CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY

It would be recalled that the purpose of this investigation was : (i) to study the pertinent personality factors of inservice teachers and preservice student teachers and find out whether there were any significant differences in the personality factors of inservice teachers and student teachers separately belonging to different teaching fields, viz. Science, Arts and Commerce; (ii) to study the attitude towards teaching of the sample inservice teachers and student teachers separately belonging to the three teaching fields mentioned in (i) above; (iii) to study the creative potential of the sample inservice teachers and preservice student teachers separately belonging to the three teaching fields stated in (i) above; (iv) to study the differences between the inservice teachers and student teachers of the various teaching fields on measures of personality, attitude towards teaching and creativity; and (v) to study the differences in and between inservice teachers and student teachers specializing in the teaching of different subjects when scores derived from different measures were factor-analyzed.

The following hypotheses formulated prior to the analyses of data, were considered :

1. That teaching in different fields of specialisation, both for inservice and preservice teachers, calls for personality configuration, attitude towards teaching and creative potential unique to each field.

2. That there are significant differences between inservice teachers and prospective student teachers belonging to respective teaching fields of specialisation on measures of personality, attitude towards teaching and creativity, and

3. That when the scores derived from different measures used in (1) and (2) above were factor analyzed different factors would emerge and characterize the various groups.

The psychometric instruments administered to the sample inservice teachers and student teachers included : Sixteen Personality Factor Test (16PF) - (Cattell, 1964) adapted and standardized by Kapoor and Mehrotra (1967); Minnessota Teacher Attitude Inventory (MTAI) (Cook, Leeds and Callin, 1951); and Something About Myself - a measure of creative potential (Khatena, 1974).

The sample of this investigation consisted of 180 inservice teachers and 180 student teachers specializing in the teaching of Science, Arts and Commerce subjects. Each group in both the samples consisted of 60 subjects. All the inservice teachers and student teachers were males only. The age range for the inservice teachers were 23 to 52 years with a mean of 37.22 years, S.D. = 5.63. The age range of the student teachers were 19 to 37 years with a mean of 25.92 years, S.D. = 3.32. The mean of the teaching experience of

inservice teachers was 11.20 years, S.D. = 2.33; and the mean of the teaching experience of the student teachers was 3.06, S.D. = 1.06. The sample inservice teachers belonged to 18 high and higher secondary schools and the student teachers belonged to four teachers colleges of Ajmer District. In every specialisation there were both graduate and post-graduate inservice teachers and student teachers.

The following statistical measures were used in this study :

(i) Mean and Standard Deviation; (ii) Rank Order Correlation (Rho); (iii) Analysis of Variance; (iv) t test, and (v) factor analysis. In all twenty-four variables were subjected to factor analysis.

B. CONCLUSIONS

The conclusions of this study are presented according to the order of presentation employed in the previous chapters.

(a) Personality Structure of Inservice Teachers

Cattell's Sixteen Personality Factor Test (16PF) was administered to a total sample of 180 inservice teachers specialising in the teaching of Science, Commerce and Arts subjects. Similarly, the 16PF was administered to 180 student teachers teaching the three subjects mentioned above. There were 60 subjects in each group of inservice teachers and student teachers.

Judged by the magnitude of means of the different factors the inservice teachers were highest on Factors : H (Shy Vs. Adventurous); C (Less Stable Vs. More Stable); E (Submissive Vs. Dominant); A (Reserved Vs. Outgoing); and F (Sober Vs. Happy-Go-Lucky); they were lowest on Factors : B (Less Intelligent Vs. More Intelligent); L (Trusting Vs. Suspicious); I (Toughminded Vs. Tenderminded); Q_2 (Group Dependent Vs. Self-sufficient) and O (Placid Vs. Insecure).

Intergroup Differences Among Teachers

(i) The Science inservice teachers have given the top five ranks to Factors : H (Shy Vs. Adventuresome); C (Less Stable Vs. More Stable); E (Submissive Vs. Dominant); Q_2 (Group Dependent Vs. Self-sufficient); and N (Forthright Vs. Shrewd) and the bottom five ranks to Factors : I (Toughminded Vs. Tenderminded); B (Less Intelligent Vs. More Intelligent); L (Trusting Vs. Suspicious); O (Placid Vs. Insecure) and F (Sober Vs. Happy-Go-Lucky).

(ii) The Arts inservice teachers have given top five ranks to Factors:H (Shy Vs. Adventuresome); C (Less Stable Vs. More Stable); A (Reserved Vs. Outgoing); F (Sober Vs. Happy-Go-Lucky); Q_4 (Relaxed Vs. Tense) and the bottom five ranks to B (Less Intelligent Vs. More Intelligent); L (Trusting Vs. Suspicious); Q_2 (Group Dependent Vs. Self-sufficient); N (Forthright Vs. Shrewd); and Q_1 (Conservative Vs. Experimenting).

