

## EDUCATIONAL RESEARCH IN EAST AFRICA

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### Summary

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Educational psychology research in East Africa is still in its infancy, but already some useful pieces of research have been conducted in the Psychology Department of the Makerere University, Kampala, Uganda, which may be of interest to educationists in developing countries and elsewhere.

During the period 1965-1971 studies in 5 areas were undertaken, viz,

\* Intelligence and Intelligence Testing

\* School Discipline and Strikes

Attitudes towards Teaching

Personality Factors

Behavioural Development

The first two studies\* are described here.

### Report

#### Study 1 : Intelligence and Intelligence Testing

The study was concerned with three main areas: (i) the concept of general intelligence in East Africa, (ii) the construction and application of general intelligence tests, and (iii) the structure of intellect of East African students.

The concept of general intelligence in East Africa presented far-reaching problems in a developing country. First, typical existing Western tests of general intelligence applied in Africa tended to penalize testees for whom English language was not the mother tongue. Second, psychological concepts such as intelligence, and personality were given interpretation essentially Western in nature, to a large extent lacking direct equivalents in most African cultures. Two studies were carried out to this effect. The first study dealt with the application of the Otis Higher Examination. In March 1966, 19 British and 18 East African (E.A.) postgraduate students sat the Otis Higher Examination, Form B. The differences between British and E.A. students scores were found to be highly significant. Because the number of each group had been small, it was then decided to repeat the experiment

with larger groups of diploma students. This took place in October 1966. 50 British and 30 E.A. diploma students sat Form A, the equivalent to Form B. Analysis of the differences between British and E.A. Students confirmed the early results. A further analysis was conducted to investigate the psychological factors which hindered local students from doing well on the Otis test, i.e. in comparison with the English students. Items which differentiated widely between the two groups of students were categorized into three categories each of which reflected a psychological factor. These were: verbal comprehension, verbal implication and verbal reasoning factors.

The second study dealt with the qualities of the clever person in East African societies. Over two years 1967 and 1968, 67 E.A. Education students were asked to write an essay on the important factors which made the person clever in his society. Since the term "intelligent" had no direct translation into the African vernacular, the word "clever" was substituted. Two members of staff, including the writer, analysed the contents of the essays. The analysis resulted in fourteen categories constituting the concept of cleverness, capability or brightness in East Africa. The fourteen categories with the average percentage for each individual category were: Economic status (8.3% of the total responses), wisdom (18.3%), vocational efficiency (9.3%), professional position (2.5%), hereditary status (2.9%), personal qualities (9.2%), problem solving (11.2%), leadership (6.7%), physical superiority (3.4%), spiritual superiority (3.5%), creativity and originality (4.0%), social and family status (12.4%), story telling (4.3%), and aging (2.8%). The East African concept of intelligence appeared to be different in meaning from Western intelligence, though wisdom, problem-solving and creativity constituted a third of its content. The implication of these studies was that general verbal intelligence tests were not irrelevant, despite the fact the construction of tests reflecting the global capacity of the African individual might seem appropriate.

#### The construction and application of general intelligence tests.

In 1952 Mr. Y.K. Lule designed a multi-racial non-verbal intelligence test. The test in its original form had no norms; so the writer revised the test during 1966 and 1967. The revision of the test was based on a group of 1633 Primary and Junior Secondary pupils. It included 80 items distributed on six sub-tests: Doesn't belong, analogies, number series, touching blocks, relationships, and pattern completion. An estimate of the predictive validity of the Lule tests was obtained using the aggregate score on the primary leaving examination in Uganda. It was found to be .60. The reliability of the test equalled .90 and it was based on the odd-even method. Applying the test to different racial groups, it was found that the West-European child led the Asian child by three marks out of 80, i.e., half the standard deviation, and the Asian child led the Uganda child by one standard deviation. But this was due to the fact that the African child was deprived of the material wealth that would enable him to manipulate objects in space, classify them or reconstruct the parts of say, a mechanical toy. There were also some other factors which militated against the African good performance, such as, malnutrition, illnesses, irregularity of school attendance etc. Therefore in case of comparing an Asian child with an African child three marks should be deducted from the Asian child to make possible comparison in terms of the norms concerned.

