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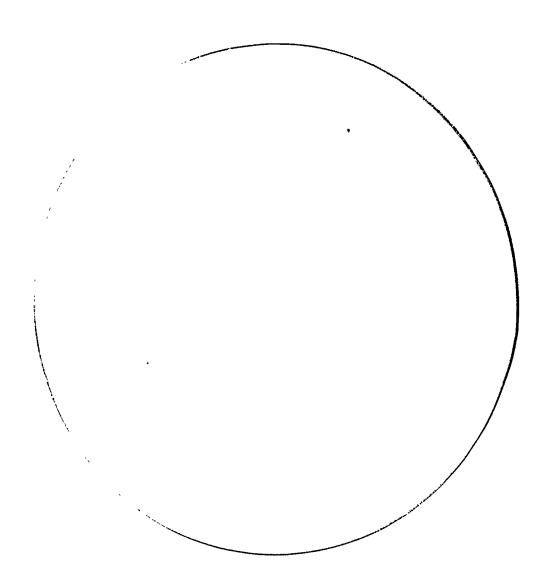
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FIVE SCHOOLS TOOK PART IN A SAMPLE STUDY TO SET SCORING PROCEDURES IN A LONGITUDINAL STUDY IN PROGRESS TO DETERMINE THE EFFECTS OF JUNIOR KINDERGARTEN ATTENDANCE ON THE CHILDREN'S LATER ACHIEVEMENT AND DEVELOPMENT. PUPIL CHARACTERISTIC DATA ARE BEING COLLECTED ON PROFILE CARDS AND A TEACHER-RATED QUESTIONNAIRE WHICH WAS DESIGNED TO PROVIDE INFORMATION ON A CHILD'S SOCIAL, EMOTIONAL, MENTAL, PHYSICAL, AND LANGUAGE DEVELOPMENT. KINDERGARTEN DRAWINGS WILL ALSO BE EXAMINED TO FIND OUT THE CHILDREN'S PERCEPTIONS OF THE WORLD. HALF OF THE CHILDREN INVOLVED IN THE SAMPLE HAD HAD JUNIOR KINDERGARTEN AND HALF HAD NOT. RESULTS SHOWED THAT THE FORMER HAD HIGHER QUESTIONNAIRE RATINGS IN ALL 5 CATEGORIES, THAT CHILDREN WITH POOR ENGLISH BACKGROUNDS RATED LOWER, AND THAT CHILDREN WHO HAD REPEATED SENIOR KINDERGARTEN HAD CAUGHT UP WITH THEIR CLASSMAYES BEFORE ENTERING GRADE I. THE STUDY IS BEING CONTINUED AT GRADE I LEVEL USING THE DOMINION READING READINESS AND METROPOLITAN ACHIEVEMENT TESTS. (MS)

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STUDY OF ACHIEVEMENT. TORONTO

INFORMATION BULLETIN #1

PS 000356

June, 1963

Study of Achievement, Toronto Information Bulletin #1, June, 1963

The Study of Achievement had two objectives particularly relevant to the Kindergarten:

- (1) Evaluation of the effect of Junior Kindergarten attendance upon the achievement and development of children.
- (2) Examination of the nature of the world of Junior and Senior Kinder-garten children.

Methods Used

This is a longitudinal study. At the kindergarten level, data was collected on pupil profile cards, from classroom drawings and by rating questionnaires.

(a) The pupil profiles were completed for 8,695 pupils, the Senior Kindergarten population in all Toronto Public Schools. The card dealt with age, sex, and enrolment date of the pupil, his home environment, racial, religious, national and linguistic background, parents' education, occupation and family size. A statistical report on the pupil profile for the Junior Kindergarten population is now available and a statistical comparison of Junior and Senior pupil profile information will shortly be available from the Research Department. A special I.B.M. card has been designed to keep track of student mobility as over one quarter of the original population is no longer at the school entered. The students will be followed as long as they remain in the Toronto Public School System.

- (b) Drawings have been collected from Junior Kindergarten children, 1961, Senior Kindergarten children, 1962, and Grade I children, 1963.

 These drawings contain the child's representation of part of his world. The drawings were collected to gain insight into children's concepts of space and time, their interest in letters and numbers, their awareness of shape and size, their interest in detail, reality, fantasy, activity, people and so on. In general, the drawings provide indications of the way the children relate to the world in which they find themselves.
- (c) The rating questionnaire was developed to measure levels of social,
 emotional, mental, physical and language development. It was
 primarily designed to collect information based on the teacher's
 knowledge of her pupils. In the future, revised forms of this
 questionnaire may aid the teacher in evaluating her students and
 complementing other standardized tests that might be used. Achievement on the rating questionnaire is being related to the drawings
 and to relevant characteristics obtained from the pupil profile
 cards.

Limited Sample Study

Before any scoring procedure could be applied to information collected, it was necessary to study intensively a variety of scoring possibilities on a small sample. During the past year, an examination of achievement and development was made using the materials submitted by five Toronto Public Schools. There was approximately equal representation of children with and without Junior Kindergarten experience. The schools chosen represented different sccio-economic levels (major professionals, administrative personnel, skilled manual employees, unemployed workers, etc.).