(iii) The Commerce inservice teachers have given top five ranks to Factors : H (Shy Vs. Adventuresome); C (Less Stable Vs. More Stable); E (Submissive Vs. Dominant); A (Reserved Vs. Outgoing) and F (Sober Vs. Happy-Go-Lucky); and the bottom five ranks to : B (Less Intelligent Vs. More Intelligent); L (Trusting Vs. Suspicious); Q_2 (Group Dependent Vs. Self-Sufficient); I (Toughminded Vs. Tenderminded) and Q_1 (Conservative Vs. Experimenting).

(iv) The conclusions derived suggest that there are some variations in the ranking of the sixteen Personality Factors on the part of three groups of teachers.

(v) The rank order correlation (Rho) between Science and Arts inservice teachers is 0.320 ($\bar{P}$ = NS), between the Science and Commerce teachers it is 0.628 ($\bar{P}$ = .01), and between Arts and Commerce teachers it is 0.822 ($\bar{P}$ = .01).

(vi) The analysis of variance indicated that the three groups of teachers were significantly different on eight of the sixteen factors assessed by the 16PF test. The factors were : A (Reserved Vs. Outgoing); B (Less Intelligent Vs. More Intelligent); E (Submissive Vs. Dominance); F (Sober Vs. Happy-Go-Lucky); I (Toughminded Vs. Tenderminded) N (Forthright Vs. Shrewd); Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-sufficiency).

(vii) The results of the t test indicated that the Science and Arts teachers differed on eight of the Sixteen factors : A (Reserved Vs. Outgoing); B (Less Intelligent Vs. More Intelligent); E (Submissive Vs. Dominant); F (Sober Vs. Happy-

Go-Lucky); I (Toughminded Vs. Tenderminded); N (Forthright Vs. Shrewd); Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-Sufficient).

(viii) The Science and Commerce teachers differed only on four of the Sixteen factors : A (Reserved Vs. Outgoing); F (Sober Vs. Happy-Go-Lucky); Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-Sufficient).

(ix) The Commerce and Arts teachers differed only on the three of the sixteen factors : E (Submissive Vs. Dominance); I (Toughminded Vs. Tenderminded) and N (Forthright Vs. Shrewd).

(x) Science and Arts Teachers : More specifically the Science teachers are more Shrewd (N+); Experimenting (Q_1); and Self-Sufficient than Arts teachers who are forthright (N-), Conservative (Q_1-) and Group Dependent (Q_2-). Science teachers are more Humble (E+) than Arts teachers who are Assertive (E-). The Science teachers are more Intelligent (B+) than the Arts teachers who are less Intelligent (B-). The Arts teachers are more Outgoing, Warmhearted (A+), Happy-Go-Lucky (F+) and More Tenderminded (I+), than the Science teachers who are Reserved (A-), Sober (F-) and Toughminded (I-).

(xi) Science and Commerce Teachers : The Science teachers are more Experimenting (Q_1+) and Self-Sufficient (Q_2), than Commerce teachers who are Conservative (Q_1-) and Group-Dependent (Q_2-). The Commerce teachers are more Outgoing, Warmhearted (A+), and Happy-Go-Lucky (F+), than the Science teachers who are Reserved (A-) and Sober (F-). The Science and Commerce teachers are not significantly different on

Factors : B (Intelligence), E (Humble Vs. Assertive), I (Toughminded Vs. Tenderminded) and Factor N (Forthright Vs. Shrewd).

(xii) Commerce and Arts Teachers : Commerce teachers are more assertive (E+) and more Shrewd (N+) than Arts teachers who are Humble (E-) and Forthright (N-). Arts teachers are more Tenderminded (I+) than Commerce teachers who are Toughminded (I-). Commerce teachers and Arts teachers are not significantly different on Factors : B (Intelligence), A (Reserved Vs. Outgoing), F (Sober Vs. Happy-Go-Lucky), Q_1 (Conservative Vs. Experimenting and Q_2 (Group Dependent Vs. Self-Sufficient).

Personality Structure of Student Teachers

Cattell's Sixteen Personality Test (16PF) was administered to 180 student teachers specialising in the methodology of teaching Science, Commerce and Arts subjects. Each group consisted of 60 student teachers.

Judged by the magnitude of means of the different factors the student teachers are highest on H (Venturesome), E (Dominance), O (Insecurity), Q_4 (Tenseness) and F (Surgency) and lowest on B (Intelligence), N (Shrewdness), I (Sensitivity), L (Suspiciousness) and M (Unconventionality).

