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The value of research in education depends very largely upon the degree to which its results are intelligently analysed, interpreted and applied. The investigators working in the field of research would like to summarise their findings in a lucid and precise manner, as no body can, at a glance, see the whole processes of the results. It is, therefore, felt necessary that the data collected may be analysed and placed in tabular form to give a comprehensive look and easy grasp. The analysis of the data was undertaken to study the tabulated material, by breaking its complex factors into simpler parts, and pulling them together into new arrangements for inferring the tenability of the hypotheses formulated. It essentially involved the application of the statistical methods. The interpretations called for a critical examination of the results in the light of the limitations of the study and the results of the previous researches in the field. Therefore, this could be carried out in parts as follows:

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Part 'A' The first section consists of description of n-Ach., personal preferences, self-perception, anxiety, risk-taking behaviour, intelligence, S.E.S. performance and the nature of the family.

Part 'B' In this section analysis and interpretation of the results are based on t-test technique and the results are discussed according to the components under study as independent variables and their relationship with the dependent variables(35) for judging the level of confidence etc.

Part 'C' Analysis and interpretation of the results are taken up by having the inter-correlations of the variables in all possible combinations which can be worked out possibly to find out the available relationship among the different variables.

Part 'D' In this section multiple Regression analysis has been undertaken and results are discussed accordingly.

#### PART 'A'

##### 5.00 Nature and Description of the Sample

Before the detailed analysis of the data is presented it is essential to describe in brief the nature of the sample of this study.

### 5.1 Background of the Study

This study has been undertaken in the State of Orissa, and it is spread on six government teachers training colleges offering B.Ed. course with a total population of approximately 1100 students of education. The sample of the present study was drawn from six government teachers training colleges and the only one private college catering to the B.Ed. training programme was left out as the permission for the survey of the study could not be received in time. The total sample constituted of 608 students of education. The breakup of the total sample into smaller samples from different colleges has been given in Chapter III (B). The characteristics of the sample as gathered from the Self-report-card for teacher trainees are being summarized as under:

Part A      Analysis and Interpretation of the Data from the Self-report-card for Teachers. (This section will describe some of the factors related to the general back-ground of teacher trainees e.g. age, sex, teaching experience, prior qualification, SES, and the nature of their families).

In order to investigate the background effects of the teacher trainees (who are to reveal their self-perceptions, personal preferences, anxiety, intelligence and family back-ground), the investigator, felt to administer the self-report card for teacher trainees along with the other

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psychological tools. It was thought that the Self-perception, personality needs, SES, anxiety and intelligence level are largely connected with the general background of the teachers and which may determine the n-Ach. level of the respondents. However, some of the significant variables such as intelligence, performance, SES of the parents, teaching experience, economic status, sex, urban/rural background or traditional/modern outlook, religious/liberal attitudes towards life situations have got a considerable impact on the different variables under study. The results would be meaningless or would not give much clarification as regards to the social psychological make-up of the teacher trainees unless and until the statistical results had, are interpreted meaningfully in relation to the general background of the teacher trainees. Therefore, it became imperative on the part of the investigator to analyse the results itemwise.

#### 5.2 Teacher Trainees and Their General Back-ground

To study the n-Ach., personal preferences, self-perception, anxiety and the other correlates in relation to intelligence, SES and performance of the teacher trainees, the variables included in the self-report-card have got a significant contribution to understand the n-Ach. performance and intelligence levels of the trainees in particular and their adjustment possibilities later on in schools in



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particular and society in general. Therefore, the researcher has included certain items to explore the academic and general backgrounds of teacher trainees under study and results are given as under:

TABLE 5.1

Characteristics of the Sample

S. No. Variables	Characteristics					
	1	2	3	4	5	6
1. Sex	Male Female					
f	429	179				
%	70.55	29.45				
2. Marital Status	Married Un-Married					
f	287	321				
%	47.2%	52.8%				
3. Age in years	21-25	26-30	31-35	36-40	above	
f	261	293	49	4	1	
%	42.92	48.19	8.05	0.65	0.16	
4. General Educational Qualification highest degree	B.A.	B.Sc.	B.Com	M.A.	M.Sc.	M.Com
f	296	204	10	54	43	1
%	48.68	33.55	1.64	8.88	7.07	0.16
5. Rank/Division secured	I	II	III	Compartmental pass		
f	55	211	230	112		
%	9.05	34.70	37.83	18.42		

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6. Teaching Experience				
		Nil-3	4-9	10-above
	f	348	244	16
	%	57.23	40.13	2.63
7. Place of Residence				
		Urban	Rural	
	f	152	456	
	%	25.00	75.00	
8. Stay				
		Home	Hostel	
	f	81	527	
	%	13.32	86.88	
9. Parent's Educational level				
		College P.G.	Primary Higher	Illiterate Primary
(i)	Father f	110	297	201
	%	18.09	48.84	33.05
(ii)	Mother f	13	194	401
	%	2.13	31.90	65.95
10. Parents' Occupation				
		Labour Farmer	Clerical Teacher	Gazetted others
	f	367	125	116
	%	60.36	20.55	19.07
11. Economic Status				
		Lower class	Middle class	Upper class
	f	72	530	6
	%	11.84	87.17	0.98

12. Nature of family		Joint	Nuclear
(i) Joint/ Nuclear	f	270	338
	%	44.41	55.59
(ii) Rural/Urban		Rural	Urban
	f	423	185
	%	69.57	30.42
(iii) Agriculturist/ non-agricul- tunist		Agricultu rist	Non-agricul- tunist
	f	411	197
	%	67.60	32.40
(iv) Traditional/ Modern		Traditional	Modern
	f	203	405
	%	33.38	66.61
(v) Religious/ Liberal in Religion		Religious	Liberal in Religion
	f	403	205
	%	66.28	33.71

5.3 Characteristics of the Sample Described

Having studied the above mentioned table it is obvious that out of the total sample of 608 teacher trainees the various characteristics under study are: Sex, Marital Status, Age, General Educational Qualification or the highest degree attained, division secured, teaching experience, place of resident, stay during the study period, parents' educa-

tional, and occupational level, monthly income, economic status and the nature of the family etc. These characteristics under study sample have revealed some of the factors connected with the general background of the teacher trainees. On the basis of the knowledge had, the investigator would be able to give genuine interpretation as regards to personality needs and phenomenal self related with the ego and his world around him, anxiety and the risk-taking behaviour as compared with the intelligence level of the respondents. The pattern of characteristics of the sample has been analysed and the following results have been derived:

1. Out of the total sample of 608 respondents, the men population constituted of 70.55% and rest of the population was women candidates. This was due to the uneven percentage of admitted students for the B.Ed. Training Programme, i.e., all the six colleges the number of male and female candidates are already fixed by the govt. Therefore, even due to random samples the population male and female teacher trainees is quite representative.

2. As regards to marital status of teacher trainees 52.8% of the teacher trainees hold unmarried status and rest of them belong to married cadre, but the percentage is more or less just equal. Looking to the age range of teacher trainees 91% of them belong to the age group 21-30, i.e., 21-25 years (42.92%), 26-30 (48.19%) and rest of them roughly 9% belong to

TABLE 5.95

Showing Ms. S.D.s., and significant difference of means in E.P.P.S. dimensions/ 15 personality needs in relation to three levels of n-Ach. of the trainees N = 608  
(Independent variable Motivation (MT with dependent variables RPPS)

Categories															
	1 Ach.	6 Aff.	11 Nur.	1 Del.	7 Int.	12 Org.	3 Ord.	8 Suc.	13 Pnd.	4 Exh.	9 Dom.	14 Hct.	5 Aut.	10 Lba.	15 Agg.
High MT	Mean 14.639	14.090	15.835	15.113	15.000	15.113	14.723	13.361	14.867	12.737	14.023	10.647	13.027	14.232	12.835
N = 133	S.D. 3.088	2.712	3.402	3.261	3.732	3.620	3.354	3.734	3.628	3.360	3.113	5.468	3.878	3.316	3.703
Average MT	Mean 13.935	13.973	15.419	14.718	14.710	15.349	14.964	12.873	14.676	13.135	13.938	11.823	13.012	14.105	13.329
N = 402	S.D. 3.287	3.379	3.644	3.125	3.094	3.543	3.650	3.654	3.523	3.174	3.373	5.427	3.155	4.282	3.168
Low MT	Mean 14.027	14.479	15.603	14.164	14.342	14.534	14.411	13.712	16.507	13.603	14.438	12.288	13.247	14.466	13.329
N = 73	S.D. 2.949	3.123	2.985	3.149	3.163	3.033	8.858	3.687	2.829	2.802	6.130	4.474	3.662	2.994	3.206
H MT/A MT	-values 2.172	0.339	1.152	1.248	0.916	0.663	0.672	1.328	0.532	1.234	0.256	2.162*	0.030	0.316	1.494
D.F. 532															
A MT/L MT	t-values 0.224	1.192	0.407	1.391	0.907	1.845	1.177	1.803	2.681**	1.179	1.003	0.690	0.568	0.691	0.001
D.F. 472															
L MT/H MT	t-values 1.382	0.760	0.480	2.021*	1.275	1.160	0.604	0.649	2.753**	1.873	0.646	2.192*	0.404	0.501	0.559
D.F. 204															

\* Significant at .05 level (1.97)

\*\* Significant at .01 level (2.59)

age group which is above 31 years of age group. It clearly shows that the representation of teacher trainees in this sample belongs to fresh graduates/postgraduates and the experienced teachers who may have three to four years of teaching experience in secondary schools.

3. When the data was analysed as regards to the highest degree obtained by the teacher trainees under study it was observed that roughly 83% of them had passed their graduation in arts/science and/commerce. Their percentage according to different streams are B.A. 948.68%), B.Sc. (33.55%), B.Com. (1.64%) and rest of them are post-graduates in arts/science/commerce. The investigator feels to write that only 11 students in the whole study sample belong to commerce stream, i.e., teacher trainees on the whole more or less belong to arts or science faculties.

When the data was analysed as regards to rank of division secured by them at the degree level it was observed that 56% of them could pass the graduation either by securing a pass class or by having a III Division. 34.7% of them belong to II Division category and only 9% of them come from first divisioner rank. It can be safely concluded that teacher training programmes could not attract the better potentials for admission purposes.

As government teachers training colleges, the untrained teachers with 2-3 years of teaching experience are

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so it was<sup>a</sup> necessity to know all about their duration of teaching in different schools. It was revealed that 57.23% of them had teaching experience from 0-3 years. 40% of them could have teaching experience for 4-9 years. It is observed that the teaching experience tallies with the age range of teacher trainees. Some teacher trainees would have experience of teaching for 10+ years. Along with this data it was felt necessary that the information about the permanent residence of the teacher trainees may be observed. The analysis of the data showed that 75% of the total trainees belonged to rural areas and only 25% of them come from urban sector. It clearly shows that the teacher trainees opting for teaching as a career come mostly from rural sector. It can be safely interpreted that Orissa being an underdeveloped state and mostly inhabited by tribal people, education has not been a major concern of them. Due to economic development and new plans being launched in the state the people are sending their wards for education but the data shows that mostly the teacher trainees have rural background. When the respondents were asked to mention their stay during studies at the B.Ed. level 86.68 of the respondents favoured hostel living. It may be also one of the possibilities the training colleges being residential in nature, naturally, asked the trainees to opt for the hostel living. Therefore, only 13.32% of the teacher trainees remain with their parents while doing B.Ed.

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To explore the academic background of the parents, i.e., the parents' - fathers'/mothers' educational level it was observed that 18% of the trainees' fathers are post-graduate or have attended different colleges to go for post-graduate studies. Approximately 80% of them are either primary or higher secondary or having education below primary level. The mothers' education seems to be very meagre, that is, 13 trainees' mothers have gone for post graduate study. Majority of them (66%) is either illiterate or they have taken education upto primary level. Looking to these figures it is observed that majority of the teacher trainees come from those homes where parents are not much educated. This condition tallies with the rural background of the teacher trainees.

When the data was analysed for parents' occupation it was observed that 60% of them belong to labour and farmer classes, 20.55% from clerical/teachers and only 19% of them constituted a gazetted class. It can be safely concluded that approximately 81% of the trainees' parents are having non-gazetted and low level occupations. Their economic status as observed or perceived by the trainees themselves is also of middle class level. 87.17% of them belong to middle class, 11.84% to the lower class and only 1% constitute of upper class level. This data is quite in parlance with the parents' occupational and educational level. The monthly



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income of teacher trainees' parents was found out to be:  $M = 498$  with S.D. of 346. This shows that parents of the teacher trainees have a large variation as regards to income per month. Majority of them have income ranging from 399 to 100. 65 of them have income beyond Rs. 1,000/-. Rest of them belong to 400 - 999 group.

#### 5.4 Nature of the Family

It was thought proper to study the teacher trainees in their total perspectives, that is, the world around which they live so that their perceptions, personality needs, anxiety and other behavioural correlates may be studied in relation to their family structure they belong to. It was thought proper to explore the social background of students of education in this sample as regards to the nature of the family such as joint/nuclear, rural/urban, agriculturist/non-agriculturist, traditional and illiterate/modern and literate, religious and liberal in religious. These factors were considered essential to define the nature of the families so that the teacher trainees' attitude in relation to their homely background, age and religion may be studied properly. Therefore, the part 'B' of the questionnaire - Self-Report Card for teacher trainees was developed. The analysis of the data has shown the following results:

As regards to the type of the family that the teacher trainees have, it was observed that 55.59% of the trainees belong to nuclear families and the rest of them (44.4%) belong

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to joint family category. It is safer to say that the teacher trainees in majority belong to nuclear families.

As regards to the rural/urban background, the teacher trainees (70%) come from rural homes as the occupation of the parents has been one of the indices to assess the general back-grounds of parents, it is essential that rural background has a significant contribution to the general adjustment towards life situations, that is, 70% of the students have extensive rural life experience that it is not surprising to find that the fathers who practise urban occupations could very well live in their village homes on the periphery of the small towns where they work. Therefore, the practice of an urban occupation does not necessarily mean urban residence. The sample also indicates that only 30% of the teacher trainees belong to urban areas.

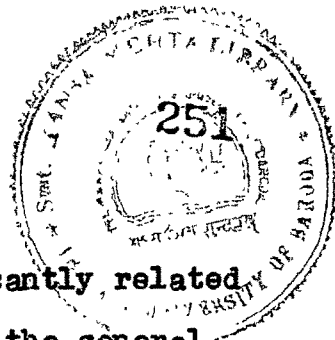
As regards to the occupation undertaken by the parents of the trainees 67.6% of them belong to agriculturist class and rest of them are engaged in non-agriculturist towards traditional or modern life was assessed and it was surprising to find that 66.6% of them want to practise modern ways of living as they consider it a basic of esteemed position. By having education and income they have a sense of achievement which they judges on the basis of characteristics like family, income, education and the occupation. Their attitude towards religion is also not a less than any measures

of their value system. Even then, it was found that 66.28% of them practise religious values and 33.71% of them are liberal in religion, that is, by having social and public life, the value of teacher trainees are more towards the religious set-up than the modern effects. As religion and caste play an important role for shaping the individual's personality and perception, so most of the teacher trainees of Orissa, believe in religious directives. It can be safely concluded that the teacher trainees mostly come from rural setting and their parents practise agriculture as an occupation. They believe in modern outlook towards life but still they practise religious values. All these factors have got a significant contribution towards n-Ach., personality needs, anxiety, self-perceptions and intelligence level which affect the academic performance. Therefore, a detailed description of these variables would be studied in combination in relation to the nature of the family and can be analysed from the following pages:

#### 5.5 Study of n-Ach.

Research in certain non-intellectual factors such as n-Ach., personal preferences/personality needs, measures of self-perception, anxiety and some of the socio-psychological factors are gaining a good importance in the recent years and especially impact of these variables on academic performance of individuals. The very fact, as reported by Binder et. al. (1970) that the 70% of achievement variance remains to be explained, encourage researchers to identify isolated

and investigate these and other non-intellectual factors as possible predictors of scholastic achievement. When some of these factors proved to be the viable predictors, it reinforced their belief to undertake more studies at different samples and with different geographical areas. Jones and Grieneeks (1970), while discussing the results of their study "measures of self-perception as predictors of scholastic achievement" maintained "perhaps it is in the realm of such non-intellectual variable that one's insight into nature of other persons become most meaningful for decision making and accomplishment. The individual possessed both types of energies such as intellectual as well as non-intellectual which bring desirable results as regards to the future needs etc. through which the individual is able to meet the motivational needs to reach the desired goals. McClelland, Klett, Krug, Uhlinger and Stephens have utilized these measures of motivation for relating them to academic achievement. Therefore, the academic achievement of the individual is due to the intellectual energy but researchers of Binder (1965), Jones (1966), Binder, Jones and Storowing (1970) and Schroeder (1963) have explored this myth and they encouraged others to undertake more studies in this area. McClelland, et al. (1953), Rosen (1956), Atkinson et al. (1961), Merrill and Murphy (1969), Mehta (1973), Desai (1970) and several others have established that



achievement motivation (n-Ach.) was significantly related to the academic achievement, and similarly, the general background of the individuals has got a considerable say to speak the success and failure of the individual in the job, occupation, academic success etc., i.e., n-Ach. will be correlated with 1) the strength of parental demands for achievement and 2) the reported strength of super-ego demands for achievement. The studies concluded by McClelland and Friedman (1953), Rosen and d'Andrade (1959) pointed out that encouragement of independence in general must be distinguished from encouragement of independent achievement in particular.

One of the major objectives of the present study was to determine the n-Ach. level of the students of education/ B.Ed. trainees study in the six different government teacher training colleges of Orissa to investigate its nature and relationship with other variables. It is, therefore, necessary that the investigator should define the concept of achievement motive before presenting the different details related to n-Ach. and its different categories, as measured by Dr. Mehta's Test of Achievement Motivation.

#### 5.5.1 Achievement Motive

Motives are conceived as latent dispositions to strive for a particular goal, state or aim achievement,

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affiliation or power. Therefore, the term achievement motive refers to the need for achievement (Atkinson, 1966, p. 379).

From the above statement it is obvious that motives are different patterns of thought associated with different goals. Achievement motives can be inferred from the achievement thoughts. Achievement thoughts are those ideas which are associated with striving for some kind of excellence, as opposed to the thoughts/ideas associated with gaining prestige and influence etc.

Prof. McClelland et al. (1953) has arrived at a behavioural sequence, after classifying many aspects of the behaviour and experiences reflected by the individuals while writing stories which depict their fantasy level. Summarizing their observations Atkinson (1958, 1966) suggested that the thoughts of an individual having n-Ach. are associated with the following patterns:

1. Individual experiences a state of need or a motive (N);
2. He may also be anticipating successful attainment of his goal (Ga+) or anticipating frustration and failure (Ga-);
3. He may engage in activity instrumental (I) to the attainment of his goal which may lead to the attainment of the goal (I+) or not (I-).
4. Sometimes his goal - directed activity will be

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blocked. The obstacle or block (B) to his progress may be located in the world at large (Bw) or it may be some personal deficiency or located within himself (Bp).

5. He may experience strong positive and negative affective states while engaged in solving his problem, i.e., in attempting to gratify his motive. He is likely to experience a state of positive affect (G+), in goal attainment, or a state of negative affect (G-) when his goal-directed activity thwarted or he fails;
6. Often someone will help or sympathize with the person (Nurturant Press-NUP) aiding him in his goal-directed behaviour.

Based on the concepts given as above the n-Ach. scores for an individual were arrived at by analysing six TAT stories which have been related to the fantasy level of the respondents who could perceive six different pictures for a short span of time. The content of the pictures has a back drop of TAT principles as developed by Murray and later on used by Dr. McClelland for measuring the achievement motivation of the individuals. In approaching these problems the several activities or actions in the form of goal orientation, goal anticipation affective states, instrumental acts etc., were to be sorted out with the achievement of the individual

or with some other motive of his. Having approached this problem McClelland and his associates could develop the different ideas - one based on experimental investigations of animal motivation. Therefore, the fantasy effect related to an individual was utilized for measuring the motivation of the individual. This hypothesis appears to be, amply supported by Freud's original work on Dream Analysis, and the clinical success of Murray's Thematic Apperception Test of measuring personality disorders. For the present study the investigator used 6 pictures standardized by Dr. Prayag Mehta for getting total achievement motivation scores. The 6 stories were examined as regards to their constituent elements such AI, UI, TI, N, I, Ga+, Ga-, Bp, Bw, NUP, G+, G- and n-Ach. Th. and the total n-Ach. score was calculated for each individual in response to the six pictures. The scoring was done as per instructions provided in the manual by McClelland and his associates. The maximum score achieved by an individual on 6 stories is 66 while the minimum is of value -6, when 6 picture test is used. The below mentioned table indicates the distribution of n-Ach. score for teacher trainees of Orissa:



TABLE 5.2

n-Ach. Score Level of the Teacher  
Trainees  
N = 608

S.No.	Class interval	f	%	Remarks
1.	44-48	1	0.16	
2.	39-43	8	1.31	
3.	34-38	10	1.64	
4.	29-33	20	3.28	
5.	24-28	28	4.60	
6.	19-23	57	9.37	
7.	14-18	62	10.19	
8.	9-13	52	8.55	
9.	4-8	97	15.95	
10.	-1 to +3	63	10.36	
11.	-6 to -2	210	34.53	

It is obvious from the above table that the n-Ach. score for the present sample of teacher trainees of Orissa ranged between -6 to 48. The figures in the table show that 273, subjects secured below +3 score which indicates that the subjects are not oriented to achievement imagery, i.e., they have described the cards as such with unrelated variation. Therefore, the stories of these individuals belong

to UI class. While other 67 could secure n-Ach. scores between 24-48 which pertain to higher n-Ach. level while rest of them have obtained average n-Ach. score. The mean and S.D. for the present sample ( $N = 608$ ) are 7.64, and 11.848. These results are little higher than the already established norms of school children. Because the study is confined to teacher trainees, therefore, the results obtained are better in magnitude than the Madras Study ( $M = 4.88$  S.D. 4.39). It can be concluded that the teacher trainees of Orissa are having higher n-Ach. line than the teacher trainees of Madras.

#### 5.5.2 Need Achievement Measure

The present study has been confined to the sample of teacher trainees of Orissa who would join as secondary school teachers later on. As need achievement is one of the variables used in this study around which the other variables have been worked out to find out the significant relationship if any or otherwise of n-Ach. with other variables. So it is implied that the essential statistics related to these dimensions may be given for a comparative understanding. The investigator observed the set procedure for scoring the AI stories whose reliability effect was confirmed by the other researchers and experienced scorers for the efficacy of the results. The investigator could arrive at the following results:

TABLE 5.3

Showing Mean, S.D. Median and Mode of the  
n-Ach. Scores of the Subjects(N = 608)

S.No.	Variable	Mean	S.D.	Median	Mode
1	n-Ach. N=608	7.64	11.848	5.09	0.013

The above table shows the mean S.D., Median, Mode of the n-Ach. score for the present sample. It is observed that the mean and S.D. of the present sample are a little higher in magnitude than that of the other studies conducted in India in general and that of Madras study in particular. Some of the researchers<sup>9</sup>(Delhi, Gujrat (G), Andhra Pradesh) results range from Mean 4.66 to 6.0 while the result of the present study n-Ach. mean is 7.64 with S.D. of 11.848. This indicates the teacher trainees of Orissa are having higher motivational level as compared to teacher trainees of other states ( A.P. and Madras). The teacher trainees under sample show higher level of motivation as these teachers would occupy different positions in several schools of Orissa State in particular and country in general. Therefore, there is every liklihood, that with the passage of time they would hold executive and administrative post in the hierarchical level of educational jobs. It is, therefore,

essential that n-Ach. level of the youth should be high when the data of the present study is put to comparison with the already established norms related to n-Ach. levels, pertaining to Indian situations and the foreign scene, the following results are obtained:

TABLE 5.4

Essential Statistics (Means and S.Ds for n-Ach.  
Scores in Various Studies - Indian/Foreign

S.No.	Countries	N	Mean	S.D.
1.	Japan (a)	175	8.24	4.81
2.	Germany (a)	411	4.60	5.34
3.	Brazil (a)	378	5.47	5.24
4.	U.S.A. (b)	424	4.76	5.11
5.	India (a) (Madras)	152	3.79	4.79
6.	India (Delhi) (c)	974	4.76	3.82
7.	India (Gujrat) (d)	1000	3.92	7.10
8.	India (Gujrat) (e)	236	6.00	6.13
9.	India (Gujrat) (f)	1346	1.88	5.77
10.	India (Gujrat) (g)	170	4.81	5.84
11.	India (Gujrat) (h)	125	3.10	6.63
12.	India ( A.P. ) (i)	200	4.66	4.02
13.	India (Madras) (j)	410	4.88	4.39
14.	Present Study (Orissa)	608	6.67	4.81

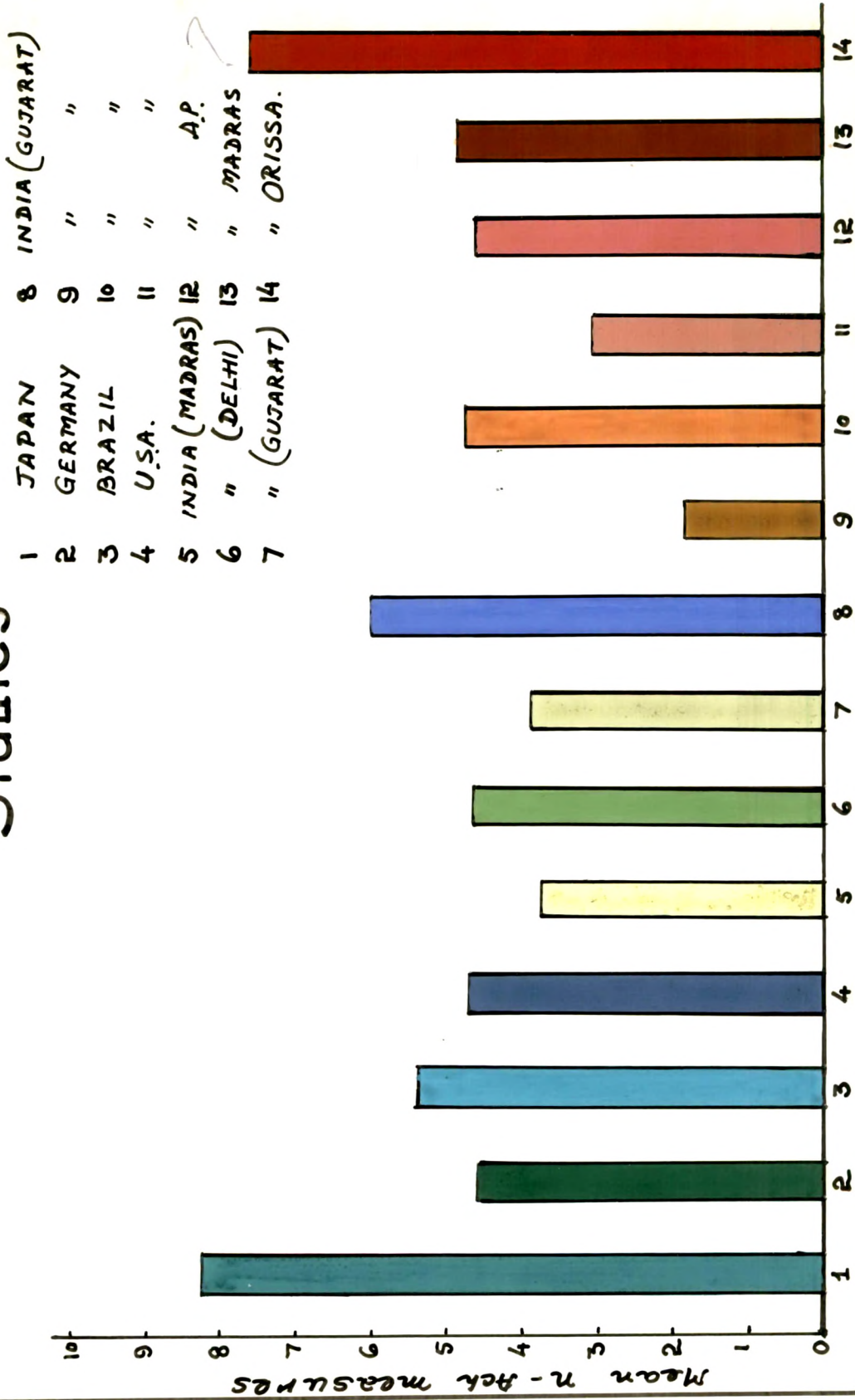
The graph shows different level.

- a) McClelland, D.C.: 1961 - Stories written to 4 pictures
- b) ROSEN: 1959 - Stories written to 4 pictures
- c) Mehta Prayag: 1969 - Stories written to 6 pictures
- d) Desai, D.B.: 1970 - Stories written to 4 pictures
- e) Dave, K.: 1973 - (unpublished dissertation) Stories written to 6 pictures
- f) Pathak, C.C.: 1973 - (unpublished thesis) Stories written to 6 pictures
- g) Choksi, A.J.: 1973 - (unpublished dissertation) Stories written to 6 pictures
- h) Kapoor, R.: 1974 - (Unpublished dissertation) Stories written to 6 pictures
- i) Vijaya Vardhan, T.: 1975 - (Unpublished M.Ed. Dissertation, 1975).
- j) Rao, K.S.: 1975 (unpublished.Ph. D. thesis)

The table 5.4 presented above shows the n-Ach. level of the various sample population Indian and foreign. As most of the studies quoted above have been conducted on school going population, so the results arrived at by the Indian researchers are comparable to that of the Japan and America. Even, the results arrived at by the present researcher are very much akin to that of Japanese study while the sample varies in magnitude that in  $N = 608$ ,  $M = 7.64$ ,  $S.D. = 1.848$ . These results are higher than the results obtained by Rao, K.S. (1975) of the teacher trainees of Madras. As we offer education through set curriculum, therefore, the schools and colleges help the students to

# Mean Measures of n-Ach in Fourteen

## Studies



Country (or place) from which sample is drawn.

acquire certain skills, knowledge, understanding of the concepts. And therefore, they develop certain cognitive abilities. If these abilities are sharpened at a proper age and time then, the individuals can be more productive in their outputs in the world of work. But the system of education seems to have no clear goals, therefore, it needs direction to serve the purpose to which it is intended. Achievement Motivation is one of the variables which need to be developed among the youth so that they may achieve better through several challenges to work upon and to enter in a desirable way to meet the success. The subjects taught at the school and college level should harness the best potential of the individuals so that they must contribute positively to the society.

### 5.5.3 Components of Need Achievement

The n-Ach. stories are to be scored out from (UI) unrelated imagery through task related imagery to achievement imagery. The scorer is to decide whether the stories belong to unrelated imagery (UI), task related imagery (TI) or achievement related imagery (AI). The UI & TI stories were awarded '-1' and '0' scores respectively, AI stories were '1' score. These AI stories were further scored out for the sub-categories which together with AI make up the n-Ach. score of each story. The sub-categories were: Need (N), goal anticipation either positive or negative (Ga+, Ga-), blocks either from outside or from within (Bw, Bp), affective states both positive and negative (G+, G-), instrumental

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activities (I), help (NUP) and achievement thema (Ach.Th.).

For the above mentioned sub-categories one score is to be awarded for each point in a story. Therefore, these sub categories form the components of n-Ach. score. Individuals who would verbalize these categories while writing these stories for depiction of their fantasies in these stories secure higher n-Ach. score. The table given below gives all the details of the components present in the stories written by 608 teacher trainees:

TABLE 5.5

Need achievement components present in the Imaginitive stories written by the total sample of the study N.608

Total number of stories written: 3648

S.No.	Nature of the stories	f	%
1.	UI stories	1556	42.65
2.	TI stories	1142	37.30
3.	AI stories	950	26.04

The total analysis of the stories indicated that the teacher trainees have expressed achievement Imagery in 26% stories, task related Imagery in 37.30%, and Unrelated Imagery in 42.65%. It is to conclude that the sample of the teacher trainees could not provide the better percentage as regard to achievement Imagery facts. But whosoever has



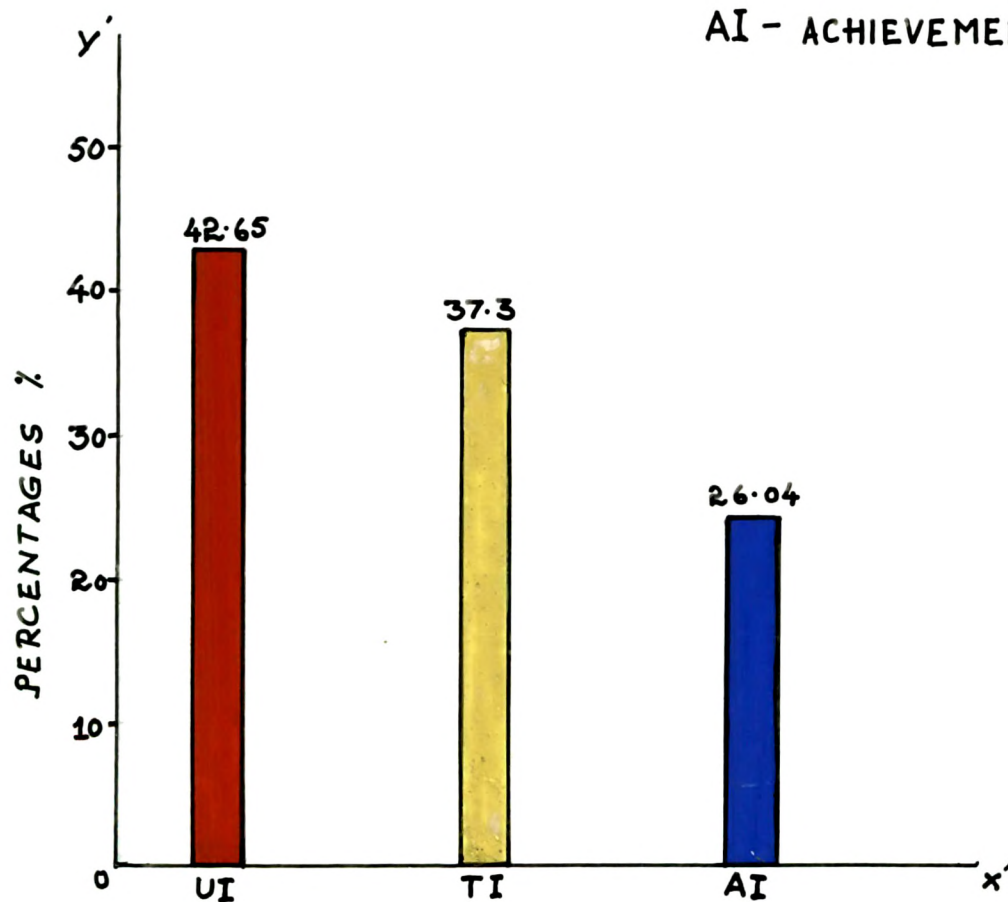
# Different types of Imageries in Need Achievement Stories

Total sample (N= 608 )

UI - UNRELATED IMAGERY

TI - TASK IMAGERY

AI - ACHIEVEMENT IMAGERY

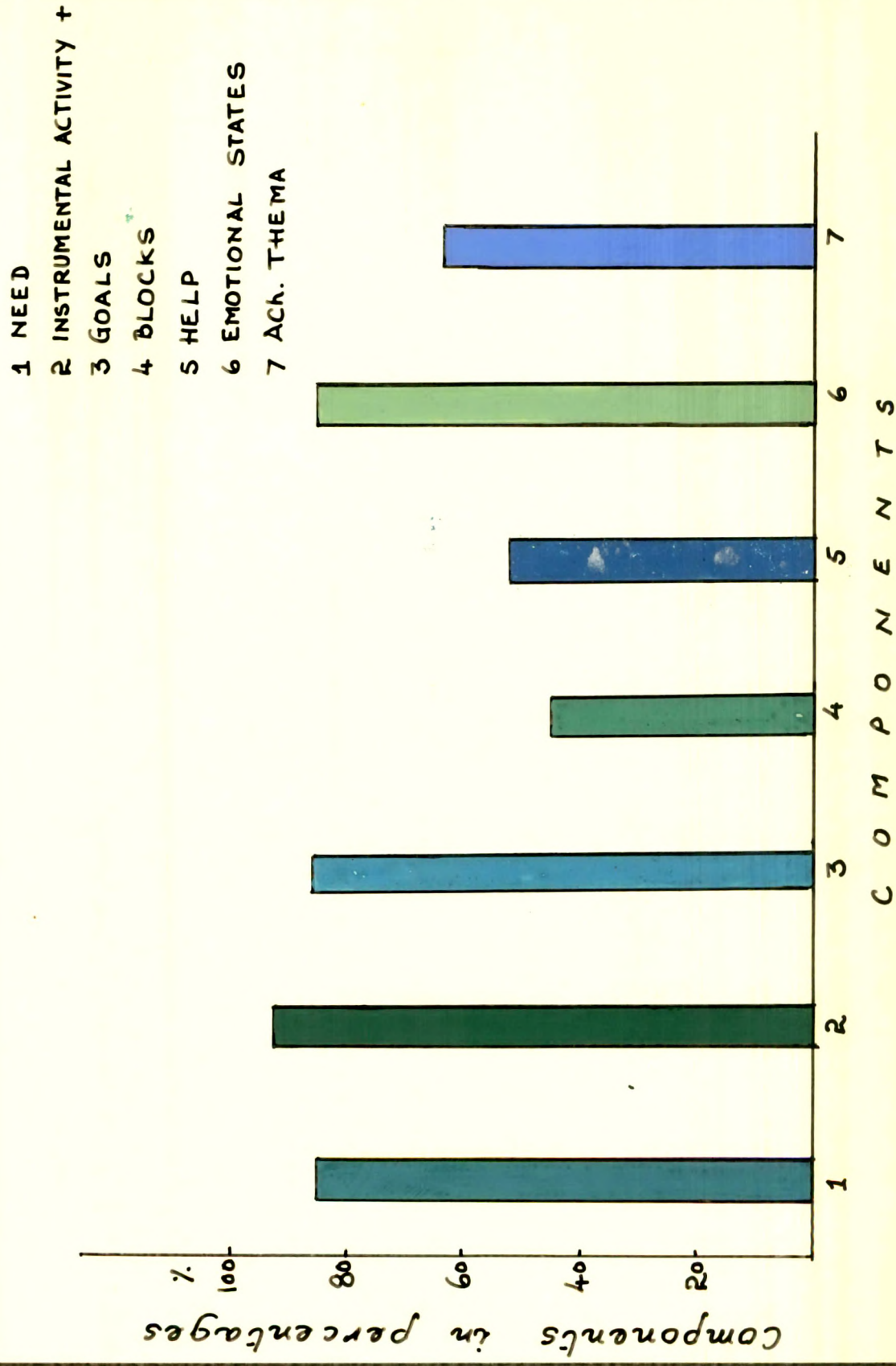


done it sincerely, they have shown the high score in the total n.ach. as compared to other samples related with the school going population (it might be one of the reasons that the some of the trainees could not pick up the genesis of the TAT. However, they have reacted to the pictures for writing the stories. The future researchers can find out the validity of this statement). The AI stories have been further subjected to the detailed analysis as regards to its 12 different components as N, I+, I?, I-, Ga+, Ga-, Bw, Bp, Nup, G+, G-, Th. These components have been sorted out in stories -950, and the details worked out are given as under:

TABLE 5.6  
Showing the various components of AI stories  
with f, and %

S.No.	Categories	Total no. of score	N	%
1.	N	820	336	86.31
2.	I+	859	345	90.42
3.	I?	13	11	1.36
4.	I-	19	15	2.0
5.	Ga+	824	335	86.73
6.	Ga-	42	25	4.42
7.	Bp	242	154	25.47
8.	Bw	193	127	20.31
9.	Nup.	502	236	52.84
10.	G-	63	45	6.63
11.	G+	759	328	79.89
12.	Th.	607	264	63.89

# Percentages of n-Ach Components in the Present Sample



The above table shows that the sample of the teacher trainees have expressed 86.31% of Need related to the expressed imagery in the stories. This shows that they want to achieve the goals in the right perspectives. Instrumental activities have been shown in 93.78% of the cases. However, the percentage of the positive activity is 90.42 in the present sample. These trainees have shown the keen motivation to reach the goals, in some way or the other and the activities listed down are varied in nature. Goal anticipation also find a good percentage in the stories, i.e., 86.73% of cases are able to imagine their goals clearly. That is why they have shown the better n.ach. score than others. They are more motivated as regard to the general success in teaching tasks is concerned. It may be interpreted that -t the teacher trainees want to settle down in the world of work or some may find the opportunity to settle down into the life situations. Blocks worldly and blocks personal also find place in the analysis and their percentages are: 25.4% and 20.31%. This shows that the trainees feel some inconveniences as regards to training programme. This may be related to their homly conditions as most of them are coming from the rural areas and belong to middle and lower middle class families.

NUp. also finds a good place in the stories as 52.84% of the trainees have expressed their desire to seek the

help from the outside agencies. They are not self sufficient to rub the situations themselves. It may be possible that the professional classes pose some difficult<sup>ies</sup> and help the trainees to get help from others: teachers, student teachers and parents etc. Achievement Thema is also related with the AI stories and 63.89% of the trainees have described the achievement thema in various stories. This shows that well knit characters can be identified in these stories which reflect the mental state of the trainees at the moment of getting training for teaching as a career. However, it can be concluded that the trainees, are having the best record as regard to writing procedure as most of the components of each find the representation in the sample under study.

Pathak (1973) has also analysed the AI stories for components. But the sample of his study was high school children between the age 13+ and 16 years. His figures showed that 61.6% indicated need, 58.0% instrumental activities, 22.4% goal anticipation, 11.9% blocks, 3.4% help, 9.2% affective states, and 7.8% achievement thema. These figures in various components of his study and the study made by Rao, K.S. (1975) show wide diversity. The two samples are drawn from the different regions which differed in culture. Added to these differences, the age of the two groups differed significantly. The sample of Pathak (1973) study was in the growing stage, their attitudes, and motives

have not yet emerged to any state of development.

The results of the present study on teacher trainees, show a little divergence from the study made by Rao, K.S. (1975) as the sample belongs to state of Orissa where the individuals are striving hard to better their lots. The results show the similar findings.