The author developed a test entitled "General Verbal Ability Tests." It consisted of two equivalent forms and each form contained sixty-five items. The content of the test included direction items, word vocabulary, always has, letter series, mixed sentences, analogies, sentence completion, rearranging

words in alphabetical order or sentences in meaningful order, number series, anagrams, classification, mathematical operations, and word opposites. Test-norms were built using 567 Ugandan and Kenyan pupils. The general verbal intelligence test possessed reasonable reliability with an average of .84 ranging from .73 to .95 for Form A, and .85 ranging from .75 to .95 for Form B. Its correlation with the Lule non-verbal tests was found to be .61. Percentile norms were available for primary seven, secondary one and two. The Lule non-verbal intelligence tests and the writer's general verbal ability tests were supposed to measure the African pupils general reasoning abilities. The general purpose of both or either tests was to provide teachers with an estimate of the general mental ability level of the school child. Other purposes of applying the tests included: grouping pupils in a way that facilitated individual advice, and classifying them in terms of brightness for group work.

### The Structure of intellect of E. A. Students:

In 1966 the writer put forward the hypothesis that "An American test battery representing various psychological factors already known when analysed in terms of E. A. undergraduates responses would exhibit a factor structure similar to that observed in Western cultures." Eleven tests representing five mental abilities were administered to a small group of students at the Makerere Faculty of Education. The rotated factor matrix yielded the five above abilities in addition to g, a result which sustained the hypothesis. Another study was conducted to investigate the validity of the earlier findings and to test the assumption that "The structure of intellect is independent of race or religion and dependent on education and experience." Fourteen tests were selected to represent seven mental abilities using two large samples of students. All seven factors were indentified in both samples. Multivariate Behavioural Research, 1970, 5. H. el Abd.

### Study II: School Indiscipline and Strikes

Twenty-three times over fifteen years the education of hundreds of Ugandan school students has been disrupted by the so-called students' strikes or outbreaks. Teachers and educationists involved in the task of nation-building are entitled to know why. Two studies were carried out by the writer to uncover the causes of such outbreaks. In the first study a questionnaire on "School Discipline Investigation" was constructed and sent to 100 secondary institutions in Uganda. Its content dealt with the reactions of principals and headmasters towards discipline problems in their schools. Eighty completed forms were returned and items were analysed in terms of the percentages of responses. More than 50% of the headmasters reported no occurrence of strikes in their school. Of those who did report strikes the highest frequency (g) was in 1965. The declared grievances included bad student-staff relationships (35%), generally poor school facilities (25%), and bad teaching (15%). The most difficult group of students seemed to be S3. The ten problems that caused concern to headmasters in the schools were, in the order of seriousness: drunkenness, untidiness, untruthfulness, stealing, careless work, laziness, tardiness, disobedience, selfishness, and lack of interest. The Headmasters identified three main reasons which seemed to be of equal importance in giving rise to school indiscipline. The reasons were (a) poor staff/student relationship and students' desire for more responsibility, power and freedom (b) poor staffing, shortage of experienced teachers and students' demands for better school facilities, and (c) inappropriate administration and students' dissatisfaction with school rules. To avoid school strikes entailed (a)

improvement in staff/student/administration relationships and (b) development of healthy attitudes in students towards communication with school authorities. In dealing with strikes, 36% of the headmasters suggested firm punitive action (suspension, expulsion, closure of school), and 26% suggested using outside help to put down the strike (parents, policemen). Only 8% suggested discussing the discipline problems with the students. In the second study a questionnaire entitled "Students Opinions on School Strikes" was constructed and administered to 419 secondary and teacher training college students. The students were asked to give reasons for the strikes they had participated in. The most frequent responses were (a) unfair rules and punishment (41%), (b) lack of facilities (23%) and (c) bad food (17%). When each student was asked what he would have done to prevent strikes, if he had been the headmaster, they gave the following responses (a) meeting demands (44%), (b) discussing the problem with the students (42%), and (c) punishment (7%). It was noted that a large number of the students recommended discussing the discipline problems with the authorities in contrast to the very small number of headmasters who recommended the same.

Four studies were also completed on "Construction and application of discipline scales". Apart from the first study on the construction of two comparable scales, each consisting of forty school and home situations, the second study was concerned with the factor analysis of these two scales. One of the factors could be identified with what was known as self-discipline. Another factor was related to school versus out-of-school discipline. The third study dealt with the construction of a culture fair discipline scale consisting of forty statements. The statements represented a series of opinions and attitudes of teachers and writers ranging from consideration of discipline as education to consideration of discipline as punishment. The fourth study related to the construction of a British discipline scale involving 24 statements. Both scales were devised using original statements collected from various books, articles and literature on discipline.

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