Intergroup Differences Among Student Teachers

(i) The Science student teachers have given top five ranks to Factors : H (Shy Vs. Adventurous), E (Submissive Vs.

Dominant), O (Placid Vs. Insecure), Q_4 (Relaxed Vs. Tense), C (Less Stable vs. More Stable) and bottom five ranks to Factors : B (Less Intelligent Vs. More Intelligent), M (Practical Vs. Imaginative); L (Trusting Vs. Suspicious), A (Reserved Vs. Outgoing), and N (Forthright Vs. Shrewd).

(ii) The Arts student teachers have given top five ranks to Factors : E (Submissive Vs. Dominant), O (Placid Vs. Insecure), F (Sober Vs. Happy-Go-Lucky) and bottom five ranks to Factors : B (Less Intelligent Vs. More Intelligent), N (Forthright Vs. Shrewd), Q_3 (Uncontrolled Vs. Controlled), Q_1 (Conservative Vs. Experimenting), Q_2 (Group Dependent Vs. Self-Sufficient).

(iii) The Commerce student teachers have given top five ranks to Factors : E (Submissive Vs. Dominant), H (Shy Vs. Adventurous), C (Less Stable Vs. More Stable), Q_4 (Relaxed Vs. Tense), O (Placid Vs. Insecure) and bottom five ranks to Factors : B (Less Intelligent Vs. More Intelligent), I (Tough-minded Vs. Tenderminded), L (Trusting Vs. Suspicious), N (Forthright Vs. Shrewd), M (Practical Vs. Imaginative).

(iv) The conclusion derived suggests that there are some variations in the ranking of the Sixteen Personality Factor on the part of three groups of student teacher.

(v) The rank order correlation (Rho) between Science and Arts student teachers is 0.592 (P = .05), between Science and Commerce student teachers it is 0.862 (P = .01), and between Arts and Commerce student teachers it is 0.600 (P = .05).

(vi) The analysis of variance indicated that the three

groups of student teachers are significantly different on seven of the Sixteen factors assessed by the 16PF test. The seven factors are : A (Reserved Vs. Outgoing), C (Less Stable Vs. More Stable), H (Shy Vs. Adventurous), L (Trusting Vs. Suspicious), M (Practical Vs. Imaginative), Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-sufficient).

(vii) The results of t test indicated that Science and Arts student teachers differed on six of the sixteen personality factors : A (Reserved Vs. Out-going), H (Shy Vs. Adventurous), L (Trusting Vs. Suspicious), M (Practical Vs. Imaginative), Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-sufficient).

(viii) The Science and Commerce student teachers differed on only one factor : A (Reserved Vs. Outgoing).

(ix) The Commerce and Arts student teachers differed on four factors : C (Less Stable Vs. More Stable); H (Shy Vs. Adventurous); L(Trusting Vs. Suspicious), and M (Practical Vs. Imaginative).

(x) Science and Arts student teachers : More specifically the Science student teachers are more Venturesome (H+) and Trusting (L-), than Arts student teachers who are Shy (H-) and Suspicious (L+). The Arts student teachers are more Outgoing (A+), and Imaginative (M^+) than Science student teachers who are Reserved (A-) and Practical (M-). The Science student teachers and Arts student teachers do not significantly differ on factor C (Less Stable Vs. More Stable). The Science Students are more experimenting (Q_1+) and Self-Sufficient (Q_2+).

(xi) Science and Commerce Student Teachers : Commerce student teachers are more Outgoing (A+), than Science student teachers who are Reserved (A-). Science and Commerce student teachers do not significantly differ on factors : C (Less Stable Vs. More Stable), H (Shy Vs. Adventurous), L (Trusting Vs. Suspicious), M (Practical Vs. Imaginative), Q_1 (Conservative Vs. Experimenting) and Q_2 (Group Dependent Vs. Self-Sufficient).

(xii) Arts and Commerce Student Teachers : Arts student teachers are more Suspicious (L+), and Imaginative (M+) than Commerce student teachers who are Trusting (L-) and Practical (M-) ~~(H+)~~, than Arts student teachers who are Less Stable (C-) and Shy (H-). Arts student teachers and Commerce, student teachers do not differ significantly on Factors : A (Reserved Vs. Outgoing), Q_1 (Conservative Vs. Experimental) and Q_2 (Group Dependent Vs. Self-Sufficient).