#### 5.6.00 Personal Preference Measured by E.P.P.S.

The personal preferences of the teacher trainees were measured by EPPS. This tool is a measure of a number of relatively independent normal personality variables, called personality needs as defined by Murray. It contains 225 items each of which has two self-descriptive statements arranged in a forced choice format. The examinee is instructed to indicate which of the statements is more characteristic of what he likes or how he feels. These 225 paired items have been divided in 15 manifest needs as measured by EPPS such as achievement, deference, order, exhibition, autonomy, affiliation, introversion, succorance, dominance, abasement, nurturance, change, endurance, heterosexuality and aggression. The total score on EPPS is 210 and fifteen items are to be ignored for finding out the category-wise score. The maximum score of each category is indicative of one's dominant needs from the 15 personality variables. The means and S.D.s of the EPPS variables for the present study are given as under:

**TABLE 5.7**  
**Means and Standard Deviation of the EPPS**  
**Variables for the Normative Samples**

S.No. Variable	Means			S.D.		
	Men	Women	Total	Men	Women	Total
1. Achievement	14.08	14.14	14.11	3.14	3.4	3.27
2. Deference	14.46	15.39*	14.92	3.11	3.2	3.15
3. Order	14.72	15.12	14.92	3.69	3.42	3.55
4. Exhibition	13.13	13.00	13.06	3.18	3.17	3.17
5. Autonomy	13.20	12.68	12.94	3.24	3.68	3.46
6. Affiliation	14.05	14.07	14.06	3.2	3.9	3.55
7. Intraception	14.6	15.00	14.80	3.2	3.48	3.34
8. Sucorance	12.96	13.39	13.17	3.74	3.53	3.63
9. Dominance	14.17	13.65	13.91	3.95	3.20	3.57
10. Abasement	13.91	14.80*	14.35	4.18	3.22	3.70
11. Nurturance	15.2	16.31*	15.75	3.3	3.9	3.60
12. Change	14.81	16.14*	15.47	3.4	3.6	3.5
13. Endurance	14.38	15.01*	14.69	3.5	3.5	3.5
14. Heterosexuality	12.92*	8.54	10.73	4.5	5.9	5.20
15. Aggression Score	13.46*	12.67	13.06	3.1	3.61	3.35

\* this mean is significantly larger (at the percent level  
than the corresponding mean for the opposite sex.

From the above table it is evident that the EPPS variables statistics for the present sample (N = 608) is quite informative as regards to the inter-intra individual differences related with the teacher trainees. The means worked out for different personality needs ranged from 12.92 (hetero-sexuality) to 15.2 (nurturance) while the means for the girls are 8.54 (heterosexuality) and 16.39 (Nurturance). These means are the lowest and the highest in magnitude for men and women as related to 15 personality needs. When this data is compared with the American sample population the following figures emerge out:

TABLE 5.8

Means and S.D.s of the EPPS Variables for the  
normative Sample of College Men and Women of  
U.S.A.

College Sample

S.No. Variable	Means			Standard Deviations		
	Men	Women	Total	Men	Women	Total
1. Achievement	15.66*	13.08	14.38	4.13	4.19	4.36
2. Deference	11.21	12.40*	11.80	3.59	3.72	3.71
3. Order	10.23	10.24	10.24	4.31	4.37	4.34
4. Exhibition	14.28	14.40	14.34	3.53	3.65	3.59
5. Autonomy	14.34*	12.29	13.31	4.45	4.34	4.53
6. Affiliation	15.00	17.40*	16.19	4.32	4.47	4.36
7. Intraception	16.12	17.32*	16.72	5.23	4.70	5.01
8. Succorance	10.74	12.53*	11.63	4.70	4.42	4.65
9. Dominance	17.44*	14.18	15.83	4.88	4.60	5.02



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10. Abasement	12.24	15.11*	13.66	4.93	4.94	5.14
11. Nurturance	14.04	16.42*	15.22	4.80	4.41	4.76
12. Change	15.51	17.20*	16.35	4.74	4.87	4.88
13. Endurance	12.66	12.63	12.65	5.30	5.19	5.25
14. Heterosexuality	17.65*	14.34	16.01	5.48	5.39	5.68
15. Aggression	12.79*	10.59	11.70	4.59	4.61	4.73
N =	760	749	1509			

\* this mean is significantly larger (at the 1 per cent level) than the corresponding mean for opposite sex.

The table gives a distribution of scores according to sexes on different variables. The means and Standard Deviations in raw score units, for each of the 15 personality variables as shown in the table are given for making comparison between men and women teacher trainees. The table also shows that men have got different personality need, that is, heterosexuality and aggression and their means are significantly higher than women means on these dimensions. But women teacher trainees show higher means than men on deference, abasement, nurturance, change and endurance. These have got significantly larger means than male teachers at .01 level of confidence. The results of the present study are quite comparable with results of the U.S.A. Study made by using EPPS on the college students. The male teacher trainees show similar personality needs (heterosexuality, aggression)

and are comparable with the results of the American study. However, men teacher trainees do not show significant difference between the means on need achievement, need autonomy and need dominance when compared with the results of America data. This is attributable to the fact that in Indian setting socio-cultural influences are altogether different from that of America. In the Indian set up men and women both strive hard for need achievement, deference, autonomy and dominance. Hence, both the sexes do not show much difference on these variables. However, they show similarity on personality needs - as heterosexuality and aggression which are mainly the characteristics of the male population. Women generally by nature avoid or feel shy as regards to heterosexuality and aggression standard, when compared with the opposite sex. The present study has contributed significantly to justify the personality needs, difference if any of the male and female teacher trainees.

The other variables in hand have been compared with EPPS results and have been shown on the other pages.

#### 5.7.0 Self-Perception Measures

Along with the personal preferences the self-perception measures have been examined by using Oliver H. Bown's SRI and results have been obtained on 8 dimensions: scores on perception of self, others, children, work, authority, reality, parents and hope. The levels of

perceptions of the total sample given in the table 5.9. The mean and standard deviation of each scale are given for the entire population. These measures indicate the significant difference in any between the two sexes or the positiveness or negative effect of perceptions of the students of education about their phenomenal world. The phenomenal world as per the operational definition consists of 8 perceptual areas and the attitude of students of education of Orissa about their phenomenological world can be seen at a glance from the following table:

TABLE 5.9

Means and Standard Deviations of Nine Scores  
of Self-perception for the Normative Samples

S.No. Variable	Means			Standard Deviation		
	Men	Women	Total	Men	Women	Total
1. Self	17.60	17.88	17.74	3.8	4.1	3.95
2. Others	20.3	20.13	20.21	3.68	3.68	3.68
3. Children	20.1	19.7	19.9	3.4	3.56	3.48
4. Work	18.3	18.72	18.51	3.8	3.8	3.8
5. Authority	19.4	19.7	19.55	3.6	4.02	3.81
6. Reality	18.80	18.62	18.71	4.02	3.85	3.93
7. Parents	20.21	20.44	20.32	5.17	4.19	4.68
8. Hope	22.1	21.84	21.97	7.4	6.7	7.05
9. Total	155.9	158.1	157	17.9	32.1	25

From the above table, it is obvious that the mean scores for boys and girls on self, other authority, reality and parents scales are more or less of the equal magnitude when compared with children and hope scales. The significant difference on these scales has not been observed as possible that is it clearly shows that the perception of the boys and girls under the study are more or less same. While the aggregate means for all the scales for boys and girls show a difference. The self was not perceived negatively but still difference has not been observed. Anxiety and uncertain future is associated with the "negative self", of the person. Therefore, due to "negative self", the phenomenological world also gets changed and thereby, the individual is not able to achieve properly. Therefore, "negative self" is always a hindrance. Combs (1959) observed that a positive view of the self gives it owner a tremendous advantage in dealing with the life situations. It provides the basis for great personal strength feeling positively about themselves and adequate, individuals can meet life expecting success. Because they expect success, they behave what is more, in ways that tend to bring it out, (as reported in "self concept and school academic achievement", Pinkey, 1970). Positive self is essential and more so in youth. The children and hope scales show difference in attitudes of both the sexes and it is clearly evident that the sexes are bound to show

the difference in attitude as the self-image incorporates his perception of what he is really like (self identity), and of his worth as a person (self-evaluation), as well as his aspirations for growth and accomplishment (self ideal) as such the accuracy of our view of ourselves and others has a great deal to do with the type of inter-personal relationships which we are able to establish. The teacher trainees show a slight difference in their attitudes on work and reality scales which are not significant statistically. The teacher trainees have shown the higher degree of means on others, parents and hope scales while the least means are self, reality and authority. This clearly shows that the teacher trainees under sample study are not having higher perceptions about self, authority and reality.

These scales clearly show the behaviour of the youth of today who are generally showered with the remarks: "they do not know themselves, they do not have truism in life, perception of reality as related with their phenomenological world." And so is true as to their work situation. However, the teacher trainees show better concern about children, that is, liking of children, playing and spending time with them indicate the positive attitude of a classroom teacher towards teaching. Richek and Bown (1968) found that the work score was correlated significantly with sensations/intuition type.

### 5.8.0 Sex and Intelligence

When the data for intelligence test was examined, it was found that the female teacher trainees showed better intelligence level than the male population. The difference between the mean intellectual level is shown as under:

TABLE 5.10

Means and Standard Deviation of Men and  
Women Teacher Trainees

S.No.	Teacher Trainees	N	M	S.D.	Remarks
1.	Male	429	39.67	11.14	
2.	Female	179	43.79	9.79	

From the above table, it can be observed that the difference between the sexes on the intelligence scores is clearly evident. It is safer to say that under this study the female population has a higher mean intelligence score than the male population (43.79 and 39.67 respectively). Looking to the inter-intra individual differences, the female population is more homogeneous in character than the male population, that is, they vary in their intelligence levels. The higher mean intelligence among female teacher trainees is attributable to the fact that they come from middle and upper middle class of the Oriya Society where education of the girls in the past has not been favoured much while on the other side the male

teacher trainees have chosen this career as a last resort (to be presumed) and therefore difference is obvious.

When the data for anxiety scores was analysed, it was found<sup>that</sup> the male members show a higher anxiety mean than the girls which is evident from the following table.

TABLE 5.11

Means and Standard Deviation of the  
Teacher Trainees on Anxiety Test

S.No.	Teacher Trainees	N	M	S.D.
1.	Male	429	43.97	15.85
2.	Female	179	41.36	15.41

The anxiety and sex show a general trend; male members have more anxiety than the female members. The present study also purports the same relationship. The mean score for male teacher trainees is 43.97 while for the female population it is 41.36, that there is a slight difference between the means of male and female teachers. However, it may not be statistically significant as regards to difference between the two means.

When the studies connected with anxiety, achievement motivation and the reports of success or failure on learning tasks was analysed Weiner (1966) assessed the relationship among these variables and found that students high in achievement motivation performed better on an easy

task but worse on a more difficult task. These results represent a partial contradiction of some other researches and suggest the possible existence of an optimal level of anxiety some-where between the easy and difficult task.

Sharma, S., (1968) investigated the relationship of self-concept and general anxiety with school achievement (362 males, 358 females of class X students). He reported the relationship between self-concept and anxiety as  $r = -.50$  which shows a very low degree of correlation between these two variables. This is due to the fact that anxiety producing stimuli are individually perceived. Hence the degree and nature of resultant anxiety may be thought of as aspects of personality. Catahn (1965) attempted to relate scores on the Taylor Manifest Anxiety Scale for College students to their scholastic aptitude and achievement on a learning task. He found high anxiety combined with high aptitude in individual students facilitates learning, but that high anxiety combined with low or average scholastic aptitude hindered learning.

#### 5.8.1 Self and Performance

The performance of the teacher trainees at the B.Ed. level was examined by having the annual examination marks in theory and practice in aggregate. It has been observed that male and female teacher trainees do not show much difference as regards to achievement in academic tasks. The table given



below shows the performance of teacher trainees at the B.Ed. level.

TABLE 5.12

Means and Standard Deviation in Academic  
Achievement of B.Ed. Trainees

N = 608

S.No.	Teacher Trainees	N	M	S.D.
1.	Male	429	212.12	251.64
2.	Female	179	214.74	243.07

Academic performance of teacher trainees does not show significant difference in mean performance in aggregate marks. Girls are slightly better than boys. Girls are having less anxiety as compared to boys, therefore, anxiety and performance scores go together. More variation in academic achievement is observed that in girls, that is, girls are getting scores which show homogeneity<sup>or</sup> character as compared to boys. This is in accordance with the general trend observed elsewhere also. Kerensky (1967) found strong relationship between self-concept and achievement motivation of primary school students (N = 452) as compared to their scholastic achievement. However, having reviewed the studies the major generalization arrived at by the researcher is that consistent relationship between personality needs, self-perception, anxiety, achievement motivation and scholastic

achievement etc., does not exist. Considering the various variables under review, it is observed that the present study in hand would be able to give certain results at this level so that some generalization may be made.

Motivation and sex have got a significant relationship and shows a tricky affair with other variables, viz: personal preferences, self-perception, anxiety, performance, intelligence and the nature of the family etc. The data related to n-Ach. score obtained by male and female teacher trainees has been summarized in the following table.

TABLE 5.13

Means and S.D. of n-Ach. Scores related  
to Teacher Trainees N = 608

S.No.	Teacher Trainees	N	M	S.D.
1.	Male	429	5.84	11.69
2.	Female	179	10.67	13.20

From the above table it can be concluded that the male and female teacher trainees differ markedly as regards to n-Ach. scores as on Prayag Mehta's Test. Girls have higher n-Ach. score (10.67) than the boys (5.84). This fact has been supported by the study of Rao, K.S.(1975), who concluded that female's n-Ach. score was 5.039 (N = 271) and for males

3.87 (N = 139). However, the results showed significant difference at .01 level. In the present study also women students secured significantly higher than the men and the difference was significant at .01 level of confidence. The main reason for having a higher n-Ach. mean in case of women can be interpreted that the women candidates have got a better prospects for entering the teaching career for settling the marriage prospects and to become a bread earning unit in the family. Therefore, they have got a better goal anticipatory feelings, On the other sides the male members do not feel to have similar circumstances, therefore, they do not show a better n-Ach. score.

The nature of the family also contributes a lot as regards to the personality needs, perceptions, anxiety, n-Ach., academic performance and intelligence level because the SES of the families majorly govern the individuals attitude and outlook towards life situation. The present investigator also felt to assess the different family aspects related to male and female teacher trainees. These were sex, age, urban/rural residence, economic status, experience and their attitude towards religion.

#### 5.9.00 't' test technique and the Analysis of Data for Testing the Significant Difference between Different Independent and Dependent Variables

After analysing the data the investigator felt to give his conclusions regarding the relationship of different

variables and their difference if any on the basis of the statistical techniques and the results related to different variables such as n-Ach., personal preferences, self-perception, anxiety and other correlates as are related to intelligence, SES and academic performance of the teacher trainees of Orissa State. The number of dependent and independent variables included in the predictive battery were:

#### 5.9.1 Independent Variables

1. Intelligence.
2. Socio-Economic Status:
  - i) SES 'A' qualification of father
  - ii) SES 'B' occupation of the father
  - iii) SES 'C' income of the father per month
3. Performance
4. Sex
5. Teaching Experience
6. Economic Status
7. Urban/Rural
8. Traditional and Illiterate/Modern and literate
9. Religious/Liberal in Religion
10. Motivation

Some of these independent variables have been worked out in the form of levels as high, average, low (codified as 1, 2, 3), and other variables codified as per details given in the self-report card for teachers and have been undertaken on three levels only such as teaching experience:

10 years and above	1
4 - 9 years	2
0 - 3 years	3

#### Economic Status

Upper middle class and upper class	1
Middle Class	2
Lower class	3

Other dimensions such as sex (male, female), urban/rural, traditional and illiterate/modern literate, religious/liberal in religion have been codified as 1 & 2. Motivation codified as high, average and low.

These levels were worked out by the investigator by finding out the means and standard deviation for each and every college and by converting the raw scores into  $\bar{U}$  units and thereby all the score limits were identified for each variable in the form of high, average, low group for the preparation of data for computerization. This provided a sound basis as regards to cutting scores for different variables and could provide a scientific procedure for the identification of raw scores pertaining to different categories. This avoided the anomaly based on raw score ideas and on the basis of  $\bar{U}$  scores the procedure adopted became uniform for each and every individual under study. This provided a total uniformity for different variables so that necessary classification might have been made for comparison purposes. The higher statistics such as 't'

test technique, correlational matrix and regression analysis have been worked out likewise. The investigator is of the opinion that such a procedure adopted provided a scientific base for better conclusions on the basis of relevant interpretations.

5.9.2 Dependent Variables

For finding out the necessary relationships significance of difference of means between the dependent (35) and independent variables (10), the dependent variables were retained in the form of actual scores obtained by the individuals. The different codes assigned for the computerization of the data with details of different sub-categories under different variables have been shown against their titles with their appropriate abbreviations which can be seen from the following headings.

TABLE 5.14

Dependent Variables -35

S.No.	Computer Code	Variable with sub categories if any	Abbreviation used	Remarks
1.	INS	Intelligence Score	INS	
2.	ANX	Anxiety	ANX	
3.	E.P.P.S.			
	A - 1	Need achievement	n-Ach.	
	B - 6	Need Affiliation	Aff	

C	-	11	Need Nurturance	NUr
D	-	2	Need Deference	Def
E	-	7	Need Interception	Int
F	-	12	Need Change	Chg.
G	-	3	Need Order	Ord.
H	-	8	Need Succorance	Suc.
I	-	13	Need Endurance	End.
J	-	4	Need Exhibition	Exh.
K	-	9	Need Dominance	Dom
L	-	14	Need Heterosexuality	Het.
M	-	5	Need Autonomy	Aut.
N	-	10	Need Abasement	Aba.
O	-	15	Need Aggression	Agg.

4. Self Perception - Oliver H. Bown

P	-	1	Self Scale
Q	-	2	Other Scale
R	-	3	Children Scale
S	-	4	Authority Scale
T	-	5	Work Scale
U	-	6	Reality Scale
V	-	7	Parents Scale
W	-	8	Hope Scale
X	-	Tsp	Total Score

5. PR - Performance Score
6. Mot.- Motivation Score
7. Sx. - Sex
8. AGE Age

9.	UrR	Urban/Rural	U-1, R-2	
10.	Qua.	Qualification	B.Sc./M.Sc.-1	
			B.A./M.A.	-2
			B.Com./M.Com	-3
11.	Es	Economic Status	Upper	-1
			Middle	-2
			Low	-3
12.	Ex	Experience	10+	-1
			4 - 9	-2
			0 - 3	-3
13.	REL	Religious/Liberal	Religious	-1
			Liberal	-2

The above mentioned scheme as regards to the sequence of the variables has been utilized and null hypotheses have been worked out to test the significance of the difference between mean and other statistics.

#### 5.9.3 Significance of the Difference Between Mean

When can we feel reasonably sure that a difference between two means is large enough to be taken as real and dependable? This question involves standard errors of the two means being compared and can not be answered categorically. The obtained mean is subject to sampling fluctuations or errors of sampling and it is reasonable to expect that the difference between two means will also be subject to



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sampling errors. In order to test the significance of an obtained difference, we must first have a standard error of the difference. Then, from the difference between the sample means and the SED, we can determine whether a difference probably between the population means. A difference is called significant when the probability is high that it cannot be attributed to chance, hence, represents a true difference between population means and the difference in non-significant or chance when it appears reasonably certain that it could easily have arisen from sampling fluctuations, hence, implies no real or true difference between the population means.

#### 5.9.4 The Null Hypothesis

The present investigator has found the null hypothesis a useful tool in testing the significance of differences. In its simplest form, "This hypothesis asserts that there is no true difference between two population means and that the difference found between sample means is, therefore, accidental and unimportant."

If the null hypothesis is untenable, it must be rejected and the relation found otherwise would be interpreted like-wise.

To test the hypotheses, the investigator could use

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the 't' test technique for various independent and dependent variables in combinations against number of cases for each the degree of freedom observed for judging the difference as significant or non-significant where-ever necessary.

The detailed analysis and the data obtained have been worked out in relation with the independent variables with the 35 dependent variables and tables of the following pages maintain a sequence according to the details of independent variables.

#### 5.9.5 Intelligence Level and Intelligence Scores

The effects of intelligence on the relationship of personality needs with academic success have been demonstrated by Goodstein and Heilbrun. In their study they have come to conclusion that "when levels of ability are ignored as a variable the true relationship between personality measures and achievement may be concealed." The variations in the relationship may be found at different age levels. Therefore, differences between the sexes on some aspect of life at various levels have been the subject of numerous researches. Parlsey and others (1964) found significant difference between sexes in cognitive abilities. In the study conducted by Getzel (1962) has indicated that males from childhood to manhood tend to exhibit more aggressive behaviour than females of corresponding age levels. With this research background the

n-Ach. scores, self-perception, personal preferences, anxiety and other variables have been examined in relation to intelligence, SES and academic performance and other variables connected with nature of the family. The hypothesis was as follows:

Significant difference exists between the mean scores obtained by high, average and low intelligence categories of individuals.

TABLE 5.15

Significance of Difference in the means of intelligence scores among high, moderate and low intelligent teacher trainees.

(Controlled INT with dependent INS)

S.No.	Level of Intelligence	N	Mean	S.D.
1.	High INT	120	52.350	3.473
2.	Mean INT	375	42.456	5.645
3.	Low INT	113	23.496	8.532
		t-Values	D.F.	
High INT / Mean INT		18.125**	493	
Mean INT / Low INT		27.493**	486	
High INT / Low INT		34.158**	231	

\*\* Significant at .01 level (2.59)

INS = Intelligence Scores

The hypothesis has been retained as high, average, low categories of individuals have significant difference

between the means at .01 level of probability. It is obvious that the mean intelligence score for the high intelligent group is 52.35 with N = 120, and the average intelligence level has a mean score of 42.46 while the low intelligence level has a score of 23.49. The maximum number of teacher trainees (N = 375) fall under the category as having moderate intelligence. In the high and low category the number of students distributed in the present study seem to be more or less equal (120, 113). As the teacher trainees are engaged in B.Ed. course, therefore, the levels of intelligence shown by them are quite in parlance with the demands of the curriculum.

When intelligence levels were affected with the anxiety scores, it was observed that high, average and low intelligent teacher trainees do not show significant relationship with the anxiety scores as is evident from the table 5.16.

TABLE 5.16

Mean, S.Ds. and Significant Difference of  
Means of Intellegence Levels on Anxiety  
(Controlled variable INT with dependent Anxiety)

	N	Mean	S.D.
High INT	120	43.483	15.982
Average INT	375	42.627	15.528
Low INT	113	44.814	16.296

	t-value	D.F.
High INT/Average INT	0.522	493
Average INT/Low INT	1.298	486
Low INT/High INT	0.629	231

\* Significant at .05 level (1.97)

\*\* Significant at .01 level (2.59)

The above table clearly shows that high, average and low intelligent groups of teacher trainees do not show significant difference in means of anxiety scores as their means of anxiety scores are 43.48, 42.63, 44.81 with the S.Ds of 15.98, 15.52 - 16.3, therefore, it can be safely concluded that the anxiety level of the teacher trainees can-not be compared possibly with the intelligence groupings of the teacher trainees, that is, high intelligent people have high or low anxiety or low intelligent people have high anxiety. But in the present study sample no significant difference exists between the means of anxiety pertaining to three levels of intelligence. Therefore, the null hypothesis was retained, that is, levels of intelligence have more or less the same means on anxiety test.

5.9.5.1-15 Intelligence Levels and E.P.P.S. Dimensions (High, Average, Low Intelligence and 15 Personality Need Measured by E.P.P.S.):

Intelligence, scholastic achievement and personality

needs have been utilized quite frequently for predicting academic success. Intelligence and abilities are regarded all over the world as the most important factors involved in the attainment of scholastic success. The validity of selection for secondary school education at 11+ as discussed by McClelland throws more light on the prognostic value of test of verbal intelligence. ~~Arithmetic and English~~. It was found by him that the test of intelligence correlated with a criterion of success in the secondary schools to the extent of 0.70. But the findings of some of the studies do not take intelligence as a major predictor of academic performance. In a study made by Rowland grade point averages were found to be related to ACE scores to an extent of  $.41 \pm .03$ . This study brings out the inadequacy of the intellectual factor as a predictor of academic achievement. Still more prominently Kennedy also arrived at similar results and the correlation found by him for the total score on SCAT was as low as .35 for the male students which shows that only about 12% scholastic success was dependent on this test (Phyllis E. Kennedy- "The Predictive Value of the College Ability Test for a Group of College Freshment", Calif J.Edu. Research, 12.4, 1961, P. 175). Holland also made similar observation with scholastic aptitude test and found it was low efficiency for predicting the grades of high aptitude sample with a narrow range of talent. It is obvious that no intelligence test could explain more than 20% of the total variance

of success in any single school subject. In a follow-up study by Mehrotra, correlation between five psychological tests (EPT-8, Progressive Matrices, NIIP 70/23, Form Relations and EPST-1) and the aggregate scores of 115 students in the Intermediate Examination of 1957 were calculated and they were found to be as follows:

EPT-8	PM	70/23	FR	EPST-1
.47	.29	.30	.26	.40

It revealed that the maximum correlation was .47 between the verbal intelligence test (EPT-8) and the aggregate marks. The predictive efficiency of the psychological test of intelligence used singly came to be of the same order as found by other studies. Therefore, it is observed that academic success can not alone be dependent on intelligence level rather it is to be attributed to other factors also such as personality need, self-perception, n-Ach. etc., which are the major concern for the present study. (a) Are personality factors associated with academic achievement? and (b) which factors are associated with achievement in what manner? These were the two tempting questions which motivated the investigator for the genuine answers for success of teacher trainees at the B.Ed. level. Therefore, the personality needs were assessed by administering E.P.P.S. which has 15 variables: Achievement (ach), Deference (def), Order(ord) Exhibition (~~int~~ (exh.), Autonomy (Aut), Affiliation (aff),

Interception (int), Succorance (suc), Dominance (dom), Abasement (aba), Nurturance (nur), Change (chg), Endurance (end), Heterosexuality (het), Aggression (agg).

The present study has revealed the relationship that might be existing between certain factors of personality and academic performance, SES and Intelligence and some correlates of the nature of the family of the teacher trainees of Orissa. Therefore, the personality factors were selected for relationship pertaining to E.P.P.S. alone. The needs are regarded as forces that operate behind academic motivation. The attempt would be made to explain under-achievement pattern of behaviour, over achievement in terms of manifest needs of the personality. It may be logically thought that dominance of certain needs may urge upon the pupil to achieve more than what is expected in terms of his ability, while dominance of certain other needs may force him to under-achieve. Therefore, the investigator has attempted to investigate which needs are associated with academic achievement, intelligence level and SES Components (qualification, occupation and income per month) of the teacher trainees. The purpose is to relate the 15 personality needs measured by the E.P.P.S. to the academic achievement and other variables when the independent variables are correlated with the results of different personality needs or personal preferences. Then, a pattern of behaviour can be evolved which may give the best prediction along with



other factors. Some of the needs may be positively related with the intelligence, academic achievement and others may be negatively correlated. Therefore, this procedure will reveal the general pattern held by teacher trainees as regards to personality variables, self-perception, anxiety and other family correlates for predicting academic success of the teacher trainees. The results arrived at have been summarized as follows:

### 1. Intelligence levels and n Ach. ( E.P.P.S);

The above table shows that teacher trainees with high, average and low intelligence show a difference in the first need, that is, need achievement. The mean score for low intelligence group is 14.55 with a S.D. of 3.27 while for the high intelligence group mean score is 13.91 with S.D. of 3.48. It clearly shows that the low intelligence group shows higher motivation level to do their best to be successful, to accomplish tasks requiring skills and efforts, to do a difficult job well and to solve difficult problem and puzzles so they may do better than others. The mean achievement sum decreases in magnitude from low intelligence group to the high intelligence group. However, the difference among the three means is not significant statistically at .01 and .05 levels of confidence.

### 2. Intelligence levels and n affiliation:

For the affiliation need - loyal friends, to participate in friendly groups, to do things for friends, to form new friendships and to form strong attachments, it is noticed that the means for three groups (H = 14.04,, A = 14.14, L = 13.8 with S.D.s of 3.8, 3.32, 3.23) show a reverse order, that is, high and moderate groups have the higher means than the lower intelligence groups. These relationships also do not have statistically acceptable difference in means of 608 trainees on this personality dimension.

### 3. Intelligence level and n Nurturance:

Nurturance - to help friend when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy and to forgive others and to be generous with others, to sympathize with others who are sick and hurt etc., it is observed that all the groups have more or less same means (H = 15.7, A = 15.6 and L 15.2 with S.Ds of 3.66, 3.53, 3.4). These results also do not show significant difference among them at .01 level or so.

Deference (def.) - to get suggestion from others, to find out what others think, to follow instructions and do what is expected, to praise others, to accept the leadership of others and to let others make decision also has something to contribute to intelligence levels. Teacher trainees with high intelligence level (N= 120) have 15.0 mean with S.D. of 3.2 while average and low groups (N =375/ 113 respectively) show means of 14.6 and 14.87 with S.Ds, of 3.1 and 3.5 respectively. It clearly shows that highly intelligent teacher trainees are prone to suggestions, accept suggestion from others and follow instructions and do what is expected. The low intelligence group also shows better deference than the average intelligent teacher trainees. This trend is very much akin to the general rule for improving the academic standards. People with high and low intelligence feel to seek more suggestions or want to do the job better while the moderate intelligent students do

not feel to observe the trend as such, that is, they are easy going people.

This dimension is also not showing significance difference of means at any level. It can be concluded safely that all the three groups of intelligence have more or less the same behaviour on these dimensions.

#### 4. Intelligence Level and Intrareception

Intrareception - to analyse one's motives and feelings to observe others, to understand how others feel about problems to oneself in other's place, to judge people why they do things rather than by what they do, to analyse behaviour of others etc., intrareception is the 7th dimension of E.P.P.S. on 3 intelligence groups high, average and low. The mean scores are 15.08, 14.72, 14.3 with S.Ds. 3.25, 3.34, 2.9 respectively. It clearly shows that with the decrease of intelligence level the intrareception mean score also shows decrease in their magnitude, that is, highly intelligent individuals feel to analyse their motives and feelings and they feel to observe others. They also want to know what others are feeling about etc. The low intelligence group of teacher trainees shows a good difference as compared to the high intelligent group but this difference in means is not statistically significant at .05 level.

Intelligence Level and change is the 12th dimension in E.P.P.S. it signifies as: to do new and different

things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places etc., pertains to changed situations. All the groups - high, average, and low show the means as 15.75, 15.02, 15.212 with S.Ds 3.61, 3.36, 3.76 respectively. High and average intelligence groups show a significant difference in means at .05 level while in other groupings significant difference does not exist.

##### 5. Intelligence level and order

Order is the 3rd dimension and signifies as to have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to keep letters and files according to some system, to have things arranged so that they run smoothly without change. Under these dimensions the mean scores of high, average and low intelligence groups are 15.15, 14.61 and 15.23 with S.Ds 3.39, 3.71, 3.48 respectively. All the groups show more or less the same behaviour, that is, they like this characteristic that is being an orderly person and do not show significant difference on this trait of personality.

##### 6. Intelligence Level and Succorance

The 8th dimension Succorance signifies to have others provide help when in trouble, to seek encouragement

from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to have others do favours, cheerfully, to have others feel sorry when one is sick etc. The general behaviour of the two higher groups high and average intelligence groups show means as 13.49, 13.1 with S.Ds. 3.5 and 3.8 respectively. The low intelligence group has a mean difference of 12.6 with S.D. of 3.4. All the three intelligence groups do not show significant difference in means at any level.

#### 7. Intelligence Level and Endurance

Endurance signifies the behavioural needs as to keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or a problem until it is solved, to work at a single job before taking others, to stick at a problem even though it may seem that as if no progress is being made. All the groups have got means ranging from 14.3 to 14.7. The low intelligence group shows a higher mean than the high intelligence group. This shows their motive to complete their work while higher intelligence group has less endurance means but all these groups means do not have statistical difference. Therefore, they tend to show more or less similar behaviour.

### 8. Intelligence Level and Exhibition

The exhibition trait of personality relates to say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experience, to have others notice and comment upon one's appearance, to say thing just to see what effect it will have on others, to talk about personal achievement to be the centre of attention and to ask questions others can not answer, to use words that others do not know the meaning of. All these situations reveal the exhibitionist trait of personality. All these 3 intelligence groups do not show significance difference of means. However, the magnitude of means of exhibitionist's complex goes from low intelligence to high intelligence group. It can be said that low intelligence group has a higher mean value than the high intelligence group. But differences are not statistically significant.

### Intelligence Level and Dominance

This trait of personality has been identified as to argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committee, to settle arguments and disputes between others and to tell others how to do their jobs. The means of three intelligence groups are 13.5, 14.14, and 14.12 with S.Ds of 3.3, 4.0, and 3.3 respectively. On this trait of personality average and low groups have almost same mean value while the high intelligence

group has got lesser value than the others. But the difference among the three is not statistically significant at .05 level.

#### Intelligence Level and Heterosexuality

Heterosexuality is the 14th dimension in E.P.P.S. and signifies as: to go out with members of opposite sex, to engage in social activities with opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to participate in discussion about sex, to read books and plays involving sex, to become sexually excited and to tell jokes involving sex. The teacher trainees identified for three groups of intelligence show mean of 10.61, 11.9, 11.8 with S.Ds of 6.1, 5.1 and 5.2 respectively. The first two groups show a significant difference of means at .05 level of confidence while the second and the third are more or less the same. It can be interpreted safely that high intelligence group students do not think early about heterosexual relations as they find themselves engrossed in reading and writing work or their nature of work may demand something, very serious attention and thus they remain devoid of enjoying such concessions. Average and low intelligent persons show higher mean than the highly intelligent persons.

#### Intelligence Level and Autonomy

Autonomy is the fifth category in the E.P.P.S.



and the behaviour of all the 3 groups of intelligence have been observed in relation to autonomy which relates as: to be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to avoid situation where one is expected to conform, to criticize those in positions of authority, to avoid responsibilities and obligations etc. The general trend observed for all the groups show more or less similar behaviour. The means of all the groups are 12.98, 13.1, 12.92 with S.Ds of 3.4, 3.5 and 3.00. The significant difference of mean is not significantly true at .05 level of confidence.

#### Intelligence Level and Abasement

This is the 10th category in E.P.P.S. and signifies to feel guilty when one does some thing wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in ~~the~~ and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situation, to feel timid in the presence of superiors etc. The teacher trainees belonging to three intelligence groups show means as 14.79, 14.22, and 13.34 with S.Ds of 6.0, 3.2 and 3.2.

The higher group does not show significant difference in the means with the moderate one while the average and low intelligence groups have significant difference in means at point .05 level of confidence.

#### Intelligence Level and Aggression

Aggression is the last category of E.P.P.S. which signifies as: to attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others of when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence etc. The means for three level groupings of intelligence are 12.8, 13.12, 14.02, with S.Ds of 3.165, 3.37 and 3.1. The relationship is significant for average and low intelligence groups at .01 level, while in case of high intelligent teacher trainees the mean difference is not significant at .05 level of confidence. It can be concluded safely that personality effects become more dominant with the average and low intelligent people. The highly intelligent people think critically and visualize this situation accordingly but this interpretation of the investigator may not prove true in all situations and may show variation in other samples.

Having reviewed the relationship of intelligence with 15 personality needs as measured by E.P.P.S. It is safe to conclude that most of the dimensions, the significant difference between the means pertaining to high, moderate and low intelligence groups do not exist. The significant difference in means has been observed with categories - change, heterosexuality, abasement and aggression. The categories No. 1, 6, 11, 2, 7, 3, 8, 13, 4, 9 and 5 do not show significant difference in means in relation to high, moderate and low intelligence groups at .05 level of confidence. The present study reveals that personality needs have only a little relationship with the levels of intelligence - high, average and low.

These findings are in consonance with the study conducted by Bhatnagar, R.P. (A study of some of the personality Factors as Predictors of Academic Achievement - 1967). The study reveals "the variables n endurance and n nurturance are the least susceptible to the influence of age or intelligence or both". The investigator has also arrived at the similar findings even when the sample pertains to teacher trainees who are adults at the moment. Therefore, personality needs can be said to be independent of the intelligence levels of the individuals. However, some needs have seen significant difference among the various groupings such as high and moderate intelligence, moderate and low intelligence, and low and high intelligence.

#### 5.9.6.00 INT Levels and Self-Perception:

The data has been processed as regards to the self-perception of the teacher trainees and the following hypothesis has been listed down:

People with high intelligence will have higher self-perception than the subjects who have low intelligence.

Perceptions are formed because of certain life experience and association with others. According to Freud the self is under making at the young stage and is influenced by the phenomenological self which largely governs the immediate environment of the individual. This self gets enlarged later on due to perceptual field pertaining to individual adjustment into different life situations. Explaining the formation of perceptions many stimuli work on the individual, viz: parents' influence on child's personality, friends and relatives and other related members, his level of aspiration and values of life, hope of success and reality into the world of work - all these factors influence the personality of the individual and therefore give a total formation of the self to the ego. Rogers (1951) states-as experiences occur in the life of an individual they are either (a) symbolised, perceived and organised into some relationship to the self, (b) ignored because there is no perceived relationship to the self-structure, (c) denied symbolization or given a distorted symbolization because

the experience is inconsistent with structure of the self. Thus by incorporation, modification, rejection or manipulation of the experiences mostly perceptual, the organism tries to attain consistencies in his self structure. The self perception as defined in the study has 8 distinct areas - self, others, children, authority, work, reality, parents and hope. The table given below indicates the results related with intelligence level. In the table the means and S.Ds and 't' values of the different measures of self perception are given according to the level of intelligence and they are presented as under:

TABLE 18

Mean Scores, S.Ds, and 't' values of different self perception measures with regard to intelligence levels.  
(Independent variable Intelligence (INT) with dependent variable self-perception)

	Sc.	Ot.	Ch.	Au	Wo	Re	Pa	Ho	Total	
High-INT	Mean	18.175	20.508	19,800	18.908	19.558	18.808	20.532	21.692	156.725
N = 120	S.D.	4.176	3.992	<del>3.324</del> 3.624	3.528	3.837	4.096	4.102	8.271	18.609
Average -INT	Mean	17.587	20.123	19.981	18.488	19.432	18.824	20.240	21.563	155.525
N = 375	S.D.	3.932	3.509	3.443	3.903	3.655	3.923	5.443	5.258	17.760
Low - INT	Mean	17.478	20.398	20.062	18.248	<del>18.248</del> 19.619	<del>19.619</del> 18.442	<del>18.442</del> 20.106	<del>20.106</del> 23.673	159.920
N = 113	S.D.	3.384	3.881	3.290	3.690	<del>3.690</del> 3.747	3.747	8.998	3.639	37.745
H.INT/A.INT	t-values	1.405	1.013	0.496	0.199	0.326	0.038	0.543	0.201	0.637
D.F. 493										
A. INT/L.INT	t-values	0.266	0.714	0.220	0.581	0.475	0.902	0.245	2.887**	1.714
D.F.										
L.INT/H.INT	t-values	1.395	0.213	0.576	0.339	0.123	0.699	0.939	1.611	0.827
D.F. 231										

\*\* Significant at .01 level (2.59)

The above table shows that high, average, low intelligent groups of teacher trainees have more or less similar means in most of the sub-scales such as self, others, children, authority, work, reality, parents. But in hope scale moderate and low intelligence groups show significant difference at .01 level of confidence. The rest of the 't' values worked out do not show significant difference even at .05 level. It is safer to conclude that on self-perception measures the three groups of individuals based on intelligence levels (high, average and low) do not show significant differences in their means and standard Deviations. But in the hope scales significant difference at .01 level has been observed. The hope scale under the present study has been defined as: expectations of optimistic feelings or a sense of confidence that one will always play for a satisfying role in future like situations. Every body hopes for the future. Sometime the hope results with the attaining of the goals while others feel exactly opposite of goal situations. The individual who have got better hope for meeting the success they might have high intelligence level. The present study reveals that average and low intelligent people have got significant difference in the hope of success. High and average intelligent groups do not have much difference as regards to means (21.69, 21.56 with S.Ds of 8.27, 5.257 while with low intelligence group the mean for hope dimension is 23.67 with S.D. of 10.42. This shows that the low intelligence

groups depend more on hope situations. Therefore, they want to strive hard to fulfil their hope and expectations for the future. The data was analysed for the total perception based on Oliver H.Bown's instrument; the basic statistics for all the variables have been summarized as below in relation to the high, average intelligent people for comparative purposes.

TABLE 5.19

Basic Statistics for all Variables and  
Comparison of means for high, average,  
low intelligent teacher trainees.

N = 608

INTELLIGENCE

S. No.	Perceptions Score	High N = 120		Average N = 375		Low N = 113		Remarks
		M	S.D.	M	S.D.	M	S.D.	
<hr/>								
1.	Total Perception Score	156.72	18.61	155.53	17.76	159.92	37.74	

From the above table it is obvious that the low intelligence group has got high perception mean with a high S.D. as compared to the high intelligence group mean and S.D., that is, 156.73, 18.61. It is observed with concern that the average intelligence group has a mean score



155.53 with a S.D. of 17.76, that is, the mean is lesser than the lower intelligence group of teacher trainees, that is, their perception is also of lower order. It can be safely concluded that lower the intelligence level, higher the mean perception score, the higher the intelligence level, the more moderate is the perception mean.

#### 5.9.7 Intelligence Level and Performance

It is hypothesized that higher the intelligence, the higher would be the academic achievement of the teacher trainees at the B.Ed. level. This hypothesis is quite feasible and logical from the theoretical point of view but with the students of education the significant difference between the means of academic achievement in relation to high, average, low intelligence levels is yet to be observed because entrance of individuals to B.Ed. class has been considered as a last resort because other courses such as medicine, engineering and science subjects demand higher performance level at the graduation stage. Therefore, more talented and ambitious students are generally driven towards the science courses and the less ambitious students join teachers training colleges. Therefore, the relationship of performance with intelligence level is to be observed in a logical fashion. The results of the present study have been summarized as below:

TABLE 5.20

Ms., S.Ds., and significant difference of the  
Ms. of academic performance in relation to  
Intelligence level. (Controlled INT with  
dependent performance)

	N	Mean	S.D.
High INT	120	212.833	259.873
Average INT	375	207.883	248.079
Low INT	113	229.575	241.397
	t-values	D.F.	
High INT/Average INT	0.188	493	
Average INT/Low INT	0.820	486	
Low INT/High INT	0.509	231	

The above table shows three intelligence groups relationship with a total performance of the N = 608 teacher trainees. There is no significant difference found even at .05 level of confidence of high, average and low intelligence grouping with the mean total performance. It is surprising to find that the low intelligence group (N = 113) has got a mean performance of 229.6 which is the highest mean performance as compared to the average and high group-mean performance, that is, (M = 212.8, S.D. 259.9 and mean = 207.88 with S.D.

of 248). The results obtained are not <sup>la</sup>pata~~x~~ble to the investigator but there can be many factors to interpret the situation. As teaching career has not been able to attract people with better potential and capabilities so among the total lot received and having divided them into three groups have depicted such a situation. It might be one of the possibilities that the average and low groups of intelligence people might be more motivated or having a dire necessity to enter a world of work and so felt to put more labour to attain the goals. Moreover, marking in practice teaching being a highly subjective criterion might have added some bias to give the mean performance of all the groups ranging from 207.8 to 229.58. It is to note that a good teacher may not be a highly intelligent person or vice-versa.

