta (1969), it was found that parents' education and occupation were significantly related to the n Ach. level of the children.

Moss and Kogan (1961) have empirically investigated the influence of parents' education level on the n Ach. of the children. It was found that subjects whose parents were highly educated scored higher in n Ach. than the subjects whose parents were low educated.

(d) Faculty and n Ach.

It might be said that person's perception of success and failure in life acts as strong determinant of motive to achieve success, and for this they take calculated risks and also choose safe alternative (Atkinson, 1966). In the light of the observation made by Atkinson, one can presume, the students tend to study either arts courses or science courses according to their perception of the course content, perception of self to cope with it and perception of the course content, perception of self to cope with it and perception of future goals. Studies were conducted wherein it was investigated the relation of the faculty (arts vs. science) to n Ach. level.

De and Shambhoopriya (1972) studied n Ach. of the science vs arts students and found that the n Ach. level of science students was significantly higher than the n Ach. level of arts students. The observation they made about this findings was that the science students have more cristalized life goals in terms of their occupational opportunity than the students of arts. In the absence of adequate number of students the findings may not indicate any definitive trend.

More studies are needed to establish this finding.

2.8 Socio-Economic Status and Academic Performance

Since different classes of people place different emphasis on things such as education and occupational goals, children coming from such family show differences in their educational performance and occupational aspirations. Many studies were conducted to relate SES to academic performance.

Abrahamson (1952), Ahluwalia and Gupta (1968), Ames (1943), Benerji (1961), Bear (1928), Bennur (1968), Campbell (1952), Choppin (1968), Chauney (1929), Chitra (1968), Chopra (1966,1969), Choudhry (1963), Clark (1927), Collins and Doughlas (1937), Coster (1959), De and Sinha (1968), Douvan (1956), Frankal (1960), Fraser (1959), Griffiths (1959), Garrison (1932), Gough (1946), Gupta and Kapoor (1969), Hollingshed (1949), Kemp (1955), Impellizzeri et al. (1965), Jamuar (1963), Kamath and Deshmukh (1969), Kaer (1961), Knief and Stroud (1959), Milner (1951), Miner Ketty (1968) Pairthraum (1963), Pavitran and Feroz (1964), Pierce and Brown (1960), Raina (1967), Raghavacharyulu (1957), Richaria (1952), Sharma (1969), Sharma (1961), Shaw (1943), Termur and Oden (1947), Verma, et al. (1960), Washburne (1959), Wiseman (1966) have reported positive relationship between SES and academic performance.

But there were studies which showed no such relationship between SES and academic performance. Conklin (1940), Curry (1962), Myers (1952), Naidu and Aaron (1960), Nemzek (1940), Rao (1968), Sinha (1966), and Watson (1965) fall under this category.

2.9 Intelligence and academic performance

Intelligence is a capacity of an individual which is manifested through his ability to adopt and to reconstruct

the factors of his environment, in accordance with his group. Psychologists accept the idea that the capacity to learn is essentially an aspect of intelligence. Studies were conducted to find out the relationship between intelligence and academic performance.

Amisworth (1962), Bhargava (1957), Bhojak (1961), Bent (1939), Cohlar (1941), Dev (1969), Durflinger (1943), Edds and McCall (1933), Forest and Brandes (1956), Gupta and Kapoor (1969), Hartson and Sprow (1941), Hyday (1968), Jordan (1923), Kapoor (1961), Kemp (1965), Lennon (1950), McPhail (1925), McClelland (1952), Mishra, Dash and Pandhi (1960), Raina (1967), Rao (1968), Richaria (1952), Rosengarten(1965), Satsangi (1960), Sharma (1961), Shivaramayya (1947), Shrivastava (1955), Sultana (1969), Temhankar (1968), Thurston (1925), Tooks (1926) and Verma, et al. (1960) have found positive relationship between intelligence and academic performance.

But on the other hand, studies of Cooking and Holy (1927), Gupta (1967), Muthaya (1966), O'Brien (1928), Rao (1968) and Young (1936) have reported no relationship between IQ and academic performance.

Miss Shah (1974) studied the performance of science of high school students in relation to IQ. It was found that scores in science and IQ were correlated significantly(r= .49).