<u>Comparison between Personality Structure of Inservice Teachers and Student Teachers</u>

(i) Judged by the magnitude of means of the different factors the total 180 teachers were highest on Factors : H (Shy Vs. Adventurous); C (Less Stable Vs. More Stable); E (Submissive Vs. Dominant), A (Reserved Vs. Outgoing) and F (Sober Vs. Happy-Go-Lucky) and lowest on factors: B (Less Intelligent Vs. More Intelligent), L (Trusting Vs. Suspicious), I (Toughminded Vs. Tenderminded), Q_2 (Group Dependent Vs. Self-sufficient) and O (Placid Vs. Insecure).

(ii) Again, judged by the magnitude of means of the different factors the total 180 student teachers were highest on Factors : H (Shy Vs. Adventurous), E (Submissive Vs. Dominant), O (Placid Vs. Insecure), Q_4 (Relaxed Vs. Tense) and F (Sober Vs. Happy-Go-Lucky) and lowest on Factors : B (Less Intelligent Vs. More Intelligent), N (Forthright Vs. Shrewd), I (Toughminded Vs. Tenderminded), L (Trusting Vs. Suspicious), and M (Practical Vs. Imaginative).

(iii) Judged by the magnitude of means of the different factors the Science inservice teachers were highest on Factors: H (Shy Vs. Adventurous), C (Less Stable Vs. More Stable), E (Submissive Vs. Dominant), Q_2 (Group Dependent Vs. Self-Sufficient) and N (Forthright Vs. Shrewd) and lowest on Factors : I (Toughminded Vs. Tenderminded), B (Less Intelligent Vs. More Intelligent), L (Trusting Vs. Suspicious), O (Placid Vs. Insecure) and F (Sober Vs. Happy-go-Lucky).

(iv) Judged by the magnitude of means of the different factors the Science student teachers are highest on Factors : H (Shy Vs. Adventurous), E (Submissive Vs. Dominant), O (Placid Vs. Insecure), Q_4 (Relaxed Vs. Tense), C (Less Stable Vs. More Stable) and lowest on Factors : B (Less Intelligent Vs. More Intelligent), M (Practical Vs. Imaginative), L (Trusting Vs. Suspicious), A (Reserved Vs. Outgoing) and N (Forthright Vs. Shrewd).

(v) Again, judged by the magnitude of means of the different factors the Commerce inservice teachers are highest on Factors : H (Shy Vs. Adventurous), C (Less Stable Vs. More

Stable), E (Submissive Vs. Dominant), A (Reserved Vs. Outgoing), F (Sober Vs. Happy-Go-Lucky) and lowest on Factors : B (Less Intelligent Vs. More Intelligent), L (Trusting Vs. Suspicious), Q_2 (Group Dependent Vs. Self-Sufficient), I (Toughminded Vs. Tenderminded), and Q_1 (Conservative Vs. Experimental).

(vi) Judged by the magnitude of means of the different factors the Commerce student teachers are highest on Factors : E (Submissive Vs. Dominant), H (Shy Vs. Adventurous), C (Less Stable Vs. More Stable), Q_4 (Relaxed Vs. Tense) and O (Placid Vs. Insecure) and lowest on B (Less Intelligent Vs. More Intelligent), I (Toughminded Vs. Tenderminded), L (Trusting Vs. Suspicious), N (Forthright Vs. Shrewd) and M (Practical Vs. Imaginative).

(vii) Judged by the magnitude of means of the different factors the Arts inservice teachers were highest on Factors : H (Shy Vs. Adventurous), C (Less Stable Vs. More Stable), A (Reserved Vs. Outgoing), F (Sober Vs. Happy-Go-Lucky) and Q_4 (Relaxed Vs. Tense) and lowest on Factors : B (Less Intelligent Vs. More Intelligent), L (Trusting Vs. Suspicious), Q_2 (Group Dependent Vs. Self-Sufficient), N (Forthright Vs. Shrewd) and Q_1 (Conservative Vs. Experimental).

(viii) Judged by the magnitude of means of the different factors Arts student teachers were highest on Factors : E (Submissive Vs. Dominant), O (Placid Vs. Insecure), F (Sober Vs. Happy-Go-Lucky), Q_4 (Relaxed Vs. Tense) and I (Toughminded Vs. Tenderminded) and lowest on Factors : B (Less Intelligent Vs. More Intelligent), N (Forthright Vs. Shrewd), Q_3 (Uncon-

trolled Vs. Controlled), Q_1 (Conservative Vs. Experimental) and Q_2 (Group Dependent Vs. Self-sufficient).

