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ABSTRACT

The Draw-A-Classroom Test was designed to provide information (1) on how a child perceives the world and how this world is influenced by school experiences and (2) about the developing concepts and ideas in the child's mental, emotional, and social areas of growth. This test is one part of a larger Study of Achievement, and has been administered to a base population of 8,695 children over a six-year period. The test was administered by giving each child paper, crayons, and standard instructions to draw his classroom. Upon completion, the child's explanation of his drawing was affixed to the drawing. A coding system based on a "constant" foundation was devised. Three constants were evaluated: space, people, and objects. A total of 83 analysis categories have resulted, with an average of over 80% interrater reliability. It is thought that the scoring results, currently being analyzed, will provide a valid look at the child's psychoeducational world through a drawing. (JS)

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THE DRAW-A-CLASSROOM "TEST"

An Overview

September, 1966

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What's in a drawing - a child's drawing? Investigators have been trying to answer this question since the late 19th Century. Drawings have been examined in terms of intellectual and physical development, in terms of perceptual growth and learning processes and from the point of view of their projective significance, and as an aid to therapy.

It has been fairly well established that there is significant relationship between Intelligence Quotient scores and completeness of detail with which human figures are represented (Harris, 1963). Such a relationship between drawings and existing personality tests has yet to be successfully demonstrated.

Research studies done on children's drawings are widely divergent and inconclusive in their results. Reliability is low due to the subjective nature of the study. Whatever is observed in the drawing depends to a great extent on the nature of the person examining the drawing. Studies have been based on small samples and conclusions have usually been based on the judgement of only two or three raters.

The Draw-A-Classroom Test is one part of the larger Study of Achievement originated by the Research Department of the Toronto Board of Education in 1960. The study of Achievement is first and foremost an investigation into the nature of achievement (Toronto Board of Education,

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* "...it is now common usage to include as a test any set of situations or occasions that elicit a characteristic way of acting, whether or not a task, and whether or not characteristic of the individual's best performance...as distinguished from experiment, the test seeks to measure differences between individuals, whereas in experiment differences are eliminated or held constant. But tests often form an essential part of experimentation in its wider sense."
(English and English, 1958, p. 547)

1964). The population included all students attending Junior Kindergarten in 1960, and any new students beginning Senior Kindergarten in 1961. This brought the base population to 8,695. The Draw-A-Classroom Test has been administered to the same children for six consecutive years. Students who fail, accelerate or move to special classes remain in the study. About one-third of the original population has been lost due to attrition but nonetheless some 35,000 children's drawings have been collected!

The study is composed of several different types of information. It consists of a pupil profile card which covers some forty items of background data such as sex, age, religion, nationality and linguistic background, family size, type of dwelling and parent's education. There is also a Rating Questionnaire - an assessment by the teachers on a five-level scale of pupils' development in language, mental, social, emotional and physical areas. The Metropolitan Achievement and the Otis Intelligence Quotient Tests have also been given.

The Draw-A-Classroom Test is the most novel instrument to be used. The child was given paper, crayons and standard instructions, "Look all around the room and draw your classroom." There was no time limit. The test was administered by the class teacher. When finished, the child was asked to tell his teacher (or a monitor) about his drawing and his words were recorded on the face of the drawing.

Techniques of educational assessment have traditionally emphasized academic achievement - excluding almost completely social, emotional, and creative development. The Draw-A-Classroom Test was designed primarily to allow us to look into the world the child perceives and to see how this world is influenced by school experiences. The second

purpose was to obtain information about the developing concepts and ideas of the child in his mental, emotional and social areas of growth.

The outstanding characteristic of the Draw-A-Classroom instrument is that there is not one right answer - rather the opportunity is provided for multiple answers, through a non-verbal medium. One can observe how the child perceives and conceptualizes his classroom by the selection and organization of people and objects. The child can telescope many "happenings" into one space-frame. Unwittingly he lets the adult view the time space of his school world.

Existing research on children's drawings points out that the young child does not duplicate what he sees but rather puts down on paper how he feels about what he sees (Lowenfeld, 1947). The drawing thus provides an indication of the way children relate to their classroom.

Jean Piaget (1960), a Swiss psychologist, describes children's relationships as "syncretic wholes" where children assume that objects and events that are thought of together, belong together, in the absence of any time, space or causal relationships.

Before deciding on how to score the drawings, small samples (cross sectional) were examined in a search for possible trends and relationships. The central problem was to devise a method of abstracting the content of the children's drawings in a useful, meaningful manner, preserving and recording everything the child expressed. Certain obvious elements such as children, teacher, desks and blackboards, colour and relationships between people were categorized. It was found that these categories reflected experience and maturation.