Therefore, the hypothesis that highly intelligent teacher trainees would have higher academic performance, stands rejected. Other studies have also shown that intelligence is not the only predictor for academic success. The studies of Rotter, J.B., Liverant, S. and Goodstein and Heilburn (1962) have shown that intelligence only contributes to the factor of 20% alone and academic success depends largely on other factors such as personality, needs, motives and aptitude etc. High and low achievement patterns of behaviour in academic situation for this group may be explained in terms of relatively high and low position of students on dominance,

nurturance, endurance and other personality variables for the academic success. Nurturance and endurance may be considered related to academic achievement in the same manner as is visualized in the case of dominant motives. The feelings of academic superiority or others may be considered as a modified form of need for dominance. Hence, high scholastic achievement may be a means providing the young teacher trainees for the satisfaction of a dominance. It can also be attributed by taking hope as a perceptual measure. Teacher trainees with low and average intelligence have got significant difference in 'hope' variable and they score high as compared to the highly intelligent group. So it can be safely concluded that the low intelligent group has got high hope, high performance as compared to high intelligence group of teacher trainees whose mean scores on hope and performance at B.Ed. level show lower level as compared to the low intelligence group.

#### 5.9.8 Intelligence Level and Achievement Motivation

The major aspect of this study was to find out achievement motivation level in relation to various personality dimensions, self-perception, performance, intelligence, SES etc. So, intelligence level has a significant relationship with the achievement motivation score. The following table show the relationship of high, average, low intelligence groups of teacher trainees in relation to means n-Ach. scores.

TABLE 5.21

Showing Ms., and S.Ds. and significance of the difference of n-Ach. scores of the subjects in relation to high average and low intelligence levels.

(Controlled INT with dependent Motivation)

	N	Mean	S.D.
High INT	120	5.325	12.232
Average INT	375	8.736	12.629
Low INT	113	4.425	10.717
	t.values	D.F.	
High INT/Average INT	2.595**	493	
Average INT/Low INT	3.289**	486	
Low INT/High INT	0.596	231	

\*\* Significant at .01 level (2.59)

From the above table it can be safely concluded that between the high and average intelligence subjects, the difference in n-Ach. scores was significant at .01 level of confidence. Same results have been arrived at by Rao, K.S., (1975) for the sample of teacher trainees of Madras. These results support the findings of other studies also. Lakhia (1971) has also found very significant relationship between n-Ach. and I.Q. Pathak (1973) also supported the above relationship. Meyer, Heek Hausen et al. (1965) have found

close relationship between the two variables. The mean scores of high and average intelligence groups show a significant difference (mean for high group = 5.32 with S.D. of 12.2 and for average intelligence n-Ach. mean = 8.74 with S.D. =12.6). From the above table it is obvious that the low intelligence group has the lowest n-Ach. mean of all. It is heartening to note that the average intelligence group has the highest n-Ach. mean, that is, they are the most stimulated and motivated to show better performance.

5.9.9. 1-7 Intelligence level and the variables of Self-Report Card: Sex, age, urban/rural, qualification, Economic Status, experience, and Religious/Liberal:

The investigator wanted to find out the differences of high, average and low intelligence groups of teacher trainees in relation to their sex, age, urban/rural, qualification, economic status, experience and their general outlook towards religious/liberal in religion.

TABLE 5.22

Showing Ms., S.Ds. and significance of difference of means between Sex, age, irban/rural, qualification, economic status, teaching experience and religious/liberal in relation to intelligence level.  
(Independent variable of Intelligence with dependent vatiables of self-report card.) N = 608

	Sx	Age	URR	QUA	Es	Ex	REL
High INT	Mean	1.467	1.442	1.325	2.125	2.050	1.967
N = 120	S.D.	0.501	0.605	0.470	1.345	0.532	1.053
Average INT	Mean	1.275	1.723	1.291	1.939	2.027	2.315
N = 375	S.D.	0.447	0.776	0.455	1.243	0.693	1.143
Low INT	Means	1.177	1.779	1.301	1.611	1.920	2.363
N = 113	S.D.	0.383	0.608	0.480	1.039	0.503	1.061
High INT/Av. INT	t-value	3.975**	3.629**	0.714	1.401	0.338	2.957**
D.F. 493							0.114
Average INT/Low INT	t-value	2.101*	0.706	0.207	2.550*	1.514	0.399
D.F. 486							0.006
Low INT/High INT	t-value	4.935**	4.238**	0.387	3.254**	1.909*	2.860**
D.F. 231							0.086

\*Significant at .05 level (1.97)

\*\* Significant at .01 level (2.59)

The teacher trainees have shown good relation to these dimensions. High and average intelligence groups differ significantly as regards to sex and the mean difference is significant at .01 level. Similarly, low and high intelligence groups show a significant difference of means at .01 level of confidence while the second group - average intelligence group shows difference at .05 level only. Differences among intelligence groups exist due to age also. High and average groups show significance of the difference in age at .01 level of confidence and same is true about the low and high groups. Average intelligence group does not show any significant difference with the low group. Qualifications also showed significant difference of means with the average and low intelligence group at .05 level of confidence. While the low and high groups show significant difference in means at .01 level of confidence. High and low intelligence groups show significant difference in economic status also while other groups - high and average intelligence, average and low intelligence groups do not show significant difference in their economic status.

#### Intelligence level and Experience

Teacher trainees differ markedly as regards to significance of difference in means between intelligence levels and experience. It is observed that high and average intelligence groups differ markedly as regards to teaching



experience and this difference in means is significant at .01 level. The same is true with the low and high intelligence groups. The moderate groups does not show any significant difference in experience with the low intelligence group. The urban/rural and religious/liberal dimensions do not show any significant difference in means with the high, average and low intelligence groups of teacher trainees. It is obvious that the intelligence does not have a rigid pattern as regards to urban/rural setting and same is true as regards to their attitude towards religion being rigid or liberal. As these dimensions are more related with the phenomenological world of the individual so they (dimensions) may influence the perception but not the intelligence level. It clearly shows that intelligence is not totally dependent on the environment but something else also contribute towards it.

Analysis of the data has been taken further and different variables, that is, the independent and dependent have been studied to show the relevent effect, if any, for needful conclusions.

#### 5.10.00 SES Components and the 35 dependent variables

The investigator wanted to study the SES of the teacher trainees' parents so that their n-Ach., personal preferences anxiety and other correlates may be studied effectively. As the educational, occupational and economic levels largely determine the well-being of the family

members and to a greater extent they are responsible for the making of the personality and the self-perception of the individual. So it was felt essential to assess these components in relation to other variables. The investigator used B. Kuppuswamy's SES scale as such. But the composite score of SES for an individual was avoided due to change of weights. Therefore, the responses on these three components have been assessed independently. The results related to dependent variables can be seen from the following table.

5.10.1 Educational level of parents 'Fathers' Qualification) and intelligence scores

The educated family has contributed significantly as regards to children's well being in educational and vocational fields as these determine largely the values and attitudes of the offspring. The investigator wanted to find out the influence of father's education on the development of intelligence levels of the teacher trainees. Therefore, the data is presented below:

TABLE 5.23

Father's Qualification and Intelligence scores  
of the teacher trainees (Independent variables  
SES.A with dependent variable INT Scores)

S. Father's educational No. level (SES-A)	N	M	S.D.	Remarks
1. College/Post graduate	110	42.691	10.274	
2. High School/Primary	297	41.030	10.802	
3. Illiterate/Lower Primary	201	39.746	11.326	
		't' values	D.F.	
1. 1SES A/2 SES A	1.395	404		
2. 2SES A/3 SES A	1.275	495		
3. 3SES A/1 SES A	2.254*	309		

\* Significant at .05 level( 1.97 )

From the above table it is obvious that the father's education has a significant difference in mean intelligence of teacher trainees whose parents are illiterate or having lower primary education as compared to those whose parents are having post-graduate qualification, i.e., the significant difference of means of intelligence of post graduate and illiterate parent's children have

been found out at .05 level of confidence. It can be said with a fair conviction that educational environment at home stimulates the mental growth and personality pattern of the children. The significant difference between the college/postgraduate and high school passed parents is not significant (means = 42.69 and 41.03 with S.Ds. of 10.3 and 10.8). This clearly shows that the educational level of the parents contributes to the intellectual level of the children due to better intellectual and educational environment at home.

#### 5.10.2 SES A and Anxiety

The educational level of the parents does not contribute to the anxiety level of the children to some extent because the educated parents are supposed to interpret the situations independently which may be related to health, family, peer group relationship, friendship, love, guilt and shame, physical and psychological manifestations, success or failure in education, work, finance and occupation. If the individual is confronted with the problems related to these areas, the anxiety level would increase. A more anxious person who tend to be anxious in a greater number of different situations that would a less anxious person. The education of the parents or the stimulating environment does not contribute anything as regards to arousal to anxiety state. The data analysed shows the following results:

TABLE 5.24

Showing educational level of the parents and the anxiety of teacher trainees. N = 608  
(Independent variable SES - A with dependent variables Anxiety Scores)

S. No.	Parents educational level	N	Mean	S.D.	Remarks
1.	SES A	110	40.918	14.673	
2.	SES A	297	42.784	16.284	
3.	SES A	201	45.035	15.444	

	't' value	D.F.
1. 1 SES 2/SES A	1.053	404
2. 2 SES 3/SES A	1.544	495
3. 3 SES 1/SES A	2.287*	309

\* Significant at .05 level (1.97)

The above table clearly indicates that the illiterate and lower primary passed parents' children have higher anxiety level as compared to the post graduate and graduate parents' children. The difference of mean scores on anxiety test is significant between these two groups at .05 level of confidence. The post graduate and high school passed parents' children have got means 40.91 and 42.78 with S.Ds. 14.7 and 16.3 which do not show significant

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difference statistically. It can be concluded that anxiety decreases in relation to better educational environment at home as they provide facilities to the teacher trainees which reduces their anxiety state. Group I and II are having more or less same mean while highly educated and the illiterate groups show a significant difference.

5.10.3. 1-15 Educational Level of the Parents and the E.P.P.S. (Personality needs - 15) dimensions

The investigator wanted to find out the effect of parent's educational level on the personality needs of the teacher trainees. As the E.P.P.S. is majorly a test for measuring different personality needs or variables so the effect of these three groups ( SES A<sub>1</sub> : College/post-graduate, SES A<sub>2</sub>: High school and Primary, SES A<sub>3</sub> : Illiterate and lower primary) has been observed in relation to E.P.P.S. dimensions. The results are summarized as given below:

From the above table it is obvious that significance of difference in means at .01 level has been observed in change and heterosexuality dimensions related to post graduate and high school parents' children and illiterate and post graduate children groups, that is, group 1/2 and 3/1 show a significant relationship for these two categories at .01 level of confidence while the middle group and the illiterate, that is, 2/3 show a significant difference at .05 level for these two categories - change and heterosexuality. For the rest of the categories as 1, 6, 11, 2, 7, 8, 13, 4, 9, 5, 10 and 15. All these categories and educational levels, do not show significant difference in means that is the difference in educational levels of the parents of the teacher trainees do not contribute significantly as regards to the personality needs of teacher trainees as n-Ach., nur., def., int., chg., ord., suc., end., exh., dom., aut., aba. and agg. It can be safely concluded that the personality needs are not solely dependent on the educational environment of the home rather they are based on the total exposure of the teacher trainees to their phenomenological world. Therefore, personality needs or variables do not seem to be confined to home alone.

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## 5.10.4. 1-9

SES-A educational level of the parents and the  
self perception categories - self, others,  
children, authority, work, reality, parents,  
hope and the total score

Perception in an individual about his phenomenal world crystalize because of many factors. These factors are related to the total cultural set up of the society in which one lives and is largely governed by the values, attitudes and the cultural set-up of the immediate environment. In home situation also, there are several factors and parent's educational level is also one of the dominant factors for shaping the personality of the child. It is investigated in this study whether father's educational level has got any significant relationship with the perceptions of the children. Parents' education was considered at three levels- graduates and post graduates - 1, high school/intermediate 2, and illiterate and primary - 3. The table given below gives the details about the various variables which determine the perceptions of the teacher trainees:



TABLE 5.26

Showing significance of difference in Self-Perception scores in relation to parents' educational level(Independent variable SES-A with dependent variable self-perception)

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa.	Ho.	Total
1 SES-A	Mean	18.091	20.027	20.182	18.773	19.845	19.036	21.209	22.300
110	S.D.	4.399	3.570	3.680	4.244	3.740	3.573	6.402	8.365
2 SES-A	Mean	17.720	20.375	20.061	18.382	19.534	18.750	20.284	21.990
297	S.D.	3.798	3.803	3.406	3.693	3.832	3.950	3.712	7.433
3 SES -A	Mean	17.398	20.199	19.697	18.289	19.259	18.572	19.736	21.766
201	S.D.	3.724	3.560	3.384	3.668	3.480	4.198	3.646	5.959
1 SES-A/2 SES-A	t-value	0.838	0.832	0.311	0.910	0.733	0.666	1.536	0.361
404									0.192
2 SES-A/3 SES-A	t-value	0.934	0.520	1.173	0.277	0.815	0.480	1.625	0.356
495									1.171
3 SES-A/1 SES-A	t-value	1.470	0.406	1.172	1.052	1.384	0.981	2.145*	0.652
309									1.393

\* Significant at .05 level

From the above table it is obvious that all the three levels related to education of parents do not show difference in the children's perceptions in all possible combinations except one, that is, parents' scale. Therefore, the teacher trainees whose parents are engineers, doctors, scientists, teachers, clerks etc., do not show difference in perception as compared to teacher trainees whose parents are farm labourers, illiterate or primary school pass. Therefore, it can be said with confidence like personality needs, the perceptions related to self, others, children, authority, work, reality and hope for success etc., are not related to the educational environment of the home except the parents scale. The average and the low educated groups parents' wards show significant difference at .05 level on parents' scale, that is, they feel concerned about the education of their parents, that is, the individuals parents are illiterate while others' parents are high school pass. This difference is significant. This case is an exception looking to the rest of the results.

These results are in consonance with the results obtained by Rao, K.S. (1975) who found that the educational level of the parents do not show significant relationship with self, work, reality, hope scales of perception and the total perception of the teacher trainees of all the possible combinations, the significant difference in mean scores had not been found out.

The total score of perception is an index of the degree of positiveness of respondents' perceptions of the 8 aspects of the phenomenal world. The educated parents' means in a way enlightened behaviour in the family members. It certainly helps for behavioural adjustment in the children which may be helpful in developing positive attitudes to and clear perceptions around the life situations. The significantly high scores on perceptions of the subjects coming from the families where parents were highly educated is explained on the basis of the positions held and the social background acquired by the parents. The self-made persons always put faith in future and they never relax into despair for a moment. Looking to the table, it is observed that the total perception means the first two groups and more or less the same while the IIIrd differs a little but not significantly (157.8, 153.3, 154.8, with S.Ds. of 19.0, 26.8, 18.4). Therefore, it can be safely concluded that perception of children of the subjects is not influenced by the parents' education liking children, valuing the work with them, perception of others, respecting the authority, valuing of one's own parents and their social status are some of the aspects which an individual develops slowly from the early age and the individual begins to internalize them in him from the very beginning. Therefore, it is safer to conclude that the perception of the children has got nothing to do with the education of one's parents.

### 5.10.5 SES-A and Performance

The educational environment of the home has got a significance contribution to the academic performance of the students. It was hypothesized that the teacher trainees whose parents are educated would show better academic performance at the B.Ed. level. To test this hypothesis the data have been analysed and shown in the following table:

TABLE 5.27

Showing the significance of difference of mean performance scores in relation to educational levels (high, average and low) of the parents.

N = 608

(Independent variable SES-A with dependent variable with performance)

Parents educational level SES-A	N	M	S.D.	Remarks
1. SES-A	110	156.207	233.336	
2. SES-A	297	221.547	248.868	
3. SES-A	201	232.322	254.130	
t-values		D.F.		
1. SES A/2 SES-A	2.397*	404		
2. SES A/3 SES-A	0.470	495		
3. SES A/1 SES-A	2.605*	309		

\* Significant at .05 level (1.97)

1. SES A = College/Post-graduate

2. SES A = High School - Primary

3. SES A = Illiterate/Lower Primary

From the above table it is obvious that the total performance of the teacher trainees at the B.Ed level differ significantly with high and average educated parents, that is, high and average educated parents' wards show significant difference in means in academic performance at .05 level of confidence and same is true with the low and high group means of academic performance. Average group does not show any significant difference with the low group. The teacher trainees belonging to parents who are highly educated achieve less as compared to the teacher trainees whose parents are illiterate and are having only primary education (means: 156.2, 232.2). The second group whose parents are high school and are engaged in farming, business, clerical jobs, teaching etc., are achieving moderately ( $M = 221.5$  with S.D. of 248).

#### 5.10.6 SES-A and N-Ach. Scores

It was hypothesized that teacher trainees whose parents are highly educated would show a significant relationship with the n-Ach., that is, the teacher trainees whose parents are educated will have high n-Ach. scores as compared to those teacher trainees whose parents are high school or illiterate. The analysis of the data has shown the following results which are given in the tabular form:

TABLE 5.28

Showing significance difference in Mean scores of  
N-Ach. in relation to educational level of parents  
N = 608. (Independent variable SES-A with  
dependent variable - Motivation)

	Parents' educational level SES-A	N	Mean	S.D.
1.	SES A	110	11.445	12.389
2.	SES A	297	6.199	11.965
3.	SES A	201	6.592	12.460
		t-values	D.F.	
1.	SES A/2 SES A	3.889**	404	
2.	SES A/3 SES A	0.353	495	
3.	SES A/1 SES A	3.291**	309	

\*\* Significant at .01 level (2.59)

SES A<sub>1</sub> = College/Post-graduate

SES A<sub>2</sub> = High School/Primary

SES A<sub>3</sub> = Illiterate/Lower Primary

From the above table it can be safely concluded that the teacher trainees whose parents are highly educated have got high n-Ach. score (M = 11.5) as compared to those teachers trainees whose parents are illiterate (M = 6.59, with S.D. 12.5). It is obvious that 1/2 groups show significant

difference in means at .01 level of confidence. The same relationship is found with high and illiterate groups. The significance of difference of means is not available with the groups 2 and 3, that is, n-Ach. score of high school and illiterate parents' children are having more or less the same n-Ach. mean ( $M = 6.2$  and  $6.59$ ). It is concluded that the highly educated parents' children have got high n-Ach. mean as compared to the means of the illiterate.

The results in the study indicated that the better the education of parents, the better is n-Ach. level. This fact is in parlance with the studies conducted by Rao, K.S. (1975) who also arrived at similar results. The development of n-Ach. in children, youngmen and women is partly due to the educational level of head of family under whose care, guidance and discipline they are brought up. The parents influence the personality of child, that is, the hobbies, education, life style and the intellectual pursuits will all influence the other members in the family. As the children grow up, they are to make decisions independently for the future life. If the parents are educated, they leave on children a kind of direction which helps them to be more motivated for higher order tasks. From the present study it is obvious that the parents' educational level seems to be significantly related to the n-Ach. level of the child.

Is it true in all cases or particular in cases such as professor, doctor, engineer etc., where fathers' education is instrumental for his own career in certain cases like politician businessman, industrialist, diplomat etc.? It is not so. Will the education in the later category <sup>be</sup> significantly related to the n-Ach. level of the child? This should be examined before it is established that education of the parents and n-Ach. level of the child are related positively. Studies conducted by Desai (1970), Mehta (1969) and Chaudhary (1972) supported this finding. But the study of Gokulnathan and Mehta (1972) where they have investigated the tribal students' n-Ach., the education of the parent did not show any significant relationship with the n-Ach. level of the children. McClelland, Sturr, Knapp and Wendt (1958) found no significant relationship between fathers' educational level and child's n-Ach. But Moss and Kogan (1961) have empirically investigated the influence of parents' educational level on the n-Ach. of the children. They found that subjects whose parents were highly educated seemed to have higher n-Ach. than the subjects whose parents were low educated.

The studies reviewed gave different results so a definite conclusion can not be drawn as all the studies have been undertaken at different samples. The present investigator could find the similar results on teacher trainees as found by Rao, K.S. (1975), i.e., higher the educational level of the subjects' parent, the higher would be the n-Ach. of the teacher trainees.



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5.10.7: 1-7

SES-A and Variables of Self-Report Card, Sex, age, Urban/rural, Qualification, Economic Status, experience, religious/liberal in religion.

The self report card dimensions were chosen to find out the relationship of these with the educational levels of the fathers of the teacher trainees. One of the contentions to include sex, age, urban/rural, qualification, economic status, teaching experience and their attitude towards religion or liberal in religion to know all about the teacher trainees in relation to SES-A components, performance, residence and intelligence level, motivational level etc. so that some definite conclusion might be drawn. Therefore, educational level of the parents was considered in relation to the above quoted dimensions and the following results have been arrived at:

TABLE 5.29

Showing Ms. and S.Ds. and significance of difference of Ms. of 7 dimensions of Self Report Card in relation to educational level of the parents (Independent variable socio economic status ( SES -A) with dependent variables of Self Report Card)

	Sx.	AGE	URR	QUA	ES	EX	RFL
1 SES-A	Mean	1.745	1.327	2.409	2.336	1.473	1.400
N = 110	S.D.	0.438	0.544	1.486	0.870	0.821	0.492
2 SES -A	Mean	1.291	1.639	1.828	2.003	2.247	1.361
N = 297	S.D.	0.455	0.649	1.168	0.504	1.091	0.481
3 SES-A	Mean	1.055	1.930	1.771	1.846	2.701	1.269
N = 201	S.D.	0.228	0.822	1.125	0.584	1.063	0.444
1 SES-A/2 SES-A							
D.F. 404	t-values	9.049**	4.478**	4.460**	4.775**	6.762**	0.712
2 SES-A/3 SES-A							
D.F. 495	t-value	6.793**	4.411**	3.948**	0.538	3.206**	4.609**
3 SES-A/1 SES-A							
D.F. 309	t-value	18.307**	6.912**	7.784**	4.254**	5.922**	10.523**

\*Significant at .05 level (1.97)

\*\*Significant at .01 level (2.59)

From the above table it is obvious that male and female teacher trainees have got significant difference in means in group 1 and 2, 2 and 3, and 1 and 3, i.e., the educational level of the parents of male and female teacher trainees differ markedly and difference is significant at .01 level. This shows that the parents of the male teacher trainees (70.55%) belong to all the three categories while most of the female teacher trainees' parents are highly qualified individuals.

As far as the age is concerned, it is also showing a significant relationship at .01 level of confidence with all the possible combinations pertaining to the educational level of the parents. The same behaviour is observable with the urban/rural dimensions that the parents of the trainees who have significant difference in educational level, show significant difference as to regards urban and rural residence (also evident from the total sample  $N = 608$ , rural = 69.57%, and urban = 30.42%).

The qualifications of the teacher trainees, i.e. entering qualification B.A./B.Sc./B.Com; M.A./M.Sc./M.Com., when studied in relation to the educational level of the parents, it was observed that relationship between 1/2 and 3/1 levels, i.e., post graduate/college and high school, and illiterate/post-graduate parents' wards are having significant difference in means as regards to qualification at .01 level of confidence. That is, educated and uneducated parents' wards differ markedly as regards to entering qualification. The

trainees belonging to high school pass parents do not show any relationship.

Economic status and teaching experience of the trainees show a significant difference in means at .01 level of confidence for three levels of parents' educational qualifications.

It is heartening to find that the trainees whose parents have higher educational qualification, do not show any significant difference in their outlook towards religion or being liberal in religion while high school and illiterate parents of the trainees show significant difference in mean at .05 level of confidence as regards their outlook towards religion. This fact is supported by the analysis of the data of the Self Report Card, i.e., 66.28% of the trainees' parents have got religious outlook and 33.71% of them are liberal in religion. Therefore, the difference is significant at .05 level for high school and illiterate parents.

Having examined the SES-A dimension in relation to the 35 dependent variables with their analysis and interpretation the investigator feels to undertake SES-B: Occupation of the trainees' parents for detailed discussion.

#### 5.11.00 SES-B: Occupations practised by the Parents of the Teacher Trainees

Occupation practised by the parents largely determine the perception and personality traits of the individual to hierarchical level of occupations in society the individuals

are divided differently which constitute a high, average low SES. As the teacher trainees are a part of the society so the occupations practised by their parents have significant contribution towards their general adjustment and their personality make up in particular, how far the occupations of the parents contributed as regards to development of intelligence, SES, n-Ach. personality needs, self-perception, performance etc., is to be examined thoroughly so that the occupational level and the dimensions under study may be studied effectively. The occupations in general have been divided into three categories of levels.

<u>Code</u>	<u>Definition</u>
1. SES B <sub>1</sub>	Gazetted Officer and other categories
2. SES B <sub>2</sub>	Teacher/Lecturer/Headmaster/Clerical
3. SES B <sub>3</sub>	Labour and unskilled, farmer with land, business etc.

A list of six types of parents' occupations: Labour and unskilled, farmer with land/business, clerical etc., teacher, lecturer, headmaster, Gazetted officer and other categories, was given to each teacher trainees to tick mark the item to which their parents belonged and their comments were obtained. Having analysed the data three major categories based on the levels of the occupation as high, moderate and low were framed. The six different samples constituted the total population under study and the distribution of occupations practised by

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the parents of the trainees were gazetted and other categories (19.07), clerical/teacher/headmaster, lecturer(20.55%), and labourer/unskilled farmer with land and businessmen (60.36%). The figures indicate that majority of the subjects came from low occupational group.

TABLE 5.30

Showing significance of difference in  
intelligence scores in relation to father's  
occupation (Independent variables SES-B:  
Occupations with dependent variable  
intelligence scores)

S.No.	Parents Occupation SES-B	N	M	S.D.	Remarks
1.	Gazetted & others	116	42.026	10.830	
2.	Clerical/Teachers	125	41.685	11.362	
3.	Labourer/Unskilled/ Farmer/Businessmen etc.	367	40.256	10.793	
		t-values	D.F.		
1/2 SES -B		0.237	238		
2/3 SES -B		1.258	489		
3/1 SES -B		1.538	481		

The 't' tests were run to find out whether any significant difference in mean intelligence score would exist between any two groups in all possible combinations. The

analysis indicated that there was no significant difference in means of intelligence scores related to three levels of occupations. Even from examination it is observed that the mean scores for three levels of occupations (1, 2 and 3) are 42.0, 41.68 and 40.3. This shows that the occupations practised by parents do not contribute significantly as regards to the individuals to give him better level of intelligence. That is to say that even a gazetted officer may have an average intelligent child. Therefore occupational level is not having significant difference in means of intelligence scores.

#### 5.11.2 SES-B and Anxiety

Occupations of the parents and anxiety exhibited by the teacher trainees have been studied so that their performance in education in particular and their adjustment in general may be found out. The 't' tests were run to find out whether any significant difference in mean score of anxiety and the occupational level would exist between any two possible combinations. The analysis of the data showed no significance difference in mean measures of anxiety scores. This can be observed from the following table:

TABLE 5.31

Showing Ms., & S.Ds. and significance of difference of means of anxiety scores in relation to levels of occupations - high, moderate and low (Independent variable socio Economic Status with dependent Anxiety) (SES-B)

		N	Mean	S.D.
1.	SES-B	116	41.414	16.258
2.	SES-B	125	43.855	15.640
3.	SES-B	367	43.567	15.659
		t-values	D.F.	
1.	SES-B/2 SES-B	1.185	238	
2.	SES-B/3 SES-B	0.177	489	
3.	SES-B/1 SES-B	1.279	481	

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that means on anxiety test in relation to high, moderate and low occupations, practised by the trainees' parents are 41.41, 43.85, and 43.57, with S.Ds. of 16.26, 15.6, and 15.7. All these means with all possible combinations do not show significant difference in means in anxiety scores. However, means differ in magnitude but their values are statistically insignificant. It can be



concluded that anxiety scores had by the teacher trainees are independent of the occupational level practised by the trainees parents.

5.11.3: 1-15 SES-B and E.P.P.S. Dimensions

Occupation practised by the parents of the teacher trainees and the 15 personality needs have been examined statistically by employing the 't' test technique. Whether any significant difference in means of E.P.P.S. categories would exist between any of the three groups in all their possible combinations in relation to occupational levels. The analysis of data shows significant difference in means for the categories change, order, succorance, exhibition, heterosexuality and abasement. But with rest of the categories no significant difference in means exists in relation to three levels of occupations. The details about the statistics worked out can be observed from the following table:

The personality needs as measured through E.P.P.S. have been observed in relation to occupational levels of the trainees' parents. As occupation provides a maximum contribution as regards to the development the personality traits etc., it was observed that only a few categories' means show a significant difference in relation to occupational levels. The category 3rd - order: to make plans before starting on a difficult task, to arrange the things in a systematic order, keeping letters and files according to some system - all these statements pertains to the genesis of an occupation. It is observed that a high and a moderate occupational level of parents has got a significant difference in means at .01 level of confidence while other combinations, that is, moderate and low do not show differences in mean. Change is the 12th category in which significant difference in means at .05 level of confidence has been observed for occupational levels 2/3 and 3/1. That is moderate and low and low and high categories of occupations practised by trainees depend on n-change, i.e., trainees parents want to do new and different things, to meet new people and to participate and try new and different jobs. This result is very much akin to groups under study, i.e., middle and low level of occupations sometimes provide a dramatic change to the incumbents rather they help them to strive high in the ladder of occupations. While the top level of occupations do not leave any chance for further progress.

Succorance is the 8th category of E.P.P.S. and shows a significant difference of means at .05 level between moderate and two groups of occupations, i.e., the parents of the teacher trainees who practise such occupations, help others when they are in need or trouble, seek encouragement from others etc., but the other combinations 1/2, 3/1 do not show significant difference in means under this category. The means for three categories are: 13.24, 13.73 and 12.82 with S.Ds. of 3.5, 3.5 and 3.8.

Exhibition is also a dominant trait of personality which shows significant difference of means among the three levels of occupation. Significance of difference in 1/2 and 2/3 exists at .05 level of confidence while in the 3rd combination this state of behaviour has not been shown. It clearly shows that the parents of high and moderate, and moderate and low categories show a significant difference in their personal achievements and they want to talk about these, may be their personal adventures and experiences.

Heterosexuality also finds a place and the lower group shows a significant difference of mean at .01 level in relation to the parents' practising high level of occupations, i.e., to go out with members of the opposite sex, to listen to or to tell jokes involving sex, to kiss those of opposite sex. The parents of the teacher trainees belonging to the high and low professions provide a chance to their children to acquire such notions about sex. It is safer to

say that the environment at both the levels differ markedly- one category of trainees can talk about sex freely while the other belonging to low occupation group may restrict themselves in relation to sex values, while the moderate occupational group is very much akin to the high professional group. It may be possible they might be enjoying more facilities for heterosexual relations ( $M = 11.46$ , S.D. 5.8 for moderate group, high group  $M = 10.4$ , S.D. 5.7).

The results clearly show the class-consciousness effects with the trainees.

Abasement - to feel guilty when one does something wrong, to accept blame when things do not go right, to feel timid in the presence of superiors and to feel inferior to others in most respects. These feelings are also a part of the teacher trainees who belong to three occupational groups. The significance difference in means between 1/2 groups has been found at .05 level and between 3 and 1 at .01 level of confidence. The groups 2 and 3 do not show significant difference in their means performance on this category. It is to note that the feeling of guilt and shame is very much exhibited among trainees who belong to high and low occupational groups. While this tendency is very much in parlance with the 2nd and 3rd groupings ( $M = 13.93$  and  $13.96$  with S.Ds. of 3.35 and 3.3) Rest of the dimensions such as n-Ach., n-Aff., n-nur., n-def., n-intra., n-end., n-dom., n-aut., n-agg., are

the personality variables which do not show significant difference between means among three levels of occupation in their all possible combinations.

#### 5.11.4: 1-9 SES - B and Self Perceptions

Perceptions in an individual relates to his phenomenological world which largely determines his total self. The child develops the perceptions in relation to his total environment. According to Karl Rogers, the fully functioning self is always desirable to achieve something and to become something in this world of action. He must see in his experiential background, some history of success. He needs to see process, the building and becoming mature of himself. He must see in his life what he sees at least will be enough if it is operational. To measure some of the ideas related to individual and his environment, to measure some of these perceptions, the SRI was administered which is divided into 8 sub-scales self, others, children, authority, work, reality, parents, hope. It is investigated in this study whether the levels of occupation of fathers of teacher trainees have got any significant relationship with the perception of their children. Parents' occupation was considered at 3 levels (high, moderate and low) and the following results had been arrived at:

TABLE 5.33

Showing Ms., S.Ds. and significant of difference of Ms. in self perception scores in relation to parents occupational levels

(Independent variable socio-economic status with dependent variable self-perception)

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa.	Ho.	Total
1 SES-B	Mean	18.483	20.621	20.112	18.888	20.172	19.336	20.776	23.319
N = 116	S.D.	4.031	3.941	3.572	4.068	3.677	6.633	4.496	8.120
2 SES-B	Mean	17.815	19.881	19.887	18.073	19.379	18.548	20.540	20.944
N = 125	S.D.	3.966	3.742	3.645	3.722	3.917	3.879	7.800	8.234
3 SES-B	Mean	17.392	20.362	19.942	18.403	19.324	18.640	20.030	21.910
N = 367	S.D.	3.790	3.553	3.349	3.718	3.623	4.092	3.585	6.361
1 SES-B/2 SES-B	t-value	1.294	2.097*	0.482	1.621	1.615	1.621	2.248*	3.000**
D.F. 238									
2 SES-B/3 SES-B	t-value	1.060	2.090*	0.156	0.856	0.143	0.219	0.984	1.352
D.F. 489									1.507
3 SES-B/1 SES-B	t-value	2.660**	0.664	0.467	1.196	2.190*	1.639	1.832	1.939
D.F. 481									1.376

\* Significant at .05 level (1.97)  
\*\* Significant at .01 level (2.59)

The above table shows that self, others, work, hope scales and the total perception score show a significant difference of means at one level or the other in relation to different occupational levels. Self scale difference in means between group 3 and 1 is significant at .01 level of confidence and rest of the grouping 1 and 2, and 2 and 3 do not show any significant difference in means. Others scale - perception of others seems to have been influenced by the levels of occupation the teacher trainees who belong to high and moderate occupation of parents show a significant difference at .05 level of confidence in their means when groupings are 1 and 2, and 2 and 3. In the low level occupations when compared with the high level occupations the means difference is negligible, that is, both type of individuals perceive the occupations in a similar fashion. Work also figures out as a significant dimension for the low and high groupings of occupations and show a significant difference in means at .05 level of confidence for trainees whose parents practise low and high occupations.

Hope is another scale which has been observed for giving significant difference in means at .05 level for 1 and 2, 3 and 1 occupational groups. The moderate group does not go with optimistic feelings or a sense of confidence that one will always plan a significant and satisfying role in future. The level of occupation of parents seem to play a

significant role in developing positive perception of hope in the B.Ed. trainees. This is perhaps due to the climate the head of the family generates in the home where every member of the family deeply thinks over it. The total perception score of teacher trainees on different dimensions in relation to three levels of occupation also shows a significant difference of means between 1 and 2 groups and rest of the groups 2/3 and 3/1 of course show difference in means but they are not significant statistically. The first and second occupational levels show significance<sup>of</sup> difference in means at .01 level of confidence (ms. are 160.21 and 152.999 with S.Ds. of 19.6 and 17.7).

#### 5.11.5 SES-B and Academic Performance

The hypothesis was as follows:

That the subjects whose parents practised high level occupations will have higher academic performance at B.Ed. training than the subjects whose parents practised moderate and low occupations. This hypothesis has been tested against the annual B.Ed. marks obtained by the teacher trainees and have been termed as academic performance. The analysis of the data shows that teacher trainees whose parents practised low and high occupations and moderate and low occupations show a significant difference in means at .01 and .05 level of confidence respectively. The results can be seen from the following table:



TABLE 5.34

Showing Ms., S.Ds. and significance of difference of Ms. of academic achievement/performance of teacher trainees in relation to SES-B: high, moderate and low occupations of parents.

(Independent variable Socio-Economic Status with dependent Performance (SES-B))

	N	Mean	S.D.
1 SES -B	116	149.233	229.040
2 SES -B	125	185.726	242.166
3 SES -B	367	242.771	252.071
	't' values	D.F.	
1 SES-B/2 SES-B	1.198	238	
2 SES-B/3 SES-B	2.193*	489	
3 SES-B/1 SES-B	3.548*	481	

\* Significant at .05 level (1.97)

\*\* Significant at .01 level (2.59)

It is surprising to find that the means of academic performance pertaining to high, moderate and low groups of occupation are 149.23, 185.73, and 242.77 with S.Ds. of 229, 242 and 253. It can be safely concluded that the low occupational group of trainees have higher mean in performance at B.Ed. level as compared to the high group level. This shows trainees coming from middle and lower middle class of society

show better academic performance. In this study sample approximately 99% of the trainees belong to these classes of society. Hardly one per cent of them belong to higher economic status. Therefore, high and low group, moderate and low groups show significant difference of means of academic performance at .01 and .05 levels respectively.

#### 5.11.6 SES-B and Socio-Economic Status

It was hypothesized that the subjects whose parents were practising high level occupations would have high socio-economic status than the subjects whose parents practise low level occupations. Occupation is majorly concerned with the socio-economic status of the individual. It largely determines whether one would be rich or poor which class structure in society he would belong to. This situation is determined by the income he draws, which determines the social prestige of the individuals. If the high level occupations are acquired then the individual gains a better economic prosperity and therefore attains a better social prestige among his fellow members. The teacher trainees were asked to pen down their socio economic status as they felt or observed looking to their individual condition. It was simply a projection of their feelings, to narrate their self in the form of their economic status in the society classed as upper, upper-middle and middle class, and the lower class. The data has been analysed and it was

found that the group 1 and 2, and 3 and 1 have got significant difference in means at .05 and .01 levels of confidence respectively, i.e., high and moderate occupational groups practised by parents of teacher trainees show a significant difference in means as related to SES perceived by them. Similarly, low and high occupational groups show significant difference in means .01 level in relation to total SES. The moderate group does not show any difference with low group of occupations.

The above quoted facts can be seen from the following table:

TABLE 5.35

Showing Ms., S.Ds. and significance difference of M.S. of socio-economic status of teacher trainees in relation to the occupation at level of their parents (High, average, low) N = 608.

(Independent variable Socio-Economic Status with dependent SES-B)

		N	Mean	S.D.
1	SES-B	116	10.431	13.437
2	SES-B	125	7.016	12.123
3	SES-B	367	6.308	11.918
		t-values		D.F.
1	SES-B/2 SES-B	2.069*		238
2	SES-B/3 SES-B	0.570		489
3	SES-B/1 SES-B	3.148**		481

\* Significant at .05 (1.97) \*\* Significant at .01 (2.59)

The above table shows that the hypothesis is retained, i.e., high level occupations practised by the parents of the teacher trainees have got significant relationship with the high SES of parents as perceived by the respondents themselves.

Parents of the teacher trainees who have low SES, practise low level occupations.

TABLE 5.36

Showing Ms. S.Ds. and significance of difference in means as regard to sex, age, rural/urban qualification, economic status, experience, religion/liberal in religion in relation to parents' occupations  
(Independent variable of Socio Economic Status (SES-B) with dependent variables of Self Report Card)

	Sx	AGE	URR	QUA	ES	EX	RFL
1 SES-B							
Mean	1.681	1.422	<del>1.432</del>	2.319	2.310	1.603	1.405
N= 116			1.586				
S.D.	0.468	0.621	0.495	1.484	0.785	0.931	0.493
2 SES -B							
N =125							
Mean	1.444	1.476	1.387	2.105	2.040	2.000	1.371
S.D.	0.499	0.643	0.505	1.280	0.655	1.036	0.485
3 SES-B							
Mean	1.128	1.826	1.180	1.725	1.907	2.545	1.305
N = 367							
S.D.	0.328	0.744	0.385	1.093	0.535	1.095	0.461
1 SES-B/2 SES-B							
D.F. 238							
t-value	3.797**	0.653	3.081**	1.999*	2.900*	3.111*	0.542
2 SES-B/3 SES-B							
D.F. 489							
t-value	8.161**	4.675**	4.770**	3.201**	2.255**	4.855*	1.356
3 SES-B/1 SES-B							
D.F. 481							
t-value	14.297**	5.281	9.225**	<del>6.260</del>	<del>6.260</del>	<del>8.352</del>	2.002*
				4.656	6.260**	8.352	2.002*

\* Significant at .05 level (1.97)

\*\* Significant at .01 level (2.59)

#### 5.11.7: 1-7 SES-B and the Self Report Card Measures

The investigator wanted to find out the relationship of occupational levels practised by the parents of the teacher trainees in relation to sex, age, urban/rural, residence, qualification, economic status, experience, religious/liberal in religion and its related outlook towards social adjustment. It is observed that the occupational level of the parents of the trainees has got a significant difference of means in three level of teacher trainees based on sex. It is inferred that the occupational level majorly governs the total environment of the teacher trainees in home situations. It was observed that the 81% parents of the trainees have occupation belonging to framing, teaching, clerical, skilled, unskilled and labour class. Hardly 19% of them belong to the gazetted and other categories. This case is particularly to be viewed in relation to the qualifications had by the girls' parents as they belong to upper class. Age also shows a significant difference in means between groups 2/3 and 3/1, that is, between moderate and low groups 2/3 and 3/1, that is, between moderate and low groups, and low and high groups, it is observed that the high and average groups do not have means difference in age, that is, most of them are graduates post-graduates with an age range of 21-25 or below, that is, most of the trainees are freshers. However, people, who hold pass classes and compartment they belong to higher age range groups, that is, 31-40. The significance of difference of means is found at .01 level of confidence.

Urban/rural residence has also got a significant impact as regards to choice of the occupation by the trainees' parents. It was hypothesized that the trainees who come from urban areas their parents practise high level occupations. To test this hypothesis the data were analysed and it was observed that high and average, moderate and low, and low and high occupational groups have got significant difference in means regarding the urban/rural residence of the teacher trainees. (It was observed that approximately 87% of the trainees) It was observed that approximately 87% of the trainees remain in hostels and the rural residence influences their parents' occupational choice. These facts are also supported by the occupational data when analysed as teacher trainees' parents: labour/unskilled/farmer (60.36%, clerical/teacher/headmaster/lecturer (20.55%) and gazetted officers and others (19.07%). Therefore, the residence of the teacher trainees' parents as regards to all the three levels show significant difference in means at .01 level of confidence. Therefore, the hypothesis is retained.

Qualification also show a significant difference of means among the three levels of occupations. The higher occupational group and the moderate one show significant difference in means of qualification at .05 level of confidence at .01 level. This shows that the trainees belonging to labour/farmer class and the teacher/clerks have got a wide gap in qualification as compared to the qualification of the trainees

belonging to the high occupational group. It can be safely concluded that near about 84% of the trainees have entering qualification as graduate in science/arts and commerce and approximately 16% of them have got post-graduate degrees in arts/science/commerce. It was surprising to find that only one of the trainees could have M.Com. degree. This shows that the subject commerce is not popular in the higher secondary schools of Orissa as a few graduates in commerce had adopted for the teacher training programme.