Douglan, Kinney and Segel (1934), Wagner and Garrett (1937) have reviewed the studies dealing with intelligence and academic performance.

TABLE 5.32

Showing means and S.Ds. and significant difference in means of 15 personality needs of teacher trainees in relation to occupation - high, moderate and Low: N = 608 (Independent variable Socio Economic Status with dependent (E.P.P.S.)(SES-B)

Categories:		1 Ach.	6 Aff	11 Nur	2 Def	7 Int	12 Chg	3 Ord	8 Suc	13 End	4 Exh.	9 Dom.	14 Hct	5 Aut	10 Aba	15 Agg
1 SES-B	Mean	14.233	13.931	15.586	14.793	14.853	15.776	15.466	13.241	14.474	12.853	13.871	10.422	12.733	15.138	13.005
N = 116	S.D.	3.549	3.680	3.991	3.376	3.201	3.247	3.841	3.528	3.470	3.266	3.242	5.688	3.557	3.840	3.543
2 SES -B	Mean	13.790	14.484	15.347	14.750	15.000	15.718	14.218	13.784	14.216	18.653	14.000	11.460	12.816	13.935	13.290
N = 125	S.D.	3.311	3.446	3.716	2.816	3.259	3.576	3.487	3.497	3.303	3.076	3.250	5.766	3.555	3.354	3.356
3 SES-B	Mean	14.158	13.967	15.580	14.706	14.580	14.834	14.856	12.823	14.708	12.995	14.074	12.052	13.223	13.956	13.243
N = 367	S.D.	3.068	3.323	3.317	3.216	3.272	3.520	3.573	3.775	3.562	3.170	3.286	5.036	3.263	3.297	3.211
1/2 SES-B D.F. 238	t-value	0.999	1.202	0.481	0.108	0.351	0.132	2.655**	1.086	0.476	1.954*	0.228	1.402	0.178	1.972*	0.439
2/3 SES-B D.F. 489	t-value	1.131	1.483	0.657	0.137	1.236	2.408*	1.735	2.866*	1.217	2.015*	0.183	0.090	1.179	0.061	0.142
3/1 SES-B D.F. 481	t-value	0.220	0.100	0.016	0.252	0.787	2.559*	1.574	1.057	0.621	0.415	0.581	2.942**	1.381	2.737**	0.421

* Significant at .05 level (1.97)

** Significant at .01 level (2.59)

The number of studies they have reviewed ranged from 39 to 442 and the mean value of correlation coefficient was found to vary between .40 to .50 (as quoted in Rao, 1967, p.13). Eysenck (1947) have reviewed 358 titles and concluded that the correlation varied between .50 and .60.

Louttite (1947), Pintner (1943), Aaron (1946), Frochlich and Hoyt (1959) have also reviewed the literature related to intelligence as a predictor of academic performance. The correlation reported by them were Louttit - .10 to .60; Pinter - .28 to .60; Aaron -.25 to .65 with a median of .48.

Harris (1940) pointed out that a multiple R of .6 or .7 was found between college grades, secondary school grades, intelligence and scholastic aptitude.

SECTION 'B'

2.10
Studies in Self-Perception

Perception means converting a sense impression of the organism into the awareness of some meaningful situation.

Haider (1946) defining social perception says - "it is not so much the study of social influence upon the perception of the physical world but rather the study of the conditions which influences our perceptions of other people and determines the characteristics and relations that we attribute to them."

Woodworth (1947) believes that "perception is always driven by a direct, inherent motive which might be called the "will" to perceive. Whatever alterior motives may be present from time to time, this direct perceptual motive is always present in any use of the sense. It is impossible to look without trying to see, or listen without trying to hear. To see, to hear - to see clearly, to hear distinctly - to make out what it is one is seeing or hearing- moment by moment such concrete immediate motives dominate the life of relation with environment. When the goal of such a search is attained strong reinforcement is revealed by the observer's cry of satisfaction and later by his excellent retention of the discovered figure."

Self-esteem has been considered as a central personality variable. It then follows that individuals with high self-esteem and very low self-esteem should differ.

