

THE CORRELATION OF GENERAL INTELLIGENCE TESTS AND SCHOOL STANDING

THE following is a report on the results of the Army Alpha test, given approximately a year ago, which may be of some general interest and a possible contribution to the very important problem of correlation between general intelligence and school standing.

The writer gave the Alpha test to juniors and seniors in the Millersville (Pa.) State Normal School and, after dropping those cases having no previous Normal School record, had left 153 individuals (mostly women). The school standing was worked out for each of these individuals and the coefficient of correlation was found between their general intelligence standing and the school standing.

The school standing was obtained by taking the average of the final marks made by each student for one term. It is possible that it would have been better to take the school standing over a longer period of school life, but this was the best we could do at the time. Whether this seriously affects our results is a question, though we do not believe that it does. Yet in the absence of any adequate explanation for the very low correlation found, this factor may play some part.

The following quantitative results were found:

$r = +.31 = .039$ (Pearson's Product-Moment Formula).

Standard Deviation G. I. = 28.2.

Standard Deviation S. S. = 6.1.

Mean G. I. score = 117.1 Points.

Mean S. S. grade = 81.00 (% basis).

The following table shows a rough picture of the distribution of individuals according to their relative places in school and intelligence classes.

| INTELLIGENCE STANDING | | SCHOLASTIC STANDING | | | |
|-----------------------|--------|---------------------|------------|------------|------------|
| | | A Students | B Students | C Students | D Students |
| No. | Class | No. | No. | No. | No. |
| 25 | A | 6 | 17 | 5 | .. |
| 80 | B | 5 | 43 | 29 | 3 |
| 39 | C Plus | .. | 18 | 19 | 2 |
| 4 | C | .. | 1 | 3 | .. |

Why we have obtained such a low correlation is difficult to explain. We cannot blame the grading system, for the Normal School upholds a good standard. The fact that the majority of the individuals tested were women may be significant, for the Army tests are tests especially for men. Yet this has been the case in many schools where the tests were given and which reported better correlation. The fact that school standing is based upon one term of school work may have something to do with the results. Again, it might signify some truthfulness to the notion expressed by Stern.* "Complete agreement between school ability and intellectual ability is not to be expected at all, nor even to be desired, because performance in the school depends not only upon intelligence but upon certain other quite different factors." As a matter of fact some investigators find very satisfactory correlation between general intelligence standing and school standing, while others find very low correlation. It is time for a complete summary of all work done as to correlation between general intelligence tests and school standing, for the kind of coefficient of correlation found here is of great significance. The gathering and comparing of this data the writer has started but, as yet, has only made a start. In the data we have, we find most conflicting results.

We believe that the mental tests are by far the best means we have at present for sorting out students and predicting their future. But to say that our tests have decided limitations is to state the obvious. We would like a complete profile of the boy or girl examined. An individual may be extremely lazy, a shirker, and yet be "very superior" in general intelligence. He may have no "stick-to-it-iveness," no ideals, and yet stand high intellectually. The emotional life of the individual is little touched by the tests. The intelligence ratios are subject to change also, as Miss F. Mateer has shown.†

We have, in our limited use of the more prominent mental tests during the last four years, found illustrations of each of these statements. No one would think of branding a child as feeble-minded until many other factors besides the bare intelligence rating had been taken into consideration, as heredity, training, environment, disease history, sense-organ conditions, etc.

*Psychological Methods of Testing Intelligence.

†*The Diagnostic Fallability of Intelligence Ratios.* Ped. Seminary, Dec. 1918.

We do not wish to magnify exceptional cases nor do we wish to assume a destructive attitude. Only as we recognize these limitations can we remove them. The child or the man is a many-sided creature, and these many aspects must be adequately tapped before our system of tests, mental and physical, can be thought of as in any sense complete. For diagnostic and prognostic purposes the tests have many weak points, undoubtedly, but that they serve a good function now that they are better than any past hit-and-miss methods of the pedagogue, is beyond question.

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A NEW SILENT-READING TEST

A new form of silent reading test has recently been devised at Indiana University by Mrs. S. L. Pressey. The test consists of paragraphs in each of which there is a word which spoils the meaning of the paragraph or makes a false statement (*e. g.* "The men in the shoe factories in the East have been striking for shorter hours, lower wages, and a recognition of their union"); the children are told to cross out, in each paragraph, the wrong word. The development of the test has also involved certain unusual features. In the first place, the scale is being compared with other reading tests by correlation of each test with an independent statement of ability in reading, based on pooled ratings as to reading ability from four teachers for each child in a large Junior high school. Finally, rate score and comprehension score are being combined into a single score in silent reading by means of the partial regression equations of rate score and comprehension score on reading ability, as thus judged. This last step—the scientific combination of the two scores into a single statement—is felt to be a particularly important feature of the work.