#### SES-B and the Economic Status

The opinions about the economic status of the parents of the trainees was asked on the basis of the self perception of the trainees themselves. It was observed that the level of the economic status perceived by the teacher trainees and the level of occupations showed a significant difference of means between groups 1 and 2, and 2/3 at .05 level of confidence. Similarly, the 3rd group differs markedly and the significance of difference of means is found at .01 level of confidence. In nut shell it can be concluded that the trainees belonging to three occupational groups have got significant difference as regards to the economic status of the parents as perceived by them (trainees).

#### SES-B and Experience

Teaching experience had by the trainees before entering the B.Ed. course in different colleges shows a



significant difference as regards to the occupational levels attained by the parents of the trainees. It was hypothesized that the trainees who belonged to higher occupational groups would be either freshers or might have experience of teaching 2 to 3 years and it would show a marked difference as regards to teaching experience covering many years. The analysis of the data could show that all the trainees belonging to three occupational groups show a significant difference of means among all the three groups - 1/2, 2/3 and 3/1 at .01 level of confidence. This shows the teacher trainees belonging to high and average occupational groups differ markedly in teaching experience from the low group.

#### SES-B and Trainees Outlook towards religion

As religion is a guiding force for the general adjustment of the individuals towards life situations, therefore, the trainees were asked to show their attitude towards religion. It was hypothesized that the trainees belonging to high and moderate occupational groups would show their outlook to be liberal in religion. Having analysed the data it was observed that the high and moderate groups do not show significant difference in their outlook towards religion while the low and high group trainees show a significant difference in means related to being religious in outlook at .05 level of confidence. It clearly shows that trainees belonging to parents low level occupation group are more religious outlook than the trainees who belong to moderate

high groups. Therefore, the hypothesis is retained. It can be safely concluded that the trainees who belong to educated homes and whose parents practise high level occupations, are liberal in religious outlook while trainees coming from parents of low occupational groups are conservative in religion.

#### 5.12.00 SES-C: Monthly Income of Parents from all Sources

Attempts have been made to estimate the socio-economic status of an individual. These attempts are based on three assumptions (a) that there is a class structure in society, (b) that status positions are determined mainly by a few commonly accepted symbolic characteristics and (c) that these characteristics can be scaled and combined by using statistical procedure.

Many variables have been identified in relation to social prestige and income has been attached as a major dimension for identification of social prestige and income has been considered a very important factor in this regard. The man who gets an income from the property he has inherited, feels that he has higher prestige than a person who has acquired his own property. Therefore, income from all sources per month or yearly has been one of the dimensions for assessing the SES of the individual. Therefore, the researcher identified variables related to socio-economic status in urban/rural areas as education, occupation and income. Dr. Kuppuswamy, B. SES scale was administered to collect information about the above mentioned dimensions. The

weightage given to assess the total SES on these three components was ignored in the changed situations. The scale as such can not be used due to want of standardization effects. Therefore, the analysis of the data has been done separately and the effects were observed in relation to other dimensions or variables. The scheme presented earlier has been followed strictly, so that the results may be observed for better conclusions.

#### 5.12.1 SES-C and INT Scores

The relationship of intelligence level has been observed in relation to the levels of monthly income had by the parents of the teacher trainees. It was one of the hypotheses that high income group trainees may show better intelligence scores and vice-versa. To test this hypothesis the 't' test technique was run.

TABLE 5.37

Showing Ms., and S.Ds and significant difference in means of Intelligent scores in relation to high moderate and low income levels of parents of the trainees N = 608 (Independent variable Socio-Economic Status (SES -C) with dependent - INT scores)

	N	Mean	S.D.
1 SES-C	207	41.353	11.120
2 SES-C	23	44.087	8.431
3 SES-C	378	40.434	10.923
	't'-values	D.F.	
1 SES-C/2 SES-C	1.142	228	
2 SES-C/3 SES-C	1.575	399	
3 SES-C/1 SES-C	0.967	583	

\* Significant at .05 level (1.97)  
\*\* Significant at .01 level (2.59)

It was observed from the above table that different levels of income group do not have much significance as regards to their means. The high, middle and low income groups of teacher trainees have mean scores of 41.35, 44.0 and 40.43 with S.Ds. of 11.1, 8.4, and 10.9.

The significant difference in means has not been found out and it is observed that intelligence scores and

monthly income do not show any significance relationship. Therefore, the hypothesis rejected, that is, high intelligence scores may not mean high income level or vice-versa.

5.12.2 SES-C and Anxiety

Anxiety has also been studied in relation to income level of the parents of the trainees. Financial aspects have been of good importance as regards to the general level of anxiety. It was hypothesized that high anxiety score is related with the low income group or high income with low anxiety aspects.

TABLE 5.38

Showing Ms, and S.Ds. and significance of difference in means of anxiety scores in relation to high, moderate and low income levels of parents of the trainees. N = 608.  
(Independent variable socio Economic Status (SES-C) with dependent - Anxiety)

		N	Mean	S.D.
1	SES-C	207	42.498	15.477
2	SES-C	23	35.913	19.621
3	SES-C	378	44.032	15.566
		t' values		D.F.
1	SES-C/2 SES-C	1.881		228
2	SES-C/3 SES-C	2.390*		399
3	SES-C/1 SES-C	1.142		583
* Significant at .05 level. ** Significant at .01 level				

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From the above table it is obvious that 't' test results showed that both the possibilities as listed above do not hold good in case of teacher trainees, that is, high and low income groups do not show significant difference of means of anxiety scores. These are for high income group mean score on anxiety = 42.5 and for low income group 44.03. Both the means are not statistically significant at .01 or .05 levels to show differences between them. However, it is heartening to note that the middle and low income groups show significant difference in means of anxiety scores at .05 level, that, middle and low income groups differ markedly as regards to anxiety level, that means low income-high anxiety; middle income - low anxiety; but high income and moderate anxiety. These results show that due to anxiety level and low income group, the trainees are able to achieve higher as their performance scores also show increase in magnitude in relation to anxiety level and may be true for n-Ach. and other measures of perceptions and personality needs which would be examined in the subsequent parts.

#### 5.12.3:1-15 SES-C and E.P.P.S. Dimensions

It was hypothesized that high, average and low income groups have a direct relationship with the different personality needs such as n-ach., a-aff., n-nur., n-agg, i.e., high income group trainees might have high n-ach., high n-agg., etc., or vice-versa. To examine all these results the 't' test was run and the following results were obtained.

The above table shows that high, moderate and low income groups of trainees do not show significant difference in means on 14 dimensions such as n-Ach., n-aff., n-nur., n-def., n-agg. This shows that personality needs are not having significant relationship with the income groups except heterosexuality; on this dimension the moderate and low groups show significant difference in mean at .05 level while for the high and moderate groups the difference is not significant at any levels. Same is true for low and high groups. It can be safely concluded that more or less all the needs are independent of the monthly income of the parents of the trainees. Therefore, the hypothesis formulated, stands rejected.

#### 5.12.4: 1-9 SES-C and Self Perception

Significance of the difference in the scores of self-perception measures have been worked out to find out its relationship to the income of the family. Therefore, the 't' test technique was run. The following table shows the means and S.Ds. of self perceptions of subjects from upper middle and lower income groups and the 't' ratios are presented in all the possible combinations. It was surprising to find that the various measures of self-perception as perceived by the trainees such as self, others, children, authority, work, reality, parents and hope and the total perception do not have significance of difference in means as regards to the perception of the trainees. This can be seen from the results of the following table:

TABLE 5.40

Showing Ms., S.Ds. and significant difference in means scores on 8 self Perception dimensions and with total perception scores in relation to high, moderate and low income groups of parents of teacher trainees N 608 Independent variable Socio-economic Status (SES-C) with dependent variable Self-perception)

	Sc.	Ot.	Ch.	Au.	Wo	Re.	Pa	Ho	Total	
1 SES -C	Mean	17.633	20.072	20.130	18.589	19.734	18.647	20.314	22.242	157.469
N = 207	S.D.	4.027	3.663	3.451	3.859	3.665	3.997	3.847	8.227	30.325
2 SES-C	Mean	16.957	20.609	20.348	18.261	19.609	17.826	19.609	21.043	154.696
N = 257	S.D.	3.699	3.951	3.773	3.852	3.564	4.292	4.470	5.022	17.986
3 SES-C	Mean	17.754	20.325	19.844	18.349	19.352	18.862	20.291	21.894	156.206
N = 378	S.D.	3.827	3.678	3.429	3.752	3.735	8.933	5.416	6.623	18.104
1SES-C/2 SES-C	t-value	0.770	0.651	0.284	0.387	0.156	0.928	0.819	0.684	0.430
D.F. 228										
2 SES-C/3SES-C	t-value	0.972	0.358	0.680	0.109	0.321	1.221	0.592	0.605	0.389
D.F. 399										
3 SES-C/2 SES-C	t-value	0.359	0.797	0.964	0.733	1.192	0.629	0.054	0.556	0.630
D.F. 583										

\* Significant at .05 level (1.97)  
\*\*Significant at .01 level (2.59)



Self-perceptions of the subjects were examined in relation to the three levels of the family income - namely low - middle and upper income groups. The financial status of the family, no doubt, has its influence in the development of the perceptions in the subjects. The results indicated that significant difference in means on various dimensions and in the total perception of the trainees in relation to upper, middle and, lower income groups do not exist in the present sample.

However, the study conducted by Rao, K.S.(1975) on teacher trainees of Madras indicated that significant difference ( $t = 3.82$ ) was found in the perception of authority between low income group Ss and middle income Ss. The difference was significant beyond .01 level of probability. Authority was also perceived differentially by middle and upper middle Ss. The difference in this case was significant ( $t = 2.80$ ) at .01 level of probability. In these two cases the difference was in the positive direction. Though no significant difference was evident in the perception of other sub-scales, i.e., high moderate and low income groups trainees means on different dimensions are more or less the same in the present study sample with the small variations in S.Ds. related to these three income groups.

#### 5.12.5 SES-C and Academic Performance

It was hypothesized that no significant relationship exists between high performance and high income group

of the teacher trainees. To test this hypothesis the 't' test technique was adopted and the following results were obtained.

TABLE 5.41

Showing Ms., S.Ds. and significant difference of means of academic performance scores in relation to high, moderate, and low income groups of parents of the trainees N = 608 (Independent variable Socio Economic Status (SES-C) with dependent - Performance)

	N	Mean	S.D.
1 SES-C	207	198.541	244.756
2 SES-C	23	234.174	232.441
3 SES-C	378	219.455	252.429
	't'-values	D.F.	
1 SES-C/2 SES-C	0.666	228	
2 SES-C/3 SES-C	0.273	399	
3 SES-C/1 SES-C	0.968	583	

\* Significant at .05 level

\*\* Significant at .01 level

The above table shows that the total performance scores of the teacher trainees do not show any significant difference in means, in relation to high, moderate and low income groups of parents of teacher trainees. The results

show that hypothesis is retained,i.e.,that academic performance at B.Ed. level is independent of the income groups, i.e., the financial status had by the trainees is not having any influence on the increase or decrease of academic performance in different examinations.

5.12.6 SES-C Achievement Motivation

Need Achievement was examined in relation to income of the parents of the trainees. The income of the parents was considered at three levels - low, middle and upper. The following table gives all the details regarding the analysis of the variables.

TABLE 5.42

Showing Ms., S.Ds. and significance of difference of means of the n-Ach. scores in relation to high, moderate and low income groups of parents of the trainees N = 608  
(Independent variable Socio Economic Status  
( SES-C) with dependent - Motivation)

	N	Mean	S.D.
1 SES -C	207	9.377	12.808
2 SES -C	23	2.217	10.322
3 SES--C	378	6.410	12.031
	't'-values	D.F.	
1 SES-C/2 SES-C	2.587*	228	
2 SES-C/3 SES-C	1.635	399	

3 SES-C/1 SES-C

2.787\*

583

\* Significant at .05 level.

\*\* Significant at .01 level.

The above table shows that significant difference of means in n-Ach. scores between high and moderate (1/2) and low and high (3/1) exists at .05 and .01 levels of confidence respectively. The moderate and low groups (2/3) do not show any significant difference in means on n-Ach. scores. These results are in consonance with the study undertaken by Rao, K.S. (1975) whose sample was the teacher trainees of Madras. He found that the n-Ach. score was significantly different ( $t = 2.94$ ) at .01 level of probability between the subjects coming from low-middle income family backgrounds. Between the middle and upper income groups the Ss also showed the significant difference in n-Ach. scores ( $t = 3.429$ ) at .01 level of probability. He concluded that the higher the family income, the greater is the development of n-Ach. in the children. The above results have been also arrived at by the present investigator and are very much akin to the results of the study of Rao, K.S. Lack of money for education of the children and for needs of life in the family causes many frustrations and anxieties among children. This is a general feature among the low income group families. The significant low n-Ach. of the Ss in the average income families can be understood in this context.

#### 5.12.7: 1-7 SES-C and Self-Report Card Dimensions

The relationship of different dimensions such as sex, age, urban/rural, entering qualifications of trainees, their economic status, teaching experience if any and their attitude toward religion were examined in relation to three levels of income groups. It was found that in some dimensions significant difference in means could exist between 1/2, 2/3 and 3/1 levels of income groupings. The following tables throws a light on results of dimensions.

TABLE 5.43

Showing significance difference in means of sex, age, sttitude towards religion in relation to high, average low income groups of parents of the trainees. (Independent variable of Socio-economic status (SES-C) with dependent variables of Self report Card

	SX	AGE	URR	QUA	ES	EX	RFL
1 SES-C	Mean	1.464	1.512	1.406	2.063	2.324	1.942
2 SES-C	S.D.	0.500	0.653	0.502	1.319	0.755	1.018
2 SES-C	Mean	1.391	1.913	1.261	1.957	1.826	2.609
N = 23	S.D.	0.499	0.900	0.449	1.296	0.576	1.406
3 SES-C	Mean	1.196	1.754	1.243	1.831	1.852	2.405
N = 378	S.D.	0.397	0.736	0.430	1.183	0.482	1.118
2 SES-C/2 SES-C	t-value	0.660	2.681**	1.326	0.367	3.062**	2.858**
D.F. 228							1.849
2 SES-C/3 SES-C	t-value	2.256**	0.993	0.189	0.493	0.246	0.836
D.F. 399							0.857
3 SES-C/1 SES-C	t-values	7.104**	3.954**	4.114**	2.178*	9.202**	4.939
D.F. 583							2.790**

\* Significant at .05 level

\*\* Significant at .01 level

The above table shows that male and female teacher trainees belonging to moderate and low, and low and high income groups differ markedly and the difference in means pertaining to sex exists at .01 levels. Age of the trainees belonging to all the three income groups shows significant difference between 1/2 and 3/1 grouping at .01 level of probability. Urban/Rural, residence and the entering qualifications of the trainees also show significant difference at .01 and .05 levels between low and high income group trainees. With other combinations the difference is not significant. Economic status and the income level show a significant difference in means at .01 level of confidence for 1/2 and 3/1 groups while in the moderate and low groups of teacher trainees do not show significant difference in their economic status.

Experience also gives a marked difference as regards to income groups had by the teacher trainees. It is observed that groups 1/2 and 3/1 show significant difference as regards to teaching experience had by the trainees before entering the training colleges for B.Ed. programme and probability in both the cases has been found out at .01 level of confidence.

Teacher trainees showed difference in their outlook towards religion also. Teacher trainees who belonged to low and high income groups showed difference in the outlook towards religion at .01 level of confidence. The first two

groups resemble in their outlook towards religion.

#### Performance Levels and INT

The investigator wanted to find out the mean intelligence scores of the trainees in relation to three levels of performance - high, average and low and 't' test technique was applied to test the significance difference in mean scores of intelligence in relation to performance of the teacher trainees. The levels of performance were obtained by getting the aggregate scores of theory and practice and converting them into  $\bar{O}$  scores for getting high, average, low groups. The same procedure was followed for the three teacher training colleges which could provide final performance scores of B.Ed. trainees who could take the performance scores of B.Ed. trainees who could take the psychological test. The following results have been arrived at, which can be observed from the table given below:



TABLE 5.44

Showing Ms., S.Ds. and significance<sup>a</sup> difference in Mean Intelligence scores in relation to high, moderate low performance. N = 608  
(Controlled Performance with dependent Intelligence Scores)

	N	Mean	S.D.
High PERF	36	42.389	11.515
Average PERF	199	40.121	11.257
Low PERF	26	36.269	14.658
	't'-values		D.F.
High PERF/Average PERF	1.109	233	
Average PERF/Low PERF	1.580	223	
Low PERF/High PERF	1.841	60	

\* Significant at .05 level.

\*\* Significant at .01 level.

From the above table it is obvious that the mean intelligence scores for high, average, low performance groups are 42.4, 40.1, 36.3 with S.Ds. of 11.5, 11.2 and 14.7. It is observed that all the possible groups in combinations do not show significant difference, i.e., intelligence levels of the trainees do not show significant difference with the performance, i.e., for high/low performance, intelligence is not

the only factor which may predict the success outrightly rather it simply accounts for 20% of total variance. The other personality factors such as endurance, succorance, difference etc., also contribute for the success of the individuals. These facts are also in consonance with the results arrived at by different researchers, as teacher trainees in general do not belong to high intelligence groups. However, the mean difference in intelligence scores for high, average, low groups have been observed but these are not significant.

#### 5.13.2 Performance Levels and Anxiety

Anxiety also affects the human behaviour, and thereby it affects the performance as the relationship with different individual, health, family, sense of guilt and shame, worries regarding the future etc., are affected by the anxiety state of the person. It is to say that manifestation of anxiety is a multi-dimensional phenomenon. Therefore, the relationship of anxiety with the academic performance of the trainees was worked out with the help of 't' test and the following hypothesis was put to test.

Individuals with high anxiety would show poor performance or low anxiety would help for higher performance.

This hypothesis was tested and the results are as under:

TABLE 5.45

Showing Ms., S.Ds. and significance of difference of mean anxiety scores in relation to three levels of performance  
(Independent variable Performance with dependent Anxiety)

	N	Mean	S.D.
High PERF	36	43.528	13.727
Average PERF	199	43.332	16.298
Low PERF	26	49.577	13.348

	't'-values	D.F.
High PERF/Average PERF	0.068	233
Average PERF/Low PERF	1.872	223
Low PERF/High PERF	1.732	60

\* Significant at .05 level.

\*\* Significant at .05 level.

The above table shows that the mean score of anxiety for three levels of performance are 43.5, 43.3, 16.3 and 13.3. All these possible combinations do not show significant difference of means in high-average, average-low, and low and high groups of performance. The differences in mean of average and low are there but are not significant statistically. However, high and average groups of teacher trainees have

similar means on anxiety tests. It can be safely concluded that low performance and high anxiety scores, and average-high performance, moderate is the anxiety. It might be possible the people having low performance might be of higher age and anxiety increases slightly with age factor, of course, most of the teacher trainees belonged to the age group 21-30. 10% of them constituted the age group 31-40.

#### 5.13: 1-15 Performance levels and the E.P.P.S. Dimensions

Different E.P.P.S. dimensions have been studied in relation to the performance levels of the teacher trainees. It is observed that personality factors also contribute a significant effect as regards to the performance of the individuals is concerned. Intelligence is not alone the predictor of success rather other factors such as aptitude, abilities and personality traits of behaviour also contribute towards success. The E.P.P.S. dimensions such as n-ach., n-aff, n-nur, n-def., n-int., n-change, n-order etc., and n-aggression have been studied in relation to high, moderate and low performance levels. The 't' test was run to find out the significance<sup>of</sup> difference of means of various dimensions in relation to three groups.

From the above table, it is observed that the first 14 categories of E.P.P.S. do not show any significant difference in means with the three levels of performance in all possible combinations, i.e., high-average, average-low and low-high. In aggression trait of personality, the significant difference between low and high groups are 14.6 and 11.9 with S.Ds. of 2.6 and 3.00. For rest of the dimensions ~~ei~~ significant difference in means do not exist. This clearly shows that the performance levels are independent of personality needs, i.e., it can be said with confidence that the high, average, low performance groups of trainees have similar n-Ach. means such as high -13.9, average 14.5, and low - 13.8 with S.Ds. of 3.5, 3.3 and 2.9 respectively. This clearly shows that the average performance group ~~is~~ is more motivated than the high or the low group members. This result is very much akin to the findings had from the Dr. Mehta Prayag's test for n-Ach. Similar results are there, i.e., high, average, low performance groups do not show significant difference in their means as regards to other dimensions of E.P.P.S.

#### 5.13.4: 1-9 Performance levels and the Self Perception

The hypothesis was that the students who have high academic performance would score high in self perception dimensions and on the total score of self perceptions and

vice-versa. On the basis of the hypothesis framed it was essential that significance difference of means calculation may be found out to find the relationship among the three levels of performance with, various dimensions of self-perceptions, that is, self, others, children, authority, work, reality, parents and hope.

TABLE 5.47

Showing Ms. S.Ds. and significance difference of means of self perception, measure scores in relation to high moderate low performance N 608 (Independent variable Performance (PERF) with dependent variable Self-Perception)

	Sc.	Ot.	Ch.	Au	Wo.	Re.	Pa	Ho.	Total	
High - PERF	Mean	18.750	19.972	20.222	18.389	20.444	19.056	21.000	22.306	160.417
N = 36	S.D.	3.872	3.629	3.072	2.950	3.614	3.312	3.389	4.241	15.285
Average-PERF	Mean	17.779	20.899	20.482	18.608	19.342	18.925	20.216	22.804	160.161
N = 199	S.D.	3.525	3.336	3.335	3.405	3.744	4.160	3.526	8.308	30.157
Low - PERF	Mean	17.000	20.192	19.500	18.308	19.615	18.923	20.808	20.654	156.845
N = 26	S.D.	3.298	3.578	2.775	2.950	3.645	3.730	4.454	11.651	15.694
H PERF/A PERF	t-value	1.498	1.514	0.436	0.362	1.634	0.179	1.235	0.351	0.050
D.F. 223										
A PERF/ L PERF	t-value	1.067	1.008	1.438	0.429	0.352	0.002	0.779	1.014	0.550
D.F. 223										
L PERF/ H PERF	t-value	1.866	0.237	0.951	0.107	0.887	0.147	0.193	1.114	0.898
D.F. 60										

\* Significant at .05 level  
\*\* Significant at .01 level

From the table it is obvious that the high, average and low groups do not show significant difference in means of different dimensions of SRI. However, the high, average and low groups means on self scale are 18.75, 17.8, and 17.00 with S.Ds.. of 3.87, 3.5. and 3.3. respectively. However, the differences in means have been observed but these means are not statistically significant. The same is true for other categories and for the total perception also. It is ~~super~~ surprising to find that the self perception categories do not show significant relationship. The same results have been arrived at by Rao, K.S. (1975) in which he shows significant difference in means in authority scale between first and III divisioners. But the present study has not been able to prove this difference even. Therefore, it can be concluded safely that the SRI dimensions do not show significant difference as regards to performance level.

#### 5: 13: 5 Performance levels and the Performance

The investigator wanted to find out the relationship between combination of various performance levels and the general performance had by 261 teacher trainees. (As the performance scores concerning 347 students could not be received from the 3 teachers training colleges. So the results are based on the data connected with 261 students). It was hypothesized that the high and low performance



groups of students should have significant difference in means as regards to their academic performance at the B.Ed. level. To examine<sup>it</sup> results were obtained as<sup>is</sup> evident from the table given below:

TABLE 5.48

Showing Ms., S.D.s and significant difference of means of performance scores in relation to performance levels.

S.No.	N	M	S.D.	Remarks
1. High Perf.	36	560.58	46.26	
2. Average Perf.	199	488.87	56.15	
3. Low Perf.	26	429.65	21.14	
		't'-values	D.P.	
1. High Perf / Average Perf.	7.22*	233		
2. Average Perf/Low Perf.	4.77**	223		
3. Low Perf/High Perf.	8.05**	60		

\* Significant at .05 level (1.96)

\*\* Significant at .01 level (2.58)

The above table shows that the performance scores of high, average and low groups are 560.58, 488.87 and 429.65 with S.Ds. of 46.26, 56.15, and 81.14. This clearly shows that the three groups, i.e., high, moderate, low differ markedly in their mean performance scores. The significant different in means between the all possible combinations have

been found out and the significance difference in means between 1-2, 2-3, and 3-1 exist at .01 level of confidence. It is observed that the high performance group have low mean achievement. Therefore, the hypothesis is retained.

#### 5.13.6 Performance levels and n-Ach. Scores

When the data was analysed for n-Ach. scores in relation to different performance levels as high, average, low, it was observed that for all the possible combinations the significant difference in means has not been found out which is evident from the following table:

TABLE 5.49

Showing Ms., S.Ds. and significant difference of means of motivation scores in relation to different performance levels.

(Independent variable Performance with dependent variable Motivation)

	N	Mean	S.D.
High PERF	36	5.722	10.544
Average PERF	199	4.452	10.160
Low PERF	26	5.115	9.284
	't'-values	D.F.	
High PERF/Average PERF	0.686	233	
Average PERF/Low PERF	not given		
Low PERF/High PERF	0.235	60	

\* Significant at .05 level

\*\* Significant at .01 level

It can be safely concluded that the significant difference in mean scores of n-Ach. doesnot exist in relation to three levels of performance, of course mean n-Ach. scores for high and low performance groups are 5.72 and 5.11 with S.Ds. of 10.5 and 9.2. Both the means are higher in magnitude than the average performance group for which the mean is 4.45 with S.D. of 10.2. This is the only combination in which the n-Ach. scores have not shown any significant difference for different performance groups. It can be concluded safely that B.Ed. being a training class does not help the individuals to go for more competitive spirit or higher motivation among the different individuals so that they might have shown a significant difference in n-Ach. mean scores in relation to the performance level. As they are to enter the world of work so degree in teaching is enough to qualify for getting the job,so they are not highly motivated. Even they have shown slight difference among all the possible groups. But still it is not showing any significant difference statistically.

#### 5.13.7: 1-7 Performance levels and the Self Report Card

##### Dimensions

The performance levels of teacher trainees have also been studied in relation to sex, age, urbanprural residence, qualification, economic status, religious and liberal in outlook. The findings arrived at show that the significant

difference among all the three possible groups does not exist at all in relation to sex, age, urban/rural, residence, entering qualification, economic status had by the trainees teaching experience before joining B.Ed. course and their attitudes towards religion. The following table gives the detailed description of different dimensions as regards to means, S.D.s and 't' values related to high, moderate and low performance groups:

TABLE 5.50

Showing Ms. S.Ds. and significance difference in mean of Sex, age, urban/rural, residence, entering qualification, economic status, teaching experience, outlook towards religion to 3 levels of performance - high, moderate and low

N = 608 (Independent variable of Performance (PERF) with dependent variables of Self-Report-Card

	Sx	Age	URR	QNA	Es	Ex	RFL
High PERF	Mean 1.316	1.806	1.389	1.611	2.000	2.611	1.333
N = 36	S.D. 0.987	0.889	0.494	1.022	0.418	1.498	0.478
Average PERF	Mean 1.302	1.834	1.307	1.673	1.925	2.513	1.342
N = 199	S.D. 0.460	0.680	0.473	1.054	0.577	1.096	0.475
Low PERF	Mean 1.269	1.654	1.269	1.731	1.808	2.077	1.192
N = 26	S.D. 0.452	0.485	0.452	1.185	0.567	0.891	0.402
High PERF/Av.PERF	t-value0.709	0.221	0.955	0.328	0.739	0.467	0.097
D.F. 233							
Average PERF/Low PERF	t-value0.337	1.308	0.380	0.257	0.974	1.944	1.531
D.F. 233							
Low PERF/High PERF	t-value0.755	0.789	0.974	0.425	1.445	1.621	1.223
D.F. 60							

\* Significant at .05 level  
\*\* Significant at .01 level

From the above table it is obvious that the 't' values worked out for all the possible combinations do not show any significant difference in means of dimensions under study in relation to performance levels of teacher trainees. It can be safely concluded that these variables do not show variation that ~~is~~ accelerates or retards the performance of the trainees in the academic task. No such evidence has been depicted by the data. Of course there is slight difference in average worked out but the significant difference doesnot exist as regards to performance levels.

#### 5.14.00 Sex: Male/Female teacher trainees

For the teacher training programme both the sexes are given admission. However, due to paucity of women candidates qualifying for admission the seats for women candidates are less in propostion as compared to male members. The major reason is Orissa being a backward state (5 districts are non-tribal and 14 districts are inhabited by the tribals) could not afford facilities for higher education in all parts of the state and therefore, educations was a concern of the chosen few Zamindars. Teaching was not a tempting career in the past. But recently 1965 - teacher training programme could get more impetus and therefore more seats were created in all the six government colleges for education of Orissa - Women candidates are also coming to have a

training in large number. But due to some impositions of certain restrictions on admission criterion male and female population is roughly 2: 1, leaving aside the R.N. Training College Cuttack. Keeping these factors in mind the present investigator selected male and female population randomly for the administration of psychological tests. The major aim to go for this selection was to make a comparative study of both the sexes as regards to different variables under study. The following section would show the study of different dimensions in relation to male and female population of teacher trainees.

#### 5.14.1 Sex and INT Scores

Intelligence scores have been studied in relation to male/female population. It was hypothesized that the male teacher trainees could have higher intelligence scores than the female trainees. To test this hypothesis the 't' test was run and following results were arrived at:

TABLE 5.51

Showing Ms., S.Ds. and significance difference means of male and female teacher trainees in relation to INT scores N = 608.  
(Independent variables Sex (male/female) with dependent - INT Scores)

	N	Mean	S.D.
1 Sex : male	429	39.671	11.144
2 Sex : female	179	43.793	9.794
	't'-values	D.F.	
1 Sex / 2 Sex	4.303*	606	

\* Significant at .05 level (1.96)

\*\* Significant at .01 level (2.58)

The above table shows a significant difference in mean between male and female population on INT scores at .01 level of confidence, i.e., the significant difference exists between male and female trainees as regards to mean intelligence scores. It is surprising to note that the female trainees have higher intelligence mean score (43.79) than that of male trainees (39.7) on Raven's Standard Progressive Matrices - A non-verbal test of intelligence free from all



cultural bias. The higher mean intelligence score for female trainees is attributable to the fact that women candidates generally come from higher SES group - their parents are well placed in jobs, are educated and earn handsome salary, which provide them an extra exposure to the environmental situations, Hence the hypothesis listed down is tejected.

5.14.2 Sex and Anxiety Scores

The investigator wanted to find out level of anxiety in relation to different sexes, i.e., male and female. It was hypothesized that the male teacher trainees show a higher mean score on anxiety test than the female teacher trainees. To test this hypothesis the following statistics have been worked out which can be seen from the following table:

TABLE 5.52

Showing Ms., S.D.s and significance<sup>of</sup> difference of means of male and female teacher trainees in relation to anxiety scores N = 608  
(Independent variable Sex with dependent-Anxiety)

	N	Mean	S.D.
1. Sex	429	43.972	15.857
2. Sex	179	41.358	15.411
	't'-values	D.F.	
1 Sex/2 Sex	1.868	606	
1. male    2.female	* Significant at .05 level		
	** Significant at .01 level		

From the above table it can be seen that male and female teacher trainees do not show significant difference in anxiety scores, that is, male and female teacher trainees have got means of anxiety scores as 43.97 and 41.36 with S.Ds. of 15.85 and 15.41. It is observed that in both the cases that value of S.Ds. is the same. That is, both the sexes exhibit more or less similar relationship as regards to anxiety state. Therefore, the hypothesis listed ~~dee~~ down is rejected.

#### 5.14.3: 1-15 Sex and E.P.P.S. Dimensions

The E.P.P.S. dimensions have been analysed in relation to male and female teacher trainees. It was one of the convictions of the investigator that the male teacher trainees would have significant differences in means on personality dimensions from the female teacher trainees, i.e., the male teacher trainees would differ markedly as regards to personality variables as compared to female teacher trainees. The data analysed showed the following results given in the tabular form:

From the above table it is obvious that some of the dimensions such as nurturance, defence<sup>ve</sup>, change, heterosexuality and aggression show a significant difference in mean scores pertaining to male and female population. The differences found are significant at .01 level of confidence. Both the sexes show significant difference in other dimensions also such as endurance and abasement and differences were found significant at .05 level of confidence. It is heartening to note that both the sexes showed significant difference on these personality traits or needs and they differ markedly while in some of the other categories such as n-ach., n-aff., n-intra, n-ord., n-suc., n-exh., n-dom., n-aut. Both the sexes do not show significant difference in mean scores, that is, the personality traits of male and female teacher trainees resemble on these dimensions of E.P.P.S. The dimensions showing similarity in personality traits are n-ach., n-aff., n-int., n-ord., n-suc., n-exh., n-aut. and n-dom. The various personality needs on which significant differences have been found out are n-nur., n-def., n-chg., n-end., n-het., n-aba., and n-agg. Therefore, both the sexes differ in the personality make up and can prove effective teachers according to the different traits of behaviour.

#### 5.14.4: 1-9 Sex and Self Perception

The self-perception dimensions were studied in relation to sex, that is, male and female teacher trainees.

It was hypothesized that the significant difference exists between the sexes in relation to eight dimensions of self perception scale, that is, self, others, children authority, work, reality, parents, and hope and the total perception scores for male and female teacher trainees. The analysis of the data has shown the following results:

TABLE 5.54

Showing Ms., S.Ds. and significance difference of means of 8 SRI dimensions and the total perception score in relation to sex - male and female ( Independent variable Sex with dependent variable self perception)

	Se.	Ot.	Ch.	Au.	Wo.	Re	Pa.	Ho.	Total	
1 Sex	Mean	17.601	20.301	20.068	18.303	19.396	18.809	20.203	22.090	155.942
N = 429	S.D.	3.796	3.681	3.400	3.753	3.562	4.020	5.170	7.336	17.886
2 Sex	Mean	17.877	20.128	19.704	18.726	19.721	18.620	20.441	21.838	158.106
N = 179	S.D.	4.104	3.675	3.555	3.864	4.022	3.845	4.192	6.718	32.055
1 Sex/2 Sex	t-values	0.797	0.526	1.186	1.256	0.984	0.521	0.547	0.316	1.059
D.F. 606										

\* Significant at .05 level

\*\* Significant at .01 level

In the above table the perception of the male and female teacher trainees oneself, others, children, authority, work, reality and parents, hope and total perception were given. It is revealed that different dimensions of the perception do not show significant difference in mean at any of the levels: .05 and .01 levels of confidence in relation to males and females teacher trainees. It can be concluded that both the sexes have got the similar perception as regards to self, others, children, authority, work, reality, parents, hope and with the total perception scores. So hypothesis formulated is rejected and it is mentioned that both the sexes show similar behaviour as regards to perception variables.

#### 5.14.5 Sex and Performance

It was hypothesized that male teacher trainees would have better performance at the B.Ed. level than the female teacher trainees. To test this hypothesis the 't' test technique was adopted to find out the significant difference in means in performance, if any. Therefore, the analysis of the data has shown the following results.

TABLE 5.55

Showing Ms., S.Ds. and significant difference of means in performance in relation to sex - male and female teacher trainees N = 608  
(Independent variable Sex with dependent-Performance)

	N	Mean	S.D.
1. Sex	429	212.121	251.645
2. Sex	179	214.737	243.071

	't'-values	D.F.
1. Sex / 2 Sex	0.118	606

\* Significant at .05 level

\*\* Significant at .01 level

The above table shows that difference in performance between male and female teacher trainees is not significant at any of the levels of confidence. It can be concluded safely that male and female teacher trainees have more or less similar performance means (212.12, 214.74 with S.D. of 251.61, 243.07).

#### 5.14.6 Sex and Motivation Scores

The investigator wanted to find out the relationship of sex and the motivation score. It was hypothesized that the male trainees are more motivated than the female teacher trainees. The 't' test findings show the following results:

TABLE 5.56

Showing Ms., S.Ds., and significant difference in means of achievement motivated in relation to sex- male and female teacher trainees

(Independent variable Sex with dependent -Motivation)

	N	Mean	S.D.
1 Sex	429	5.839	11.693
2 Sex	179	10.670	13.203
		't'-values	D.F.
1 Sex / 2 Sex		4.467**	606

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it can be safely interpreted that the female teacher trainees have higher mean n-Ach., scores than the male teacher trainees. The significant difference exists between the two sexes at .01 level of confidence. It is interpreted that the female teacher trainees are more motivated than the male one. It may be due to socio-cultural factors and some of the environmental influences, viz, settling down into marital status, getting a better opportunity for a job or having a better



economic status of becoming an earning unit in the family. Some of these and various other reasons may contribute to higher n-Ach. scores for the fair sex trainees. Therefore, the hypothesis is not proved. It is concluded that female teacher trainees possess higher n-Ach. level than the male teacher trainees.

#### 5.14.7: 1-7 Sex and Self Report Card Measures

The self-report card measures such as sex, age, urban/rural residence, entering qualification, economic status as perceived by the trainees teaching experience and their outlook towards religion would show a marked difference in relation to both sexes. The male trainees would have higher means on different dimensions of SRC than the female teacher trainees. The following results show that significant difference on these dimensions exist in between the sexes. This can be perceived from the following table:

TABLE 5.57

Showing Ms., S.D.s and significant difference means of SRC dimensions  
in relation to both the sex: N = 608  
(Independent variable Sex with dependent variables of Self Report Card)

	Sx	Age	URR	QUA	ES	EX	RFL
1 Sex	Mean	1.846	1.193	1.837	1.918	2.583	1.315
N = 429	S.D.	0.048	0.733	0.395	1.177	0.493	0.465
2 Sex	Mean	1.914	1.274	1.553	2.101	2.235	1.391
N = 179	S.D.	1.075	0.517	0.510	1.358	0.842	0.489
1 Sex / 2 Sex							
D.F. 606	T-value	194.445**	9.508**	9.351**	2.404*	5.765**	12.546**
							1.818

\* Significant at .05 level  
\*\* Significant at .01 level

The above table shows that teacher trainees male/female have significant difference at .01 level of confidence on sex, age, urban/rural residence, economic status and teaching experience.

As regards to the trainees outlook towards religion it was found that both the sexes have similar outlook towards religion and significant difference is not available. It can be concluded that teacher trainees - male and female differ markedly as regards to age, urban/rural residence, economic status and teaching experience. Both the sexes also differ as regards to entry level qualification and significant difference has been found at .05 level. About their outlook towards religion they do not have different outlook rather they resemble on this dimension. This can be concluded that both sexes differed due to environmental situations.

#### 5.15.00 Teaching Experience

The candidates for teacher training programme are admitted if they have got prior teaching experience. This was the first and foremost condition for undergoing the course for being a teacher. As the students come from different urban and rural areas naturally they have got a different background as regard<sup>to</sup> their personality needs, anxiety, self-perception achievement motivated and their general outlook towards academic achievement at B.Ed. level in relation to their intelligence level and SES. As the

teaching experience contributessignificantly to other  
adjustive processes, therefore, it was thought proper that  
the teaching experience should be studied in relation to  
other dimension under study. The teaching experience had  
by the trainees varies in the total number of years spent  
as a teacher in schools. The investigator has assigned  
different codes as 1-, 2-, 3-, etc. for duration of the  
teaching experience:

<u>Code</u>	<u>Definition</u>
3-	Nil to 2 years
2-	4 to 9 years
1-	10 years and above

Under these ranges of experiences the interpreta-  
tions would be given for the discussion of the data.

5.15.1 Teaching Experience and INT Scores

How far intelligence scores are related to the  
teaching experience had by the trainees was to be studied in  
relation to the levels of experience had by them. To test  
this hypothesis, the 't' test technique was adopted and  
following results have been obtained:

TABLE 5.58

Showing Ms., S.Ds. and significance<sup>of</sup> difference  
of means of teaching experience in relation to  
INT scores (Independent variable teaching  
experience (Exp) with dependent - Int. Scores)

	N	Mean	S.D.
1 Exp.	16	37.625	13.861
2 Exp.	244	40.324	10.641
3 Exp.	348	41.428	10.953
	't'-values	D.F.	
1 Exp / 2 Exp	0.963	258	
2 Exp / 3 Exp	1.222	590	
3 Exp / 1 Exp	1.341	362	

(1.97) \* Significant at .05 level

(2.59) \*\* Significant at .01 level

(1) 10 years and above

(2) 4-9 years

(3) nil to 3 years

It was hypothesized that no significant difference existed in intelligence scores of teacher trainees who had varied teaching experience. To test this hypothesis the data was analysed and 't' test results showed the following results.

The teacher trainees having teaching experience 1-3 years, 4-9 years and 10 years and above showed mean difference in intelligence scores as 41.42, 40.3, 37.62 with S.Ds. of 10.9, 10.6, and 13.2. It is safely concluded that the teacher trainees who have experience of 10 years or so show a slight difference in means as compared to the teacher trainees who have 1-3 years teaching experience. However, the difference in means has been registered but this difference is not statistically significant. This shows that experience as an entry requirement is not at all associated with the intelligence levels of the trainees. No significant difference between the 1-2, 2-3 and 3-1 groupings have been found at any of the levels i.e. .01 or .05 levels of probability. Therefore, the hypothesis is retained.

#### 5.15.2 Levels of Teaching Experience and Anxiety

Whether the teacher trainees having teaching experience difference in anxiety state from the trainees who have experience of teaching of less years was to be studied in the present sample. It was observed from the analysis of the data that no significant difference in means existed among the various groupings. These results can be observed from the following table.

TABLE 5.59

Showing Ms., S.Ds. and significant difference of means of anxiety scores in relation to three levels of experience.

(Independent variable teaching experience (EXP) with dependent - Anxiety)

	N	Mean	S.D.
1 Exp	16	41.750	18.201
2 Exp	244	43.635	16.245
3 Exp	348	42.966	15.330
	't'-values		D.F.
1 Exp / 2 Exp	0.446		258
2 Exp / 3 Exp	0.510		590
3 Exp / 1 Exp	0.308		362

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that no significant difference in means exist between the groups 1/2, 2/3 and 3/1 and these differences are not available at .05 and .01 levels of probability. This clearly indicates that the anxiety state of the trainees is independent of the teaching experience had by them. However, as and when the individuals advance in experience they show slightly higher or less means

according to environmental situation. Same is true for S.Ds. which are 15.3., 16.2, 18.2 that the intra individual difference among the young trainees and older one are of the similar order. It is safer to interpret also that is not a significant criterion for increase/decrease of anxiety state.

#### 5.15.3: 1-15 Teaching Experience and E.P.P.S. Dimension

Personality needs are also related with the teaching experience had by the trainees. How far the variations in personality needs differ in relation to three levels of teaching experience, i.e., nil - 3 years, 4 - 9 years and 10 years and above, it is observed that E.P.P.S. dimensions do not show significant difference in means in most of the dimensions. The personality needs such as interreception, authority, and aggression showed significant difference of means between high and moderate, moderate and low groupings of teaching experience at .05 level of confidence. In the categories change, heterosexuality and aggression, the moderate and low groups, that is, trainees having teaching experience below 10 years show significance<sup>of</sup> difference in means at .01 level of confidence. In rest of the variables - personality needs and among all the possible combinations significant differences have not been found out. The results can be seen from the following table.