A study by Mukherjee (1965) investigated the relationship between self-perception and n Ach. He measured self-perception by a 30 item questionnaire called 'Self Insight Test'. The test gives seven dimensions of self-image - sociability, perseverance, leadership, flexibility, perfection, intellectual ability, and emotional stability. Need for achievement (n Ach.) was measured by Sentence Completion test constructed by the author. The sample consisted of 87 undergraduates enrolled for introductory psychology course. No significant difference was evident

between high and low (median split) groups with regard to their self-perception. But from the figures it was obvious that high n Ach. group scored higher self-ratings on 'perseverance', and lower rating on intellectual ability.

No significant differences was found in self-perception due to sex. Jones and Grieneeks (1970) studied the measures of self-perception as predictors of scholastic achievement. The subjects were sophomores. They defined self-perception as self-expectations, self-concept of ability and degree of identity of development. The results indicated that self-expectations correlated significantly with GPA for girls only self-concept of ability correlated significantly with GPA for both boys and girls, and identity ratings correlated with GPA for boys and total. The authors commenting on the results observed that it might well be that the male sophomore is generally a person who has intellectual capacity to make it college and it is at this point that the non-intellectual factors of his existence become prominent in controlling his behaviour, both academic and otherwise.

Another study was conducted by Inamdar (1974) with 100 high school students. She investigated the relationship between perceptual world and n Ach. of the high school students. The perceptual world in this study has five dimensions - self, school, goals, aspirations and conflicts. The need for achievement was measured by TAT. No significant relation was found between the perceptual world and n Ach.

Nataraj (1966-67) studied self-perception of women and self-evaluation in relation to their attitudes towards sex role. Korner and Mishra (1967) studied perception of human relationship as a function of inter-individual distances. Shivappa (1969) studied the relationship between n Ach. and self-concept. Pareek and Khanna (1960) studied attitude towards 'self' and others. Miranda and Mohan (1968) studied the perception of an ideal self-Nehru and Shashtri.

George and Mathew (1967) studied ideal self-concept held by men and women.

Self-perception as measured by the Self-Report Inventory (SRI), (Bown, 1958) has been widely used in research mainly connected with teacher education programme and mental health of the college students. Nearly 50 researches reports are reviewed by the investigator where the SRI was either principal instrument of measurement or one of the instruments. For brevity and want of space the researches connected with the following variables only are reported here: Commitment for teaching, teacher effectiveness, personality dimensions of student teachers, attitudes and aptitudes of college students, and sex differences of student teachers.

1. Commitment to Teachers

The study reported in this area in relation to the scales of the SRI is that of Barton (1970).

2. Teacher Effectiveness

Studies reported in this area in relation to the

scales of the SRI are by Veldman (1964, 1965), and McLondon (1965).

3. Personality Dimensions of Student Teachers

The studies reported in this area in relation to the scales of the SRI are by Veldman (1960), Bown and Richek (1968, 1969), and Bohn et al. (1968), Connelly (1969).

4. Attitudes and Aptitudes of College Students

Studies reported in this area in relation to the scales of the SRI are by Veldman (1968), Breits and Butts (1969), Ruppel (1971), Slavik (1971).

5. Sex

Studies reported in this area in relation to the scales of the SRI are by Veldman (1959, 1962, 1968).

The several researches the reference of which are cited above deal with the student teachers in the Colleges of Education. The present study has addressed itself to investigater certain behaviour correlates of student teachers with a view to bring about objectivity in teacher education. The investigator felt it good to give a brief abstract of some of the important research reports.

2.10.1

Commitment to Teaching

Barton (1970) explored the possibility of using the SRI to predict high versus low commitment to teaching which students entering teacher preparation would subsequently display in their post-graduate undertakings.

The subjects used were 174 female students enrolled in the teacher education programme at the University of Texas, Austin, 79 of these students were secondary education majors and 95 were elementary education majors. The results of this study indicated that one scale of the SRI (work) differentiated between the high commitment group and low commitment group at or below the .05 level of probability with the high commitment group having the highest mean. This finding was true for both elementary and secondary education majors.