On the basis of t test between the means the following conclusions were arrived at :

(i) (a) The inservice teachers are more intelligent and more emotionally stable than the student teachers who are less intelligent and affected by feelings, (b) the inservice teachers are more humble and emotionally stable than the student teachers who are assertive and happy-go-lucky, (c) the inservice teachers are more venturesome and trusting than the student teachers who are shy and suspicious, (d) the inservice teachers are more shrewd and and placid than the student teachers who are forthright but apprehensive, (e) the inservice teachers are more group dependent and relaxed than the student teachers who are self-sufficient but tense.

(ii) Science Teachers and Science Student Teachers

(a) The Science teachers are more intelligent than Science student teachers who are less intelligent, (b) Science teachers are more emotionally stable and shrewd than Science student teachers who are affected by feelings but are nevertheless forthright, (c) Science student teachers are more happy-go-lucky and tenderminded than Science inservice teachers who are sober but toughminded, (d) Science student teachers are more apprehensive and tense than Science teachers who were placid and relaxed.

(iii) Commerce Teachers and Commerce Student Teachers

(a) Commerce teachers were more intelligent than Commerce student teachers who are less intelligent, (b) Commerce teachers are more shrewd than Commerce student teachers who were forthright, (c) Commerce student teachers are more assertive and apprehensive than Commerce teachers who were humble and placid, (d) Commerce student teachers were more self-sufficient and tense than Commerce teachers who were group dependent and relaxed.

(iv) Arts Teachers and Arts Student Teachers

(a) Arts teachers are more outgoing than Arts student teachers who are reserved, (b) Arts teachers are more emotionally stable and venturesome than Arts student teachers who are affected by feelings and shy, (c) Arts student teachers are more assertive and suspicious than Arts teachers who are humble and trusting, (d) Arts student teachers are more tense than Arts teachers who are reserved.

(b) Attitude Towards Teaching : Inservice Teachers and Student Teachers

The Minnesota Teacher Attitude Inventory (MTAI) was administered to 180 inservice teachers and 180 student teachers specialising in the teaching of Science, Arts and Commerce subjects. Each group consisted of 60 subjects. The following results were arrived at :

(i) There was a significant difference in the MTAI scores between the total inservice teachers and total student teachers. The mean difference of 9.03 in the MTAI scores was in favour of student teachers : t being significant beyond .001 level of significance.

(ii) There were statistically no significant differences in the MTAI scores between inservice Science teachers and inservice Arts teachers; between inservice Science teachers and inservice Commerce teachers; and between inservice Arts teachers and inservice Commerce teachers. The t ratio was less than unity in all the cases, uniformly.

(iii) There were significant differences between MTAI scores between Science student teachers and Arts student teachers and between Science student teachers and Commerce student teachers. The gain in scores was in favour of the Science student teachers in both the comparisons : t being significant beyond .001 level of significance in both the cases.

(iv) There were no differences between the MTAI scores between the Arts student teachers and Commerce student teachers.

(v) There was a significant difference between the MTAI scores (t significant beyond .001 level) between inservice Science teachers and Science student teachers. The difference, however, was in favour of Science student teachers.

(vi) There was no significant difference between the MTAI scores of inservice Arts teachers and Arts student teachers.

(vii) Lastly, there was again no difference between the MTAI scores of inservice Commerce teachers and Commerce student teachers.

(c) Creative Potential of Teachers

Judged by the magnitude of means of the different factors that comprise the Something About Myself (SAM) - a measure of creative potential comprising of six factors - the 180 inservice teachers were highest on Factor IV (Intellectuality) followed by Factors III (Self-Strength), Factor I (Environmental Sensitivity), Factor V (Individuality) Factor II (Initiative) and Factor VI (Artistry).

Intergroup Differences Among Teachers

The following is the rank order for SAM for the inservice teachers :

(i) Science Teachers - Factors : IV (Intellectuality), III (Self-Strength), V (Individuality), I (Environmental Sensitivity), II (Initiative), and VI (Artistry).

(ii) Arts Teachers - Factors : IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), VI (Artistry), V (Individuality) and II (Initiative).

(iii) Commerce Teachers - Factors : III (Self-Strength), IV (Intellectuality), I (Environmental Sensitivity), V (Individuality), II (Initiative) and VI (Artistry).

(iv) The conclusions drived suggest that there are some variations in the ranking of the Something About Myself on the

part of three groups of teachers.

(v) The rank order correlation (Rho) between Science and Arts inservice teachers is 0.715 (P = NS), between the Science and Commerce teachers it is 0.886 (P = .05), and between Arts and Commerce teachers it is 0.772 (P = NS).

(vi) The analysis of variance indicated that the three groups of teachers were significantly different on three of the six factors assessed by the SAM. The three factors were : Factor IV (Intellectuality), Factor V (Individuality) and Factor VI (Artistry).