The above table shows the different E.P.P.S. dimension such as intraception, change, heterosexuality, authority and aggression which have shown significant difference in means. In rest of the categories such relationship has not been found out.

#### 5.15.4: 1-9 Teaching Experience and Self Perception

Self perception also governs the effectiveness in teacher behaviour. It was hypothesized that different dimensions of self perceptions such as self, others, children, authority, work, reality, parents and hope sub-scales' means would show significant difference in relation to three levels of teaching experience. To test the hypothesis the 't' technique was adopted and following results were arrived at.

TABLE 5.61

Showing Ms., S.Ds., and significant difference of means of self-perception scores inrelation to 3 levels of teaching experience.  
(Independent variable Teaching Experience with dependent variable Self-Perception)(EXP)

	Se.	Ot.	Ch.	Au.	Wo.	Re.	Pa	Ho	Total	
1 EXP	Mean	17.125	18.875	20.563	19.188	19.938	19.375	21.188	21.938	158.188
N = 16	S.D.	3.344	2.729	3.119	4.505	3.296	4.801	4.037	5.234	13.566
2 EXP	Mean	17.402	19.967	19.881	18.168	19.225	18.545	19.934	21.340	154.012
N = 244	S.D.	3.588	3.555	3.308	3.680	3.485	3.919	3.454	6.413	16.459
3 EXP	Mean	17.905	20.511	19.988	18.575	19.658	18.865	20.468	22.431	158.805
N = 348	S.D.	4.102	3.777	3.561	3.827	3.864	3.965	5.726	7.686	26.795
1 EXP/2 EXP D.F. 258	t-values	0.300	1.205	0.801	1.058	0.794	0.809	1.391	0.364	0.992
2 EXP/3 EXP D.F. 590	t-values	1.547	1.768	0.372	1.293	1.396	0.971	1.300	1.817	2.225*
2 EXP/1 EXP D.F. 362	t-values	0.749	1.712	0.634	0.621	0.284	0.498	0.496	0.254	0.017

\* Significant at .05 level.  
\*\* Significant at .01 level.

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The table shows that all the dimensions of SRI do not show significant difference in means in all the possible combinations pertaining to 3 levels of teaching experience. It is heartening to find that the total perception scores also do not show significant difference in means in most of the combinations of high, moderate and low teaching experience showed significant difference in means at .05 level of confidence that is trainees having less than 3 years of experience and those having 4-9 years teaching experience differ in the total perception scores and probability is .05 level.

#### 5.15.5 Levels of Teaching Experience and the Performance Scores

Academic achievement at the B.Ed. level comprises of theory and skill in teaching known as practice teaching and the aggregate scores are the combination of both. It is one of the convictions that the trainees who have taught already in different schools and before joining the training programme have got the prior teaching experience would differ in total academic achievement at B.Ed. level. It was hypothesized that higher the teaching experience, higher should be the mean academic performance of the individuals. To test this hypothesis 't' test was run and the following results were obtained:

TABLE 5.62

Showing Ms., S.Ds. and significant difference of means in performance scores in relation to three levels of teaching experience.  
(Independent variable teaching experience(EXP) with dependent - Performance)

	N	Mean	S.D.
1 EXP	16	380.250	235.039
2 EXP	244	223.016	248.000
3 EXP	348	198.098	247.743
	't'-values		D.F.
1 EXP/2 EXP	2.464*		258
2 EXP/3 EXP	1.204		590
3 EXP/1 EXP	2.882**		362

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that the teacher trainees differ in their means - 0-3 years (198), 4-9 years (223) and 10 years & above (380). The significant difference in mean performance scores has been found in grouping 1/2, 3/1, at .50 and .01 level of confidence. In the moderate and low groups, no significant difference is available.

5.15.6 Levels of Teaching Experience and Total Experience

When the teaching experience had by the trainees was distributed among the three levels the following results could emerge out:

TABLE 5.63

Showing Ms. S.Ds. and significant difference in means in experience in relation to three levels of teaching experience .(Independent Variable teaching experience (EXP) with Dependent)

	N	Mean	S.D.
1 EXP	16	-1.625	6.217
2 EXP	244	7.250	12.308
3 EXP	348	7.678	12.449
	't'-values	D.F.	
1 EXP / 2 EXP	2.857*	258	
2 EXP / 3 EXP	0.414	590	
2 EXP / 1 EXP	2.969*	362	

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that experienced teacher trainees differ in experience as regard to number of years served as a teacher in different schools. The 't' test results show that significant difference in means exists between 1/2 and 3/1 grouping at .01 level of confidence. While in the moderate and low groups, such significant difference is not available.

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5.15.7: 1-7

Levels of teaching experience and variable  
of Self Report Card.

It was hypothesized that teacher trainees - male, female, having different age groups, urban/rural residence, differing in qualification with different economic status, teaching experience and in outlook towards religion, would show a marked difference in relation to 3 levels of teaching experience. To test these hypotheses as related with different dimension the 't' test results were obtained which have been summarized in the following table:

TABLE 5.64

Showing Ms., S.Ds. and significant difference in means of Self Report Card variables such as Sex, Age, Urban/Rural residence, qualification, Economic Status, and attitude towards religion of teacher trainees in relation to three levels of teaching experience.  
(Independent variable teaching experience (EXP) with dependent variables of Self Report Card)

	SX	AGE	URR	QUA	ES	EX	RFL
1 EXP	Mean	1.000	2.750	1.313	1.438	1.875	1.563
N = 16	S.D.	0.000	1.065	0.479	0.512	0.500	0.512
2 EXP	Mean	1.070	2.020	1.197	1.533	1.910	1.316
N = 244	S.D.	0.255	0.663	0.398	0.913	0.544	0.466
3 EXP	Mean	1.466	1.388	1.371	2.204	2.089	1.342
N = 348	S.D.	0.500	0.585	0.490	1.373	0.684	0.475
1 EXP/2 EXP	t-values	1.090	4.019**	1.112	0.413	0.249	9.662**
D.F. 258							2.042*
2 EXP/3 EXP	t-values	11.879**	12.553**	4.587**	6.669**	3.407**	33.752**
D.F. 590							0.670
3 EXP/1 EXP	t-values	3.723**	8.703**	0.455	2.223*	1.236	18.401**
D.F. 362							1.810

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that the moderate and low groups of teaching experience, that is, 4-9 and 0-3 years of groupings show significant difference in means in sex, age, urban/rural residence, qualification, economic status and experience at .01 level of confidence. Same relationship is true for groups 3-1 in relation to sex, age and experience. The groups 1/2, that is, 10 years and above and 4-9 years show significant difference in age at .01 level of confidence. They show significant difference in their outlook towards religion at .05 level of confidence. In rest of the groupings such relationships have not been found out. It can be safely concluded that the teacher trainees: male/female, differing in age, having urban/rural residence, differing in entering qualification, economic status and experience show significant difference in means in most of the possible groups - high, moderate, low as related to teaching experience had by the trainees.

#### 5.16.1 Economic Status with INT Scores

The teacher trainees under survey belong to different economic status as most of them belong to rural areas and their parents qualifications are not <sup>of</sup> higher order. 80% of them belong to labour/clerical/teaching/farming etc., types of occupations. How far they have a clear perception as regards to the economic status was to be determined by asking them to verbalize their economic status as such therefore, the



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trainees perceived their economic status as middle class (87.17%) and the lower class (11.84%). Hardly 1% of them belonged to higher economic status. The investigator divided this variable into three levels which are to be studied as under:

<u>Code</u>	<u>Definition</u>
1	Upper middle class and upper
2	Middle class
3	Lower class

Under these three levels of economic status the Intelligence scores of the trainees have been distributed. It was one of the hypotheses that the higher the economic status higher would be the intelligence level and vice-versa. To test this hypothesis 't' test results have been obtained which are summarized in the following table.

TABLE 5.65

Showing Ms., S.D.s and significance<sup>Of</sup> difference in means in INT scores in relation to three levels of economic status N = 608  
(Independent variable Economic Status (EDS) with dependent - INT Scores)

	N	Mean	S.D.
1 ECS	6	43.667	7.866
2 ECS	530	41.094	10.847
3 ECS	72	39.111	11.586
	't'-values	D.F.	
1 ECS/2 ECS	0.579	534	
2 ECS/3 ECS	1.444	600	
3 ECS/1 ECS	0.942	76	

\* Significant at .05 level

\*\* Significant at .01 level

The above table clearly shows that the means for upper middle and lower classes of economic status of trainees are 43.67, 41.0 and 39.1 with S.Ds. of 7.87, 10.8 and 11.6. In all the groupings such as 1/2, 2/3 and 3/1 the significant difference in mean has not been found out at any of the recognized levels. It is safer to interpret that the INT scores of the trainees are not related to the level of economic

status had by them,that is, it can not be generalized that higher the economic status, higher would be the intelligence score, that is, the intelligence is not only limited to high, moderate and low groups of economic status,that is,other factors also contribute to Intelligence level.

5.16.2 Economic Status and Anxiety Scores:

Anxiety level of the individual also gets affected with the total environmental influence on the individual in general and economic status of the family in particular. It was hypothesized that the higher the economic status, the higher would be the anxiety score. To test this hypothesis the data has been analysed on the basis of 't' test and the following results have been obtained.

TABLE 5.66

Showing Ms. S.Ds. significant difference of means in anxiety scores in relation to three levels of economic status of the trainees N = 608  
(Independent variable economic status (ECS) with dependent Anxiety)

	N	Mean	S.D.
1 ECS	6	45.833	14.049
2 ECS	530	42.640	15.692
3 ECS	72	47.125	16.002
	't'-values	D.F.	
1 ECS/2 ECS	0.496	534	
2 ECS/3 ECS	2.270*	600	
3 ECS/1 ECS	0.191	76	

\* Significant at .05 level. \*\* Significant at .01 level

From the above table it is concluded that the moderate and low status economic groups have significant difference in means in anxiety scores at .05 level of confidence. The other possible groupings do not show significant difference in means at any of these levels. As regards to their S.Ds. the upper economic status class is more homogeneous than the lower economic status holders that is the lower economic status individuals show more variation in anxiety scores. Even from observation of the table it is obvious that the upper status group has mean economic as 45.8 while the lower economic status group has slightly higher mean 47.1

#### 5.16.3: 1-15 Levels of Economic status and E.P.P.S. Variables

All the 15 personality needs as measured by E.P.P.S. have been studied in relation to 3 levels of economic status upper, middle, lower as perceived by teacher trainees. As personality needs are more influenced by the environmental situations so it is hypothesized that the significant difference in these personality needs would be found in relation to 3 levels of economic status. The means and S.Ds. worked out for 15 personality dimensions in relation to high, moderate low economic status have been summarized in the following table:

From the table it is obvious that most of the dimensions do not show significant difference in means in relation to all the possible groups of economic status. The possible relationships found are for moderate and low, and low and high economic status groupings for n-ach., n-affiliation and n-succorance. The differences in means are significant at .05 level of confidence. It is obvious that the perception of the economic status by the trainees goes vis-a-vis different personality needs, that is, the trainees belonging to three different economic groups show similar means in most of the personality needs as measured by E.P.P.S.

#### 5.16.4: 1-9 Levels of Economic status and Self Perception Dimensions

The economic status of the individuals is largely governed by the self perception of the individuals of the nature of work they are engaged in or the members of their families undertaking different jobs, their educational levels and the income earned from all sources. The self perception as measured in this study yielded 8 perception scores which are governed phenomenological world of the individuals. The scores on Self perception were analysed in relation to three levels of economic status in its all possible combinations. No significant difference exists in the 'self', 'others', 'children', 'work', 'hope' and 'parents' scales scores in all their possible combinations with levels of economic status. This indicated that the economic status is not

significantly related to these dimensions of SRI. The significant difference existed in combinations moderate low and low/ high for reality and/ authority scales at .05 levels of confidence. Perception of authority in positive directions is good and brings about a desirable working relationship with the superiors. The moderate groups showed more positive attitude towards the authority. The results arrived at by Rao, K.S. (1975) for composite SES scores, converted into levels showed different results from the present study.

TABLE 5.68

(Independent variable economics status, with dependent variable Self-Perception)  
(ECS)

	Sc.	Ot	Ch	Au	Wo	Re	Pa	Ho	Total
1 ECS	15.333	19.833	19.500	21.000	20.500	20.167	19.167	20.333	155.833
N = 6	4.546	3.189	3.146	4.427	1.871	5.269	3.764	3.502	17.849
2 ECS	17.755	20.274	19.998	18.498	19.526	18.864	20.392	22.226	157.257
N = 530	3.958	3.696	3.428	3.839	3.804	3.989	5.050	7.506	24.005
3 ECS	17.347	20.111	19.722	17.694	19.153	17.792	17.486	20.306	151.653
N = 72	3.233	3.610	3.639	3.218	2.996	3.584	3.669	3.668	13.001
1 ECS/2 ECS D.F. 534	1.488	0.290	0.354	1.585	0.626	0.793	0.593	0.617	0.145
2 ECS/3 ECS D.F. 600	0.836	0.351	0.636	1.697	0.800	2.165*	1.471	2.136	1.942
3 ECS/1 ECS	1.421	0.182	0.145	2.349*	1.080	1.503	0.205	0.018	0.736

\* Significant at .05 level.

\*\* Significant at .01 level.

#### 5.16.5. Levels of Economic Status with Performance

The performance has been studied in relation to three levels of economics status as perceived by the trainees. It was hypothesized<sup>that</sup> the higher the economic status, the higher would be the performance of the individuals at the training level. To test this hypothesis the 't' test technique was adopted. The results can be seen from the following table.

Table 5.69

Showing Ms. S.Ds. and significance<sup>of</sup> difference of means in performance scores in relation to three levels of economic status N = 608

(Independent variable economic status (ECS) with dependent performance)

	N	Mean	S.D.
1 ECS	6	159.000	260.493
2 ECS	530	215.491	248.784
3 ECS	72	198.250	251.855
	't'-value	D.F.	
1 ECS/2 ECS	0.553	534	
2 ECS/3 ECS	0.551	600	
3 ECS/1 ECS	0.366	76	

\* Significant at .05 level.

\*\* Significant at .01 level.



The above table shows that the significant difference in means in all the possible groupings of economic status have not been found significant at any of the levels of confidence, therefore, the hypothesis formulated is not tenable, that is, the academic performance of the teacher trainees is not related with the economic status had by them ( the results are based on N = 608 as computed data but actual performance belonged to three teacher training colleges only. The performance data is extrapolated for the total sample for predictive purposes.

#### 5.16.6 Levels of Economic Status and n-Ach. Scores

The investigator wanted to study the mean n-Ach. scores obtained by the teacher trainees having different levels of economic status, that is, high, average and low. It was hypothesized that higher economic status individual will have higher n-Ach. mean scores. To test this hypothesis 't' test was adopted and the following results have been arrived at:

TABLE 5.70

Showing Ms., S.Ds., significant difference of means of n-Ach., scores in relation to three levels of economic status N = 608  
(Independent variable economic status(ECS)  
with dependent Motivation)

	N	Mean	S.D.
1 ECS	6	16.167	13.182
2 ECS	530	7.451	12.109
3 ECS	72	6.125	13.652

	't'-values	D.F.
1 ECS / 2 ECS	1.752	534
2 ECS/ 3 ECS	1.505	600
3 ECS/ 1 ECS	1.908	86

\* Significant at .05 level.

\*\* Significant at .05 level.

The above table reveals that the teacher trainees belonging to high, moderate and low economic status do not show significant difference in means at any of the recognized levels of probability. This shows teacher trainees belonging to three levels do not show significant difference in n-Ach. scores. It is observed that 90% of the trainees belong to moderate economic status group and the mean n-Ach. score is 7.5 with S.D. of 12.1 which differs markedly with the high economics status group (N=6, M = 16.16 and S.D. 13.18). It is concluded that in the present study sample 99% of the trainees have middle and lower economic status. These facts are in consonance with the data related to income and occupation had by the trainees parents.

#### 5.16.7: 1-7 Levels of Economic Status and Variable of Self Report Card

The investigator wanted to find out the distribution of teacher trainees according to sex, age, urban/rural

residence, qualification, economic, experience and the outlook of the trainees towards religion in relation to high moderate and low economic status and to find out the significant difference in means of these variables in relation to three levels of economic status. The data has<sup>been</sup> analysed accordingly and is presented in the following table:

TABLE 5.71

Showing Ms., S.Ds. and significant difference in means in self report card dimensions in relation to three levels of economic status N =608 (Independent variable of Economics Status (ECS) with dependent variables of Self-Report Card)

	SX	AGE	URR	QUA	ES	EX	REL
1 High ECS	Mean	1.667	1.500	1.833	4.333	2.000	1.833
N = 6	S.D.	0.516	0.548	1.169	0.816	0.894	0.408
2 Average ECS	Mean	1.326	1.315	1.964	2.113	2.194	1.393
N = 530	S.D.	0.469	0.469	1.278	0.502	1.097	0.475
3 Low ECS	Mean	1.028	1.167	1.556	1.069	2.722	1.250
N = 72	S.D.	0.165	0.375	0.820	0.256	1.189	0.436
High ECS/Av. ECS							
D.F. 534	t-values	1.764	0.085	0.959	0.249	10.694**	0.432
Average ECS/Low ECS							
D.F. 600	t-values	5.351**	3.179**	2.575*	2.638*	17.337**	3.791**
Low ECS/High ECS							
D.F. 76	t-values	7.240**	0.598	2.017*	0.771	23.696**	1.450

\* Significant at .05 level

\*\* Significant at .01 level

The different dimensions show significant difference in means in economic status and the outlook of trainees towards religion for high, average economic status groups and the significant difference of means have been found out .01 and .05 levels of confidence. For the moderate and low groupings significant difference exists as regards to sex, age, urban/rural residence, qualifications, economic status and experience at .01 and .05 levels of confidence. The teacher trainees' outlook toward religion for this grouping average-low, does not show significant difference while low and high groups also differ markedly as regards to sex, economic status and their outlook towards religion. It is concluded that low economic status trainees are more religious minded than the high and low economic status grouping. This fact is in consonance with the already existing interpreted results for the present study.

5.17.00 Urban/rural residence and  
teacher trainees

The individuals differ markedly as regards to the influences had from different phenomenological world which provides a different social climate to the individuals. Since the people in 2 situations have different experiences, it is assumed that the personality needs, self perceptions, anxiety states and other related variables should show a significant difference. It is believed that the city culture is altogether

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different from that of the village. Therefore the urban/rural residence of the teacher trainees contribute significantly as regards to the individuals' personality make-up and their general perception towards living conditions. The data concerning the 35 dependent variables have been analysed under two categories (1) Rural (2) Urban. With this code 1 UR - rural trainees and 2 UR urban trainees. The data concerned with the different variables have been analysed in relation to these two categories.

#### 5.17.1 Rural/urban residence & INT Score

The residence of the individuals in rural/urban settings provided a different type of experiences to the individuals which indirectly affect their personality make-up and the self-perceptions. The investigator identified the intelligence data of the teacher trainees under these two groupings to find out the significance<sup>of</sup> differences, if any, for these two groups and the same have been summarized as under.

Table 5.72

Showing Ms. S.Ds. and significant difference of means in INT scores in relation to rural/urban residence of teacher trainees N = 608

(Independent variable Urban/Rural (UR) with dependent INT Scores)

	N	Mean	S.D.
1. Rural	423	40.988	10.513
2. Urban	185	40.649	11.824

	t-values	D.F.
1 UR/2 UR	0.353	606

\* Significant at .05 level

\*\* Significant at .01 level

It ~~is~~ was hypothesized that the urban teacher trainees would show a higher mean intelligence score than the trainees belonging to rural residence. The data analysed depict a different situation. The teacher trainees do not show significant difference in means in intelligence scores at any of the recognized levels of probability, that is, residence of the teacher trainees does not affect the intelligence levels of the individuals. From the observation of the table it is obvious that the mean scores for rural and urban trainees are 40.98, 40.65 with S.Ds. of 10.5 and 11.8. This shows average computed for both the groups are the same.

On the anxiety test also, similar results are obtained.

#### 5.17.2 Rural/Urban residence and Anxiety Scores

Anxiety scores obtained by all the trainees have been studied in relation to rural/urban residence of the teacher trainees. The means, S.Ds. and 't' test values obtained have been summarized as below:

TABLE 5.73

Showing Ms., S.Ds. and significance of difference of means in anxiety scores in relation to rural/urban residence N = 608.

(Independent variable Urban/Rural (UR) with dependent Anxiety)

	N	Mean	S.D.
1 Urban	423	43.395	15.554
2cRural	185	42.762	16.253
	t-values	D.F.	
1 UR/ 2 UR	0.455	606	

The above table shows that both the groups do not show significant difference in means on anxiety scores, that is, anxiety state of the trainees is not significantly related with their residence. The means for the 2 groups are 43.39 (N = 423) and 42.76 (N = 185) with S.Ds. of 15.5 and 16.2 respectively.

#### 5.17.3: 1-15 Rural/Urban Residence with E.P.P.S. Dimensions

The 15 E.P.P.S. dimensions have been studied in relation to urban/rural residence of the teacher trainees. It was hypothesized that the urban trainees would have higher means scores for different personality traits than the rural teacher trainees, that is, they would differ significantly on 15 personality traits. The data analysed have been presented in the tabular form and show the following results.



The data presented in the above table clearly shows that no significant difference in 15 personality needs exists at any of the levels of probability in relation to rural/urban residence of the trainees. It can be safely concluded that the teacher trainees can-not be differentiated from the various personality dimensions had by them, on the basis of rural/urban residence.

5.17.4: 1-9 Rural/Urban Residence with Self Perception measures

The urban teacher trainees would have better means on different self perception dimensions than the teacher trainees having rural residence. This hypothesis had been framed for testing the various measures of self perception. The data when analysed showed the following results.

TABLE 5.75

Showing Ms., S.Ds. and significant difference of means in  
Self perception measures in relation to rural/urban  
residence N = 608  
(Independent variable Urban/Rural (UR) with dependent  
variable self perception)

	Se.	Ot.	Ch.	An.	Wo	Re.	Pa	$\bar{x}$	Ho	Total
1 UR	Mean	17.558	20.123	19.903	18,281	19.376	18.738	20.151	21.804	155.177
N = 423	S.D.	3.870	3.679	3.429	3.860	3.637	4.119	5.238	7.448	17.992
2 UR	Mean	17.968	20.541	20.092	18.762	19.757	18.778	20.551	22.384	159.784
N = 185	S.D.	3.924	3.665	3.495	3.605	3.846	3.609	4.022	6.436	31.371
1 UR/2UR										
D.F. 606	t-value	1.196*	1.285	0.621	1.441	1.167	0.117	0.926	0.920	2.282*

1. Rural      2. Urban

\* Significant at .05 level

The table shows that self has been perceived significantly higher by the city dwellers than those having rural residence. The difference in their perception of self was significant at .05 level of probability ( $t = 1.196$ ). This result is in consonance with the results arrived at by Rao, K.S. (1975) for teacher trainees of Madras. Some background in city culture always helps a person develop individuality and self reliance. Since family is a unit in the city having limited contacts with neighbours, the members of the family endeavour for self-sufficiency while the situations in the villages are different. Interdependence and co-operation are evident among the village dwellers. These two situations may explain, to a certain degree, the significant difference observed in the perception of the self. Other categories of the SRI have not shown significant difference in means in relation to rural/urban residence. However, the total perception of rural/urban teacher trainees show a significant difference in means at .05 level of confidence. City dwellers certainly excel in total perception scores (159.78) than the rural residents (155.17)

#### 5.17.5 Rural/Urban Residence with total performance

The urbanite teacher trainees would show better performance than the ruralite teacher trainees. For this conviction of the investigator it is felt that urban sector provides better individuals. To test hypothesis, it was thought to use the 't' test and the following results were obtained which are summarized below:

TABLE 5.76

Showing Ms., S.D.s significance of difference of means in total performance of rural urban teacher trainees.

(Independent variable Urban/Rural (UR) with dependent Performance)

	N	Mean	S.D.
1 UR	423	207.428	248.991
2 UR	185	225.384	249.097
	t-values	D.F.	
1UR/2 UR	0.818	606	

From the above table-it is obvious that the rural/urban teacher trainees do not show significant difference in means in the total performance at any of the recognised levels of probability either at .05 or .01. The hypothesis formulated is not tenable. It is observed from experience that the teacher trainees stay in the hostel while getting education and these hostels are very much located in the urban settings and all sorts of facilities are available to them as compared to the urban trainees. It is concluded that the urban and rural trainees do not differ markedly as regard to their total performance at B.Ed. level, is concerned.

5.17.6 Rural/Urban Residence and n-Ach. Scores

Due to technological and scientific developments the fruits of industrialization such as transport, radio, clothing, new devices for farming etc., are reaching the countryside and more especially the mass communication systems in the form of cinema are etc. are bridging the gap between the rural and urban populace. But at present the difference between background of urban and rural people show some distinction. Therefore, it was thought proper to examine n-Ach. in relation to the residence of the Ss. Out of the total sample of 608 subjects, 423 belong to villages and the rest 185 come from urban areas. With these views in mind, the data were collected in achievement motivation in relation to urban and rural teacher trainees and the results are summarized as below:

TABLE 5.77

Showing Ms., S.Ds., and significant difference of means of n-Ach. scores in relation to urban/rural residence N = 608

(Independent variable Urban/Rural (UR) with dependent-motivation)

	N	Mean	S.D.
1xUR	423	6.050	11.979
2 UR	185	10.032	12.745
	t-values	D.F.	
1 UR/2 UR	3.698**	606	
1. Rural	2. Urban	** Significant at .01 level	

From the above table it is obvious that the urban teacher trainees are more motivated ( $M=10.03$ ,  $S.D. 12.74$ ) than the teacher trainees belonging to rural residence ( $M=6.05$ , and  $S.D. = 11.98$ ).

The significant difference in means between the two groups has been found significant at .01 level ( $t= 3.698$ ). This is to conclude that the urban teacher trainees score higher on n-Ach. test than the rural teacher trainees. The findings of the present study are very much akin to the findings of Rao, K.S. (1975) who studied n-Ach. of rural and urban teacher trainees of Madras (Urban:  $M = 5.43$ ,  $S.D. 4.46$ ; Rural:  $M = 3.99$   $S.D. 4.14$ , 't' value 3.26\*\*).

In the cities individuals find many opportunities for employment, education, entertainment, business etc., therefore, an individual will have varied experience due to industrialized world in the urban areas. Therefore, in the urban culture, individuals are the time-conscious. People find less time to spend on their own.

Therefore, many entrepreneurial activities are to be observed in the city life but in villages the situation is different. People are slow and do not find work round the year. They work seasonally. People are not exposed to many experiences. They are more co-operative in social activities than the urban people. It is, therefore, expected that n-Ach. grows in the competitive atmosphere rather in the co-operative atmosphere.

Right from the child-rearing practices upto the most grown-up individuals, the keen competition is going on in various facets of life-situations. Therefore, the better development of n-Ach., in city dwellers can be attributed to this aspect. Therefore, teacher trainees belonging to urban areas have higher n-Ach. means than the rural teacher trainees.

TABLE 5.78  
(Independent variable Urban/Rural (UR) with dependent variables  
of Self Report Card)

	SX	AGE	URR	QUA	ES	EX	REL
1 UR							
Mean	1.184	1.716	1.000	1.804	1.962	2.390	1.314
N = 423	S.D.	0.388	0.725	0.0	1.147	0.637	1.067
							0.465
2 UR							
Mean	1.546	1.589	1.984	2.168	2.124	1.946	1.389
N = 185	S.D.	0.499	0.718	0.164	1.314	0.609	1.174
							0.489
I UR/ 2 UR							
D.F. 606							
t-values	9.650**	1.995	123.474**	3.363**	2.926**	4.578**	1.796

1. UR = Rural, 2 UR = Urban

\* Significant at .05 level

\*\*Significant at .01 level



## 5.17.7: 1-7

Rural/Urban Residence and the SelfReport Card Measures

Sex, age, rural/urban residence, entering qualification, economic status, teaching experience and the outlook of trainees, toward religion or liberal in religion have been studied in relation to the urban/rural residence of the teacher trainees. It is observed that in first six dimensions significant difference in means existed while in the seventh dimension outlook toward religion, rural urban trainees did not show significant difference in means. It can be safely concluded that the urban sample constitutes of more number of women trainees than that of male teacher trainees, as compared to total trainees having rural residence. Significant difference of means between the urban and rural trainees have been found at .01 level for sex, urban/rural residence, economic status and teaching experience and age at .05 level. The outlook of rural/urban teacher trainees towards religion do not show significant difference in mean values. It may be interpreted that the Oriya people are more religious-minded so they imbibe this virtue.

5.18.00 Traditional/Modern Family

It was thought proper by the investigator that the family characteristics of the teacher trainees may be explored. Therefore, to find out the interactions among the family members, family structure, their socio-economic status, home and living

conditions of different teacher trainees as regards to their residence, occupation of parents, it was considered that change in family with regard to different traits - joint/nuclear, rural/urban, agriculturist/non-agriculturist, traditional and illiterate/modern and liberate etc., were considered essential to trace out the various issues related with their outlook, towards different life situations. Therefore, the dimension traditional and illiterate/modern and literate was considered essential for its relationship with other variables such as self-perception, personality needs, anxiety state and performance etc. The following results have been arrived at taking this variable as independent one and the same one being summarized as below for easy interpretations.

#### 5.18.1 Traditional/modern family with INT Scores

All the teacher trainees' intelligence scores have been studied in relation to traditional and modern family. Whether modern family ex<sup>ci</sup>ercises some influence on individuals for the development of better intelligence or not; this anomaly was sorted out by applying 't' test for the teacher trainees' intelligence scores and the following results were arrived at.

TABLE 5.79

Showing Ms., S.Ds. and significant difference of means in intelligence scores in relation to traditional/modern family.

(Independent variable Traditional/Modern(TM) with dependent - INT Scores)

	N	Mean	S.D.
1 TM	203	39.951	10.913
2 TM	405	41.353	10.906
	t-values	D.F.	
1 TM/ 2 TM	1.495	606	

1. Traditional                      2. Modern

\* Significant at.05 level

\*\* Significant at.01 level

From the above table it is obvious that the trainees belonging to traditional and illiterate and modern and literate families do not show significant difference in means at any of the levels of probability. Therefore, intelligence scores means for both types of trainees are more or less similar, that is, that significant difference does not exist between the means for these dimensions. Therefore, development of intelligence of teacher trainees has got nothing to do with the nature of the family as traditional or modern. The data

have been further considered for anxiety scores obtained by the teacher trainees belonging to traditional and modern families and the following results were obtained.

5.18.2 Traditional/Modern family and the anxiety scores of the trainees

The mean anxiety scores for two types of trainees are given as under:

TABLE 5.80

Showing Ms., S.Ds. and significant difference of means in anxiety scores in relation to Traditional/Modern family N = 608  
(Independent variable traditional/modern(TM) with dependent - anxiety)

	N	Mean	S.D.
1 TM	203	41.591	16.069
2 TM	405	44.010	15.559
	t-values	D.F.	
1 TM/ 2 TM	1.788	606	

The above table shows that teacher trainees belonging to the traditional and modern families do not show significant difference in means at any of the levels of probability. However, the teacher trainees belonging to modern and literate families show a little higher mean(44.0 S.D. 15.6) than the trainees belonging to traditional and illiterate homes (41.59 with S.D. of 16.1), that is, both the groups show slight differences in means but they are not significant.

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5.18.3: 1-15

Traditional and Modern family and15 Dimensions of E.P.P.S.

E.P.P.S. dimensions have also been studied in relation to the nature of the family as traditional/modern. As family is a dominant unit of the community, therefore, it exercises ~~a~~ great influence over the individual or different members of the groups as the child receives his first lesson in the family, therefore, his personality make-up is influenced to a great extent by the different members around him which ~~&~~ they determine his phenomenological world. Therefore, the child gradually picks-up the social cultural heritage in relation to his physical, mental development. Therefore, personality is nothing but a social effectiveness (Burgess, E.W.) which is largely determined by the personality needs such as n-Ach., n-aff., n-nur, n-agg. Keeping these ideas in mind, the investigator studied the teacher trainees' need in relation to their family set-up, that is, traditional/modern. Having analysed the data, the following results were obtained:

The above table shows the teacher trainees male/female belonging to traditional/modern homes do not show significant difference in means on 14 dimensions of E.P.P.S., that is, teacher trainees belonging to traditional/modern homes have more or less similar personality needs. They show significant difference in means for the category n-nurturance at .01 level of confidence, that is, traditional and modern teacher trainees differ significantly as regard (to helping friends when they are in trouble, to assist others, to helping friends when they are in trouble, to assist others, less fortunate, to treat others with kindness and sympathy, to be generous with others, to sympathize with others who are hurt. The mean for modern families is more than the traditional one. It may be interpreted that the city living conditions helped the teacher trainees to acquire a generous outlook towards living conditions as in the cities nuclear families are mostly there. Therefore, at the time of need, they are to depend on others, that is, one people who do not have kinship ties. Therefore, this spirit is helpful in giving them a trait of personality like nurturance better than those who live in villages and have got joint families. In rest of the dimensions teacher trainees belonging to traditional/modern outlook do not differ markedly. The results concerning them can be perceived from the table.

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1.18.4: 1-9

Tradition<sup>al</sup>/modern family and SelfPerception Dimensions

It was thought to investigate the self perception measures 'self', others, children, authority, work, reality, parents, hope and the total perception of teacher trainees belonging to traditional and modern homes. The analysis of data showed the following results:

TABLE 5.82

Showing Ms., S.Ds. and significant difference of means in 8 dimensions scores of SRI and the total perception in relation to traditional/modern family N=608 (Independent variable Traditional/Modern(TM) with variable self perception).

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa.	Ho	Total
1 TM	Mean	17.566	20.473	20.005	18.438	19.305	18.690	20.192	21.709
N = 203	S.D.	3.771	3.545	3.248	3.684	3.316	3.692	3.600	5.775
2 TM	Mean	17.741	20.138	19.938	18.422	19.585	18.780	20.314	22.116
N = 405	S.D.	3.949	3.740	3.547	3.843	3.883	4.102	5.440	7.758
1TM/2 TM	t-values	0.521	1.058	0.225	0.050	0.878	0.265	0.288	0.661
D.F. 606									0.211



From the above table it is obvious that the teacher trainees belonging to traditional and modern homes do not show significant difference in means on various sub-scales of SRI and the total perception score obtained by teacher trainees of Orissa. It clearly shows the traditional/modern families do not differ significantly. It is one of the convictions of the investigator that phenomenological world of the individuals is largely governed by the immediate relatives and other members of the group. Therefore, perceptions of the trainees should show a marked difference. The results obtained are quite contrary to the convictions of the investigator but the same can be interpreted more logically as under:

The trainees under the study sample belonged to lower and middle class families and 68% of their parents are engaged in agriculture. However, 67.6% of them possess modern outlook, that is, they being educated do not believe in traditional practices. Naturally, their perception has shown a changed trend. They are traditional in their origin - being ruralites, agriculturists and occupying a lower and middle class economic status (99%) and believe in religion (66%) but still they have perceptions which are very much akin to the modern living conditions. This fact is supported on the basis of mean-n-Ach. scores for low and high economic status.

#### 5.18.5 Traditional/Modern Family and Total Performance

It was hypothesized that the modern families would be able to contribute <sup>more</sup> significantly towards the performance at the annual examination of the trainees than that of the families who practise traditional ways.

It was one of the convictions of the investigator that the traditional families lack adequate accomodation<sup>mod</sup>, educated people, other facilities for a comfortable living and <sup>On the</sup> other hand modern homes provide all such things to the individuals. Naturally, all these factors add to the positive side of the enriched programmes for the individual. To test this hypothesis the performance of the traditional/modern trainees was attributed and following statistics were calculated.

TABLE 5.83

Showing Ms., S.D.s., significant difference of means of total performance in relation to traditional/modern families. N = 608  
(Independent variable Traditional/Modern (TM) with dependent - Performance)

	N	Mean	S.D.
1 TM	203	191.566	246.067
2 TM	405	223.580	250.008
	t-value	D.F.	
1 TM/2 TM	1.497	606	

From the above table it is obvious that significant difference between the means in performance scores as regards to traditional/modern families does not exist at any of the levels of probability. This clearly indicates that modern families do not contribute significantly to performance due to extra possible facilities. However, the difference in the mean performances has been observed, that is,  $M = 191.57$  and  $223.58$ . But the significant difference has not been found statistically.

#### 5.18.6 Traditional/Modern Homes and Achievement Motivation

Ach. motivation has also been considered in relation to the nature of the family as traditional/modern. As modern homes provide extra experiences and better exposure of individuals to the environment and being influenced by scientific and technological gadgets and appliances for homely and other comforts. Naturally these aspects motivate the individuals to do better in all walks of life in general and in education in particular. Therefore, it is hypothesized that the trainees coming from the modern homes would have better n-Ach. as compared to the trainees who constitute the traditional families. The data when analysed gave the following results.

TABLE 5.84

Showing Ms., S.D.s and significance difference of means of n-Ach. scores in relation to traditional/modern families N - 608  
(Independent variables Traditional/Modern (TM) with dependent motivation)

	N	Mean	S.D.
1 TM	203	7.241	13.089
2 TM	405	7.272	11.970
	t-value	D.F.	
1 TM/ 2 TM	0.028	606	

From the above table it is concluded that the modern homes have not contributed significantly towards the higher mean value of n-Ach. scores, that is, trainees from both the groups do not show significant difference of means in n-Ach. scores at any of the levels of significance, that is, .05 or .01 level probability. From observation of the table it is concluded that slight increase in the level of motivation of modern trainees is there but it is of a very little magnitude. It clearly shows the nature of the family as modern or the traditional has not been able to contribute generously towards this aspect.

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5.18.7: 1-7

Traditional/Modern families and the  
Self Report Card Measures

The dimensions such as sex, age, urban/rural residence qualification, economic status, teaching experience and attitude of trainees towards religion or liberal in religion have been studied in relation to teacher trainees belonging to traditional/modern families. It is observed that trainees' parents practising traditional ways constitute of  $N = 203$  trainees in the total sample of  $N = 608$ , that is, rest of trainees  $N = 405$  come from those homes who feel to practise modern ways of living. When the data were sorted out for the above named dimensions the following results were obtained.

TABLE 5.85

Showing Ms., S.D.s and significant difference in means of 7 dimensions of Self Report Card in relation to traditional/modern families.  
(Independent variable Traditional/Modern (TM) dependent variable of Self Report Card)

	SX	AGE	URR	QUA	ES	EX	REL
1 TM							
Mean	1.133	1.808	1.217	1.685	1.828	2.527	1.212
N = 203	0.340	0.763	0.413	1.062	0.531	1.091	0.410
2 TM							
Mean	1.375	1.612	1.341	2.030	2.104	2.119	1.400
N = 405	0.485	0.697	0.480	1.303	0.659	1.108	0.491
1 TM/2 TM							
D.F. 606	t-values	6.375**	3.161**	3.144**	3.267**	5.182**	4.308**
							4.705**

\*\* Significant at .01 level.

The above table summarized the means, S.D.s and 't' values for traditional/modern teacher trainees. It is observed that trainees, belonging to traditional/modern families, exhibit significant difference in means as regard to sex, age, urban/rural residence, entering qualification, economic status as perceived by them, teaching experience before joining B.Ed. course and their outlook towards religion at .01 level of confidence. That is, all the results are having significant difference as regards to trainees belonging to traditional/modern families. The trainees of traditional families have higher mean age and teaching experience in years as compared to the modern families. It is an acceptable result that people coming from traditional homes have been able to join B.Ed. course after spending an appreciable time in teaching or in some other jobs. While the <sup>modern</sup> trainees from the families seem to be fresh graduates/post-graduates who show slightly lower mean of age, experience etc. In other dimensions such as sex, urban/rural residence, qualification, economic status and their liberal outlook towards religion, the trainees belonging to modern homes excel than the traditional ones. Therefore, the nature of the family traditional/modern has contributed significant difference as regard to above mentioned variables- sex, age, urban/rural residence, qualification, economic status, teaching experience had before entering the B.Ed. course and their outlook towards religion ---rigid or liberal.

5.19.00

Religious/Liberal Outlook of the Teacher Trainees

The personality make-up of the teacher trainees or the individuals is mostly surrounded by the phenomenal world in which many agencies such as institutions of learning, friends, peer group members, parents, temples, religious technique teachings, books, magazines etc., of interests, influence the individual's personality. As the family is the major unit of society, therefore, the individual members are influenced by the practices adopted by them. Religion is thus a dominant force to mould or shape the attitudes, feelings and other personality traits of different individuals. As the teacher trainees are having majorly the rural residence and belong to the low and average class families, therefore, their personality is more influenced by the religious needs of the individuals. As Orissa State is majorly an under-developed state, religion has got a strong base among the villagers. Moreover, in the eastern sector of India, Jaggannath Puri is famous pilgrimage centre of the Hindu devotees. Moreover, Oriya people, in general, are religious-minded people and practise rituals as regard to worshipping and 'Puja' etc. It was one of the convictions of the investigator that the teacher trainees are more influenced by the religious/liberal ideas. To test this hypothesis, the outlook of trainees as regard to religion was examined against 35 dependent variables. The results of these can be observed from the following pages.



#### 5.19.1 Religious/Liberal in Outlook and INT Scores

It was one of the convictions of the investigator that religious practices influence the general intelligence make-up of the individuals. How far religion has been able to stimulate the thought process and the adjustment to the environmental influence, was a concern with the investigator. The religious values largely affect personality traits of the individual and thereby, influences/retards the intelligence level as to what type of intelligence level is had by the trainees who might practise religious ways or might be liberal in religious thinking. Therefore, trainees having religious and liberal outlook were examined in relation to intelligence scores. This is obvious from the below given table:

TABLE 5.86

Showing Ms., S.D.s, and significance of difference  
of means in INT scores in Relation to Religious/  
liberal outlook of teacher trainees N = 608  
(Independent variable Religious/liberal(RL) with  
dependent variable INT Scores)

	N	Mean	S.D.
1. R.L.	403	40.757	11.207
2. R.L.	205	41.167	10.370
	t-values	D.F.	
1. R.L./2 R.L.	0.436	606	

1. R.L. = Religious      2. R.L. = Liberal in Religion

From the above table it is obvious that the analysis of the data has not shown significant difference in means between the teacher trainees having religious and liberal outlook in religion and INT Scores. Even from inspection it is observed that means for these two groups are 40.75, and 41.16 with S.Ds. of 11.2 and 10.3. It is concluded safely that the trainees who practise religion and those who are liberal in religion do not differ markedly as regards to mean intelligence level of the trainees. Therefore, religious feelings do not show much impact on the intelligence level of the individuals.

Anxiety is another dimension which has been considered in relation to religious/liberal outlook of the trainees and the following results have been obtained.

5.19.2

Religious/Liberal outlook and the anxiety scores.