Rating Questionnaire

Within the limits of this sample, these are the trends based on an analysis of the Questionnaire Scores:

- (1) Children who had attended Junior Kindergarten obtained higher ratings at the end of Senior Kindergarten in all five categories of the questionnaire (mental, physical, social, emotional, language) than children who had not attended Junior Kindergarten.
- (2) Children with little or no English background obtained lower ratings on all categories of the questionnaire than those with English-speaking parents.
- (3) Senior Kindergarten repeaters rated as high as their classmates

 (one year of school) at the time when both groups of students were
 to progress to Grade I.
- (4) Socio-economic status appears to be related to high and low scores.

 Further analysis showed that children from all socio-economic groups who had a year of Junior Kindergarten received higher scores on the questionnaire than those who had not attended Junior Kindergarten.
- (5) Girls scored higher than boys on all questionnaire categories except English language.

Drawings

Within the limits of this sample, these are the trends based on an analysis of the Drawings.

Junior Kindergarten Characteristics. Junior Kindergarten children included significantly less of the classroom in their pictures and more of their outside personal world.

Over 25% of the drawings included light sources (sun, electric lights, etc.) as the <u>largest</u> objects.



There was a fairly high degree of sterotyping of human figures; differentiation between people was accomplished by changing size and colour only.

Changes Due to Maturation. As children grow older they:
Increase their use of colour to differentiate between objects;

Shade figures to a greater degree;

Draw more objects;

More of the objects drawn are named;

Draw more people;

Draw more generalized children;

Draw people in greater detail;

Draw fewer individually named children;

Draw fewer light sources;

Use language that shows more involved relational concepts.

Changes Due to Junior Kindergarten Experience. In contrast to children who begin school in Senior Kindergarten those who have had Junior Kindergarten experience:

Make greater use of colour to differentiate between parts of objects;

Draw more active people together;

Portray more situations where two or more people are working together;

Make more detailed drawings;

Display greater interest in clock time.

Changes Due to Combined Factors of Age and Junior Kindergarten

Experience. Both maturation and Junior Kindergarten experience result in:



An increased use of colour for <u>realistic</u> representation of coloured objects in nature;

An increased representation of inside furniture as the most detailed objects in the pictures;

A general increased quality of drawing;

A great increase in the use of figures such as circles, angles, triangles.

Correlations Between Ratings on Questionnaire and on Drawings.

Certain possible relationships were explored with the following results:

No relationship was found between drawing people and the child's social rating. It appears that a rating on the social scale and the presence of people in the drawings represent <u>different and unrelated</u> aspects of social behaviour. The drawings may indicate an <u>interest</u> in people which may or may not result in observable social behaviour.

Colour preference is associated with emotional and social scores on the questionnaire.

There was a low correlation between the scores on the mental category of the questionnaire and the scores on the space perception categories of the drawing.

Reading Readiness Test

Approximately 575 of these students received the Dominion Reading Readiness Test in the Spring of 1962. There was a substantial correlation between Reading Readiness scores and the rating questionnaire scores for all categories. The highest correlation was between Reading Readiness and the Mental score.



Summary

This is a longitudinal study with two main objectives at the kindergarten level: evaluation of the effect of Junior Kindergarten attendance upon the achievement and development of children, and examination of the nature of the world of Junior and Senior Kindergarten children. Information for this study has been obtained from pupil profile cards, children's drawings and rating questionnaires.

A sample study was made of five schools representing different socio-economic levels. There was approximately equal representation of children with and without Junior Kindergarten experience.

The Rating Questionnaire showed that Junior Kindergarten attendance, background in English and socio-economic status are related to high and low scores.

The drawings of Senior Kindergarten children with no Junior Kindergarten experience show measurable differences in their perception of space, objects, people and colour compared with the drawings of children having had two years of schooling. The exclusive contribution of Junior Kindergarten experience to the change is measurable but much smaller than the combined contribution of maturation and the extra year of school.

These present trends must be treated with caution pending further study and analysis.

The Study of Achievement continued in 1962-63 at the Grade I level. The "Draw-A-Classroom" Test was given to all Grade I children and these drawings are being processed at the Research Department. A Grade I rating questionnaire was developed, similar to the one administered last year by kindergarten teachers but upgraded to assess developmental



growth in mental, social, emotional, physical and language areas.

(These have been completed by all Grade I teachers for each child in the class.) In addition, the Metropolitan Achievement Tests, Primary 1

Battery have been administered. This is a standardized achievement test to measure reading skills and arithmetic concepts and skills.

Although the results of the kindergarten questionnaires have been tabulated, analysis of the Grade I questionnaire is necessary before any comparisons can be made. Results after two years of testing will be much better predictors of factors relating to achievement than after one year.

When results of the Metropolitan Achievement Tests have been received, correlations will be made between achievements as measured on that test and the five categories of the rating questionnaire. Differences will be examined between boys and girls, different school experience groups, variations in socio-economic status, cultural enrichment and other areas. These comparisons will be based as well on measurements taken in Senior Kindergarten and Grade I.

Thank you sincerely for your extensive co-operation on the Study of Achievement. The Research Department will endeavour to keep you informed as progress continues in this longitudinal study.