(vii) The results of t test indicated that the Science and Arts teachers differed on three factors : Factor IV (Intellectuality), Factor V (Individuality), and Factor VI (Artistry).

(viii) The Science and Commerce teachers differed on only one factor IV (Intellectuality).

(ix) The Arts and Commerce teachers also differed on only one Factor VI (Artistry).

(x) Science and Arts Teachers - More specifically, the Science teachers possess more intellectuality and individuality than Arts teachers; the Arts teachers have more artistry than Science teachers.

(xi) Science and Commerce teachers - The Science teachers possess more intellectuality than Commerce teachers; Science teachers and Commerce teachers did not differ significantly on factors of individuality and artistry.

(xii) The Arts teachers have more of artistry than the Commerce teachers; Arts and Commerce teachers did not differ

significantly on factors of intellectuality and individuality.

Creative Potential of Student Teachers

Judged by the magnitude of means of the different factors that comprise the Something About Myself (SAM) - a measure of creative potential comprising of six factors - the 180 student teachers were highest on Factor III (Self-strength), followed by Factors IV (Intellectuality), I (Environmental Sensitivity), V (Individuality), II (Initiative) and VI (Artistry).

Intergroup Differences Among Student Teachers

The following is the rank order for SAM for the student teachers :

(i) Science Student Teachers - Factors : IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), V (Individuality), II (Initiative), VI (Artistry).

(ii) Arts Student Teachers - Factors : I (Environmental Sensitivity), IV (Intellectuality), III (Self-Strength), V (Individuality), VI (Artistry), II (Initiative).

(iii) Commerce Student Teachers - Factors : III (Self-Strength), I (Environmental Sensitivity), IV (Intellectuality), V (Individuality), II (Initiative), VI (Artistry).

(iv) The conclusions derived suggest that there are some variations in the ranking of Something About Myself on the part of three groups of student teachers.

(v) The rank order correlation (Rho) between Science and Arts Student teachers is 0.722 (P = NS), between Science

and Commerce teachers it is 0.829 (P = .05), and Arts and Commerce teachers it is 0.770 (P = NS).

(vi) The analysis of variance indicated that the three groups of student teachers were significantly different on four of the six factors of SAM. They were : Factor III (Self-Strength), Factor IV (Intellectuality), Factor V (Individuality) and Factor VI (Artistry).

(vii) The results of t test indicated that the Science and Arts student teachers differ on three Factors : III (Self-Strength), V (Individuality), and VI (Artistry).

(viii) The Science and Commerce student teachers differed on two factors : IV (Intellectuality), V (Individuality).

(ix) The Arts and Commerce student teachers differ on two factors : III (Self-Strength) and VI (Artistry).

(x) Science and Arts Student Teachers - More specifically the Science student teachers have more of Self-Strength and Individuality than Arts Student teachers.

(xi) Science and Commerce Student Teachers - Science student teachers have more of Intellectuality and Individuality than Commerce student teachers; Science student teachers and Commerce student teachers do not differ significantly on Self-Strength and Artistry.

(xii) Arts and Commerce Student Teachers - Commerce student teachers have more of Self-Strength, than Arts student teachers but Arts student teachers have more of Artistry than Commerce teachers. Commerce and Arts student teachers do not differ significantly on Intellectuality and Individuality.

Comparison between Creative Potential of Inservice Teachers and Student Teachers

(i) Judged by the magnitude of means of the different factors the total 180 student teachers were highest on Factors : IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), V (Individuality), II (Initiative) and VI (Artistry).

(ii) Again, judged by the magnitude of means of the different factors the total 180 student teachers were highest on Factors : III (Self-Strength), IV (Intellectuality), I (Environmental Sensitivity), V (Individuality), II (Initiative) and VI (Artistry).

(iii) Judged by the magnitude of means of the different factors the Science inservice teachers were highest on Factors: IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), II (Initiative), VI (Artistry).

(iv) Judged by the magnitude of means the Science student teachers were highest on Factors : IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), V (Individuality), II (Initiative), VI (Artistry).

(v) The Arts inservice teachers, judged by the magnitude of means, were highest on Factors : IV (Intellectuality), III (Self-Strength), I (Environmental Sensitivity), VI (Artistry), V (Individuality), II (Initiative).

(vi) Judged by the magnitude of means the Arts student teachers were highest on Factors : IV (Intellectuality), III (Self-Strength), V (Individuality), VI (Artistry), II (Initiative).

(vii) Judged by the magnitude of means the Commerce inservice teachers were highest on Factors : III (Self-strength), IV (Intellectuality), I (Environmental Sensitivity), V (Individuality), II (Initiative), VI (Artistry).