2.10.2

Teacher Effectiveness

Veldman (1964) analysed teacher effectiveness. The subjects were female student teachers. Sixty four subjects were in the high level group, 62 in the middle, and 44 in the low. The three effectiveness groups were then compared on the scale scores of the SRI. Significant differences among the groups were obtained for the SRI scales indicating attitudes toward Self, Authority, Work and Reality. In all cases the high and middle effectiveness groups obtained higher scores than the low effectiveness group.

Veldman (1965) studied teacher effectiveness by semi-projective test information in the form of a Sentence Completion Test. It was blindly rated by clinical judges for 34 students who had been rated highly effective by their supervising professors and 34 who had been rated low in effectiveness. Only 34 of the 68 female student teachers were

rated similarly by both supervisors and clinical judges. The remaining 17 high and 17 low rated cases were then compared on the ten scores of the SRI. The results of the two grouped analyses of variance computed for each of the ten scores available from the SRI indicated that student teachers rated as effective scored significantly higher than student teachers rated as ineffective on the following scales: 1) Self, 2) Authority, 3) Reality, and 4) Total.

McLendon (1965) in his doctoral work used SRI to examine perceptions in multiple areas of the phenomenal world and their predictive value with respect to teaching effectiveness. An original sample of student teachers in various criterion groups of supervisor-judged teaching effectiveness were studied for differentiating patterns of self-reported perceptions. The patterns were used for predicting criterion group membership to individual student teachers in the original sample and for those in a replication sample. The original sample included 188 women student teachers in secondary public school classroom, and the replication sample included 216 women student teachers in secondary classrooms. Teacher Rating Scale were used by supervisors for discriminating qualitative difference in teaching effectiveness among the student teachers, and systematic rules were applied for assigning them to criterion groups.

The 188 student teachers in the original sample were assigned to three approximately equal criterion groups

(53 high, 72 average and 63 low). The discriminant function associated with approximately 81.7 percent of total discrimination among the criterion groups indicated significant difference (.05 level) produced primarily by differences in self-reported perceptions of Work, Authority and Self. When the student teachers were assigned to two groups (91 high, 97 low), discriminant function indicated significant differences (.01 level) produced primarily by differences in perceptions of work, Authority, Hope and Children. Both analyses supported the hypothesis that student teachers in different categories of supervisor-judged effectiveness express different perceptions in delineated areas of the phenomenal world. Discriminant weights from discriminant functions in both analyses of the original sample were applied to secure in the phenomenal areas to produce individual discriminant scores, used for predicting criterion group membership for each student teacher. Membership in one of three criterion groups was predicted approximately 14 percent beyond chance (.01 level of significant). Discriminant weights were applied to scores in phenomenal areas for 216 student teachers in the replication sample (71 high, 78 average, 67 low; also 116 high and 100 low). Membership in one of the two criterion groups was predicted approximately 10 percent beyond chance (.01 level of significance). With the exception of replication of predicted membership in one of the three criterion groups, results of analyses supported the hypothesis that differences in self-reported perceptions enable prediction of

supervisor-judged effectiveness significantly beyond chance.

2.10.3
Personality Dimensions of Student Teachers

Veldman (1960) examined personality ratings through factor analysis. The factors that emerged were: 1) the conscience-ruled stability versus unprincipled impulsiveness; 2) creatively intelligent autonomy versus dull, unthinking dependence; 3) loving versus coldly hostile; and 4) relaxed, outgoing optimism versus anxious, self-preoccupied pessimism. The SRI scale scores were correlated with the above four factors.

The results indicated that Factor I (conscience-ruled stability versus unprincipled impulsiveness) correlated with the SRI scale scores Authority, Work, Reality and Total. Factor II (creatively intelligent autonomy versus dull, unthinking dependence) correlated with the SRI score self. Factor III (loving versus coldly hostile) correlated with the SRI scale scores others, children, Authority and Total. And Factor IV (relaxed, outgoing optimism versus anxious, self-preoccupied pessimism) correlated with the SRI scale scores Self, Others, Authority, Reality and Total.

Bown and Rickek (1968) designed a study to explore the relationship between the SRI variables and Jungian typology as measured by the Myers-Briggs type Indicator. Both instruments were administered to a sample of 149 female student teachers. In this group there were 78 secondary and 71 elementary student teachers. The age range was 18 - 22.

