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ABSTRACT

The purpose of this longitudinal study was to describe kindergarten children's abilities, evaluate the effect of teacher expectations on kindergarten performance, and explore the predictive validity of kindergarten performance for later reading ability. An original sample of approximately 450 kindergarten children was tested with a school readiness measure. By the time the children were tested on reading ability at the end of third grade, 122 children remained in the sample. For entering kindergarteners, performance on school readiness test tasks was significantly related to socioeconomic status, age (older children performed better), and sex (girls performed better). Attending preschool and watching "Sesame Street" were also found to be slightly related to readiness task ability. Kindergarten children in 1971 performed better on most school-related tasks, except those involving perceptual-motor skills, than did kindergarten children in 1968. Teacher judgments of the subjects' abilities at the end of the kindergarten year were better predictors of the subjects' reading success in first, second, and third grades than school readiness test scores. Past reading ability was found to be the best predictor of future reading ability. Through the primary grades, girls continued to perform better than boys in the measured abilities. Data showed that children who stayed in the same school from kindergarten through third grade read better than the class as a whole, when all other factors were held constant. (BRT)

THE KINDERGARTEN CHILD 1971

or

the Class of 1984

THE KINDERGARTEN CHILD, HIS TEACHER'S EXPECTATIONS, AND READING SUCCESS IN FIRST, SECOND, AND THIRD GRADE

C. Deane Darnell and William L. Goodwin

The purpose of this longitudinal study was threefold:

(1) To describe the nature of the kindergarten child;

(2) To detail the performance expectations that teachers held for their kindergarten students and the apparent effects of these expectations; and

(3) To document the subsequent reading performance by these children in the early primary school years and to note how well variables obtained early predict that later performance.

Two major factors combined to produce the impetus for this study. The first was a needs assessment for a Title III, ESEA, grant directed at a careful diagnostic approach to early treatment of kindergarten children with apparent"high needs." The second was a prevailing attitude on the part of many local kindergarten teachers (reinforced by some parents with several children in school as well as one child entering kindergarten) that the five-year-old of the 1970's is different from his counterpart of several years ago. These perceived differences appear to be improved standing standing in regard to knowledge base and general cognitive development and, at the same time, less pronounced development in perceptual-motor and socio-emotional areas.

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Sample and Setting

The study was conducted in a Rocky Mountain small city (60,000 persons) in the Denver Metropolitan Area. Although all socioeconomic levels are represented in the city, a prepondence of middle-and upper middle-class families is apparent. Characteristically the lowest SES category was composed of fathers with high school education or less, whose occupations were in the unskilled or semi-skilled job categories. The highest SES category in the city studied was made up of fathers with graduate degrees, who primarily held professional positions.

In Spring 1971, a sample of eight elementary schools was selected for the study. The schools were designated for the study to achieve a balanced representation from all SES categories; some schools had a much higher proportion of children from high, middle, or low SES strata than others. In these eight schools, there were approximately 450 kindergarten students and 13 full--or part time teachers. All the principals and teachers agreed to participate in the study. For the purposes of this study, these 1971 kindergarteners were subsequently followed into first,second, and third grades. A variety of measures were obtained at the time of entrance and later to address the three major purposes of the study.

What Is the Nature of the Kindergarten Child in the 1970's?

In the sample studied, the entering "Class of '71" was, on the average, just under five and one-half years old Information furnished by parents at kindergarten registration allowed determination of socioeconomic status (SES) and early educational experience. Of the 450 students, 62 percent had had some structured preschool experience about one year in length, on the average.

Seven percent of the children had experienced one or more years of Head Start. In addition, almost all (98 percent) of these children were reported to have seen Sesame Street, and 32 percent had been consistent twice-a-day viewers during the previous two years.

The Metropolitan Readiness Test (form B) including six sub-tests was given to entering kindergarten children. Regression analyses were performed (using independent variables such as SES, age, sex, preschool experience, and Sesame Street viewing habits to predict success on the measures given. The strongest (if not overwhelming) predictor of success on the measures was family's SES. Age was also predictive, with older children doing better. At the beginning of the year, girls were generally better on all tasks than boys when total score was considered, and this gap had widened by the end of the year. (Interestingly, teachers expected girls to do better.) At entrance, girls were also more skilled at copying tasks (an advantage that persisted) and at recognizing the alphabet (boys subsequently "caught up" on this variable). Although amount of preschool experience did not relate significantly to any of the measures, extent of Sesame Street viewing did in several areas (alphabet knowledge, listening, word meaning, numbers and concepts).