It was one of the hypotheses of the investigator that the people who are religious-minded would have less anxiety scores than the trainees who are liberal in religion. To examine this hypothesis the following results were obtained:

TABLE 5.87

Showing Ms., S.Ds. and significant difference of means in anxiety scores in relation to religious/liberal in outlook N = 608  
(Independent variable Religious/Liberal(RL) with dependent variable Anxiety)

	N	Mean	S.D.
1. R.L.	403	43.727	15.758
2. R.L.	205	42.172	15.787
-t-values		D.F.	
1 RL/2 RL	1.148	606	

From the above table it is obvious that the significant difference in means of anxiety scores does not exist for twogroups of teacher trainees who practise religion or liberal in religion outlooks. It was observed that religious lessens the anxiety state of the individuals as it is a sort

of soothing force for providing necessary adjustment to the individual. However, the results of the study have not shown significant difference in means belonging to these two types of groups - religious/liberal at any level of confidence. But from inspection, it is observed<sup>that</sup> the religious-minded trainees have a slightly higher mean in anxiety score ( $M = 43.73$ ) as compared to the mean ( $M = 42.12$ ) had by trainees who are having liberal outlook towards religious practices. More to say that religion is not giving any significant difference between the means for these two groups of individual.

#### 5.19.3: 1-15

#### Religious/Liberal Outlook and the E.P.P.S. Dimensions

The teacher trainees belonging to religion/liberal in religion and outlooks were examined in relation to 15 dimensions of E.P.P.S., that is, n-Ach., n-aff., n-nur., n-def., n-int., and n-agg. It was hypothesized that teacher trainees having liberal outlook towards religion would show significant difference of means on some of E.P.P.S. measures as compared to the teacher trainees having religious outlook. To examine this hypothesis the detailed analysis of the data was undertaken and the following results were arrived at.

From the above table it is obvious that the teacher trainees having religious and liberal outlook do not have significant difference in means in all the categories of E.P.P.S., that is, the trainees do not differ significantly on personality needs due to religion. One of the supporting effects for such results is that 80% of the teacher trainees have got rural base and belong to lower and middle class families. Therefore, personality needs of the teacher trainees on these two groupings do not show significant difference.

5.19.4: 1-9

Religious/Liberal outlook and self perception measures

As the teacher trainees belong to rural areas and resided in the hostels so their total perception was dependent on their past experiences that they had gathered through years. It was observed that self perception is mostly a concern of the immediate-self of the individual or the phenomenological world. Reactions towards religious and liberal outlook of the trainees were examined on the SRI for its different measures and the total perception scores. The following results have been summarized as given under:

TABLE 5.89

Showing Ms., S.Ds., and significant difference of means in self perception measures and total perception scores in relation to religious and liberal outlook of the trainees

N = 608

(Independent variable Religious/Liberal(RL) with variable self perception)

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa.	Ho.	Total
1 RL									
Mean	17.732	20.285	19.856	18.444	19.464	18.695	20.159	21.533	155.720
N = 403	3.829	3.783	3.437	3.833	3.762	3.966	3.798	5.238	17.785
2 RL									
Mean	17.578	20.191	20.172	18.392	19.539	18.882	20.515	22.868	158.319
N = 205	4.017	3.472	3.475	3.714	3.600	3.972	6.565	9.876	30.776
1 RL/2 RL									
D.F. 606	t-values	0.459	0.298	1.064	0.160	0.236	0.550	0.845	2.175* 1.316

\* Significant at .05 level

It was hypothesized that the trainees who have liberal outlook towards religion would have significant difference in their perceptions regarding self, others, children, work, authority, reality, parents, hope and for total perception effects as compared to those who are religious-minded people. The hypothesis has been tested and the analysis of the data shows that trainees of both the groups do not show significant difference in means as regards to 'self' others, children, authority, work, reality, parents and total perception of the individual. But in hope scale trainees of both the groups religious and liberal show significant difference in means at .05 level of confidence. It is also observed that the mean score for trainees having liberal outlook is  $M=22.87$  with S.D. 9.88 as compared to those religious outlook as  $M=21.5$  S.D.5.23. Therefore, it is concluded that the trainees who have liberal outlook towards religion excel in hope scale - more confident about future, having a positive direction towards success, exception of optimistic feelings or a sense of confidence that one will always play a significant and satisfying role in future. It is every body's right to hope for the future. But it is not so with all in practice or in real life. Some feel exactly opposite of hope.

## 5.19.5

Religious/Liberal outlook and the total  
performance of the teacher trainees

The total performance of teacher trainees was also examined in relation to religious/liberal outlook. It was hypothesized that the trainees who are liberal in their outlook might achieve better in academic performance as they are more exposed to environmental situations and developments around them than those trainees who are having religious outlook. To test this hypothesis it was felt to analyse the data under two groupings and the data gave the following results:

TABLE 5.90

Showing Ms., S.Ds., and significant difference of means in total performance in relation to religious/liberal outlook of teacher trainee

N = 608  
 (Independent variable Religious/Liberal(RL)  
 with dependent variable Performance)

	N	Mean	S.D.
1 RL	403	219.154	250.689
2 RL	205	201.564	245.852
	t-value	D.F.	
1 RL/ 2 RL	0.822	606	

\* Significant at .05 level

\*\* Significant at .01 level



From the above table it is observed that no significant difference in means exists for teacher trainees having religious and liberal outlook towards life situations at any significant level, that is, .05 or .01 level of confidence. However, teacher trainees having religious outlook show a higher mean (219.15 with S.D. 250.68) than trainees having liberal outlook ( $M = 201.6$  with S.D. 246.9). However, the difference is observed in means but it is not significant statistically.

The data was also analysed for achievement motivation variable in relation to teacher trainees having religious/liberal attitude ~~attitude~~ towards religion.

#### 5.19.6 Religious/Liberal outlook and N-Ach.

It was hypothesized that the teacher trainees having liberal outlook towards life situations would have higher n-Ach. mean than the trainees having religious outlook. The analysis of the data showed the following results.

TABLE 5.91

Showing Ms., S.Ds. and significant difference of means in achievement motivation in relation to religious/liberal outlook of teacher trainees

N = 608 (Independent variable religious/Liberal (RL) with dependent variable Motivation)

	N	Mean	S.D.
1. RL	403	7.236	12.596
2. RL	205	7.294	11.890

	t-value	D.F.
1 RL/ 2 RL	0.055	606

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is observed that the significant difference in means does not exist at any of the levels of confidence, i.e., both the groups show more or less similar means. Therefore, the hypothesis formulated is not tenable.

5.19.7: 1-7

Religious/Liberal outlook and Self Report Card Measures

The self Report Card measures have also been studied in relation to the outlook had by the trainees, about religion. The following results have been observed significant at .01 level of confidence as is obvious from the table.

TABLE 5.92

Showing Ms., S.Ds. and significant difference of means of  
Self Report Card measures in relation to Religious/Liberal  
outlook of trainees N = 608  
(Independent variable Religious/Liberal (RL) dependent  
Variables of Self Report Card)

	Sx	AGE	URR	QUA	ES	EX	REL
1 RL	Mean	1.275	1.687	1.197	1.938	2.251	1.015
N = 403	S.D.	0.447	0.724	1.130	0.567	1.065	0.121
2 RL	Mean	1.333	1.662	2.147	2.157	2.260	1.971
N = 205	S.D.	0.473	0.728	1.403	0.726	1.222	0.169
1 RL/2 RL							
D.F. 606	t-values	1.478	0.410	0.527	3.321**	4.075**	0.095
							79.861**

\* Significant at .05 level

\*\* Significant at .01 level

Self Report Card measures, such as entering qualification, economic status, and religious and liberal outlook of the trainees, have significant difference in means for these two groupings. Other categories such as sex, age, urban/rural and residence and teaching experience do not seem to show significant difference between the means of these two groupings. It is concluded that these 2 groups show similar behaviour on these measures; sex, age, urban/rural residence and teaching experience.

5.20.00

#### Achievement Motivation with 35 dependent Variables

N-Ach. has been <sup>of</sup> prime concern for this piece of research work and all the other variables such as self-perception, personal preferences, anxiety, risk-taking behaviour intelligence, SES, and academic achievement performance and other measures covering the general background of teacher trainees have been studied effectively as regards to teacher trainees of Orissa state. The Ss of the study were the students in the college of education undergoing B.Ed. training programme to become teacher in the secondary schools of Orissa. The n-ach. studies primarily are the index of motive to achieve. This study 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). and other n-Ach. studies have been conducted by McClelland (1953) and others in relation to intelligence anxiety, risk-taking behaviour and several other personality studies and their

results are enlightening one. It was found by Robinson(1961) and others that n-Ach. is correlated with I.Q. at about 0.40. This is consistent with the idea that academic success leads to greater achievement motivation. Robinson also found that British school children who had been selected for grammar school at 11+ had a higher n-Ach. than children of the same I.Q. who were not selected. This confirmed his hypothesis that success would increase n-Ach.

To summarize that experience of success at tasks may all contribute to the development of n-Ach. Kogan and Moss (1959) found that material concern with achievement was significantly higher for high n-Ach. girls, they found no such relation. Wolf (1938) found that persistence at tasks in children was correlated with a high level of demands by adults which was reasonable in the light of the child's ability. They hypothesized that the n-Ach. would be correlated with (1) the strength of parental demands for achievement; (2) the reported strength of super-ego demands for achievement. Similarly, the self-perception of the individuals showing self-aggression with the individual himself may be negative correlation between n-Ach. and self estimates of achievement. Being impressed with such type of results observed from the findings of several researchers, it was felt essential that the detailed analysis of n-Ach. scores may be studied in relation to other variables under this study. Therefore,

n-Ach., scores achieved by the 608 trainees were converted into 0— scores for knowing the achievement motivation level such as high, average, and low and with these three levels the other effects have been studied effectively which are being described in sequence in the following section:

#### 5.20.1

##### Achievement Motivation level and the INT Scores

Achievement Motivation levels have been studied in relation to the intelligence scores of the teacher trainees. It was hypothesized that higher the n-Ach. scores, the higher would be the mean intelligence of the teacher trainees and low is the n-Ach., low would be the intelligence scores. Therefore, to test this hypothesis intelligence was examined in relation to the achievement motivation level. According to motivational level the subjects were divided into three groups - high, average and low and the results have been analysed as shown in the following table.

TABLE 5.93

Showing Ms., S.D.s and significance of difference  
in the means in intelligence scores in relation to  
3 levels of n-Ach. N = 608  
(Independent variable Motivation with Intelligence  
Scores)

	N	Mean	S.D.
High MT	133	43.188	8.362
Average MT	402	40.317	11.420
Low MT	73	39.945	11.774
	t-values	D.F.	
High MT/Average MT	2.671**	532	
Average MT/Low MT	0.254	472	
High MT/Low MT	2.294*	204	

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is observed that high/average and high/low groupings of n-Ach. levels show a significant difference in means at .01 and .05 levels of confidence. The moderate and the low groups of motivation level do not show significant difference in relation to INT scores. These results of the investigator are supported by the findings of earlier studies. Meyr, Heckhausen et al. (1965) have found close relationship between the 2 variables.

Lakhia (1971) has also found very significant relationship between n-Ach. and I.Q. Pathak (1973) also supported the above relationship. On the basis of the findings of the present study it can be concluded safely that the high and low achievement motivation level trainees differ markedly in intelligence scores.

5.20.2

#### Achievement Motivation Level and Anxiety Scores

Similarly, the anxiety scores of the teacher trainees were examined in relation to the three levels of n-Ach. The results of the previous studies when reviewed gave the following results:

Atkinson and Litwin found an insignificant negative correlation  $-0.15$  between n-Ach. and test anxiety scores when both the tests were administered under neutral conditions. The other recent studies have tended to confirm the belief that there is no significant relationship between n-Ach. and test anxiety among male college students. Mahone (1960), O'Connor (1960), Feather (1961) also found negative correlation which Raphelson (1956) had reported can probably be attributed to the facts that the n-Ach. had been assessed under relatively stressed achievement oriented conditions and he found out the results as high n-Ach. level, low would be the test anxiety and low n-Ach. level and high test anxiety; when the criterion is the medium of the distribution of the scores. Therefore,



n-Ach. and test anxiety are uncorrelated. 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, the 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.

This is the key to understand, why persons scoring low in n-Ach. recall fewer interrupted task under achievement-oriented conditions than under relaxed conditions and why subjects classified low on either test anxiety or manifest anxiety show the previously unexplained increment in level of performance of complex tasks, when the test situation become more "Threatening", "stressful", or "ego involving".

Having reviewed the studies related to n-Ach. and test anxiety. The investigator also analysed the anxiety scores in relation to motivation levels of teacher trainees. The findings have been summarized as under:

TABLE 5.94

Showing Ms., S.D.s and significant difference of means of anxiety scores in relation to motivation level of the trainees N = 608

(Independent variable motivation with dependent variable Anxiety.)

	N	Mean	S.D.
High MT	133	43.880	14.122
Average MT	402	42.574	16.371
Low MT	73	45.397	15.208
	t-values	D.F.	
High MT/Average MT	0.824	532	
Average MT/Low MT	1.370	472	
Low MT/High MT	0.718	204	

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it can be safely concluded that the 3 motivation levels of the teacher trainees do not show a significant difference between means in relation to anxiety scores, that is, to say that the three motivational levels- high, moderate, and low teacher trainees are having a mean anxiety scores as more or less similar, that is, marked difference in anxiety scores as regards three levels of motivation have not been found out. It can be safely

concluded that high n-Ach. and high anxiety, low n-Ach. and low anxiety are not possible. These findings of the investigator are very much akin to the findings arrived at by the researchers mentioned in preceding pages, that is, n-Ach. and anxiety are slightly negatively correlated ( $r = -0.15$ ). Therefore, it can be safely concluded that trainees with low motivation have slightly higher anxiety than the high motivated trainees who have slightly low mean scores. But all the possible groupings such as high/average, average/low and low/high groupings or n-Ach. do not show significant difference in means as regard to anxiety scores. Therefore, the results are very much akin to the results arrived at by the previous researchers.

### 5.20.3

#### n-Ach. levels, INT, Anxiety and Risk-taking Behaviour

The risk-taking behaviour of the level or aspiration has been found related to the n-Ach., anxiety and intelligence levels of the subjects. These relationships have been studied by Clark, Teevan and Ricciuti (1956), Litwin (1958) Witz (1957). Atkinson, Bastian, Earl, Litwin, Edwards (1960) and Mahone (1960) who showed that risk preference or the level of aspiration in achievement oriented activities is related to n-Ach. and test anxiety. In one of these studies (Atkinson et al. 1960), there was also some evidence of

probability, preferences in gambling of this sort reported earlier by Edwards who studied nature of outcomes on the basis of subjective probability. They studied that positive outcomes seemed more likely than that of negative outcomes. When subjects with high and low in n-Ach. were confronted with options having the same expected value, the Ss with high in n-Ach. showed a significantly greater preference for intermediate probabilities of winning than Ss scoring low in n-Ach. Men high in n-Ach. did not prefer intermediate gambles to extreme gambles any more than would be expected by chance. Littig found that Ss who were strong in n-Ach. and weak in test anxiety developed a significant preference for the option having the highest probability of winning in the game of chance. Thus persons who are high in n-Ach. prefer the highest probability of winning when the expected monetary values of the options presented to them are equal.

Research studies of this sort have helped the investigator to crystalize his problem regarding risk-taking behaviour of teacher trainees in the light of the findings arrived at in relation to INT and anxiety scores. As the significant difference in means exists in intelligence scores in relation to 3 levels of INT, that is, high-moderate and low-high groupings of n-Ach. showed a significant difference in means at .01 level of confidence. So it can be safely concluded that higher the n-Ach. higher would be the intelligence and risk-taking behaviour of the trainees

and vice-versa. As the anxiety scores do not show significant difference in means in relation to three levels of INT.

However, high n-Ach. shows a slight difference in mean anxiety scores when compared to the low n-Ach. level group. So, in the case of teacher trainees in particular and other samples in general, the following results can be arrived at:

- i) High n-Ach. would lead to higher risk-taking behaviour, intelligence level and weak anxiety state.
- ii) Low n-Ach. is related with low INT level, low risk-taking behaviour and moderate anxiety.

Therefore, the performance of the teacher trainees has been viewed scientifically in relation to n-Ach. levels of the trainees and has been summarized in the subsequent pages.

5.20.4: 1-15

#### n-Ach. levels and the E.P.P.S. Dimensions

The investigator has examined the E.P.P.S. dimensions, that is, 15 personality needs in relation to 3 levels of n-Ach. The 15 dimension worked out showed Ms. S.D., of 't' values in relation to high, average and low n-Ach. levels. The results have been summarized in the table given below:

The personality needs studied in relation to three levels of n-Ach. have revealed that n-Ach. measured by E.P.P.S. and the achievement motivation measured by Dr. Mehata's test show a significant difference in means at .05 level of confidence between high and average motivation groups. Similarly, heterosexuality has shown significant difference in means at .05 level between these 2 groupings, that is to say, that the trainees whose level of n-Ach. is high or moderate showed a significant difference in heterosexual behaviour and it is significant at the first level - .05 level of confidence, that is, trainees with high motivation are less in heterosexual behaviour or personality need ( $M = 10.65$  with S.D. 5.5,  $M = 11.8$ , S.D. 5.4). The teacher trainees also show a marked difference as regards to n-end., that is, moderate and low and low and high groups differ significantly in n-end. at .05 and .01 levels of confidence. That is to say, that high and average motivated groups show a similar behaviour in n-end., that is, they do not differ markedly. These facts of the present study are supported by the studies of Bhatnagar R.P. (1967), that is, n-end. and n-nur. are the least susceptible to the influence of the age or intelligence or both. In the total group which combines students of all the ages and of all the levels of intelligence together both these needs are found significant at .01 level. The findings of the present study have also supported the same contention. Similarly, the personality need def., that is, to get suggestion from others, to find out what

others, think, and to follow instructions and do what is expected to praise others, to tell others that they have done a good job, to let others make decisions also show a significant difference at .05 level of probability between the low and high n-Ach. groups. That is to say that the high n-Ach. groups have a mean difference equal to 15.1 and the low group has a mean of 14.2. Similarly, the same group and difference in heterosexuality also, that is, low n-Ach. group trainees have higher heterosexuality mean than the higher n-Ach. group and difference has been found significant at .05 level of confidence. It is to state with confidence that the rest categories that n-aff., n-nur., n-int., n-chg., n-ord., n-suc., n-exh., n-don., n-aut., n-aba., and n-agg. do not show any significant difference with all the possible groupings of n-ach. levels. So, it is concluded that it is impossible to predict all the E.P.P.S. measures which may show significant difference with n-Ach., levels. However, some measures such as n-Ach., endurance and heterosexuality have shown significant difference in mean scores in relation to three levels of n-Ach. high, moderate and low.

5.20.5: 1-9

#### n-Ach. Levels and Self Perception

The self perception measures have been examined in relation to the three levels of n-Ach. This constituted an important section of the present study. The definitions of

the different sub-scales have already been given in the proceeding section. Since both the variables are behavioural construct, they size up an individual's life, goals and attitudes towards general development. The major objective of this study was to find out whether self perceptions, n-Ach., personal preferences, anxiety and INT levels etc. are related with the future teaching efficiency of the students of education. The studies conducted by Desai (1970), Pathak (1973), Mehta (1969) and others who found that by giving training in n-Ach. to the teacher trainees then performance has been short up in the classroom situation which was reflected in the better academic performance of the students. This study is an attempt to measure the n-Ach. levels of the students<sup>of</sup> education and to analyse their classroom performance, and behaviour in the context of schools and to suggest certain guidance for the identification, selection and placement of candidates for the teacher training colleges in the first phase and placement of them in schools in the second phase. In this section of study the n-Ach. levels have been compared to the various dimension of the self perception measures such as self, others, children, authority, work, reality, parents, hope and the total perception score. The table given below gives the details of self perception measures in relation to 3 levels of n-Ach.



TABLE 5.96

Showing Ms. S.D.s and significant difference of means in self perception measures in relation to three levels of n-Ach. N = 608  
(Independent variable Motivation (MT) with dependent variable self-perception)

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa	Ho.	Total	
High MT	Means	17.827	20.571	20.301	18.812	19.737	18.737	20.398	22.143	157.113
N = 133	S.D.	4.050	3.612	3.023	3.897	3.442	3.618	3.830	6.279	18.430
Average MT	Mean	17.763	20.170	19.838	18.444	19.556	18.858	20.394	22.197	157.272
N = 402	S.D.	3.892	3.648	3.466	3.784	3.792	47.071	5.383	7.817	25.064
Low MT	Mean	17.000	20.068	20.055	17.644	18.699	18.288	19.425	20.562	152.055
N = 73	S.D.	3.551	3.970	4.034	3.560	3.655	3.939	3.685	4.140	17.570
H MT/A MT	t-values	0.163	1.104	1.376	0.965	0.487	0.305	0.009	0.072	0.067
D.F. 532										
A MT/L MT	t-values	1.561	0.215	0.479	1.676	1.788	1.106	1.476	1.743	1.703
D.F. 472										
L MT/H MT	t-values	1.463	0.923	0.495	2.121*	2.030*	0.826	1.269	1.932	1.915
D.F. 204										

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that the authority and work scales show a significant difference in means at .05 level of confidence when compared to the low and high n-Ach. levels, that is to say, that the teacher trainees who have high/low n-Ach. differ significantly as regards to authority and work scale, that is, perceiving of the authority in different situation and also in the work situations. High and low n-Ach. students' means and S.Ds. are 18.81, 3.91; 17.6; 3.5. Therefore, it is evident that the high n-Ach. group has got a higher mean in authority and work scales. Similarly low n-Ach. groups have lesser mean in authority and work scales when compared with the trainees of high n-Ach. group. But with the rest of the categories the subjects have not shown significant difference in means as related to self, others, children, reality, parents, hope and the total perception scores in all the possible groupings of high, average and low n-Ach., levels.

5.20.6

n-Ach. levels and total academic performance

The total academic performance of the teacher trainees has also been studied in relation to high, moderate, low n-Ach. levels. The total performance of teacher trainees has been summarized by showing means and S.Ds. in relation to three possible groupings of n-Ach. and shown in the following table:

TABLE 5.97

Showing Ms., S.Ds. and significant difference of mean in total performance scores in relation to three levels of n-Ach. N = 608

(Independent variable motivation with dependent variable performance)

	N	Mean	S.D.
High MT	133	259.579	255.400
Average MT	402	208.761	245.506
Low MT	73	153.438	244.419
	t-values		D.F.
High MT/Average MT	2.048*		532
Average MT/Low MT	1.772		472
Low MT/High MT	2.896**		204

\* Significant at .05 level

\*\* Significant at .01 level

The above table shows the relationship of total performance of teacher trainees in relation to three levels of n-Ach. The high and average, low and high motivation levels differ significantly as regards to their means at .05 and .01 levels of confidence. It can be concluded safely that high n-Ach. level has got a high performance scores and low n-Ach level has got a low performance scores. This fact has been supported with the results of other studies also. The studies of Winterbottom (1953) has got a significant relevance as regards to the relationship of n-Ach. with the mastery

at an early age. Boys high in n-Ach. had parents who set high standards for them and expected them to do well. Kagan and Moss (1959) found that maternal concern with achievement was significantly higher for high n-Ach. girls. These results are in parlance with the results of the present study in which the data have revealed that the high n-Ach level has shown high performance mean in academic degrees and vice-versa. Mehta (1973), Desai (1970), Sinha (1970), Tamhan Kan (1967), Muthaya (1964), Singh (1965), and Rao K.S. (1975) found that n-Ach. and academic achievement were positively and significantly related but Gokulnathan (1971) found no such relationship between these two variables. The present study also found the similar results as that of the previous researchers.

#### 5.20.7 n-Ach. levels and Motivation Scores

The motivation scores of all the teacher trainees have been distributed in relation to three levels of n-Ach. such as high, average and low and means, S.Ds. and 't' value for all the possible combinations have been worked out. This was done in order to have a rough assessment of mean n-Ach. score for three differing levels of achievement motivation. It is surprising to find that the people with low n-Ach. level have a negative mean score in n-Ach. which can be observed from the following table.

TABLE 5.98

Showing Ms., S.D.s. and significant difference of means of n-Ach. scores in relation to high, moderate and low achievement motivation levels. N = 608

(Independent variable motivation with dependent variable motivation)

	N	Mean	S.D.
High MT	133	23.639	9.938
Average MT	402	3.793	8.634
Low MT	73	- 3.466	3.167
	t-values	D.F.	
High MT/Average MT	22.099**	532	
Average MT/Low MT	7.092	472	
Low MT/High MT	22.658**	204	

\* Significant at .05 level.

\*\*Significant at .01 level

The above table shows that the mean n-Ach. scores for high motivation group is 23.64 with S.D. of 9.94 and for the low groups mean and S.D. are -3.5 and 32. It is observed that the high and moderate and low/high groupings differ significantly in n-Ach. scores and in both the cases significant difference in means of n-Ach. scores have been found at .01 level of probability. That is to say. that high and low levels of n-Ach. differ markedly as regards n-Ach. mean scores

1 M= (23.64 and M= -3.5).

5.20.8:1-7

Levels of n-Ach. and different measures of  
Self Report Card

It was one of the contentions of the investigator that teacher trainees belonging to different sex, age groups, urban/rural residence, entering qualification for the B.Ed. training, their economic status as perceived by them, their teaching experience before entering the B.Ed. course and their attitude towards religion and liberal in religion would show a mean in relation to high moderate and low n-Ach. levels. The results have been summarized in the following table for all dimensions under study in relation to n-Ach. levels.

TABLE 5.99

Showing Ms,SDs. and significant difference of means in self Report Card measures in relation to 3 levels of n-Ach. N = 608 (Independent variable of Motivation MT with dependent variables of self report card.)

	Sx	Age	URR	QUA	ES	EX	RFL
High MT	Mean	1.429	1.669	1.414	2.090	2.038	1.308
N = 133	S.D.	0.497	0.832	0.494	1.276	0.570	0.464
Average MT	Mean	1.282	1.693	1.272	1.838	2.035	1.354
N = 402	S.D.	0.450	0.713	0.451	1.227	0.227 0.670	0.479
Low MT	Mean	1.123	1.616	1.247	2.027	1.836	1.301
N = 73	S.D.	0.331	0.568	0.434	1.202	0.500	0.462
High MT/Av. MT							
D.F. 532	t-values	3.172**	0.324	3.064**	2.034*	0.041	0.964
Average MT/Low MT							
D.F. 472	t-values	2.868**	0.872	0.442	1.217	2.421*	0.870
Low MT/High MT							
D.F. 204	t-values	4.706**	0.483	2.419*	0.345	2.539*	0.102

\* Significant at .05 level.

\*\* Significant at .01 level.

The above table clearly shows that all the possible groupings of n-Ach. such as high/average, average low and low/high levels of n-Ach. show significant difference in means at .01 level of confidence for the dimension - sex- male and female. It is to mention with confidence that male and female trainees differ markedly as regards to three levels of achievement motivation. The age has been examined in relation to three n-Ach. levels.

No significant difference was found in the n-Ach. levels between the different age ranges of teacher trainees, i.e., in all the possible groupings of age no significant difference in age means have been found out. This result clearly indicates that age has no influence on the n-Ach. levels of the student teachers. These results of the present study have been supported by the findings of Rao, K.S. (1975)- "Study of Self perception, Achievement Motivation and Academic performance of the Prospective secondary School teachers of Madras", Doctoral Thesis. But people can be motivated to have high performance with proper training and encouragement, and n-Ach of the individual can be raised. The n-Ach. levels have been examined in relation to urban/rural residence of the trainees, and the results have been obtained as under:

The urban/rural residence has shown a significant difference in means in relation to high/average, and low/high groupings of n-Ach. at .01 and .05 levels of probability, i.e., the urban Ss score significantly higher in n-Ach. mean than the



rural people. These findings of the present study are also in parlance with that by Rao, K.S. It is no surprise if the city Ss. have significantly higher n-Ach. than the rural subjects as most of them are not exposed to wider environmental situations. Teacher trainees also differ as regard to quantum of entering qualifications to B.Ed. course. How far the quantum of qualification would affect the n-Ach. level, has been examined through the study and the results revealed that high and moderate groupings of n-Ach. show significant difference in means as regards to qualification, that is, both high and average groups of trainees differ markedly as regards to qualification level.

Economic status (as perceived by the trainees) also shows a significant difference at .05 level between average-low and low-high groups of n-Ach. of the trainees. The high and average n-Ach. grouping, does not show significant difference as regards to economic status of parents as perceived by the subjects. The trainees have not shown any significant difference in outlook towards religion or liberal in religion in relation to the levels of n-Ach. do not show significant difference in outlook as regards to religion.

### SECTION III

Effectiveness of teacher behaviour has been studied by various researchers as regards to many dimensions - INT, personality traits, interest patterns, vocational aspirations, achievement motivation, teaching learning models, and

teacher's personal qualities and the job success at various levels but the list is always incomplete. The research has indentified several correlates of teacher effectiveness and his behaviour. In the Western countries several attempts have been made to study n-Ach., with INT, performance, risk-taking behaviour, self-perceptions, anxiety, effects of reward and punishment of n-Ach., identification with achievement-oriented parents as a source of n-Ach. and other personality variables - anxiety in academic achievement situations, and other variables such as projection, values and attitudinal effects and so on. Among the known correlates the relationship was in varying degree. Ample research evidence from literature is available which states that teachers' behaviour and personality styles are intimately connected with an individual's performance in the class. In the present study the n-Ach., self perceptions, personal preferences, anxiety, risk-taking behaviour and the other correlates have been studied in relation to INT, SES, and performance of prospective secondary school teachers.

This section deals with the intercorrelation of these variables and n-Ach., self perception, personal preferences, anxiety and intelligence scores with the total performance of the Ss. The personal preference as measured by E.P.P.S. yield 15 scores (15 dimensions), self perception as measured by SRI yields 9 scores, anxiety, n-Ach. and INT yield one score each along with SES components; the

performance also gives a composite score of theory and practice marks of B.Ed. annual examination. Altogether there are 36 dependent variables including some of the correlates related with the nature of the family of the teacher trainees. The intercorrelations among these 35 variables have been computed in all possible combinations in relation to one another and all the possible combinations showing correlational effects. These correlations have been presented into 35 x 35 correlational matrix which provides a number of correlations for easy interpretation as regards to different dimensions under study, so that, all the possible relationships with the problem in hand may be studied effectively. The tabular representation of correlations in the form of correlational matrix can be studied from the table.

The table shows intercorrelations among all the possible groupings of 35 dependent variables such as INS Anxiety, n-Ach., n-affiliation, n-nurturance, n-deference, n-intracception, n-dominance, n-heterosexuality, n-autonomy, n-abasement, n-aggression; self, others, children, authority, work, reality, parents, hope, total perception, performance, motivation, sex, age, urban/rural, entering qualification, economic status, experience and the outlook of the trainees towards religion. In 35 x 35 intercorrelational matrix all the possible intercorrelations worked out for different dimensions/variables under study showed 595 intercorrelations. Out of the

total 595 intercorrelations worked out for the correlational matrix, 164 of them were found significant at .01 level of confidence and 44 of them at .05 level of confidence. It is to mention that some of the correlations are negative in nature while the others are positive. On examination of the correlational matrix, it is observed that for all the variables the magnitude of correlation does not exceed more than +0.58 and on the negative direction it is -0.45. Both the correlational values are significant at .01 level of confidence. Having studied the values of the correlation for different variables under study, it is not feasible that the interpretations may be given on sound basis for all the possible combinations at a time. So, for the sake easy interpretation, the major variables have been studied in fragments in relation to the other possible combinations. The scheme of presentation is listed as:

1. Motivation with 34 other combinations.
2. Self perception with other 34 combinations.
3. Anxiety with other 34 combinations.
4. Intelligence with other 34 combinations.
5. Performance with other 34 combinations.
6. 15 x 15 correlational matrix for E.P.P.S. dimensions.
7. 9 x 9 correlational Matrix for self-perception measures and total perception scores.

5.21.1.1

Correlation of n-Ach. and Intelligence Scores.

The relationship between n-Ach. and INS is not significant and the magnitude of correlation is 0.06. It can be observed from the following table.

TABLE 5.100

Correlation between the scores of n-Ach.  
and INS (Motivation with INS)

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.06
INS	40.88	10.91		

In the above table the correlation between n-Ach. scores and INS is positive ( $r = 0.06$  but of  $\log^{\text{n}}$  magnitude. It is not significant at any of the levels of confidence. But the result of the present study is in parlance with the results studied by other researchers. Robinson (1961) and others found that n-Ach. is correlated with the INS at about 0.40. The correlation for the present is 0.06 for  $N = 608$ .

2. Correlation of n-Ach. and Anxiety

TABLE 5.101

Correlation between n-Ach. scores  
and Anxiety (Motivation with Anxiety)

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.03
Anx.	43.20	15.76		

The correlation between n-Ach. scores and anxiety scores is negative and not significant at any of the levels of confidence. The magnitude of correlation between these two variables is  $-0.03$ . It shows that the n-Ach. scores are having negative relationship with the anxiety scores. That is to say, if there is high anxiety, there would be low n-Ach. and if high motivation, low anxiety. These findings are also supported by the studies conducted by Clark and McClelland (1958).

### 3. Correlation between Achievement Motivation and E.P.P.S. Dimensions

The n-Ach. scores have been studied in relation to the E.P.P.S. dimensions such as n-Ach., n-Def., n-ord., n-exh., n-aut., n-aff., n-Int., n-suc., n-dom., n-aba., n-nur., n-chg., e-end., n-het., and n-agg. It was one of the contentions of the investigator that the achievement motivation scores and the different personality needs would be correlated positively and would show significant relationship at .05 or .01 level of probability. The different correlations worked out for different dimensions of E.P.P.S. in relation to n.Ach. scores are being summarized as under for detailed interpretations, and can be observed from the following tables.

### 3.1 Correlation of Motivation Scores with n-Ach. Scores

TABLE 5.102

Correlation between Motivation scores  
and achievement scores as measured by  
E.P.P.S.

(Motivation with Ach.)

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.07*
Ach.	14.09	3.21		

\*Significant at .05 level

The correlation between motivation scores and achievement scores and ( E.P.P.S. dimension) is significant at .05 level of probability and the magnitude of coefficient of correlation is 0.07. It is observed that significant relationship exists between these two variables, that is, if a person is highly motivated, his achievement will also be high, that is, the individual would be able to show his best and will accomplish the task requiring skill and efforts to do a difficult job well.

3.2 Corrêlation of n-Ach. scores with n-affiliation Scores

TABLE 5.103

Correlation between n-Ach. and n-affiliation

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.03
Aff.	14.06	3.42		

The relationship between n-Ach. scores and n-affilia-  
tion is positive (0.03) but is not significant at any of the  
acceptable levels, that is, relationship for the personality  
need; affiliation - to be loyal to friends to participate  
in friendly groups, to do things with friends rather than  
alone, to form strong attachment etc., do not go strongly  
with the n-Ach. level of the trainees. However, both the  
traits of behaviour are positively correlated.

3.3 Correlation of n-Ach. scores with n-nurturance

TABLE 5.104

Correlation between scores of n-Ach. with  
n-nurturance

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.03
Nur	15.53	3.58		



n-nurturance - to help friends when they are in trouble, to assist others less fortunate, to forgive others, to do small favours for other etc., are the different traits of behaviour which constitute nurturance as variable. It has been studied in relation to n-Ach. scores and the correlation has been found to be -0.03, that is, both the traits of behaviour are negatively correlated but relationship is not significant at any of the acceptable levels of probability. That is, that the trainees who have high motivation scores they achieve less on nurturance variable. It means people who are highly motivated to achieve better they do not want to help friends when they are in trouble etc.

#### 3.4 Correlation of n-Ach. scores and n-deference

TABLE 5.105

Correlation between n-Ach. scores and n-deference

Variables	Scores			
	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.01
Def.	14.73	3.16		

n-deference was correlated with the motivation scores and negative correlation was found out. The coefficient of correlation came out to be -0.01, i.e., n-deference and the motivation scores are not related together. That means that the students who are highly motivated they feel to seek

suggestions from other or to find out what other think of them or they follow instruction or do what is expected of them. Similarly, they accept the leadership of other to such an extent that it may not hinder their motivational level. That is why these two variables are negatively correlated but they belong to the personality construct. The relationship has not been significant at any of the levels of confidence.

3.5. Correlation of Motivation and n-Interaction Scores

TABLE 5.106  
Correlation between n-Ach. and Intrareception Scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.00
Int.	14.71	3.25		

The above table shows that the intrareception to analyse one's motives or feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to predict how other will act - these traits of behaviour covering the intrareception behaviour were correlated with the motivation scores. It was found that no correlation exists ( 0 correlation) between these 2 variables. That is, these dimensions are not at all correlated.

### 3.6 Correlation of Motivation and n-change scores

TABLE 5.107

Correlation between the scores of n-Ach.  
and n-change scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.04
Chg.	15.30	3.5		

The above table shows that the n-change and motivation are positively correlated. The coefficient of correlation ( $r = 0.04$ ) is not significant at any of the levels of confidence. n-change takes in to coverage the traits such as to do new and different things, to travel, to meet new people, to experiment and try new things etc., i.e., these traits of behaviour are related with the motivation of the individuals but it is not significant at any of the acceptable levels of confidence.

### 3.7 Correlation of n-Ach. scores and n-order scores

TABLE 5.108

Showing correlation between the scores  
of n-Ach. and n-order scores.

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.01
Ord.	14.83	3.61		

The n-order scores on E.P.P.S. were correlated with the n-Ach. scores and it was found that the coefficient of correlation was 0.01 and it was positive but not significant at any of the levels of confidence. However, the value of correlations is low. This shows that n-order: to have written work neat and organized, to make plan before starting on a difficult task, to have things organized etc., is not related significantly with the motivation scores. The same is true for n-succorance and n-Ach.

### 3.8 Correlation of n-Ach. and n-succorance scores

TABLE 5.109

Correlation between Motivation scores and  
n-succorance

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.03
Suc.	13.08	3.68		

n-succorance dimension of E.P.P.S. was correlated with motivation scores and the correlation found between the 2 is positive but not significant. This shows that teacher trainees who provide help to their friends when they are in trouble or they seek encouragement from others, to have others be kindly, to receive a great deal of affection from other etc. These traits of behaviour cover succorance which has got a slightly positive correlation with motivation scores. Coefficient of correlation is 0.03 which is not significant at any

levels of the probability.

### 3.9 Correlation of Motivation and n-endurance scores

TABLE 5.110

Correlation between scores of n-Ach. and  
Endurance

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.04
End.	14.57	3.49		

The relationship between n-Ach. and endurance of trainees is not significant statistically. The favourable and positive attitude, that is, to keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle, to avoid being interrupted while at work etc., has not much bearing n.Ach. scores. The coefficient of correlation is 0.04.

### 3.10 Correlation of n-Ach. and n-exhibition scores

TABLE 5.111

Correlation between scores of n-Ach. and  
exhibition scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.02
Exh.	13.10	3.07		

The relation between n-Ach. and exhibition variable of E.P.P.S. shows a negative correlation whose coefficient of correlation is -0.02. This relationship is not significant statistically, that is, trainees who are witty and say clever things, tell amusing jokes and stories, talks about personal adventures, experiences and use words that other do not know the meaning of etc., cover the traits of exhibition. Therefore, it does not have positive relationship with n-Ach.

3.11 Correlation of n-Ach. and n-dominance scores

TABLE 5.112  
Correlation between n-Ach. and  
n-dominance scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.02
Dom.	14.01	3.75		

The personality need and dominance are related with these traits such as to argue for one's point of view, to be leader in groups to which one belongs, to make group decision, to settle arguments and disputes between others etc., The dominance was correlated with n-Ach. and the negative correlation has been achieved. That is, motivation and dominance scores go in a reverse direction when N = 608. The magnitude of coefficient of correlation is -0.02. This shows the correlation is not significant statistically.

3.12 Correlation of n-Ach. and n-Heterosexuality scores

TABLE 5.113

Correlation between n-Ach. and n-Heterosexuality  
Scores.

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.00
Het.	11.63	5.35		

The correlation between heterosexuality subscale of E.P.P.S. and n-Ach. scores of trainees was worked out and it was found that ( $r = 0.0$ ) zero correlation has been found between these two dimensions, that is, trait of heterosexuality-to go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with some one of opposite sex etc., does not go well with the motivation scores. This shows that these dimensions are not at all related or do not influence one another.

3.13 Correlation of n-Ach. and n-autonomy

TABLE 5.114

Correlation between n-Ach. scores and n-autonomy  
scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.01
Aut.	13.04	3.38		

Correlation between these two variables is not statistically significant and is of very low magnitude, that is,  $r=0.01$ . This shows the autonomy trait of personality to be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants etc., is slightly correlated with n-Ach. scores.

### 3.14 Correlation of n-Ach. and n-Abasement scores

TABLE 5.115

Correlation between n-Ach. and n-Abasement  
scores

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.03
Abas.	14.17	3.94		

The above table shows that abasement and motivation scores are negatively correlated and the relationship has not been found significant at any of the acceptable levels of probability. The coefficient of correlation found is -0.03, that is, scores on abasement relate to the traits of personality; to feel guilty when one does something wrong, to accept blame, when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing etc., all these narrations speak of n-abasement, Which is found to be negatively correlated with n-Ach. It is concluded safely that high motivation leads to



low abasement and high abasement leads to low n-Ach.

### 3.15 Correlation of n-Ach. scores and n-aggression

TABLE 5.116

Correlation between n-Ach. scores and  
n-aggression

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.03
Agg.	13.23	3.3		

n-Aggression dimension of E.P.P.S. is correlated with n-Ach. scores. The coefficient of correlation found was -0.03 but it is not significant statistically. These two dimensions do not show positive relationship. Aggression as a personality need is described as - to attack contrary points of view, to tell others what one thinks about them, to criticize others publically, these are some of the statements as a dimension which shows a negative correlation.

### 4.00 Correlation between n-Ach. and different dimensions of Self perception

Self perception has been measured by SRI by Oliver H.Bown which has been used widely in U.S.A. and comprises of 8 sub-scales, self, others, children, authority, work, reality, parents, hope and the total composite score for all the categories showing total perception of the individuals. Perception is

largely governed by the phenomenological world of the individuals and influenced by the environmental conditions. Therefore, the teacher trainees under survey were examined in relation to these categories. How far the teacher trainees exercise authority or remain attached with various types of jobs on work situation or they perceive the future world hopefully, is to be examined in relation to n-Ach. of the teacher trainees. The following results have been arrived at, which have been summarized as below.

#### 4.1 Correlation of n-Ach. scores and 'self' scale

TABLE 5.117  
Correlation between n-Ach. scores and  
self scale

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.01
Self	17.68	3.88		

From the above table, it is obvious that the trainees of Orissa do not show positive relationship with n-Ach., and the self scale and correlation is of the magnitude  $r = -0.01$  and is not significant at any of the levels of confidence. This indicates that the less an individual perceives his self positively, the higher would be his n-Ach. These results are quite contrary to the findings arrived at by Rao, K.S. (1975) who found a positive & significant correlation between

these two dimensions. When need achievement motive was defined as competition with some standard of excellence which is indicative of self confidence and better effect to meet the challenge. Therefore, the n-Ach. scores and scores of self scale should have shown a positive correlation but the results are just the reverse. It might be possible that the self of the individuals would have been influenced by some extraneous factors.