76

The following univariable correlations among the SRI variables and four Myers-Briggs type preference scores were statistically significant; 1) Extraversion/introversion with Self($p < .005$), Others ($p < .005$), Children ($p < .005$), Authority ($p < .005$), Hope ($p < .005$), and Total ($p < .005$); 2) Sensation/Intuition with authority ($p < .025$), Work ($p < .025$), Reality($p < .005$), and Hope ($p < .025$); 3) Thinking/Feeling with others ($p < .025$); and 4) Judgement/Perception with Authority ($p < .025$); Work ($p < .005$) and Reality ($p < .025$).

Aside from those correlations existing among the SRI variables and the extraversion/introversion scores, the eight statistically significant univariate correlations obtained in this study are deemed too low to possess predictive value in individual situation. It was concluded, that there existed at least two significant ways in which the domains tapped by the four M-B type preference scores and the eight SRI variables were related.

In this study, Veldman (1964), examined the personality correlates of selected biographical items of student teachers. A biographical information form designed by R.F. Peck for the Mental Health in Teacher Education project and the SRI were administered to 192 female seniors in student teaching. The SRI variables were used as criteria for each of the 30 biographical items studied.

Criterion data were submitted to separate single classification analyses of variance, one for each of the

30 biographical items in turn as a basis of defining groups of subjects to be compared. Group sizes were adjusted in each analysis to exclude subjects with missing scores for a particular analysis. The data were generally complete. One or more SRI scales significantly differentiated subject status on the following biographical variables; Age of the subject, father's age, father's social activities, mother's age, mother's education, visual defects, respiratory disorders, high school average, number of high school activities, best trait in high school, worst trait in high school, subject matter field, teaching level, college activities, and previous employment.

Bown and Richek (1969) studied self-perceptions versus extraversion/introversion of student teachers. They used the SRI to explore the relative 'warmth' and 'positiveness' of extroverted and introverted prospective teachers. The sample consisted of 149 prospective teachers of which 71 were majoring in elementary education and 78 were majoring in secondary education. The students were in the age group of (19 - 22) years.

Single classification analyses of variance were made. In one analysis, introverts and extroverts were compared without regard to teaching level. In another analysis, elementary school introverts and elementary school extroverts were compared. Subjects were classified as extroverts and introverts entirely on the basis of the direction of the preference scores on the Myers-Briggs Type Indicator; strength of preference was not considered in this analysis because of the small number of

introverts among the prospective elementary school teachers. The introverts (N = 49) scored significantly lower that the extroverts (N = 100) on the following SRI scales: 1) Self 2) others, 3) children, 4) authority, 5) parents, 6) hope, 7) Total.

The elementary introverts (N = 19) scores significantly lower than the elementary extroverts (N = 52) on the following SRI scales: (1) Others, (2) Authority, (3) Total. However, the elementary school extrovert and introvert groups did not differ in the positiveness of their attitudes toward children. This finding was very interesting. It would seem that the introverts who choose elementary school teaching would maintain as positive an attitude toward children as her extroverted counterpart did.

Connelly (1969) in his doctoral dissertation used the SRI to explore changes in certain aspects of the self concepts of prospective teachers within the frame work of phenomenological theory. The subjects used were 100 female elementary student teachers, 105 female secondary student teachers and 30 male secondary teachers at the University of Texas, Austin.

The study reported a series of intercorrelations between SRI scores and pre and post student teaching measurements of ideal - self discrepancy. Ideal-self discrepancy scores were measured with the Interpersonal Impressions Survey (IIS). The results indicated that among the elementary group

prior to student teaching, only the ratio score reached significance (higher 'other' related scores as compared to 'self' related scores were associated with high self-ideal discrepancies), the elementary group had a generally positive set of responses to the SRI associated with more self-ideal congruence toward the conclusion of student teaching; among the secondary female group on the pre-1-3 measure, only the children scale score was significant indicating positive attitudes children were associated with low I-S discrepancy scores. For the post-1-3 discrepancy, only the reality scale was significant.