There was no consistent support for the hypothesis that children who attended preschool most or who watched Sesame Street most functioned best on these school related tasks. In fact, across all socioeconomic levels there was a slight curvilinear relationship between these two types of stimulation and functioning on assessed abilities. Apparently, moderate (rather than extreme) amounts of preschool experience and Sesame Street

viewing appeared to relate to better performance on the measures.

As previously indicated, experienced teachers and parents perceived children of this age as different from children of a few years ago in their skills and cognitive development. There is some support for this belief on their part. Using test results from 1968, 1972, and 1975 from the same schools and the same teachers and the same form of the test (MRT), there is from a half to a whole standard deviation difference, on the average, between the entering classes examined. The difference favors the more recent kindergarteners. The only exception to this general trend is perceptual-motor skill as used in copying; past and present kindergarteners perform the same in this area. This skill may be more closely related to physical-neurological maturation and not highly subject to practice, experience or other influences.

How Accurate are Teachers in Their Expectations and do These Expectations Influence Pupil Functioning?

Three weeks after school started in Fall 1971 teachers estimated how each child would perform on sets of tasks by giving each child a specific numerical score for each section of the Metropolitan Readiness Test, Form B (that includes the six sub-tests: understanding of word meaning using pictures, listening comprehension, visual perception involving recognition of similarities, ability to recognize lower-case letters of the alphabet, number and concept knowledge, and perceptual motor skills used in copying). Then the students were actually tested by a person other than the teacher. Teachers were not given feedback about the Fall test results on their pupils. In Spring 1972, each teacher was asked to respond in the same manner for each child, using Form A of the test. Students were ther tested on Form A.

Amazingly, kindergarten teachers were extremely sensitive to and aware of their pupil's functioning, even in the minute detail measured by the test items, after only three weeks of school. By the following spring, teachers were even better judges of each child's functioning. The average correlation between teacher expectation and actual total test score for Fall was r=.66 and for Spring r=.82. The correlation for Spring is surprisingly large, since test-retest reliability is only .80 (according to the test manual). (This finding has been replicated with other tests since 1971-72; teachers are indeed good judges of their students' functioning as measured by test results. In fact, teacher judgments of kindergarten pupils in the spring turned out to be a better predictor than spring test scores of future reading success in first, second, and third grades.)

When teachers' expectations were viewed alone in relation to their classes the findings were also enlightening. Teachers who had been teaching longest (10 years or longer) were more likely to underestimate their pupils than those teachers who had taught fewer years.

Students' actual pre-to-post, fall-to-spring change scores were considered in relation to whether teachers over-or under-estimated their actual performances upon entering kindergarten. The average class gain for students in classes taught by teachers who over-estimated their fall functioning was 31.1 points, while the average class gain for pupils whose teachers underestimated their fall performance was only 19.5 points. Of the 13 teachers, 7 under-estimated their entering students' performance, while 6 over-estimated that performance. The students in over- and under- estimated classes represented all SES levels. In Figure 1, the gains made by each teacher's class from fall to spring is displayed. As can be noted, the distributions of gains for the

over-estimating and under estimating teachers are almost non-overlapping.

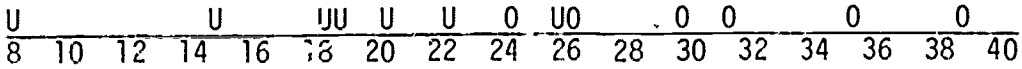

Figure 1. Mean gain scores for pupils of each teacher from fall to spring (underestimating teachers represented by U and overestimating teachers represented by 0).

How Successful Have These Pupils been in Reading in the Primary School Years and How is This Success Best Predicted?