#### 4.2 Correlation of n-Ach. and 'others' scale

TABLE 5.118

Correlation between n-Ach. score  
and 'others' scale

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.04
Ot.	20.25	3.68		

The above table shows that the 'others' scale has got a positive correlation with the n-Ach. scores. The coefficient of correlation is 0.04 but it is not significant at any of the recognized levels of significance. The perception of individuals relates to 'others', i.e., the individual feels concern about the works of others and is influenced by the environmental factors. Parents, relatives and other friends influence the perception of the individuals. The findings of the present study, however, show positive relation-

-ship but not significant. Rao, K.S. (1975) found a significant correlation between these two variables for teacher trainees of Madras. If a person has got a concern for others he feels accepting, valuing or liking peers, if a person has got a positive attitude towards others, he would be able to respect the feelings of others. Veldman (1960) has studied the personality rating in relation to the perceptions as measured by the SRI. He found that loving vs coldly hostile personality has significantly correlated with the perception of 'others'. Relaxed, outgoing optimism vs anxious, self pre-occupied, pessimism personality correlated significantly with perception of others. In other study by Bown and Richek (1968) it was found that extraversion and introversion and thinking/feeling phenomenal correlates of Jungs typology has significantly, correlated with others scale.

Having reviewed the researches conducted by Veldman, Bown and others, it is observed that significant correlation exists with 'others' scale. But the present study, however, showed the positive correlations but not significant at any of the recognized levels of confidence.

#### 4.3 Correlation of n-Ach. and children scale

TABLE 5.119

Correlation between n-Ach. and children  
scale

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.01
Ch.	19.96	3.4		

The above table shows that relationship between children scale and n-Ach. has been found positive but not significant statistically. The favourable and positive attitude towards children has no bearing. It appears on one's n-Ach. The results of the present study are in parlance with that of study made by Rao, K.S. (1975).

However, Veldman (1960) found that the personality rating of loving Vs coldly hostile as significantly correlated with the perception of children in the study of Bown and Richek (1968) found the relationship as significant between introversion and extroversion and perception of children.

#### 4.4 Correlation of n-Ach. scores and authority scale

TABLE 5.120

Correlation between n-Ach. scores and  
authority scale

Variables	Mean	S.D.	'r'	
Motivation	7.26	12.34	606	0.00
Au.	18.42	3.78		

The above table clearly indicates that the perception of authority and n-Ach. of the students of education do not show any relationship, that is, the magnitude of relationship is zero. They are perhaps indendent of each other. That is, n-Ach. and authority scores do not go together, i.e., both are independent of one another. But in the study of Veldman (1960) authority was found to be significantly correlated with such personality as conscience-ruled stability Vs unprincipled impulsiveness, loving Vs coldly hostile and relaxed outgoing optimism Vs anxious, self preoccupied pessimism. Also in the study of Bown and Richek (1968) perception of authority has significantly related to extraversion/intraversion and judgement perception. The results of the present study, however, show no relationship and the results are in parlance with that of Rao, K.S.(1975).

4.5 Correlation of n-Ach. scores and work scale

TABLE 5.121  
Correlation between n-Ach. scores and  
work scale

Variables	Means	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.06
Wo	19.49	3.7		

Need achievement and the perception of the work of

the students of education were positively correlated but not found significant at any of the levels of confidence. This result is in the expected direction. Need achievement and the attitude of students towards work show a positive relationship. When an individual perceives the work in which he is engaged in as fruitful and which brings a credit to him at the appropriate time, he feels to work with more motivation. In the case of teacher trainees of Orissa the results show a positive relationship but they are not significant as also observed in the Madras study. Society needs better teachers who may be dedicated to the teaching career. Barton (1970) found that the perception of work in student-teachers has differentiated between high commitment and low commitment groups. An individual who does not have proper attitude towards 'work' do not have motivation to do it better. The negative attitude of the teacher has got a hindrance in the better achievement of the students. The wistful drop out in the schools is partly due to the teachers' attitude towards work. In the study conducted by Bown and Richek (1968) perception of work has correlated significantly with sensation, intuition judging and perceiving the different personality correlates. In another study by Veldman (1960) work has correlated significantly with conscience-ruled stability Vs unprincipled impulsiveness. The studies reviewed in the foregoing section show that self perception towards work situation has contributed significantly towards better productive outputs.(teaching)

#### 4.6 Correlation of n-Ach scores and Reality scale

TABLE 5.122

Correlation between n-Ach. scores and  
Reality scale

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.01
Re.	18.75	3.97		

The relationship between n-Ach. and perception of reality scale of the students of education is not significant and coefficient of correlation is -0.01. That is, no correlation has been found out between these two variables. The two variables do not seem to explain each other but one aspect of n-Ach. is to take the calculated risks and to endeavour to achieve that for which he takes calculated risk. The absence of any significant result is reported by Rao, K.S. (1975) has been verified by the present study. That these two variables do not have significant relationship.

#### 4.7 Correlation of n-Ach. and the perception of parents

TABLE 5.123

Correlation of n-Ach. and the perception  
of parents

Variables	Means	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.03
Pa.	20.27	4.90		



n-Ach. and perception of parents are positively related "I am what I am because of my parents". Parents sacrifice their personal comforts for the sake of children's well-being so that they may strive hard to build up their career. Individuals who can understand well the parents' concerns, sacrifices and expectations, may be motivated to achieve high. The significant relationship between these two variables was a high expectation but results obtained are just positive. In the study by Rao, K.S. (1975) significant correlation at 0.01 level of confidence and has been found out between these two variables.

4.8 Correlation n-Ach. scores and hope scale

TABLE NO. 5.124

Correlation between the n-Ach. scores and  
perception of hope

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.02
Ho.	21.98	7.15		

The relationship between n-Ach. and the perception of hope in the prospective teachers is unrelated. This seems to be independent of each other. The one aspect of n-Ach. is anticipation of goal. It is observed that the teacher trainees do not seem to be very hopeful as regard to the destination -

after passing B.Ed. what next? It might be possible that they may feel worried as regard to employment opportunities or the hardship of the reality. The correlation found in this study is zero, that is, 0.02. Similar results have been arrived at by Rao, K.S. (1975) who found correlational value of  $r= 0.05$ , between n-Ach. and perception of hope for the Madras study. The results of the present sample are very much akin to that of previous researches.

4.9 Correlation of n-Ach. and total perception

TABLE 5.125  
Correlation between n-Ach. scores and  
total perception

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.04
Total	156.58	22.97		

The above table shows the relationship between n-Ach. and the total self perception, which is unrelated, that is, the coefficient of correlation is 0.04, that is, both the variables seem to be unrelated. The relationship has not been found significant at any of the levels of confidence. The results of the present study do not show significant relationship between n-Ach. and total perception and are quite contrary to the findings

arrived at by Rao. K.S. (1975) who found the positive and significant relation (  $r = 0.47$ , significant at .01 level) between n-Ach. and self perception. In this study he concluded that individuals with high n-Ach. tend to have a better self image than those with low n-Ach. But the results of the present study could not show similar findings.

5. Correlation of n-Ach. and total performance

The n-Ach. is able to influence the total performance of the individuals, that is, high n-Ach. is related to high performance of the individuals and vice-versa. The level of aspiration or the risk preference in achievement oriented activities is related to n-Ach. Therefore, it was one of the contentions of the investigator that n-Ach. scores were positively and significantly related with the total performance of the teacher trainees. To verify this hypothesis the correlation was worked out between n-Ach. scores and total performance scores of the teacher trainees. The results arrived at, have been summarized as under:

5.1 Correlation of n-Ach. and total performance of

Teacher trainees

TABLE 5.126

Correlation between n-Ach. scores and the  
performance

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.16**
P.E.	212.89	248.95		

\*\* Significant at .01 level

Positive and highly significant relationship between the n-Ach. and total performance of the teacher trainees was found at 0.01 level of confidence. The coefficient of correlation is 0.16. This shows that individuals with high n-Ach. scores are high in total performance. It can be said with confidence that this result can be profitably utilized for the selection of B.Ed. trainees at the time of admission. It is advisable that the n-Ach. test results can prove helpful as regards to the prediction of success at the B.Ed. programme on the basis of the high/low n-Ach. scores and they can be nurtured to become effective teachers. The present study conducted on the sample of teacher trainees of Orissa state confirms the findings of Rao, K.S. (1975), who conducted a study on teacher trainees of Madras. But it is to be written with caution that the relationship between n-Ach. and academic performance has always been elusive. The results varied from study to study. In Mehta's study (1969) positive correlations of n-Ach. with several subjects were obtained. The correlations obtained were as follows: with English ( $r = .179$ ,  $N = 875$ ,  $P = .005$ ); Hindi ( $r = .097$ ,  $N = 553$ ,  $P = .05$ ); Mathematics ( $r = .118$ ,  $N = 844$ ,  $P = .005$ ); Science group total ( $r = .134$ ,  $N = 344$ ,  $P = .01$ ); and non-science total ( $r = .085$ ,  $N = 562$ ,  $P = .05$ ). The correlations with total school marks was  $r = .179$ ,  $N = 894$ ,  $P = .005$ . All correlations were significant. Desai (1970) found significant correlation between n-Ach. and academic performance in four<sup>out</sup> of 31 schools. In another study achievement motivation and anxiety

and educational achievement among secondary school pupils of Assam, Gokulnathan (1971) found the relation between n-Ach., and academic performance. But Mehta (1973) found no significant correlation between n-Ach. and academic performance. But for the college students of Rajasthan significant correlation between n-Ach. and academic performance was found out. The value of correlation was  $r = .41$ ,  $N = 189$ . Sinha (1970) investigated the relationship between n-Ach. and academic achievement of X and XI grade boys in the age group of (14-16) years and found that both the variables were significantly correlated. The studies, thus, do not suggest a clear cut trend of the relationship between n-Ach. and academic performance. It may be concluded that n-Ach. is not uniformly related to academic performance, as performance is largely affected by many variables such as intelligence, SES, early childhood practices, parents expectations of their children, level of aspirations and students' perception of their studies and scores of the variables which may all affect this relationship. If these variables and their effects in some way or the other are correlated the relationship can be predicted scientifically. Mehta commenting on these results observed that those from poorer homes may find n-Ach. as a more positive factor in their school performance than other children.

### 6.0 Correlation of Motivation scores with Self Report Card Measures

Having measured the relationship of n-Ach. with INT, anxiety, self perception and its various sub scales, E.P.P.S. dimensions etc., it was also felt essential that the self report card items may also be studied in relation to n-Ach. It is observed that sex, age, urban/rural residence, entering qualifications of the teacher trainees, economic status, teaching experience and the attitude of teacher trainees towards religion and liberal in religion have got significant contribution as regard to certain results which have shown the relationship of various dimensions with other measures. These dimensions have been correlated with n-Ach. and the various results arrived at are being summarized below.

#### 6.1 Correlation of n-Ach. with Sex (male/female)

TABLE 5.127

Correlation between n-Ach. scores and sex  
(Male/female)

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	0.2**
Sex	1.29	0.45		

\*\* Significant at .01 level

From the above table, it is obvious that sex and motivation are significantly correlated at .01 level of confidence. It is to say that male and female teacher trainees show significant relationship of high order with n-Ach. scores. The coefficient of correlation is 0.2 and significant at .01 level of confidence. Sexes differ markedly as regard n-Ach. level. This relationship between the 2 variables is positive and significant.

#### 6.2 Correlation of n-Ach. scores with age

TABLE 5.128  
Correlation between n-Ach. scores  
and age

Variables	Mean	S.D.	D.F.	'r'
Motivation	7.26	12.34	606	-0.05
Age	1.67	0.72		

The above table shows that n-Ach. and age are negatively related and they show -0.05 value of the correlation. It can be safely concluded that, n-Ach. and age are not positively related. Sometimes if age is high n-Ach. score may be high while in some cases it may be average or low. Therefore, negative relationship exists between these two variables.

### 6.3 Correlation of n-Ach. scores and urban/ rural residence

TABLE 5.129

Correlation between n-Ach. scores and urban/  
rural residence

Variables	Mean	S.D.	D.F.	'r'
n-Ach.	7.26	12.34	606	0.15**
URR	1.29	0.46		

\*\* Significant at .01 level

The above table shows that correlation between n-Ach. and urban/rural residence has been found significant at .01 level. The coefficient of correlation is 0.15 (N = 608). This shows the n-Ach. and residence are highly correlated.

### 6.4 Correlation of n-Ach. and qualifications of Teacher Trainees

TABLE 5.130

Correlation between n-Ach. and  
qualifications

Variables	Mean	S.D.	D.F.	'r'
n-Ach.	7.26	12.34	606	0.10**
Qua.	1.91	1.23		

\*\*Significant at .01 level



Significant correlation has been found out between n-Ach. scores and qualifications of the teacher trainees. This relationship is significant at .01 level of confidence and coefficient of correlation is 0.10. That is, motivation and qualification of the teacher trainees show a positive relationship which is significant.

#### 6.5 Correlation of n-Ach. and Economic Status

TABLE 5.131

Correlation between n-Ach. and economic  
status of the teacher trainees

Variables	Mean	S.D.	D.F.	'r'
n-Ach.	7.26	12.34	606	0.12**
ES	2.01	0.63		

Correlation between economic status of trainees and n-Ach. scores has been found significant at .01 level of confidence with a magnitude of 0.12. This shows that n-Ach. scores and the economic status of trainees go together and show a positive relationship which is significant.

#### 6.6 Correlation of n-Ach. scores and the teaching experience

TABLE 5.132

Correlation between n-Ach. scores and teaching  
experience had by teacher trainees

Variables	Mean	S.D.	D.F.	'r'
n-Ach.	7.26	12.34	606	-0.09**
Ex.	2.25	1.11		

\*\* Significant at .01 level

The above table shows that n-Ach. scores and teaching experience had by the trainees are negatively correlated and show negatively significant relationship at .01 level of confidence. It clearly concluded that n-Ach. and teaching experience are negatively correlated. More is the experience, less would be the n-Ach., high is n-Ach., low would be the teaching experience.

6.7 Correlation of n-Ach. with religious/  
Liberal in religion outlook

TABLE 5.133

Correlation between n-Ach. scores and the outlook  
low and religion/liberal in religion of the trainees

Variables	Mean	S.D.	D.F.	'r'
n-Ach.	7.26	12.34	606	0.000
REL	1.33	0.47		

The above table shows that no correlation exists between these two variables, that is, n-Ach. and outlook of trainees towards religion are not at all related, that is, they show no correlation. This shows that high n-Ach. is not at all effective for creating a better outlook towards religion. The data showed insignificant correlation between these two variables.

5.21.2 Correlation of self perception with other

34 possible combinations

Self perception<sup>3</sup> has been one of the major dimensions of the present study. As it is related with the phenomenal world of the individuals, so, it governs majorly the concerns of the trainees as regard to perception about self, others, children, parents, work, reality, hope and all these measures comprised together give the total score for perception of the individual. As the total perception scores are positively related with other important dimensions, so, to find out the possible relationship existing between any two of the variables in combinations would reveal the magnitude of relationship for being significant or insignificant, positively or negatively correlated. Such type of results can not be seen in isolation. They can only be studied with the help of correlational values in all their possible combinations. Self perception scores have been correlated with all the measures of various variables under study and the results have been summarized in the following section.

1. Correlation of Self-perception with INS

TABLE 5.134

Correlation between self-perceptions  
and INS

Variables	Mean	S.D.	D.F.	'r'
Total perception	156.58	22.97	606	0.07*
INS	40.88	10.91		

\*Significant at .05 level

From the above table, it is obvious that self perception scores and INS are positively correlated and are found significant at .05 level of confidence. This is to say that total perception scores show positive relationship with INT. If high is the INT, high would be the self perception of the individual. If INT is low, low would be the self perception of the individuals. The relationship is not significant at .01 level of confidence.

## 2. Correlation of Self Perception with Anxiety

TABLE 5.135

Correlation between self perception with anxiety scores

Variables	Mean	S.D.	D.F.	'r'	<u>6</u>
Total perception	156.58	22.97	606	0.09**	
Anxiety	43.20	15.76			

\*\* Significant at .01 level.

Correlation between anxiety scores and self perception show a positive correlation at .01 level of confidence and the coefficient of correlation is .09 (N = .608). This shows that anxiety and perception are significantly correlated.

## 3. Correlation of self perception and E.P.P.S. Measures

Different measures of E.P.P.S. have been correlated with total self perception scores and it is found that a few personality needs such as n-Ach., n-succorance, n-exhibition, n-autonomy, n-aggression have shown significant relationship

either at .05 level or at .01 level of confidence. The rest of the personality needs such as n-affiliation, n-nurturance, n-deference, n-intracception, n-change, n-order, n-endurance, n-dominance, n-heterosexuality, n-abasement needs are not significant at any of the levels of confidence. However, they are positively or negatively correlated. The detailed results are given below for necessary interpretations.

### 3.1 Correlation of self perception with n-Ach.

TABLE 5.136

Correlation between self perception and n-Ach.

Scores.

Variables	Mean	S.D.	D.F.	'r'
Total perception	156.58	22.97	606	0.10**
Ach.	14.09	3.21		

\*\* Significant at .01 level

The E.P.P.S. dimension n-Ach. has been correlated with the total perception scores. The correlation value is 0.10 which is significant at .01 level of confidence. This shows that n-Ach. and self perception are positively correlated and go together.

### 3.2 Correlation of self perception and n-affiliation

TABLE 5.137

Correlation between self perception and n-affiliation

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	-0.02
Aff.	14.06	3.42		

Both the variables when correlated show negative relationship which is not significant at any of the levels of confidence. The coefficient of correlation found is  $-0.02$ . That is, perception and n-affiliation scores of the trainees show a reverse relationship between them.

### 3.3. Correlation of self perception with n-nurturance

TABLE 5.138

Correlation between self perception  
and n-nurturance

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.04
Nur.	15.53	3.53		

The above table shows that both these variables are positively related <sup>and</sup> the coefficient of correlation is  $0.04$  ( $N = 608$ ) and relationship is not significant at any of the levels of confidence. This shows relationship between the two variables is positive but not significant.

### 3.4 Correlation of self perception scores with n-deference

TABLE 5.139

Correlation between self perception and  
n-deference

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.02
Def.	14.73	3.16		

The above table shows that both the variables are positively correlated but no significant relationship exists between the two. The magnitude of correlation found is 0.02.

### 3.5 Correlation of Self Perception scores with n-interception

TABLE 5.140

Correlation between self perception scores  
with n-intraception

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.05
INT	14.71	3.25		

The table shows that the total perception of the trainees shows a positive relationship with the intraception scores of E.P.P.S. test which measures various personality needs. The coefficient of correlation found is 0.05 and is not found significant at .05 or .01 levels of confidence.

### 3.6 Correlation of self perception with n-change

TABLE 5.141

Correlation between self perception  
scores and n-change

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.02
Chd.	15.20	3.5		

The above table shows that the personality need - n-change shows a positive correlation with the total self perception scores. The magnitude of correlation is 0.92 but not significant.

### 3.7 Correlation of self perception scores with n-order

TABLE 5.142

Correlation between self perception  
scores and n-order

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.03
Ord.	14.83	3.61		

Self perception and n-order measures show a positive correlation of 0.03 magnitude which is not found significant at any of the recognized levels.

### 3.8 Correlation of Self-perception scores with n-succorance

TABLE 5.143

Correlation between self perception scores with n-succorance

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	-0.07
Suc.	13.08	3.68		



n-succorance has been correlated with the total perception scores and it is found that both the variables are negatively correlated. It is found that coefficient of correlation is -0.07 and is significant at .05 level of confidence. It can be concluded that if perception is high succorance is low and vice-versa.

3.9 Correlation of self perception with n-endurance

TABLE 5.144

Correlation of self perception with n-endurance

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.06
End.	14.57	3.49		

Both these variables are positively correlated and the magnitude of correlation is 0.06. But correlation value is not significant at any of the levels of confidence. However, endurance is positively related with self perception of teacher-trainees.

3.10 Correlation of self perception with n-exhibition

TABLE 5.145

Correlation between self perception scores  
and n-exhibition scores

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	-0.10**
Exh.	13.10	3.07		

From the table it is obvious that both the tables are negatively correlated and the value of correlation is highly significant at .01 level of confidence, that is , exhibition need of the trainees show a negative relationship with the total self perceptions of the individuals.

### 3.11. Correlation of self perception with n-dominance

TABLE 5.146

Correlation between self perception and  
n-dominance

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.03
Dom.	14.01	3.75		

The correlation between these two variables has been worked out and coefficient of correlation is 0.03. This shows that perception scores and the dominance trait of personality go together but are not significant at any of the recognized levels of confidence. But both these variables show influence on one another but not to the significant level.

### 3.12 Correlation of self-perception with heterosexuality

TABLE 5.147

Correlation between self perception and  
heterosexuality

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	-0.02
Het.	11.63	5.35		

These 2 variables have shown negative correlation, and the coefficient of correlation is  $-0.02$ . This shows that the total perception and the trait of heterosexuality show reverse relationship, that is, if high is the perception, low would be the heterosexual need, if high is the heterosexual need, low <sup>would be</sup> the perception. These facts are related with the results already arrived at.

### 3.13. Correlation of Self Perception with Autonomy

TABLE NO. 148

Correlation between total perception scores and  
the autonomy trait of behaviour

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	-0.13**
Aut.	13.04	3.38		

\*\* Significant at .01 level.

These two dimensions have been found negatively correlated. The magnitude of correlation is  $-0.13$  and the correlation has been found significant at .01 level of confidence. This shows that these two traits of behaviour do not go together rather show a reverse relationship.

### 3.14 Correlation of self perception scores with abasement

TABLE 149

Correlation between self perception scores  
and abasement as measured by E.P.P.S.

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.000
Abes.	14.17	3.94		

Abasement is the 10th dimension of E.P.P.S. which shows the person's concerns to feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm etc. This dimension was correlated with the total perception score of teacher trainees. It is found that both the variables are not correlated at all, i.e., zero correlation. It shows that the perception and the abasement are not related. However, they are the parts of general behaviour.

### 3.15 Correlation of self perception scores and n-aggression

TABLE 5.150

Correlation between self perception scores  
n-aggression

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.08**
Agg	13.23	3.3		

\*\* Significant at .01 level

These two dimensions have been worked out and coefficient of correlation is significant at .01 level of confidence. The magnitude of the same is 0.08. This shows that the total perception of the individual is highly related with the trait of aggression which is a dominant need of personality.

4. Correlation between total self perception scores and the different sub-scales.

As perception governs the total self of the individual and it provides an adjustment to the individual with his phenomenal self, therefore, it was thought proper that the different means of the total perception such as self, others, children, work, parents, reality, authority and hope may be determined so that the needed relationship between the total perception may be governed. The correlation between the total perception may be governed. The correlation matrix has provided the details about the coefficient of correlation and it is heartening to find that all the combinations worked out under these dimensions have shown significant correlation at .01 level of confidence. The details of the statistics for each dimension as related to the total are being provided as below:

4: 1-9 Correlation of total self perception scores  
with 8 sub scales

TABLE 5.151

Correlation between total self perception scores  
 and 8 sub - scales

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.41**
Self-Scale	17.68	3.88		
Total	156.58	22.97	606	0.39**
Other scale	20.25	3.68		
Total	156.58	22.97	606	0.42**
Children scale	19.96	3.4		
Total	156.58	22.97	606	0.37**
Authority Scale	18.42	3.78		
Total	156.58	22.97	606	0.48**
Work Scale	19.49	3.7		
Total	156.58	22.97	606	0.30**
Reality scale	18.75	3.97		
Total	156.58	22.97	606	0.40**
Parents Scale	20.27	4.90		
Total	156.58	22.97	606	0.60**
Hope scale	21.98	7.15		

\*\* Significant at .01 level.

From the above detailed table it is observed that all the correlations worked between 8 subscales and the total perceptions have been found significant at .01 level of confidence. This shows that the subscales items have been able to measure the perception related to a particular area and therefore, the correlations are highly significant at 0.01 level<sup>of</sup> confidence.

#### 5.0 Correlation of self perception scores and the total performance

TABLE 5.152

Correlation between self perception and  
performance scores

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.12**
Performance score	212.87	248.95		

\*\* Significant at .01 level.

The total performance scores of the teacher trainees at the B.Ed. level have been correlated with the total perception scores and it is found that both the variables show significant relationship at .01 level and the magnitude of relationship is 0.12. It is obvious that the total perception and the performance go together, that is, if high is the perception<sup>high</sup> would be high the performance and vice-versa.

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### 6.0 Correlation of self perception scores and n-Ach.

TABLE 5.153

Correlation between self perception  
and n-Ach. scores

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0,04
Motivation (n-Ach.)	7.26	12.34		

These two variables were correlated and the correlation is found to be 0.04, that is, both the variables go together and do not show high relationship of the order of .01, that is, these two variables are helping each other, i.e., high n-Ach. may be related with average perception scores and vice versa.

### 7.0 Correlation of the self perceptions scores and self Report card measures

It was one of the contentions of the investigator that difference in sex, age, residence, entering qualification and economic status, teaching experience and outlook of the trainees are helpful in giving positive self perceptions to the individual's self perception scores which have been examined in relation to motivation scores but it is observed that the relationship is not significant. How far the relationship is not significant, how far the relationship of self perception goes with the dimensions of self report card



has been examined in the following section just to find out the relationship of self perception with sex, age .....outlook towards religion etc.

7: 1-7 Correlation of self perception scores with self report card measures

TABLE 5.154

Variables	Mean	S.D.	D.F.	'r'
Total	156.58	22.97	606	0.01
Sex	1.29	0.45		
Total	156.58	22.97	606	0.00
Age	1.67	0.72		
Total	156.58	22.97	606	0.03
Urban/Rural	1.29	0.46		
Total	156.58	22.97	606	0.13**
Qualification	1.91	1.23		
Total	156.58	22.97	606	0.07*
Economic Status	2.01	0.63		
Total	156.58	22.97	606	-0.04
Teaching Exp.	2.25	1.11		
Total	156.58	22.97	606	0.05
REL	1.33	0.47		

\*\* Significant at .01 level.    \* Significant at .05 level.

From the above table it is obvious that the self perception scores showed significant relationship with entering qualifications of the trainees at .01 level of confidence. That is, both the variables are highly correlated. That is, people having high qualifications have high perception and vice-versa. The coefficient of correlation found is 0.13.

Self-perception is also positively correlated with the economic status of teacher trainees at .05 level of confidence. That is, perception and economic status go together. How the teacher trainees are able to perceive the economic status of their parents also goes along with the total perception scores, but relationship has not been found significant at .01 level. Rest of the categories such as sex, urban/rural residence and outlook of trainees towards religion, however, show positive relationship with perception scores which has not been found significant at any of the acceptable levels.

Age and self perception scores do not show any sort of relationship, that is, both the variables are independent of one another. So, no concrete judgement can be arrived at for these two variables.

Teaching experience and self perception scores show a negative correlation whose magnitude is -0.04 and the relationship has not been found significant at any of the recognized levels.

#### 5.21. Correlation of anxiety with other 34 variables

Anxiety, being a major dimension of the present study, naturally had provided varied types of correlational values

with various other dimensions under study. Anxiety, like other dimensions such as self-perception, personality needs and the general background of the teacher trainees, has a significant contribution to make for better understanding of n-Ach. academic performance, INT, etc. Many research studies have been conducted by Winterbottom (1954), McClelland and Atkinson et al. (1958, 1962). Sarason and Mandler (1967) and Mehrabian (1971) who conducted studies in various dimensions taking anxiety as the major variable. Varied types of tests on anxiety have been constructed in the west and its relationship as developed with n-Ach., risk-taking behaviour, levels of aspirations, academic performance, age, reward and punishment as incentives for judging the n-Ach. level of the candidates. Therefore, MAST (Taylor), Sarason's, Mandler's test anxiety scale for children or general anxiety scale for children (GASC) have been used by many researchers to find out anxiety levels of the children or the college going population. The present researcher used Dr. Sinha's anxiety scale for the study as in hand, which has been used widely for research purposes. The test data thus obtained, have been subjected to establish relationship with various variables and correlation matrix 35 x 35 provided the following results.

1. Correlation of Anxiety with INS.

TABLE 5.155  
Correlation between anxiety scores  
and INS

Variables	Mean	S.D.	D.F.	'r'
Anxiety	43.20	15.76	606	0.04
INS	40.88	10.91		

The above table shows that anxiety and INT are positively correlated and the coefficient of correlation is 0.04 which is not significant at any of the levels of confidence, that is, high anxiety is related with average intelligence, low anxiety and with high intelligence and so on. The relationship is positive between these 2 variables.

2. Correlation of anxiety and E.P.P.S. Dimensions

TABLE 5.156

Correlation between Anxiety and  
n-Ach.

Variables	Mean	S.D.	D.F.	'r'
Anxiety	43.20	15.76	606	-0.09
Ach.	14.09	3.21		

\*\* Significant at .01 level.

The above table shows that anxiety is negatively correlated with n-Ach. The coefficient of correlation is -0.99 and significant at .01 level of confidence. That is, high n-Ach. is related with low anxiety and low n-Ach. with high anxiety.

2: 2-15 Correlation of anxiety and E.P.P.S. Dimensions  
(n-Aff. n-aggr)

TABLE 5.157

Correlation between n-aff.....n-aggr and anxiety scores.

S.No. Variables	Mean	S.D.	D.F.	'r'
1. Anxiety	43.20	15.76	606	0.04
2. Aff.	14.06	3.42		
2. Anxiety	43.20	15.76	606	0.04
Nur.	15.53	3.53		
3. Anxiety	43.20	15.76	606	-0.0
Def.	14.73	3.16		
4. Anxiety	43.20	15.76	606	-0.0
Int.	14.71	3.25		
5. Anxiety	43.20	15.76	606	0.0
Cha.	15.20	3.5		
6. Anxiety	43.20	15.76	606	0.0
'Ord.'	14.83	3.61		
7. Anxiety	43.20	15.76	606	0.0
Suc.	13.08	3.68		
8. Anxiety	43.20	15.76	606	0.1**
End.	14.57	3.49		
9. Anxiety	43.20	15.76	606	-0.1**
Exh.	13.10	3.07		
10. Anxiety	43.20	15.76	606	-0.1**
11. Anxiety	43.20	15.76	606	0.07**

12. Anxiety	43.20	15.76	606	0.07**
Aut.	13.04	3.38		
13. Anxiety	43.20	15.76	606	-0.02
Ab.	14.17	3.94		
14. Anxiety	43.20	15.76	606	0.03
Agg.	13.23	3.3		

From the above table it is obvious that the E.P.P.S. Categories either show no correlation with anxiety scores or they are negatively correlated. Only 5 categories out of 14 in this series are showing positive correlation. Some of the correlations are significant at .01 level of confidence and these correlations pertain to dimensions such as n-end., n-exh., n-dom., n-het. These four categories are showing significant correlation at .01 level<sup>ob</sup> confidence. The magnitude of correlation are 0.2, 0.1, -0.01, 0.07. It is to observe that dominance is negatively correlated with the anxiety state, that is, high dominance with low anxiety, high anxiety state is related with low dominance, that is, both the traits do not go together. Autonomy and abasement dimensions are also negatively correlated with the anxiety scores. The coefficient of correlation is -0.04 and -0.02. The other categories which show positive correlation are affiliation, nurturance and aggression. The magnitude of correlation vary from 0.03 to 0.04. All the correlations are low and donot show significance at any levels

of confidence. The dimensions which show no correlation with the anxiety scores are deference, intraception, change, order, succorance etc. These dimensions are read as:

1. to get suggestion from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job.
  2. to analyse one's motives and feelings, to observe others, to understand how others feel about problem.
  3. to do new and different things, to travel to meet new people, to experience novelty and change in daily routine.
  4. to have written-work neat and organized, to make plans before starting on a difficult task, to have things organized etc.
  5. to have others provide help when in trouble, to seek encouragement from others, to have other be kindly-
- all these statements are very much wanted as a part of teacher's personality qualities for teaching effectiveness. It is heartening to note that these dimensions are independent of anxiety state.

### 3. Correlation of anxiety with self-perception scales

The self-perception inventory comprises of sub-scales such as 'self', 'others', children, authority, work, reality, parents and hope scales and the total perception. How far the

anxiety state goes parallel to the various dimensions of the SRI was to be studied for a needful decision. As anxiety scores and perception are the part of personality and largely govern the general behaviour of the people, so it is essential how far the concerns of the trainees can be profitably viewed as regard to 'self', others, children, authority...hope. These dimensions have been studied with the total scores of anxiety taken by 608 teacher trainees of Orissa and the results have been summarized as below:

TABLE 5.158

Correlations between anxiety scores and 8  
difference dimensions of SRI

S.No.	Variables	Mean	s.D.	D.F.	'r'
1.	Anxiety	43.20	15.76	606	-0.0
	Self-scale	17.68	3.88		
2.	Anxiety	43.20	15.76	606	0.00
	Others scale	20.25	3.68		
3.	Anxiety	43.20	15.76	606	0.07
	Children scale	19.96	3.4		
4.	Anxiety	43.20	15.76	606	-0.08*
	Authority scale	18.42	3.78		



5. Anxiety	43.20	15.76	606	-0.10**
Work Scale	19.49	3.7		
6. Anxiety	43.20	15.76	606	0.08
Reality Scale	18.75	3.97		
7. Anxiety	43.20	15.76	606	-0.05
Parents scale	20.27	4.90		
8. Anxiety	43.20	15.76	606	-0.04
Hope scale	21.98	7.15		

\* Significant at .05 level    \*\* Significant at .01 level

From the above table it can be safely concluded that reality scale has a significant relationship with anxiety at .05 level of confidence, that is, anxiety and reality perception go together. The coefficient of correlation is 0.08 (N = 606).

Authority and work scales are negatively correlated with anxiety and they are significant at .05 and .01 levels of confidence. It can be interpreted that the trainees who perceive authority and better work situations have less of anxiety and vice-versa. That is, why these 2 perceptions show negative relationship. The scales which have no correlation with anxiety are 'self' and others, that is, when the individual trainees have better self-perception and they also feel concerned with others. The children scale has got a positive relationship with anxiety as children are part of the school family. So,

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teacher trainees show positive anxiety towards the concerns of children but it has not been found significant at any of the recognized levels of probability. Teacher trainees' concerns about parents<sup>and</sup> hope and show a negative relationship with anxiety state. However, the coefficient of correlations are -0.05 and -0.04 and both are insignificant.

4. Correlation of anxiety with performance

TABLE 5.159

Correlation between anxiety and  
performance scores

Variables	Mean	S.D.	D.F.	'r'
Anxiety	43.20	15.76	606	0.06
Performance score	212.89	248.89		

The correlation between anxiety and performance scores have been worked out and it is found to be 0.06, which is not significant at any of the levels of confidence. This shows that anxiety and performance, however, go together but do not show significant relationship, i.e., if performance is high, anxiety is low and if anxiety is high, performance is low, or there may be some intermediary state. It clearly reflects that anxiety has got a significant contribution as regard to performance level but in general significant relationship

in the present study has not been found. It can be concluded that anxiety and performance are positively related but do not show significant relationship.

5. Correlation of Anxiety with n-Ach. scores

The anxiety and n-Ach. scores have been correlated and coefficient of correlation is -0.03 (data has been presented in the previous table under correlation of motivation with other variables). It clearly shows that n-Ach. and anxiety show a negative correlation, that is, if n-Ach. is high, anxiety is low, and if anxiety is high, n-Ach. is low but the magnitude of correlation is low and insignificant. This shows that anxiety shows a tricky relationship with n-Ach.

6. Correlation of anxiety with Self Report Card measures

TABLE 5.160

Correlation between anxiety and sex, age, urban rural residence, entering qualifications, teaching experience and economics status and outlook of trainees towards religion

Variables	Mean	S.D.	D.F.	'r'
Anxiety	43.20	15.76	606	0.07*
Sex	1.29	0.45		
Anxiety	43.20	15.76	606	0.02
Age	1.67	0.72		

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Variables	Mean	S.D.	D.F.	'r'
Anxiety	43.20	15.76	606	-0.01
URR	1.29	0.46		
Anxiety	43.20	15.76	606	0.12**
Qualification	1.91	1.23		
Anxiety	43.20	15.76	606	-0.02
Economic Status	2.01	0.63		
Anxiety	43.20	15.76	606	0.00
Ex.	2.25	1.11		
Anxiety	43.20	15.76	606	0.03
REL	1.33	0.47		

\* Significant at .05 level      \*\* Significant at .01 level

From the above table it is clear that anxiety and the entering qualification of the teacher trainees show a positive and significant correlation at .01 level of confidence. Both the sexes show a positive correlation with anxiety, which is significant at .05 level of confidence. Some of the dimensions show a negative relationship with anxiety. They are urban/rural residence and economic status. This shows that these two variables are related negatively.

Age and outlook of trainees towards religion show a positive relationship but values are insignificant. No relationship exist between anxiety and experience of teaching had by the trainees before entering the teacher trainees colleges. Therefore, it is safely concluded that sex and

entering qualifications have got significant relationship with the anxiety state of the trainees. Other variables - age, urban/rural residence, economics status and outlook towards religion are either positively or negatively correlated.

#### 5.21. Correlation of INS with other 34 variables under study

As INT is one of the dimensions, which has been studied in relation to n-Ach., personal preference, self-perception, anxiety, risk-taking behaviour and other correlates related to teacher trainees background and the performance<sup>at</sup> B.Ed. level. So it was felt essential that the intelligence scores should be studied in relation to other different variables under study. So that its relationship may be found out as significant or insignificant with different sub-scales of self perception and personal performance. That is, how far the intelligent trainees are able to find different traits of personality and their perceptions to their different worldly situation that they may become effective teachers later on. It clearly shows that results of such study would be able to reveal some of the cogent findings so that selection and placement of the trainees may be considered on scientific lines. In western countries the studies of Robinson (1961), McClelland et al., (1969), Gough (1957), Martiere (1956) are of very good significance as regard to the relationship of INT with n-Ach., achievement and self perception, I.Q. and n-Ach., parental achievement tendencies and n-Ach. etc. These studies have motivated the investigator to

study the result regarding correlational values between INT scores and other variables. The results of the same are being summarized as under:

1. Correlation of INS with Anxiety

TABLE 5.161

Correlation between INS and Anxiety scores				
Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	0.04
Anxiety	43.20	15.76		

Both these variables have shown a positive correlation whose magnitude is 0.04. The correlation is not significant at .05 and .01 levels of confidence. This shows that INS and Anxiety go together but not to a great extent. That is, it cannot be generalized that high anxiety means high intelligence.

2. Correlation of INT with E.P.P.S. dimensions

TABLE 5.162

Correlation between INS and 15 E.P.P.S.

Variables	Dimensions			
	Mean	S.D.	D.F.	'r'
1. INS	40.88	10.91	606	-0.04
Ach.	14.09	3.21		

Variables	Mean	S.D.	D.F.	't'
2. INS	40.88	10.91		
Aff.	14.06	3.42	606	-0.01
3. INS	40.88	10.91		
Nus	15.58	3.53	606	0.07*
4. INS	40.88	10.91		
Def.	14.73	3.16	606	0.01
5. INS	40.88	10.91		
Int.	14.71	3.25	606	0.1**
6. INS	40.88	10.91		
Cha	15.20	3.5	606	0.03
7. INS	40.88	10.91		
Ord.	14.83	3.61	606	0.1*
8. INS	40.88	10.91		
Suc.	13.08	3.68	606	0.0
9. INS	40.88	10.91		
End.	14.57	3.49	606	0.0
10. INS	40.88	10.91		
Exh.	13.10	3.07	606	-0.0
11. INS	40.88	10.91		
Dom	14.01	3.75	606	-0.02

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Variables	Mean	S.D.	D.F.	'r'
12. INS	40.88	10.91	606	0.08*
Het	11.68	5.35		
13. INS	40.88	10.91	606	-0.01
Aut.	13.04	2.38		
14. INS	40.88	10.91	606	0.07
Ab	14.17	3.94		
15. INS	40.88	10.91	606	0.09**
Agg.	13.23	3.3		

\* Significant at .05 level

\*\* Significant at .01 level

The E.P.P.S. dimensions have been studied in relation to INS. It is observed that n-Ach. and n-affiliation categories show negative correlation ranging from -0.01 to -0.04. It can be safely concluded that INS and n-Ach. as measured by E.P.P.S. and affiliation categories show negative correlation, that is, both the variables do not go together. If intelligence increases, n-affiliation and n-Ach. (as measured by E.P.P.S.) decrease. That is to say, these personality variables and INS do not show positive relationship.

IMT and nurturance show a significant and positive relationship at .05 level of confidence. However, the relationship could not be found significant at .01 level of confidence. Intraception



and succorance show a significant relationship at .01 level of confidence. The magnitude of correlation in both the cases is found to be 0.1. Zero correlation has also been found in categories - order, endurance and exhibition with INT. That is, people who are pains-taking and want to complete any job which they have undertaken, those who want to put long hours of work without distraction and show exhibition by talking personal ventures and achievement and want to keep the thing neat and tidy. All these traits of personality do not go well with INS. Therefore, it can be concluded safely that no correlation exists among these three categories and the INS. The other categories show significant correlation at .05 level and they are INT and heterosexuality and abasement. The coefficients of correlation are 0.07 and 0.08. The correlation has not been found significant at .01 level of confidence. It can be concluded that the personality needs of teacher trainees show relationship varying in degrees with INS. INT and autonomy show a negative correlation and the coefficient of correlation is -0.01. All these combinations show that INT has got a tricky effect on different personality needs.

Aggression also shows significant correlation with INS. The level of correlation is 0.01 and the magnitude of correlation is 0.09. This shows the people who are aggressive have got high INT, that is, high INT is related to high aggression and low INT is related to low aggression.

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### 3. Correlation of INS and self perception measures

TABLE 5.163

Correlations between INS and various sub-  
scales of self-perception

Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	0.02
Self-scale	17.68	3.88		
INS	40.88	10.91	606	-0.05
Other scale	20.25	3.68		
INS	40.88	10.91	606	0.03
Children scale	19.96	3.4		
INS	40.88	10.91	606	-0.01
Authority scale	18.42	3.78		
INS	40.88	10.91	606	-0.06
Work-scale	19.49	3.7		
INS	40.88	10.91	606	0.00
Reality scale	18.75	3.97		
INS	40.88	10.91	606	0.02
Parents scale	20.27	4.90		
INS	40.88	10.91	606	-0.11**
Hope Scale	21.78	7.15		

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Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	0.07*
Total scores	156.58	22.97		

\* Significant at .05 level

\*\* Significant at .01 level

From the above table it is obvious that self-perception about children and of parents show a positive relationship with INS. The coefficient of correlation vary from 0.02 to 0.03 which are low in magnitude and do not show significance at any of the levels. Negative correlation has been found for 'other', authority, work and hope scales with INT. This shows that intelligent person do not feel associated with 'other', authority, work situations and they are not hopeful about the future possibilities but all these dimensions correlate negatively with INS. The hope scale shows significantly negative correlation at 0.01 level with INS. That is, highly intelligent people do not feel to hope positively about the future action. It is to observe that the total perception scores correlate positively with INS and level of significance is .05 level, that is, it can be said with 95% confidence that such a relationship would exist between INS and total perception scores.