Bohn, Butt and Raun (1968) studied teacher characteristics as predictors in successful implementation of an innovative curriculum. A change that has taken place in the methodology of teaching science - a change from teaching to impart specific information to teaching students how to process the information of their experiences, has led to questioning whether a relationship exists between selected teacher characteristics and success in teaching such a curriculum. Factors of sex, grade level talks, school districts, years of teaching experience, and academic performance in science were examined for significance.

The sample of 110 elementary teachers from six school districts were participants in an inservice teacher education programme prior to teaching SCIENCE - A PROCESS APPROACH.

Student achievement, which was used as an index of teaching success was assessed by administering the AAAS

Competence Measure at the conclusion of each exercise. A minimum of six exercises were taught by each teacher. Multiple linear regression analysis showed that the variables of sex, grade,level, school district, years of experience, and hours of science accounted for 45 per cent of the variance in the student achievement score. Of these, sex, grade level, and years of teaching experience made significant independent contributions to predicting teacher success.

2.10.4

Attitude and Aptitudes of Student Teachers

Dreit and Butta (1969) in a study examined the relative effectiveness of a teacher education programme given at the preservice level and at the inservice level in the development of certain teacher competencies: knowledge of science content, positive perception of goals and methods of curriculum innovation, and facility in coping with a learning environment which emphasises the child's responsibility for his own learning. Also was examined the relationship of certain factors to the successful development of teacher competencies by programme participants. These factors were: initial level of competence, intensity of initial attitudes, teaching experience, amount of college science, and number of years since last science course.

Four groups of individuals were included in this study. The preservice version of the programme was given to 58 students enrolled in an undergraduate science methods course at the University of Texas. Fifteen students enrolled in an

undergraduate social studies methods course serve as a control for the group above. The inservice version of the programme was given to 28 elementary school teachers enrolled in an elementary school science workshop. Eleven elementary school teachers enrolled in the summer school at the University of Texas served as a control for the above group.

The results of the study indicated that the total experience resulted in an increase in knowledge of the processes of science and a change in instructional decision behaviour for both preservice and inservice participants. Limitations in the design of study did not permit conclusions relative to the comparative effectiveness of the programme at the two levels. It was also found that the total experience did affect attitude, but only to a limited extent. In general, it was concluded that pre-service and inservice teachers who experience a similar teacher education programme exhibit some similar changes and some contrasting changes. Further study of these changes seemed to support the conclusion that teacher education programmes need to be constructed to meet the differing needs of the participants.

Ruppel (1971) in his doctoral study of 'correlates of university students' counselling approach preferences' explored the possibility of using the SRI to examine the relationship of client personality and problem type to counselling approach preferences. The subjects used were 35 male and 51 female

undergraduate students in educational psychology courses at the University of Texas at Austin. The results indicated that the female group which differed significantly at the .05 probability level; 1) those who had a questioning approach preference had a lower mean score on the (Other' scale than did those who had a 'supporting approach' preference: 2) those who had a 'reflection of feeling approach' preference had a lower mean score on the 'authority' scale than did those who had a supporting approach preference; 3) an analysis of variance also indicated that the counselling preference groups questioning approach, advice-giving approach, reflection of feeling approach, and supportive approach differed significantly on the Intensity scale and on the Total scale of the SRI, but Scheffe's method of post-hock comparisons did not indicate that these group means significantly differed; 4) the preference for an information-giving approach correlated significantly with the 'work' scale at .05 level of significance; 5) the preference for a reflection of feeling approach negatively correlated at the .05 level with the work scale, and 6) the preference for a supporting approach correlated significantly at the .05 level with the children, others and intensity scales.

The following counselling approach preferences of males correlated significantly at the .05 level with SRI scores; 1) preference for a supporting approach correlated with the Self, Others, Hope, and Total scale scores; and 2) preference for a reflection of feeling approach correlated with others and Hope.

Slavik (1971) in his doctoral study 'the relationship between attitudinal similarity and peer evaluation of prospective teachers' have examined the relationship between attitudes as measured by the SRI and the peer ratings of the prospective teachers regarding their intelligence, liking to work within a teaching situation etc. It was expected that both the peer ratings given and the peer ratings received would be negatively correlated with attitudinal similarity. However, the results of the data analysis did not support the expectations of the study for any of six peer characteristics.