The entering Kindergarten Class of '71 has been assessed on reading ability (Gates-MacGinitie) at the end of each school year (first, second, and third). Since attrition of the sample occurred each year, a comparison of means and standard deviations for each of the variables taken at the time of school entrance was made to determine whether the key characteristics of the sample changed over the years. They did not, as the means and the standard deviation of the third graders as kindergarteners was a very close fit to the larger kindergarten sample. Once this comparability had been established, two additional analyses were undertaken.

A multiple repression analysis indicated that past reading success (in first and second grades) is the best predictor of future reading success. When kindergarten readiness tests and teacher judgments were considered, the actual test results in the fall or beginning of kindergarten predict reading success better than fall teacher judgments, however in the spring the teachers' judgments predict reading success better than test scores. Girls continue to function better than boys through the primary grades, on the average. Age is a very poor predictor of reading success by third grade. SES becomes less

and less significant as a predictor of reading success as the children progress from kindergarten through the primary grades. There is apparently very little relationship between pre-kindergarten Sesame Street viewing habits (as measured here) and reading success or between structured preschool experience and reading success by third grade.

The second analysis of the data compared reading success of these pupils with national norms and total class averages. Table 1. shows these means and standard deviations.

Gates-MacGinitie

GRADE	Vocabulary	Class of '71	All Pupils	Natl. Norms		Comprehension Class of "71	All Pupils	Natl. Norms
First 1972-73	mean	46.5*	----	37.0	mean	29.32	-----	21.0
	S.D.	7.35		10.4	S.D.	6.27		6.1
Second 1973-74	mean	42.1**	----	34.0	mean	30.9	-----	24.0
	S.D.	7.30		10.0	S.D.	6.43		7.8
Third 1974-75	mean	43.88***	38.19****	35.0	mean	39.8	35.07	31.0
	S.D.	6.25	8.41	8.3	S.D.	7.10	8.52	10.3

* N=365, **N=255, ***N=122 ****N=410

Table 1. A comparison of means and S.D. for the pupils who were in the original entering kindergarten sample '71, all pupils in those classes at third grade, and national norms for Gates-MacGinitie Reading Test results.

When the original sample of pupils was in first grade 83 percent of them were functioning above the national norm mean score on Vocabulary and 78 percent were above the national mean score on Comprehension. When they were in second grade 82 percent were functioning above the mean in Vocabulary skills

and 77 percent were above the mean on Comprehension skills. In the third grade 86 percent were above the mean on Vocabulary and Comprehension. As indicated earlier comparisons had been made each year of the remaining pupils in the sample with the original entering kindergarten sample and the means and standard deviations were very close, even though the sample became smaller each year. The pupils in this group are obviously functioning better in reading than the class average, although the only different between these pupils and their classmates is the fact that they have been in the same school since kindergarten.

Summary and Conclusions

The kindergarten child in this study was about five and one half years old, had attended preschool for one year, was a loyal viewer of Sesame Street and came from a middle class family. Success on school related tasks was measured by the Metropolitan Readiness Test[7] upon entering kindergarten in the fall and again in the spring (another form used). Success on these tasks related significantly to SES, age, and sex, but less so with structured preschool experience and Sesame Street viewing habits. In fact there was no consistent support for the hypothesis that children who attended preschool most (2-2 1/2 yrs.) or who watched Sesame Street most (twice a day-every day) functioned best on these school related tasks. There was a slight curvilinear relationship between these two types of stimulation and functioning as assessed here. There appears to be a measurable difference between the entering kindergarten child and his counterpart of 1968, favoring the child who enters today by one-half to one whole standard deviation on all tasks except perceptual-motor skills used in copying where they perform the same.

Teachers were amazingly accurate in their estimates of the performance of each child both at the beginning and end of the school year. At the end of kindergarten teacher judgment is a better predictor of future reading success than test scores. Teachers as a group and individually who underestimated their pupils at the beginning of the year obtained less pupil growth than teachers who overestimated their pupils' functioning. Although age, SES, preschool experience, and Sesame Street viewing habits become less and less important to reading success as the child progresses through the lower grades, girls continue to function better than boys. Pupils who have stayed in the same school from entering kindergarten to the end of third grade are better in their reading skills than the class as a whole, even when all other factors appear to be held constant.