#### 4. Correlation of INS and performance scores

TABLE 5.164

Correlation between INS and Performance  
Scores

Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	-0.04
Performance scores	212.89	248.95		

The above table shows that INT is negatively correlated with total performance scores of the teacher trainees of Orissa. The magnitude of correlation is 0.04 which is not significant at any of the levels of confidence. However, the results are contrary to the already established norms that INT and performance are positively related. Many factors can be said attributing to such a relationship, that is, low and average INT students feel to opt for teaching as a career. Very bright students are not at all attracted for teaching profession. Similar situations have been observed in the most developed countries like U.K. and U.S.A., where teaching has been considered a profession for those who do not seem to do well in higher mental task. Therefore, the results arrived at may differ with a different type of sample chosen. This relationship needs further testing by some future researcher.

5. Correlation of INS with n-Ach. scores

TABLE 5.165

Correlation between INS and n-Ach.  
scores

Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	0.06
Motivation scores	7.26	12.34		

n-Ach. scores (as measured by Dr. Mehta's test of n-Ach.) were correlated with INS of 608 teacher trainees of Orissa. It was found that the correlation between these 2 kinds of scores is positive but not significant. The coefficient of correlation is 0.06 which shows that these 2 variables go together but they are not significant. Of course, positive relationship between n-Ach. and INS is there. These results are in consonance with the results of other research studies.

## 6. Correlation of INS and Self Report Card Measures

TABLE 5.166

Correlation between INS and Self Report Card Measures such as sex, age, urban/rural residence, entering qualification, teaching experience, economic status and outlook of teacher trainees towards religion/liberal in religion.

Variables	Mean	S.D.	D.F.	'r'
INS	40.88	10.91	606	0.17**
Sex	1.29	0.45		
INS	40.88	10.91	606	-0.12**
Age	1.67	0.72		
INS	40.88	10.91	606	0.00
Urban/Rural	1.29	0.46		
INS	40.88	10.91	606	0.14**
Qualification	1.91	1.23		
INS	40.88	10.91	606	0.01
Economic Status	2.01	0.63		
INS	40.88	10.91	606	-0.07*
Ex.	2.25	1.11		
INS	40.88	10.91	606	0.02
REL.	1.33	0.47		

\* Significant at .05 level. \*\* Significant at .01 level.

From the above table, it can be concluded that sex, age and entering qualification show a significant correlation positive or negative at .01 level of confidence. Sex and entering qualification are positively correlated with INS. That is, boys and girls and INT are significantly related. No correlation has been found between the place of residence and INS, that is, the rural/urban setting is not related in any way with the development of INT level.

Experience is negatively correlated with INT. That is, more the experience of the trainees, less will be the INT level. The result shows that fresher trainees have INT levels. It may be attributed that young trainees are more exposed to the modern development of science and technology and thereby <sup>they</sup> have more development of INT. Therefore, teaching experience and INT levels are however, negatively correlated but relationship is significant at .05 level of confidence. (However, the INT test used was non-verbal in nature.) The outlook of teacher trainees towards religion is positively related with INT scores and coefficient of correlation is 0.02 and relationship is not significant. It can be safely concluded that sex and qualification are positively correlated with INT, and relationship is significant at .01 level of confidence. Age is also correlated but negatively and is significant at .01 level.

#### 5.21. Correlation of performance scores with other 34 variables

Performance of the teacher trainees is dependent on

various factors; INT level is not the only factor which helps to have a better academic achievement. The pattern of relationship of personality needs with academic achievement. The pattern of relationship of personality needs with academic achievement may vary from one type of achievement to another type of achievement. It was observed that relationship of INT was not independent of performance levels. This might be possible due to different personality needs and motives developed by the individuals for different types of courses. Therefore, achievement is attributed to many and varied types of factors which need a thorough study. Keeping these ideas in mind, the investigator thought to find out the relationship of performance with other variables. The results obtained, have been summarized in the following section.

1. Correlation of performance scores with INS

TABLE 5.167

Correlation between performance scores  
and INS

Variables	Mean	S.D.	D.F.	'r'
PR.	212.89	248.95	606	-0.04
INS	40.88	10.91		

The analysis of the data shows that performance scores and INS show a negative correlation having magnitude -0.04, which is not significant at any of the levels of



confidence. The investigator feels that performance and INT should show a positive relationship but in the present study the data shows the results as otherwise. The reason may be -

1. The teacher trainees may not be familiar or might not have understood the genesis of the test.
2. In the teaching training programme those individuals are joining the course, who are misfits elsewhere. That is, people having potential are not attractive towards the teaching career. However, the position is changing.

## 2. Correlation of Performance scores with anxiety

The correlation found with these variables is 0.06, that is, anxiety and performance show positive relationship (data has been presented in the previous section) which is not significant at any of the levels of confidence.

## 3. Correlation between Performance Scores and E.P.P.S.

### Dimensions

Personality needs as measured by E.P.P.S. have been found correlated with the performance scores of the teacher trainees and it was observed that many needs such as endurance, succorance and deference, n-Ach. and aggression seem to be contributing effectively for better achievement scores in

various subjects. Bhatnagar, R.P. (1967). Having these ideas in mind the investigator thought to study the personality needs of the teacher trainees in relation to performance. It was observed that some of the needs are positively related and show significance of correlation at .01 level of confidence while five needs out of 15 show negative relationship. The data can be examined at a glance from the table given below:

TABLE 5.168

Correlation of Performance Scores with 15  
E.P.P.S. Dimensions

Variables	Mean	S.D.	D.F.	'r'
1. PR	212.89	248.95	606	0.04
Ach.	14.09	3.21		
2. PR.	212.89	248.95	606	-0.07*
Aff.	14.06	3.21		
3. PR.	212.89	248.95	606	0.20**
Nur.	15.52	3.53		
4. PR.	212.89	248.95	606	0.06
Def.	14.73	3.16		
5. PR.	212.89	248.95	606	0.14**
INT	14.72	3.25		

6. PR.	212.89	248.95	606	0.0
Cha.	15.20	3.5		
7. PR.	212.89	248.95	606	-0.03
Ord.	14.83	3.61		
8. PR.	212.89	248.95	606	0.14**
Suc.	13.08	3.68		
9. PR.	212.89	248.95	606	0.10**
End.	14.57	3.49		
10. PR.	212.89	248.95	606	-0.04
	13.10	3.07		
11. PR.	212.89	248.95	606	0.07*
Dom.	14.01	3.75		
12. PR.	212.89	248.95	606	-0.14**
Het.	11.63	5.35		
13. PR.	212.89	248.95	606	-0.09**
Aut.	13.04	3.38		
14. PR.	212.89	248.95	606	0.09**
Aba.	14.17	3.94		
15. PR.	212.89	248.95	606	-0.09**
	13.23	3.3		

\* Significant at .05 level.

\*\* Significant at .01 level

The E.P.P.S. dimensions have been correlated with the performance scores of the teacher trainees at the annual examination of B.Ed. It is observed that personality needs such as nurturance intraception, succorance, endurance, heterosexuality, autonomy, abasement, and aggression show a significant relationship with the performance scores and the level of significant is .01. Some of these needs are positively correlated and their coefficient of correlation vary from 0.09 to 0.20. Some of the needs are significant but negatively correlated these are heterosexuality, autonomy and aggression.

These needs do not contribute much as regard to the better achievement scores. From the nature of the needs it is evident that heretosexuality, autonomy, aggression measures statement such as to go along with the opposite sex, to read literature concerning sex, to feel independent in one's own doings and to criticize the views of others etc., these are the different measures of personality adjustments. Therefore, they are all negatively correlated and find a significant correlation. N-Ach. deference needs are positively related with the performance scores. Same is case with dominance need but it is significant at .05 level of confidence. Change does not show any relationship with the performance scores. That is, to have the new reading material, ti adopt new practices, to except novelty, to find out new situations for work etc., do not favour better performance output. Hence,

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correlation is completely absent. It can be concluded that most of the needs such as nur., int., suc., end., dom., and aba., are positively correlated with performance and significant at 0.01 level of confidence. Dominance also shows positive relationship and shows significant relation at .05 level with coefficient of correlation 0.07. This shows the personality needs of the teacher trainees, show a favourable trend when correlated with the performance scores achieved by them at the B.Ed. final examination.

#### 4. Correlation of performance with SRI sub-scales

TABLE 5.169

Correlation between performance scores with  
the sub-scales of SRI

Variables	Mean	S.D.	D.F.	'r'
PR.	212.89	248.95	606	0.04
Self scale	17.68	3.88		
PR.	212.89	248.95	606	0.11**
Other scale	20.25	3.68		
P.R.	212.89	248.95	606	0.10**
Children scales	19.96	3.4		
PR.	212.89	243.95	606	0.04
	18.42	3.78		

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Variables	Mean	S.D.	D.F.	'r'
PR.	212.89	248.95	606	0.02
Work Scale	19.49	3.7		
PR.	212.89	248.95	606	0.04
Reality scale	18.75	3.97		
pR.	212.89	248.95	606	0.03
Parents scale	20.27	4.90		
PR.	212.89	248.95	606	0.11**
Hope Scale	21.98	7.15		
PR.	212.89	248.95	606	0.12**
Total scores	156.58	22.97		

\*Significant at .05 level.

\*\*Significant at .01 level.

The above table shows that the performance scores are related with the 'others' and children scales positively and coefficients of correlation have been found as 0.1 and 0.11, which are significant at .01 level of confidence. The 'self', authority, work, reality and parents scales show a positive correlation with the performance scores and the magnitude of correlation varies from 0.02 to 0.04. It can be concluded that 'self', work, authority, reality and parents' perception had by the trainees show positive relationship with

performance but not significant one. However, the total perception score and the hope scale show positive relationship with the performance scores which are significant at .01 level of confidence. It is heartening to find that the total self-perception and the perception about the world around them such as children, self, others, authority, work, reality, parents and hope show positive relationship in all the possible ways the performance scores. It can be concluded safely that the self-perception of the teacher trainees is positively related with the performance scales at the B.Ed. level.

#### 5. Correlation of performance scores and n-Ach.

Positive correlation has been found out between performance and n.Ach. scores of trainees which show significant correlation at .01 level of confidence (table has<sup>been</sup> already presented). The magnitude of correlation found is 0.16. It is heartening to find that the people who are highly motivated, show better performance at B.Ed. examination. Similar results have been found by Winterbottom and Gough (1965). Performance is positively correlated with n-Ach. of individuals.

#### 6. Correlation of Performance Scores with Self Report

##### Card measures

TABLE 5.170

Correlation between performance and SRC measures  
such as sex, age, residence, entering qualification,  
economic status, experience and outlook teacher  
trainees towards religion.

Variables	Mean	S.D.	D.F.	'r'
PR.	212.89	248.95	606	0.00
Sex.	1.29	0.45		
PR.	212.89	248.95	606	0.15**
Age	1.67	0.72		
PR.	212.89	248.95	606	0.02
Urban/Rural	1.29	0.46		
PR.	212.89	248.95	606	0.17**
Qualification	1.91	1.23		
PR.	212.89	248.95	606	0.10**
Economic Status	2.01	0.63		
PR.	212.89	248.95	606	0.10**
Ex.	2.25	1.11		
PR.	212.89	248.95	606	0.03
REL	1.33	0.47		



The performance scores have been correlated with the above mentioned dimensions and it is heartening to find that all the dimensions show a positive relationship except economic status with performance scores. The coefficient of correlation shows highly significant relationship of performance with age, entering qualification and teaching experience at .01 level of confidence and the coefficients of correlation vary from 0.10 to 0.17. Out look of trainees and the residence had by them also show positive correlation ranging from 0.02 to 0.03. But these coefficients are not significant at any of the levels of confidence.

Having analysed the important dimensions under study in relation to the others and their sub-scales, it is enlightening to find that the study has revealed the significant relationship in most of the combinations as related to performance of teacher trainees on different psychological tests. The investigator has portioned out certain correlations pertaining to various dimensions of E.P.P.S. and self perception measures out of the detailed correlation matrix (35x35), so that individual interpretations might be given as regard to inter-internal relationship existing between 2 any sub-scales of E.P.P.S. or self perception scales or the relationship of one with the many so that the detailed picture as regard to different variables, might be studied effectively. The section given below deals with such a treatment given to E.P.P.S. and SRI measures.

#### 5.21 Inter correlational matrix of E.P.P.S. Dimensions

The investigator has apportioned out the relevant section of E.P.P.S. dimensions from the total inter-correlational matrix to study the personality needs of the teacher trainees. Uhlinger and Stephens hold that the conception of motivation underlying the E.P.P.S. can be expressed as the strongest need at a given time will determine behaviour. This is the simpler and less complex conception which does not introduce any other force or variable between the need and the behaviour. Therefore, it was felt essential to study as how far the inter correlations between the various E.P.P.S. needs are able to reveal a significant relationship in themselves, that is , how far one need is connected with the other need and contributes for its positive and negative correlation which may be found significant at .01 and at .05 levels of confidence.

The results can be observed from the following 15 x 15 correlational matrix.

TABLE 5.171

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Showing inter correlations between 15 E.P.P.S. dimensions, i.e., inter  
Correlation matrix - 15 x 15 concerning E.P.P.S. subscales.

Inter correlation Matrix Fifteen by Fifteen concerning E.P.P.S. Variables/  
Personality needs.

D.F. 606

	Ach.	Aff.	Nur.	Def.	Int.	Cha.	Ord	Suc.	Exh.	Dom	Het	Act	Abes
Aff.	-0.17**												
Nur.	0.07*	0.15**											
Def.	0.03	-0.11**	-0.0										
Int.	0.0	0.0	0.1**	-0.0									
Cha.	-0.0	-0.0	-0.0	-0.0	0.0								
Ord.	0.1**	-0.1**	-0.1**	0.2**	-0.1**	-0.0							
Suc.	-0.2**	0.1**	-0.1**	-0.1**	-0.11**	-0.17**	0.08*						
Exh.	0.0	0.2**	-0.0	0.0	0.0	0.0	0.0	-0.23**					
Dom.	0.0	-0.1**	-0.24**	-0.05	-0.12**	-0.05	-0.15**	-0.004	-0.05				
Het.	-0.1*	-0.1*	-0.7*	-0.15**	-0.04	-0.03	0.09**	0.09**	0.05	0.04			
Act.	0.16**	0.03	-0.32**	-0.27**	-0.17**	-0.14**	-0.21**	0.16**	-0.31**	0.01	-0.06		
Abes.	-0.04	-0.16**	-0.20**	-0.09**	-0.14**	-0.05	-0.14**	-0.14**	0.07*	0.06	0.04	0.06	
Agg.	-0.11**	-0.00	0.12**	0.00	0.08*	-0.05	-0.022	0.07*	0.03	-0.12**	-0.07*	0.02**	-0.06
	0.09**	0.2**	-0.17**	-0.12**	-0.07*	-0.17**	-0.10**	0.06	-0.03	0.01	0.02	0.03*	0.11**

\* Significant at .05 level (.062)

\*\* Significant at .01 level (.031)

To study the personality in a wholesome fashion it is observed that personality needs contribute significantly as regard to the prediction of total behaviour. The above table shows that n-aggression is negatively correlated with nur., def., int., chg., ord., and correlations found are significantly at .01 level of confidence. The magnitude of correlation ranges from -.01 to -.17. Aggression also shows positive and significant relationship at .01 level with n-Ach. n-aff., and n-abx. With other dimensions such as suc., exh., dom., and aut., positive relationships have been found out. Intraception need shows no relationship or completely absent relationship with n-Ach. n-aff. and n-def., and same is true for n-Ach. dimension which also shows zero correlation for def. and int.

Endurance is also the personality need which shows negligible correlation with n-Ach., n-nur., n-def., n-int., n-chg., n-ord., while with aff. and suc. positively and negatively significant relationship has been found. The sub-scales such as dominance, heterosexuality, aut., abx., and agg. have been able to show positive or negative significant correlations with other sub-scales. It can be concluded safely that E.P.P.S. as a measure of personal preferences of personality needs have been able to measure these different combinations of all the variables under study as related to all the personality needs of the teacher trainees.

TABLE 5.172  
9 x 9 inter correlational  
matrix of SRI.

TABLE 5.172

9 x 9 Inter correlational matrix of SRI dimensions  
 and the total perception scores  
 9 x 9 inter correlation matrix of self report  
 Inventory (Oliver H. Bown)

	Sc.	Ot.	Ch.	Au.	Wo.	Re.	Pa.	Ho.	Total
Ot.	0.15**								
Ch.	0.15**	0.29**							
Au.	0.21**	0.18**	0.11**						
Wo.	0.18**	0.14**	0.15**	0.26**					
Re.	0.15**	0.17**	0.26**	0.16**	0.13**				
Pa.	0.24**	0.17**	0.21**	0.21**	0.26**	0.24**			
Ho.	0.11**	0.19**	0.23**	0.09**	0.22**	0.09**	0.10**		
Total	0.41**	0.39**	0.42**	0.37**	0.48**	0.30**	0.40**	0.6**	

\* Significant at .05 level (.062)

\*\* Significant at .01 level (.081)

From the above table, it is observed that the analysis of the data has proved SRI and its various dimensions have been able to assess the self perception of teacher trainees as regard to 'self', 'others', 'children', 'authority', 'work', 'reality', 'parents', and 'hope'. sub-scales, i.e., the items listed down for sub-scales have been able to measure the perception of teacher trainees regarding the various sub-scales and the inter-correlational and matrix worked for all the dimensions of SRI show that the correlational values found are significant in 36 possible combinations at .01 level of confidence. The magnitude of correlation varies from 0.09 to 0.42.

The next section of this chapter is devoted to the examination of the predictors of academic achievement, INT, and SES components. The Ss academic performance is an index of the teachers' effectiveness.

#### SECTION IV

In the second section of this chapter, the results of 't' test were given to find the significant differences in the variables in relation to INT, three components of SES, education, occupation and monthly income of parents from all sources, performance, sex, teaching experience, economic ~~status~~ status, urban/rural residence and traditional/modern outlook towards life, religious/liberal outlook of trainees towards religion and motivation levels etc.

In the III section, inter-correlations of 35 dependent variables in all possible combinations were computed and the results were analysed and discussed but when variables are many the simple 'r' is misleading and the concrete results can be derived for better conclusions, in such cases, multiple correlation analysis technique is more appropriate and meaningful. The under mentioned section, therefore, deals with multi-variable regression analysis and the multiple correlation 'R'. This analysis has also resulted in developing multiple regression equations to prediction purposes.

#### 5.22.1 Multiple Correlation 'R'

Multiple correlation R is an important extension of the theory and technique of simple linear correlation. The correlation between 2 variables is sometimes misleading and many may be erroneous if there is little or no correlation between the variables other than that brought about by these common dependence, upon a third variable. But when variables are more than 3 or more variables under investigation the correlation between any 2 variables is sometimes misleading but the coefficient of multiple 'R' indicates the strength of relationship between 1 variable and all other remaining variables taken together. R is not merely sum of 35 correlation of the dependent variables and the various independent variables taken separately but it is also related to the inter-correlations of the independent variables as well as their correlations <sup>with</sup> of the dependent

variables. Another interpretation of R is that it is the correlation between the predicted value of the dependent variable and its obtained value.

As mentioned above the multiple correlation provides an analysis of relations among 2 or more predictor measures and a single criterion measure. One result of the analysis is an education for predicting the criterion score viz - academic performance, INT and three dimensions of SES, i.e., academic performance, INT and three dimensions of SES, i.e., educational, occupational levels and monthly income of parents from all sources, form a known set of predictor scores.

In the present study, there are 12 predictor variables, namely: INT, three components of SES, performance, sex, teaching experience, economic status, urban/rural residence, traditional/modern outlook, religious and liberal in religion and n-Ach. levels. All of these predictor variables have been shown in levels. All of these predictor variables have been shown in levels as high, average and low or in the combinations of two such as traditional - modern etc. The 35 criterion or dependent variables were: ~~on dependent variables were:~~ INT, anxiety, 15 personality needs as measured by E.P.P.S., 9 measures of Self perception, performance, n-Ach. and 7 different measures of Self report card.

Out of the 35 criterion variables and 12 predictor variables ~~and 12 predictor variables~~, the investigator has tried to establish 35 prediction equations by having worked out the multiple regression analysis for 12 predictors against the 35 criterion variables to find out the regression equation



of the linear relationship between one of the variables and the other variables considered as a team (12 predictor variables) and of measuring the strength of the relationship. The prediction equations have resulted into the values of 'R' in the form of F ratios, which have been judged as significant at .01 or .05 level against the table values. The following results have been arrived at, which can be taken at a glance from the table given below:

Showing Prediction Equations for 35 Criterion Variables against the 12 Predictor Variables  
(Criterion variables mentioned as  $Y_1, Y_2, \dots, Y_{35}$  and Predictor Variables as  $X_1, X_2, \dots, X_{12}$ )

$$Y_1 = 72.04 - 14.23X_1 - .127X_2 + .432X_3 - .0299X_4 - .489X_5 + .694X_6 - .628X_7 - .164X_8 - .458X_9 + .217X_{10} + .462X_{11} - 1.269X_{12} \\ (.427) \quad (.431) \quad (.393) \quad (.296) \quad (.260) \quad (.769) \quad (.527) \quad (.806) \quad (.621) \quad (.591) \quad (.455) \quad (.460)$$

$$Y_2 = 26.509 + 0.190X_1 + 1.729X_2 - .271X_3 + .386X_4 + .702X_5 - 2.246X_6 + 0.725X_7 + 3.316X_8 + 0.537X_9 + 4.121X_{10} - 1.263X_{11} \\ (1.056) \quad (1.066) \quad (0.972) \quad (0.731) \quad (0.643) \quad (1.904) \quad (1.304) \quad (1.994) \quad (1.537) \quad (1.463) \quad (1.152)$$

$$- 1.564X_{12} \\ (1.137)$$

$$Y_3 = 16.324 + 0.320X_1 - .197X_2 + 3.818X_3 + 1.478X_4 + 0.178X_5 - .157X_6 + 0.254X_7 - 0.809X_8 - 3.848X_9 - 0.634X_{10} + 0.232X_{11} \\ (0.216) \quad (.218) \quad (.199) \quad (.149) \quad (.131) \quad (.389) \quad (.266) \quad (.407) \quad (.313) \quad (.298) \quad (.235)$$

$$- .346X_{12} \\ (.232)$$

$$Y_4 = 11.298 - 7.541X_1 + .186X_2 - .109X_3 + 7.455X_4 - .319X_5 + .227X_6 - 5.105X_7 + 1.025X_8 - 8.405X_9 + 0.489X_{10} - .132X_{11} \\ (.231) \quad (.232) \quad (.212) \quad (.159) \quad (.140) \quad (.415) \quad (.284) \quad (.435) \quad (.335) \quad (.319) \quad (.251)$$

$$+ 1.131X_{12} \\ (.248)$$

$$Y_5 = 12.325 - .117X_1 - 8.575X_2 + .202X_3 + 5.249X_4 + .552X_5 + 1.338X_6 + .105X_7 + .265X_8 - .977X_9 + .883X_{10} - .218X_{11} + 4.439X_{12} \\ (.231) \quad (.233) \quad (.213) \quad (.160) \quad (.141) \quad (.417) \quad (.285) \quad (.436) \quad (.336) \quad (.320) \quad (.252) \quad (.248)$$

$$Y_6 = 14.195 + 7.132X_1 + .486X_2 + .2.6X_3 - 4.923X_4 + 0.102X_5 + 1.006X_6 + 0.231X_7 - .413X_8 - .288X_9 - .115X_{10} - 3.697X_{11} \\ (.211) \quad (.214) \quad (.195) \quad (.146) \quad (.129) \quad (.382) \quad (.261) \quad (.400) \quad (.308) \quad (.293) \quad (.231)$$

$$- .316X_{12} \\ (.228)$$

$$Y_7 = 15.529 - .330X_1 + 6.725X_2 - .258X_3 + .174X_4 + .404X_5 + .314X_6 + .178X_7 - .164X_8 - .859X_9 + .214X_{10} + .180X_{11} - .266X_{12} \\ (.216) \quad (.218) \quad (.199) \quad (.150) \quad (.132) \quad (.390) \quad (.267) \quad (.409) \quad (.315) \quad (.200) \quad (.253) \quad (.233)$$

$$Y_8 = 17.520 - 6.060X_1 - .592X_2 - 6.370X_3 - .315X_4 + 0.286X_5 + 0.876X_6 + 5.236X_7 - 7.144X_8 - .705X_9 - 9.115X_{10} - .350X_{11} \\ (.231) \quad (.233) \quad (.212) \quad (.160) \quad (.140) \quad (.417) \quad (.263) \quad (.436) \quad (.336) \quad (.320) \quad (.252)$$

$$+ 7.311X_{12} \\ (.248)$$

$$Y_9 = 14.724 + .121X_1 - 8.169X_2 - .130X_3 + 2.482X_4 - .143X_5 + .337X_6 + .118X_7 + .286X_8 - 8.067X_9 - .258X_{10} - 7.916X_{11} - .140X_{12} \\ (.245) \quad (.247) \quad (.225) \quad (.169) \quad (.149) \quad (.442) \quad (.302) \quad (.462) \quad (.356) \quad (.339) \quad (.267) \quad (.265)$$

$$Y_{10} = 11.286 - .347X_1 + .298X_2 - .143X_3 + .105X_4 - .515X_5 + .469X_6 - .251X_7 + .493X_8 + .350X_9 + .634X_{10} - .167X_{11} + 4.890X_{12} \\ (.246) \quad (.248) \quad (.226) \quad (.170) \quad (.149) \quad (.443) \quad (.303) \quad (.464) \quad (.358) \quad (.340) \quad (.268) \quad (.264)$$

$$Y_{11} = 12.835 + .238X_1 - .155X_2 + .185X_3 + .322X_4 + .129X_5 + .461X_6 + .667X_7 - .350X_8 + .333X_9 - .713X_{10} + .209X_{11} - .479X_{12} \\ (.231) \quad (.234) \quad (.213) \quad (.160) \quad (.141) \quad (.418) \quad (.286) \quad (.437) \quad (.337) \quad (.321) \quad (.252) \quad (.249)$$

$$Y_{12} = 13.384 + .171X_1 - 5.277X_2 - 2.31X_3 - .240X_4 - 8.531X_5 + .189X_6 - .340X_7 + .336X_8 + 3.871X_9 - .331X_{10} - .171X_{11} + .428X_{12} \\ (.214) \quad (.216) \quad (.197) \quad (.148) \quad (.130) \quad (.386) \quad (.264) \quad (.404) \quad (.311) \quad (.296) \quad (.233) \quad (.230)$$

$$Y_{13} = 14.934 + .163X_1 + 77.246X_2 - .136X_3 - .181X_4 + .221X_5 - .358X_6 - .468X_7 + .374X_8 + .206X_9 - .306X_{10} + 7.414X_{11} + .161X_{12} \\ (.253) \quad (.255) \quad (.233) \quad (.175) \quad (.154) \quad (.457) \quad (.312) \quad (.478) \quad (.368) \quad (.351) \quad (.276) \quad (.272)$$

$$Y_{14} = 16.228 - 81.546X_1 + .511X_2 - .169X_3 - .224X_4 - .722X_5 - 4.960X_6 + .150X_7 - .550X_8 + 1.242X_9 + .492X_{10} + .136X_{11} + .218X_{12} \\ (.330) \quad (.333) \quad (.304) \quad (.229) \quad (.201) \quad (.596) \quad (.408) \quad (.624) \quad (.481) \quad (.458) \quad (.360) \quad (.356)$$

$$Y_{15} = 15.614 - 8.765X_1 + .175X_2 + .149X_3 - 2.191X_4 - .226X_5 - .144X_6 - .540X_7 - 2.024X_8 - .169X_9 - .292X_{10} + .128X_{11} + 15.300X_{12} \\ (.227) \quad (.230) \quad (.209) \quad (.157) \quad (.138) \quad (.411) \quad (.281) \quad (.430) \quad (.331) \quad (.315) \quad (.248) \quad (.245)$$

$$Y_{16} = 16.278 - .619X_1 - 3.853X_2 - .523X_3 + .182X_4 + .385X_5 + .724X_6 + 5.459X_7 - 9.378X_8 - .717X_9 - .441X_{10} + 7.727X_{11} + .255X_{12} \\ (.262) \quad (.265) \quad (.241) \quad (.181) \quad (.160) \quad (.473) \quad (.324) \quad (.495) \quad (.382) \quad (.363) \quad (.286) \quad (.282)$$

$$Y_{17} = 12.001 + .481X_1 + .163X_2 - .137X_3 + 4.690X_4 - .144X_5 - .578X_6 - .240X_7 + .266X_8 + .477X_9 - 11.052X_{10} + 3.744X_{11} + .204X_{12} \\ (.221) \quad (.223) \quad (.203) \quad (.153) \quad (.134) \quad (.339) \quad (.273) \quad (.417) \quad (.321) \quad (.306) \quad (.241) \quad (.238)$$

$$Y_{18} = 19.703 - .322X_1 - 7.939X_2 - .572X_3 + .178X_4 + .111X_5 - .629X_6 + .433X_7 + 365.137X_8 + .178X_9 - 6.147X_{10} - 3.450X_{11} - .366X_{12} \\ (.261) \quad (.264) \quad (.240) \quad (.181) \quad (.159) \quad (.471) \quad (.323) \quad (.498) \quad (.380) \quad (.362) \quad (.285) \quad (.261)$$

$$Y_{19} = 20.066 - .147X_1 - 100X_2 - 9.895X_3 + .151X_4 + .446X_5 - .944X_6 + .955X_7 - .181X_8 + .512X_9 - .499X_{10} + 82.128X_{11} - .243X_{12} \\ (.245) \quad (.248) \quad (.226) \quad (.170) \quad (.149) \quad (.443) \quad (.303) \quad (.463) \quad (.357) \quad (.340) \quad (.267) \quad (.264)$$

$$Y_{20} = 22.777 + 2.580X_1 - .445X_2 - .154X_3 - .151X_4 + .341X_5 - 1.137X_6 + .217X_7 - .102X_8 + .175X_9 - .265X_{10} + .215X_{11} - .226X_{12} \\ (.231) \quad (.233) \quad (.213) \quad (.160) \quad (.141) \quad (.417) \quad (.285) \quad (.437) \quad (.336) \quad (.320) \quad (.252) \quad (.249)$$

$$Y_{21} = 20.809 - 3.452X_1 + 5.211X_2 - 7.331X_3 + 87.043X_4 + 7.735X_5 + 3.362X_6 + .106X_7 - .854X_8 + .324X_9 - .267X_{10} - 1.261X_{11} \\ (.255) \quad (.258) \quad (.235) \quad (.177) \quad (.155) \quad (.461) \quad (.316) \quad (.483) \quad (.372) \quad (.354) \quad (.279)$$

$$- .424X_{12} \\ (.275)$$

$$Y_{22} = 21.583 + 8.698X_1 - .166X_2 - .323X_3 - 8.958X_4 - 55.154X_5 - .383X_6 + .174X_7 - .131X_8 + 9.552X_9 + 2.686X_{10} + 5.935X_{11} \\ (.250) \quad (.252) \quad (.230) \quad (.173) \quad (.152) \quad (.451) \quad (.309) \quad (.472) \quad (.364) \quad (.346) \quad (.272) \\ - .436X_{12} \\ (.269)$$

$$Y_{23} = 23.835 - .207X_1 - 6.541X_2 - .497X_3 + .251X_4 + .212X_5 - .945X_6 + .239X_7 - 1.268X_8 - 4.718X_9 - .111X_{10} - 6.710X_{11} - 2.213X_{12} \\ (.266) \quad (.245) \quad (.184) \quad (.162) \quad (.481) \quad (.329) \quad (.503) \quad (.388) \quad (.369) \quad (.290) \quad (.287)$$

$$Y_{24} = 24.371 - .183X_1 - .621X_2 - .270X_3 + .156X_4 + .138X_5 - .782X_6 + .265X_7 - .531X_8 + .150X_9 - .223X_{10} + .125X_{11} - .392X_{12} \\ (.330) \quad (.334) \quad (.304) \quad (.229) \quad (.201) \quad (.597) \quad (.408) \quad (.625) \quad (.481) \quad (.458) \quad (.360) \quad (.356)$$

$$Y_{25} = 23.076 + .871X_1 - 5.612X_2 - .721X_3 + 3.999X_4 + .960X_5 - 1.811X_6 + 1.339X_7 - 1.402X_8 + .279X_9 - .275X_{10} + .935X_{11} - .584X_{12} \\ (.475) \quad (.480) \quad (.437) \quad (.329) \quad (.289) \quad (.857) \quad (.586) \quad (.897) \quad (.690) \quad (.658) \quad (.518) \quad (.511)$$

$$Y_{26} = 154.576 + 1.463X_1 - .753X_2 - .590X_3 + .300X_4 + 2.666X_5 - 2.309X_6 + 3.599X_7 - 3.987X_8 + 3.663X_9 - 1.929X_{10} + 1.786X_{11} \\ (1.537) \quad (1.552) \quad (1.415) \quad (1.064) \quad (.936) \quad (2.772) \quad (1.898) \quad (2.902) \quad (2.236) \quad (2.129) \quad (1.676)$$

$$- 1.323X_{12} \\ (1.654)$$

$$Y_{27} = 64.484 - 20.396X_1 - 1.060X_2 + 7.398X_3 + 8.481X_4 + 216.473X_5 - 7.918X_6 - 7.433X_7 - 10.838X_8 + 14.834X_9 - 7.611X_{10} \\ (7.257) \quad (7.328) \quad (6.682) \quad (5.026) \quad (4.423) \quad (8.960) \quad (13.705) \quad (10.560) \quad (10.503) \\ - 2.321X_{11} - 3.613X_{12} \\ (7.913) \quad (7.813)$$

$$\begin{aligned}
Y_{28} &= 33.953 + .796X_1 - .522X_2 + 9.916X_3 - .413X_4 - 3.164X_5 + .504X_6 + .739X_7 + 1.153X_8 + 1.488X_9 - 1.302X_{10} + .227X_{11} \\
&\quad (.565) \quad (.570) \quad (.391) \quad (.344) \quad (1.5019) \quad (.697) \quad (.1067) \quad (.822) \quad (.782) \quad (.610) \\
&\quad - 15.113X_{12} \\
&\quad (.608) \\
Y_{29} &= 1.070 - 236.713X_1 + 756.148X_2 - 39.535X_3 + 17.615X_4 - 27.048X_5 + .993X_6 + 32.398X_7 + 1.064X_8 - 62.040X_9 - 39.201X_{10} \\
&\quad (38.693) \quad (39.076) \quad (35.627) \quad (26.801) \quad (23.583) \quad (69.794) \quad (47.778) \quad (73.073) \quad (56.305) \quad (53.603) \\
&\quad - 39.469X_{11} - 32.314X_{12} \\
&\quad (.42.191) \quad (41.657) \\
Y_{30} &= 2.890 + 6.159X_1 + 8.891X_2 + 19.631X_3 + 1.865X_4 + 6.675X_5 - .264X_6 - 517X_7 + 1.544X_8 + .114X_9 + 24.822X_{10} - 3.887X_{11} \\
&\quad (4.137) \quad (4.178) \quad (3.809) \quad (2.866) \quad (2.521) \quad (7.463) \quad (5.109) \quad (7.814) \quad (6.021) \quad (5.732) \quad (4.511) \\
&\quad - 5.554X_{12} \\
&\quad (4.454) \\
Y_{31} &= .105 - 1.444X_1 + 52.145X_2 - 80.565X_3 + 46.884X_4 - 48.734X_5 - 1.580X_6 - 40.267X_7 - 48.889X_8 + .989X_9 - 849.771X_{10} \\
&\quad (60.660) \quad (61.260) \quad (55.854) \quad (42.017) \quad (36.972) \quad (1.094) \quad (74.902) \quad (1.145) \quad (88.270) \quad (84.035) \\
&\quad - 93.475X_{11} - 53.527X_{12} \\
&\quad (66.144) \quad (65.307) \\
Y_{32} &= 1.757 - .208X_1 - 7.727X_2 - .143X_3 - 1.033X_4 - .143X_5 - .452X_6 + .553X_7 - .117X_8 + .247X_9 + .146X_{10} + .223X_{11} - .112X_{12} \\
&\quad (7.800) \quad (7.378) \quad (7.182) \quad (5.403) \quad (4.754) \quad (1.140) \quad (9.632) \quad (1.173) \quad (1.108) \quad (.506) \quad (8.398) \\
Y_{33} &= 4.613 - 37.171X_1 - 2.843X_2 - 5.223X_3 - .113X_4 - 7.299X_5 - 62.091X_6 - 1.777X_7 - 1.026X_8 - 1.580X_9 + 4.636X_{10} + 5.158X_{11} \\
&\quad (3.178) \quad (3.209) \quad (2.926) \quad (2.201) \quad (1.937) \quad (5.732) \quad (3.924) \quad (6.001) \quad (4.624) \quad (4.402) \quad (5.465) \\
&\quad - 90.798X_{12} \\
&\quad (3.421) \\
Y_{34} &= 5.977 - 1.668X_1 + 165X_2 + 2.926X_3 + 1.297X_4 + 7.667X_5 - 2.014X_6 - 1.534X_7 - 91.259X_8 + 2.734X_9 + 35.120X_{10} + 1.995X_{11} \\
&\quad (4.105) \quad (4.146) \quad (3.780) \quad (2.843) \quad (2.502) \quad (7.405) \quad (5.069) \quad (7.753) \quad (7.974) \quad (5.867) \quad (4.476) \\
&\quad - 4.960X_{12} \\
&\quad (4.419) \\
Y_{35} &= .416 - 1.505X_1 - 3.095X_2 + 1.149X_3 - 99.227X_4 + 17.680X_5 - 77.784X_6 - 82.234X_7 - 29.698X_8 + 5.109X_9 + 3.180X_{10} + .786X_{11} \\
&\quad (1.782) \quad (1.799) \quad (1.641) \quad (1.234) \quad (1.086) \quad (3.214) \quad (2.200) \quad (3.365) \quad (2.593) \quad (2.469) \quad (1.943) \\
&\quad + 55.795X_{12} \\
&\quad (1.918)
\end{aligned}$$

( ) Digits within brackets show standard error of Mean.

From the above 35 prediction equations, it is obvious that various criterion variables such as INT, anxiety, 15 personality needs, self perception sub scales, performance, motivation or self report card measures, can be predicted very easily on the basis of the 12 known predictors. The other statistics such as mean, S.D. for independent and criterion variables have been worked out. Significance of the relationship between the combined (team of the predictors and) team of the predictors and for each criterion variables has been measured through the values of R square and the F ratios, which have been found significant/insignificant at .01 or .05 level or otherwise. The same can be observed from the following table:

TABLE 5.174

Showing Ms. and S.Ds. for 12 Predictor  
Variables

S.No. Variables	Mean	S.Ds.
1. Intelligence Level	1.988	0.618
2. Fathers Qualification	2.159	0.738
3. Occupation	2.422	0.821
4. Income	2.281	0.939
5. Performance	0.842	1.021
6. Sex	1.294	0.455
7. Teaching Experience	2.546	0.548

S.No. Variables	Mean	S.Ds.
8. Economic Status	2.108	0.341
9. UR/R	1.304	0.460
10. Tradi./Modern	1.666	...471
11. Religious/Liberal	1.348	...564
12. Motivation	1.904	.579

From the above table, the Ms. and S.Ds. for different predictor variables can be studied.

The Ms., S.Ds., R-Squares and F-Ratios have been worked out for 35 criterion variables for the combined effect of all predictor variables considered as a team for measuring the relationship, and the following results have been obtained:

TABLE 5.175

Showing Ms., S.Ds, R.Square and F-Ratios  
for 35 Criterion variables

S.No. Variables	Means	S.Ds.	R-Squares	F-Ratio
1. Intelligence Scores	40.884	10.910	.670	100.937**
2. Anxiety Scores	43.202	15.746	3.200	1.639
3. EPPS - Ach.	14.098	3.208	2.700	1.376
4. Aff.	14.059	3.418	2.402	1.220
5. Nur.	15.526	3.531	7.763	4.173
6. Def.	14.733	3.160	3.178	1.627
7. Int.	14.717	3.250	4.363	2.262

S.No. Variables	Means	S.Ds.	R-Squares	F-Ratio
8. Chg.	15.300	3.501	6.200	3.277
9. Ord.	14.835	3.611	83.687	4.18
10. Suc.	13.087	3.679	3.765	1.940
11. Srd.	14.569	3.488	4.989	2.603
12. Exh.	13.105	3.172	1.881	.951
13. Dom.	14.019	3.751	1.773	.895
14. Het.	11.633	5.349	.177	10.707**
15. Aut.	13.044	3.377	2.011	1.017
16. Aba	14.175	3.935	4.228	2.188
17. Agg.	13.228	3.298	3.128	1.601
18. SRI with total (self)	17.682	3.884	2.364	.200
19. Others	20.250	3.673	3.825	1.972
20. Children	19.960	3.444	2.712	1.382
21. Authority	18.427	3.784	1.590	.801
22. Work	19.491	3.700	1.500	.755
23. Reality	18.570	3.964	2.563	1.304
24. Parents	20.273	4.896	1.653	.833
25. Hope	2.198	7.148	4.872	2.539
26. Total Perception Scores	156.578	22.956	3.518	1.808
27. Performance	212.891	248.750	.816	221.117**
28. Motivation	7.261	12.333	.548	60.165**
29. Sex	1.294	.455	.984	3147.221**
30. Age	1.677	.724	.297	20.980**
31. Urban/Rural	1.299	0.461	.962	1284.266**



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S.No.	Variables	Means	S.D.	R-Square	F-Ratio
32.	Qualifications	1.914	1.236	.143	8.302**
33.	Economic Status	2.011	.632	.455	41.556**
34.	Experience	2.254	1.117	.709	121.177**
35.	Religious/Liberal	1.337	.472	.694	112.512**

\*\* Significant at .01 level of confidence

From the above table it is obvious that the F ratios for criterion (dependent) variables - 1, 14, 27, 28, 29, 30, 31, 32, 33, 34, and 35 are statistically significant at .01 level of confidence (F ratio at .01 level-9.33). That is to say that 12 independent variables explain the above dependent variables while in rest of the criterion variables 2....13, 16 ..... 26, it is observed that the 12 dependent variables do not explain the significant relationship for prediction purposes.

The multiple regression equation between the 35 criterion variables and the 12 predictor variables have further established that only 11 coefficients out of 35 were significant scores; heterosexuality, performance, motivation, sex, age, urban/rural, qualifications, economic status, teaching experience and outlook of trainees towards religion etc. It is safer to say that on the basis of these

results, the selection of the candidates for B.Ed. training programme can be made on basis of well defined criterion measures, so that, the probable prediction for success at B.Ed. examinations in particular and their success in the world of work may possibly be ensured.

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