An attitude profile similarity measure was substituted for the total item response discrepancy measure. The new measure was formed by computing ipsative attitude scale scores and comparing these scores with a D score measure (Gronbach and Glaser, 1953) for each pair of attitude profiles. Then, the above original expectations were confirmed for one of the peer rating scales which was concerned with 'liking'. For peer ratings of 'intelligence' and 'like to work within a teaching situation' attitudinal similarity influenced the peer ratings received but the manner of influence was dependent upon the sex of the rates. It was suggested that ipsative SRI scale scores may be independent measures of the attitudinal similarity observable in overt behaviour which influence peer ratings.

84

2.10.5

Sex Differences

Veldman (1959) studied sex differences among sophomore education students. The SRI was used to distinguish between female non-elementary education majors and male non-elementary education majors. The subjects were drawn from a sample of approximately 500 sophomore students enrolled in an introductory education psychology course. But the data analyses were made on 212 female non-elementary education majors and 59 male non-elementary education majors. The results indicate that females scored significantly higher than the males on the following scales of the SRI: 1) Others ($P = .05$); 2) Children ($P = .001$) 3) Work ($P = .05$); 2) Children ($P = .001$); 3) Work ($P = .05$); 4) Authority ($P = .05$); and 5) Total ($P = .001$).

Veldman (1962) examined the personality characteristics of education students as a function of sex, course level, major field, and the effects of two years of college. The SRI was administered to sophomore and senior students. The study was concerned with the following questions with respect to the SRI: Are there any significant differences in average test scores for males and females? Are there any differences between the entire groups of sophomores and seniors? Do any differences between sophomore and senior averages appear or disappear when subjects who were retested and considered? Are there any reliable interaction effects between the sex and the level of testing? Do female seniors majoring in elementary education differ from those majoring secondary education? Do male seniors majoring in physical education differ from those majoring

other fields?

In the analyses concerning the gross sex and educational level comparisons on the SRI scale scores all the scores except work and Hope were significantly higher for females than for males. All of the differences in the sex comparisons were significant at .01 level except for reality which was significant at the .05 level. The senior level means were found to be significantly higher than those of sophomore means for all scales except Others and Authority (Self, Work, Parents, Total and Ratio at the .01 level): Children, Reality and Hope at the .05 level. The ratio scores, however, showed a decrease from sophomore to senior samples. The only significant interaction effect was for the Others scale. ($P = .01$), where males increased markedly, while females showed moderate decrease scores in the two levels of testing.

No significant differences were found between males majoring in physical education and those majoring in the other fields on the SRI scales. However, female education majors produced significantly higher means on scales Children ($P = .05$), Parents ($P = .05$), Hope ($P = .05$), and Total ($P = .01$) than did secondary education majors.

Veldman (1968) studied the effects of sex, attitudes and aptitudes on the academic achievementof college freshmen, This study represents an attempt to obtain more definite evidence regarding the determinants of sex differences in college grades, which have in the past been attributed to teacher biases favouring females.

TABLE 5.39

Showing means, S.Ds. and significance difference in means of 15 personality needs as assessed by E.P.P.S. in relation to high, moderate and low income groups of parents of teacher trainees. (Independent variable socio-economic status with dependent (E.P.P.S.) (SES-C)