(viii) Judged by the magnitude of means the Commerce student teachers were highest on Factors : III (Self-Strength), I (Environmental Sensitivity), IV (Intellectuality), II (Individuality), II (Initiative), VI (Artistry).

(ix) The rank order correlation (Rho) between total inservice teachers and total student teachers is 0.940 (P = .01), between inservice Science teachers and Science student teachers it is 0.940 (P = .01), between inservice Arts teachers and Arts student teachers it is 0.770 (P = NS), between inservice Commerce teachers and student teachers it is 0.940 (P = .01).

(x) The results of the t test indicated that there were significant differences between total inservice teachers and total student teachers on Factors : I (Environmental Sensitivity) III (Self-Strength), and V (Individuality).

(xi) The results of the t test, more specifically, indicated that (i) the total student teachers were more Environmentally Sensitivity, had more Self-Strength and greater Individuality than the total inservice teachers, (ii) again, the student teachers had an over all significant edge over the total inservice teachers in the creative potential.

Again, on the basis of t test between the means the following conclusions were arrived at :

(a) The Science teachers were significantly different on the ~~six~~ three factors measured by SAM. They were Factors : I (Environmental Sensitivity), Factor III (Self-Strength) and Factor V (Individuality). (b) The Commerce teachers and Commerce student teachers differed significantly on two factors: Factor I (Environmental Sensitivity) and Factor III (Self-Strength). (c) The Arts teachers and Arts student teachers differed on two factors : Factor I (Environmental Sensitivity) and V (Individuality).

More specifically : (a) Science student teachers are more Environmentally Sensitive, have greater Self-Strength and Individuality than inservice Science teachers. (b) Commerce student teachers are more Environmentally Sensitive and have greater Self Strength than inservice Commerce teachers, (c) Arts student teachers are more Environmentally Sensitive and have greater Individuality than Arts inservice teachers, (d) the student teachers of all the three specialities (Science, Arts and Commerce) score significantly higher mean scores on the 50 item creativity measure - SAM - than the inservice teachers.

(d) Results of Factor Analysis

Results based on factor analysis indicated, by and large, a bipolarity of factors characterising the groups compared. The following are the factor cluster of variables for the different groups :

(i) Factor	Inservice Teachers (Total)		Student Teachers (Total)
A	Creative Environmental Sensitivity	Vs.	Self Confident Creative Teaching Attitude
B	Paranoid Unconventionality	Vs.	Convergent Intellectuality
C	Warmhearted Enthusiasm	Vs.	Self-sufficient Adventurism
D	Socially Precise Individuality	Vs.	Socially Precise Naivete
E	Initiative	Vs.	Surgency
F	Positive Teaching Attitude	Vs.	Artistic Creativity
G	Stable Dominance	Vs.	Stable Conscientiousness
H	Venturesomeness	Vs.	Imaginativeness
I	Shrewd Experimentation	Vs.	Freethinking Experimentation
J	Creative Self-strength	Vs.	Suspiciousness
K	Insecurity		----

(ii) Factor	Science Teachers		Arts Teachers	Commerce Teachers
A	Intellectual Creativity	Vs.	Emotionally Instable Creativity	Vs. Creative Intellectuality
B	Environmental Sensitivity	Vs.	Protension Teaching Attitude	Vs. Creative Individuality
C	Conscientious Teaching Attitude	Vs.	Sophisticated Submissiveness	Vs. Relaxed Conventionality
D	Apprehensiveness	Vs.	Initiativelessness	Vs. Apprehensiveness
E	Venturesomeness	Vs.	Creative Intellectuality	Vs. Convergent Intellectuality
F	Self-Discipline	Vs.	Apprehensiveness	Vs. Stability
G	Suspiciousness	Vs.	Artistic Insensitivity	Vs. Sensitivity

H	Self-Sufficiency	Vs.	Aesthetic Sensitivity	Vs.	Environmental Insensitivity
I	Surgency	Vs.	Venturesomeness	Vs.	Favourable Teaching Attitude
J	Experimentation	Vs.	Tension	---	
K	Unconventionality		---		---

(iii)

Factor	Science Students		Arts Students		Commerce Students
A	Conscientious Teaching Attitude	Vs.	Creative Initiative	Vs.	Creative Self-strength
B	Dominance	Vs.	Self Discipline	Vs.	Conscientious warmheartedness
C	Creative Environmental Sensitivity	Vs.	Radical Shrewdness	Vs.	Permissive Tolerance
D	Creative Initiative	Vs.	Self-Sufficiency		Self-Sufficiency
E	Creative Self-strength	Vs.	Surgency	Vs.	Unconventional Intellectuality
F	Stability	Vs.	Suspiciousness	Vs.	Shrewdness
G	Venturesomeness	Vs.	Conscientiousness	Vs.	Self-discipline
H	Self-Discipline	Vs.	Aesthetic Sensitivity	Vs.	Dominance
I	Radicalism	Vs.	Insecurity	Vs.	Surgency
J	Insecurity	Vs.	Creative Intellectuality	Vs.	Radicalism
K	---		Creative Artistry		---