In order to compare the drawings of the same child from year to year, as well as to compare the drawings of different children of the

same age, it was necessary to devise a coding system resting on a constant foundation. Each child had had the opportunity to deal with space, people and objects.

Space

The child's piece of paper had spatial limits. Is the child's notion of space an empirical concept derived from perception or is it innate to thought and consciousness?

The Draw-A-Classroom Test records whether or not the child imposed spatial limits, framed his drawing, used a base line or a sky line. Constriction or tightness of the drawing is recorded as opposed to expansiveness. The child has had to select the space he will use in his drawing from his own world of experience. Is the classroom the focus of attention? Does he include the school building and the outside world of sun, grass and trees?

People

(a) All classrooms have people when class is in session. Who are the people a particular child chooses to represent, or does he include people at all? The Draw-A-Classroom Test concentrates on the activitiy and interaction of the people presented. Who dominates the drawing - the child or the adult? Are children identifiable by sex? Are they active, passive, isolated or interacting?

(b) The second of the two sections on people records the development from single schematic or stick presentation of a person to detailed delineation. Early studies of children's drawings established the fact that there is describable evolution in a child's portrayal of human figures (Harris, 1963). Much of the rationale for this section was based on F. L. Goodenough's scale for identifying intelligence,

i.e., The Draw-A-Man Test (1926). However, because the Draw-A-Classroom coding was not developed primarily as a test of intelligence, many of Goodenough's ideas have been restructured and some new concepts have been added. For example, the Draw-A-Classroom Test codes whether or not figures are sterectyped in their presentation, whether faces and trunks are frontal or represented by a Picasso-like three dimensional portrayal.

Objects

(a) Within this task assignment, "Draw Your Classroom", each child had the opportunity to deal with certain constant physical characteristics: doors, lights, windows, pictures, desks, tables and chairs. Each representation of these types of constants was found to be consistently unique due to individual interpretation. These are coded in terms of their presence, absence, the way colour is used and the means by which they were grouped.

(b) The last section is made up of categories dealing with organization, presentation and relationship of objects. The relationship between these objects themselves and between objects and people may not be logical in adult terms but a relationship does exist. By means of coding categories a record is made of the different ways children deal with their world. Why does one child view the class from the side or front of the room and another from above? Children represent different "time" situations. For example, some drawings clearly depict the classroom after school - no children, "They have gone home." Some drawings telescope many time situations into one drawing. Time is coded by pictorial situation and tense used in labelling. Classroom atmosphere as perceived by the student is coded. This

may prove to be a valuable concept if it enables a comparison of measured achievement between students in "teacher-dominated" classrooms and students who learn in a "pupil-centred" atmosphere.

The Draw-A-Classroom was devised as a research instrument. Validity and reliability were therefore prerequisite to procuring meaningful data.

If a test is valid, one can be certain that it is measuring what it purports to measure. The drawings presented a panorama of variation due to the nature of the Draw-A-Classroom Test. Each child differs in eye-hand co-ordination, expressive ability through drawing and verbal ability. Each child has been influenced by his environment, which includes the socio-economic status of his parents. The range of the differences within these characteristics influences the validity of the Draw-A-Classroom Test.

If a test is reliable the results of a second identical test will be very similar to those of the first test. To test this factor each child redrew his classroom after a time lapse of approximately four weeks. This interval was sufficiently long to reduce a four or five-year old child's memory factor to a minimum, yet short enough to preclude major development in drawing or verbal ability. A small sample study has illustrated high consistency on functional use of colour, repetition of human figures and objects, organization of the drawing and verbal description. Data is being processed to give the over-all picture of reliability of the Draw-A-Classroom Test.

Reliability is also influenced to a great extent by the subjective judgement of the rater. The problem facing the raters was to record exactly what the child drew. Raters with similar social back-

grounds and education often share the same biases and having successfully "brainwashed" themselves in their own academic jargon, find it difficult to communicate meaningfully. Raters with varied backgrounds were used in an attempt to overcome these biases; these included people from Canada, United States, France, Estonia and India. Their academic training ranged through anthropology, English, political science, mathematics, psychology, education, history and newspaper reporting.

The Draw-A-Classroom Test is attempting to create new frontiers in the realm of understanding the content of children's drawings. The road has been rough, but eighty-three categories for analysis have been devised and these give us an average total of over eighty per cent inter-rater reliability. Scoring results are currently being analyzed through I.B.M. computation. When this is completed it will be possible to take a good hard look at the child's psycho-educational world, as presented through a drawing.

Scoring categories and the manual of instructions are available, for research purposes, from the Research Department of the Board of Education for the City of Toronto.

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