		Ach.	Aff.	Nur	Def	Int	Chg.	Ord	Suc	End	Exh	Dom	Het	Aut	Aba	Agg.
1 SES -C	Means	14.126	13.967	15.585	14.942	14.589	15.812	14.870	13.077	14.522	13.261	14.048	11.362	12.966	14.101	12.990
N = 207	S.D.	3.263	3.694	3.512	3.098	3.110	3.561	3.717	3.781	3.256	3.111	3.274	5.593	3.561	3.209	3.618
2 SES -C	Mean	14.870	13.000	16.391	15.217	15.043	15.391	14.565	12.130	15.261	13.783	14.609	9.435	12.696	13.913	13.696
N = 23	S.D.	3.279	3.529	4.031	3.753	3.674	4.500	3.514	3.389	6.333	3.450	2.330	6.021	2.803	2.745	4.061
3 SES -C	Mean	14.037	14.180	15.442	14.590	14.767	14.854	14.833	13.151	14.553	12.979	13.968	11.915	13.108	14.233	13.331
N = 378	S.D.	3.180	3.252	3.518	3.160	3.309	3.367	3.572	3.646	3.609	3.193	4.062	5.151	3.316	4.348	3.062
1/2 D.F. 228	t-value	1.037	1.183	1.030	0.396	0.652	0.522	0.374	1.150	1.021	0.755	0.798	1.556	0.352	0.271	0.876
2/3 D.F. 399	t-value	1.217	1.681	1.246	0.914	0.386	0.727	0.350	1.308	0.913	1.167	0.748	2.220*	0.584	0.348	0.544
3/1 D.F. 583	t-value	0.319	0.757	0.470	1.293	0.635	0.221	0.116	0.230	0.103	1.031	0.244	1.204	0.480	0.341	1.204

*Significant at .05 level (1.97)

**Significant at .01 level (2.59)

Freshmen GPA, verbable and quantitative SAT scores and eight scales of the SRI were intercorrelated, and a series of regression analyses were carried to test specific hypotheses. The sample consisted of 1358 males and 957 females. The results clearly indicated that : 1) females grades were not higher than those of males on the average; 2) females achieved significantly higher grades relative to their aptitude test performance than did males; 3) self-reported attitudes toward work made a substantial contribution to the prediction of grades, even when aptitudes were held constant; and 4) a substantial proportion of the sex differences in relative achievement could be shown to overlap with attitude toward work.

7. There are very few studies to date in the areas of teachers training and inservice training. George and Nair (1966) studied emotional stability and its relation to success in student teaching. Dosajh (1969) studied the relationship between the qualifications of teacher trainees and their B.Ed. marks. One of the findings of the study inter-alia, ~~is~~ kept the performance of science graduates ~~is~~ on the whole superior to that of arts graduates. Palsane (1963) studied the factors related to success in B.Ed. Examination. Reddy (1966) reports a study about the background of teachers and their motivation for teaching. Adval (1952) has investigated into the qualities of teachers under training. Garudacharya (1964) and Upasani (1966) enquired into the education of graduate teachers and primary

teachers respectively. Srivastava (1965) studied the impact of inservice programme on teachers. Roy (1965) studied the relationship between the measures of success of teachers as students under training and teachers in schools.

2.11 Significance of Present Research and its Contribution to the n-Ach. and its Related Research

Having reviewed the past researches undertaken in the field of n-Ach. in India and in the western countries, it is observed that more or less all the research findings connected with n-Ach. and its other dimensions such as n-Ach. and intelligence, n-Ach. and academic performance, n-Ach. and social and cultural stratification, n-Ach. and motive acquisition, n-Ach. and risk-taking behaviour, n-Ach. and interest in school work etc. have been connected with school going population. Various attempts have been made in India right from 1969 to 1977 but the researchers have not been able to enter this area of their liking on college students and that toowith the students of education, that is to say that achievement motivation research in the past have been undertaken on the school samples and the results pertaining to teacher trainees and their reactions to TAT (Prayag Mehta's Test of Achievement Motivation) and its relationship with other personality Tests have not so far been studied actively. The researcher is of the opinion that such an attempt had been

made by lone researcher in 1975 on population sample of Andhra Pradesh and the results are noteworthy. But the present study as such in hand, has not yet been taken, at all in the Indian setting. Therefore, it is felt that no researcher could make a fruitful attempt in the field of achievement motivation, personal preferences, perception and anxiety and its other correlates in relation to intelligence SES and academic performance of teacher trainees of Orissa. It is, therefore, felt that the investigator doesnot possess any knowledge concerning the frame of any such research attempted at this level, that is, B.Ed. teacher trainees. So, the investigator has made a novel attempt by tackling this problem, at the state level.

However, the researcher is of the firm conviction that the present study would yield fruitful results for better implications of the data for the identification, selection and training programme for teachers so that the adacemicians, educationists and the planners might be able to choose and train right type of individuals for entering the teaching profession.

****
*****
***
*