ABSTRACTS

1. The present investigation carried out in 1961 to 62 was designed to verify in Indian conditions Vernon's (1947) claims that variations of intelligence measured by certain tests could be observed under certain conditions with reference to age, sex, locality and occupations. The desire to study such a problem was further acute when Professor P.E. Vernon, the former tutor of the present writer's supervisor, commented, on the factorial patterns of six-ability-test-battery applied by Ray-Chowdhury (1960) on 141 high school boys of 13 to 18 years, chosen from three different schools that the ability of the Indian boys appeared to be somewhat different from those of the British boys. Obviously, it was suspected that findings somewhat new and different from those of Vernon (1947) may be obtained in the present investigation. Further, Kemp (1955) studied variation of attainment with reference to several relevant factors.

2. Also, from the relevant literature, we observed that 19th century term 'intelligence' was being studied under the terms, abilities and attainments. Obviously, then the present investigation was designed in the following manner. It had two experimental designs. Experimental design No. 1 had a battery of 9 ability tests applied on 288 boys and girls of 14-19 years chosen from 6 classes (i.e. from IX
to B.A. (Final). Experimental design No. 2 had a battery of 13 ability and attainment tests applied on 306 male post-graduates chosen from ten occupational training courses of the Muslim University, Aligarh.

3. The reliability coefficients of tests in Experimental design No. 1 were all above .80 and Experimental design No. 2 all above .75.

4. Factorisation: When the battery of the above 9 tests in experimental design No. 1 was factorised and the factor loadings were orthogonally rotated, it was observed that two group factors, namely K2 or Induction or concept-formation, and K3 or spatial group factors were obtained in addition to the 'g' factor.

In experimental design No. 2 the battery of 13 tests was also factorised and the orthogonal rotation of three extracted factor loadings was in vain attempted but none of the rotations seemed justified since 'g' loadings were abnormally large. Hence the study was confined to factor structure by observing the contents between unrotated K2 and K3 loadings. And it was observed that K2 represents Artistic and Leisure vs practical, occupational (including pattern Reproduction), and K3 Abilities vs interests concerned with people.

5. Fisher's 't' analysis was carried out to study the differences in tests scores of boys and girls in experimental
design No. 1 and post-graduates of 10 occupational training courses, and the interpretation was drawn under the above mentioned factor patterns (experimental design No. 1) and factor structure (experimental design No. 2) of the tests selected in both the batteries.

6. Out of ‘t’ analysis both in high scoring and low scoring groups in 9 tests and 13 test batteries, only 804 were found to be significant.

7. Over all results show that regarding the significant observations in the six, 14 to 19 year age groups, 16 year group has obtained the first position in Gottschaldt test; 18 year groups has obtained first position in Vernon's Drawing Pattern Test; 19 year group has obtained first positions in seven tests, namely Aligarh V.I.T., Vernon's Pattern Reproduction, Vernon's Non-Verbal 'g', Vernon's Graded Arithmetic-Mathematics, Raven's Progressive Matrices, Lovell's Concept-formation test, Trist Hargreave's Concept-formation tests.

(ii) That males have obtained higher average scores in 6 tests, namely Aligarh V.I.T., Vernon's Pattern Reproduction, Vernon's Arithmetic, Vernon's 'g', Hidden shape, Raven's Matrices and females have obtained higher average scores in 3 tests namely Vernon's Drawing Pattern, Trist Hargreave's Concept-formation, and Lovell's Concept-formation.
(iii) That urban children have obtained higher average scores in all the 9 tests.

(iv) That regarding the significant observations in the 10 occupational groups. Physical Science group has obtained first position in 4 tests, namely A.M.O (of G.K. Test), and Vernon's Non-Verbal 'g'; Business group has obtained first position in 'B' (of G.K. Test); Natural science group has obtained first position in 'T' (of G.K. Test); Teaching group has obtained first position in 'C' (of G.K. Test); Library science group has obtained first position in 'G' (of G.K. Test); Engineering group has obtained first positions in 'H', 'T', 'W', (of G.K. Test) and Vernon's Pattern Reproduction; Humanities group has obtained first position in 'L' (of G.K. Test).

(v) That all the variables, namely age, sex, locality and training courses, chosen in the present investigation have been detected to be significant contributors to the growth of intelligence and attainment factors, as suspected by Professor P. E. Vernon from the factorial analysis of a six test ability battery applied by Ray-Chowdhury (1960).