CHAPTER VI

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1. Ray-Chowdhury's (1960) verification, in Indian situation, of Vernon's (1957, 1960) claim that the quality of schooling rather than the length of schooling makes a difference in intelligence test scores between 'best' and 'worst' schools was further re-verified, in the present investigation carried out during 1961-65, in relation to the various secondary educational systems prevalent in India today. Three schools one each from the Public School (the reminiscent of the former Cambridge Certificate), the Muslim University High School and the U.P. Board High School Systems were chosen instead of three schools chosen from one particular system like the U.P. Board, as was done by Ray-Chowdhury (1960). The influence of the educational system on the growth of intellectual factors was considered to be a very realistic problem today when the medium of education through English is threatened and regional languages favoured by political agitators. The U.P. Board System favours Hindi as the medium with little stress on English; the medium of the U.U. Educational System is Urdu though stress on English is given in English as a compulsory subject; Delhi Public School favours English as the only medium of education.
However, 60 boys, aged around thirteen to fifteen of pre-school leaving classes (i.e. IXth. and Xth. classes) were selected from each of the three schools, namely Aligarh 'Harma Samaj, Muslim University and Delhi Public School, under U.P. Board, Muslim University and Public School Systems respectively.

2. Further, Lovell (1955) claims that mental flexibility in particular and the capacity for forming new concepts, which are affected by the adolescent's intellectual and emotional circumstances, that is those very capacities which are most subject to deterioration in adulthood. However, with slight modification of Lovell's (1955) cross-sectional method of study, the present investigation was designed and a suitable battery of 17 tests, already standardized in Indian situation by Ray-Chowdhury (1962; a; b; c; d, g; h; i) including especially two high powered tests of concept-formation was selected for the above sample (see 1).

3. The reliability of co-efficients of all the tests for the present sample were found to be above .80, fully verifying the claims of Ray-Chowdhury (1958 a; 1958 b; 1962; a; b, c; d; e; f; g; h; i) that instead of wasting time behind the construction of too many tests through Hindi instructions we could satisfactorily use personality and ability tests which have their origin in Britain, and could find them highly reliable.
4. When the battery of above 17 tests was factorised and the factor-loadings were orthogonally rotated, it was observed that two group factors, namely \( k_2 \) or concept-formation and verbal-numerical, i.e. educational group factor and \( k_3 \) or spatial-induction group factor were obtained in addition to the \( g \) factor.

5. Student's \( t \) (or critical ratio) and Fisher's \( t \) analyses were carried out to study the differences in test scores of boys under three different systems of education, and the interpretations of results were drawn under the above mentioned factor structure of the tests selected in the battery. Any significant critical ratio figure could be interpreted as due to the quality of schooling and any significant \( t \) figure, due to external factors, such as home upbringing.

6. \( k_2 \), i.e. Concept-formation and verbal-numerical, i.e. educational group factor:

(i) Best reasons: Only 3 significant \( t \) values were observed (cf. Chapter V). Whereas the top-scorers of two schools, namely the M.U. and the U.P. Board High School, differentiated, the group ratio (or C.R.) did not show any significant pattern of difference, suggesting, in addition to quality of schooling, the influence of external factors, such as quite likely home upbringing (cf. Vernon, 1960).
(ii) **Simple reasoning**: 3 significant C.R. figures and 2 't' values for top scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960), on the intellectual development of the pre-school leaving boys.

(iii) **Extra-number**: 2 significant C.R. figures and 2 't' values for top scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960), on the intellectual development of the boys.

(iv) **Vernon's Graded Arithmetic-Mathematics**: 3 significant C.R. figures and 2 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(v) **V.I.T.**: 3 significant C.R. figures and 2 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.
(vi) Lovell's Concept-formation: Only 1 significant C.R. figure and 3 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(vii) Trist-Hargreaves' Concept-formation: 2 significant C.R. figures and 2 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

7. 'k0', i.e. Spatial induction group factor:

(i) Extra-number: The observations with reference to C.R. figures and 't' values have already been recorded earlier (cf. 6. iii of the present chapter).

(ii) Vernon's Graded Arithmetic-Mathematics: The observations with reference to C.R. figures and 't' values have already been recorded earlier (cf. 6.IV of the present chapter).
(iii) Vernon's Non-Verbal 'g': 2 significant C.R. figures and 2 't' values for top scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(iv) Raven's Progressive Matrices: 3 significant C.R. figures and 2 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(v) Vernon's Pattern Reproduction: Only 1 significant 't' value for top-scorers (cf. Chapter V) has been observed, suggesting the influence of external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(vi) Gottschalct: 2 significant C.R. figures and 1 't' value for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.
(vii) **Vernor's Drawing-pattern**: 2 significant C.R. figures and 3 't' values for top-scorers (cf. Chapter V) were observed, suggesting the influence of both the quality of schooling and external factors, e.g. home upbringing (cf. Vernon, 1960) on the intellectual development of the boys.

(viii) **Lovell's Concept-formation**: The observations with reference to C.R. figures and 't' values have already been recorded earlier (cf. 6.vi. of the present chapter).

(ix) **Trist-Hargreaves' Concept-formation**: The observations with reference to C.R. figures and 't' values have already been recorded earlier (cf. 6.vii of the present chapter).

8. It is found that in 17 test performances, Delhi Public School boys have obtained first position thirty-one times, which are significant.

9. Also, it is found that in 17 test performances, the M.U. School boys have obtained first positions eleven times, which are significant.

10. And, the U.P. Board School boys have obtained first positions only six times, in 17 test performances, which are significant.
11. The overall results show:

(i) that the Public School System still offers the best quality of schooling for stimulating the growth of intellectual factors, though we must not ignore the fact that the boys reading in these schools generally come from brighter home with better socio-economic background (cf. Sampling - Chapter II).

(ii) that the Muslim University System offers a better stimulation than the U.P. Board System although the boys reading in the schools of both the systems come from mediocre families with average or near-to-average socio-economic background.

(iii) Further, that English medium of instruction, as practised by Public School System and stress on English besides the chosen regional language for instruction, as done by the M.U. High School System, are found useful for the boys to do better at the tests originated in Britain; also that in certain Aligarh V.I.T. sub-tests given in Hindi, Public School boys have done better than those of the U.P. Board System, probably because of the already stated reasons of better intellectual stimulation through the medium of English.