(iv) Factor	Science Teachers		Science Students
A	Intellectual Creativity	Vs.	Conscientious Teaching Attitude
B	Environmental Sensitivity	Vs.	Dominance
C	Conscientious Teaching Attitude	Vs.	Creative Environmental Sensitivity
D	Apprehensiveness	Vs.	Creative Initiative
E	Venturesomeness	Vs.	Creative Self-strength
F	Self-Discipline	Vs.	Stability
G	Suspiciousness	Vs.	Venturesomeness
H	Self-sufficiency	Vs.	Self-Discipline
I	Surgency	Vs.	Radicalism
J	Experimentation	Vs.	Insecurity
K	Unconventionality		----

(v) Factor	Arts Teachers		Arts Students
A	Emotionally Instable Creativity	Vs.	Creative Initiative
B	Protension Teaching Attitude	Vs.	Self-Discipline
C	Sophisticated Submissiveness	Vs.	Radical Shrewdness
D	Initiativelessness	Vs.	Self-Sufficiency
E	Creative Intellectuality	Vs.	Surgency
F	Apprehensiveness	Vs.	Suspiciousness
G	Artistic Insensitivity	Vs.	Conscientiousness
H	Aesthetic Sensitivity		Aesthetic Sensitivity
I	Venturesomeness	Vs.	Insecurity
J	Tension	Vs.	Creative Intellectuality
K	----		Creative Artistry

(vi) Factor	Commerce Teachers		Commerce Students
A	Creative Intellectuality	Vs.	Creative Self-strength
B	Creative Individuality	Vs.	Conscientious Warm-heartedness
C	Relaxed Conventionality	Vs.	Permissive Tolerance
D	Apprehensiveness	Vs.	Self-sufficiency
E	Convergent Intellec-tuality	Vs.	Unconventional Intellectuality
F	Stability	Vs.	Shrewdness
G	Sensitivity	Vs.	Self-Discipline
H	Environmental Insensitivity	Vs.	Dominance
I	Favourable Teaching Attitude	Vs.	Surgency
J	---		Radicalism

There are eighteen graphs for group comparisons.

The Appendix consist of raw data, F ratio Tables, t ratio Tables, and Information Schedule.

Contd.

(C) SUGGESTIONS FOR FURTHER RESEARCH

1. In the present study the conclusions are based on the measurement of twenty four variables obtained from 180 inservice teachers and 180 student teachers teaching Science, Arts and Commerce, each group consisting of 60 subjects only. No claim can be made, of course rightly, about the representative character of this small sample of 60 subjects in each group. It is, therefore, suggested that a study aimed at cross validation of the reported results with larger samples from similar population in any other States may be attempted.

2. A factorial study of the personalities, authoritarianism and creativity of engineering, law, medical and student teachers may be undertaken.

3. In case a number of studies, by and large, confirm the results arrived at in this study, an attempt may be made to develop a student teacher education model for the student teachers of the various specialisations.

4. A study to determine the prognostic value of the personality measure (16PF), attitude towards teaching and creativity for the selection of B.Ed. student teachers may be attempted.

5. A factorial study of personalities, attitude towards teaching and creativity may be undertaken to compare the factor pattern of effective and ineffective inservice teachers and student teachers.

6. A longitudinal study to see whether personality structure, attitude towards teaching and creativity undergo a change in the same group of student teachers (Science, Arts and Commerce) as they advance in age, may be quite rewarding.

7. Doubts have been expressed regarding the unidimensionality of the Minnesota Teacher Attitude Inventory (MTAI) by Horn and Morrison (1965). It would be enlightening to undertake a factorial study of the multidimensionality of the same.

8. A comparative factorial study of the personality profile (16PF), attitude towards teaching and creativity of eminent teachers, inservice teachers and student teachers may be undertaken.

9. A factorial study of the personalities, values, attitudes towards teaching and dogmatism of a sample of high creative teachers and low creative teachers (selected with Torrance Test of Creative Thinking - TTCT) would be challenging.

10. A group of 100 inservice teachers may be administered 16 PF, MTAI and Something About Myself - a creativity measure - and their scores may be compared with those of the teaching ability scores as rated by the headmaster / principal. The factor pattern of the best teachers and the rest of the teachers may be compared.