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THE INFLUENCE OF A HEAD START PROGRAM ON READING ACHIEVEMENT.

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A STUDY OF THE EFFECTS OF ATTENDING AN 8-WEEK HEADSTART PROGRAM DURING THE SUMMER PRIOR TO THE FIRST GRADE ON THE FIRST-GRADE READING ACHIEVEMENT OF 152 PUPILS IN SCOTT COUNTY, KENTUCKY, INDICATED A NEED FOR A CLASSROOM CONTINUATION OF THE EXPERIENCE APPROACH IN READING METHODS. AT THE OPENING OF THE SCHOOL YEAR, THE HEADSTART PUPILS WERE MIXED IN 15 FIRST-GRADE ROOMS. SOME TEACHERS USED A SYNTHETIC, AND SOME AN ANALYTIC, APPROACH TO READING. THE METROPOLITAN READINESS TEST WAS GIVEN IN OCTOBER, THE CALIFORNIA TEST OF MENTAL ABILITY IN DECEMBER, AND THE STANFORD ACHIEVEMENT TEST IN MAY. OCCUPATIONS OF PARENTS WERE CATEGORIZED BY USE OF THE SOCIOECONOMIC SCALE OF OCCUPATIONS DEVISED BY A.M. EDWARDS. A STRAIGHT AND UNEQUATED COMPARISON OF THE READING SCORES OF THE TWO GROUPS REVEALED NO SIGNIFICANT DIFFERENCE IN ACHIEVEMENT. EVIDENTLY, THE HEADSTART PROGRAM ACHIEVED SUCCESS IN PREPARING CHILDREN FOR ACADEMIC LEARNING. SOME RADICAL APPROACH TO TEACHING READING TO CHILDREN WHOSE NORMAL DIALECT IS NONSTANDARD ENGLISH IS NEEDED. SUBSTANTIAL FURTHER EXPERIMENTATION AND STUDY ARE NECESSARY FOR HEADSTART TO ACHIEVE ITS FULL PROMISE. CORRELATIONS ON FIVE VARIABLES SUBSTANTIATE THE STUDY. A SUMMARY OF FINDINGS IS INCLUDED AND REFERENCES ARE GIVEN. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION ANNUAL CONVENTION (12TH, SEATTLE, MAY 4-6, 1967). (BK)

RE 000 202

**"THE INFLUENCE OF A HEAD START PROGRAM  
ON READING ACHIEVEMENT**

by Wallace Ramsey and Marguerite Boercker\*

Among all of the programs made possible by a massive infusion of federal funds, the one that has excited much interest and enthusiasm is aimed at giving four- and five-year olds enriched experiences that will enable them to have a "head start" in school. The states in Appalachia have received a substantial portion of Head-Start funds because of the large numbers of disadvantaged children in the region.

The study reported here sought mainly to discover the effects of Head Start on the first grade reading achievement of 152 first grade children in Scott County, Kentucky.

In September, 1965, 152 first graders who had attended an eight-week Head Start program during the preceding summer were inter-mixed in 15 first-grade classrooms with 192 children who had not attended Head-Start. Of the latter group twenty-two had attended kindergarten and were not included in the study.

#### Nature of Program

The children had been enrolled in an eight-week Head Start program in classes of fifteen taught by certified primary grade teachers. The latter had received one week of in-service training at the University of Kentucky to qualify them as Head Start teachers. Each was assisted by an aid who was a high school or college student interested in working with children.

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\*Though the study is reported here by Wallace Ramsey, Director of Reading Studies of the University of Kentucky, it was the doctoral project of Marguerite Boercker at the University.

The Head-Start program to which the children were exposed was experience oriented and designed to increase children's knowledge and understanding of their life space. A combination of field trips, viewing of films, listening to stories, construction activities, oral language activities, and classroom displays served to increase the children's stock of information and their language facility. Emphasis was given to concept and vocabulary building in an informal atmosphere.

The first grades which the children attended were all in five multi-grade consolidated schools and constituted the entire entering first grade enrollment in the two systems. The first grade teachers were graduates of four year teacher education programs in accredited institutions. None had received any training in teaching reading beyond the one course required for certification.

Each classroom was supplied with basal reading textbooks by the State Department of Education under the state adopted textbook system. Charts, supplementary readers, and supplementary phonics materials (when used) were supplied by the local system or were purchased from funds made available from the PTA. Small numbers of trade books appropriate for first grade use were available in each classroom. In both school systems represented in the study the annual per-pupil cost of education was below \$400 in 1965-1966.

Classroom equipment could best be described as minimal. A rather formal and traditional approach to reading instruction was followed. In-class ability grouping was used to care for individual differences.

Two hundred forty of the total group of 322 were enrolled in classes in which materials were used that provided for early emphasis on phoneme-grapheme correspondence and synthetic phonics. (Phonetic Keys to Reading published by the Economy Co.) The other eighty two were in classes using basal materials providing for earliest emphasis on learning to read whole words followed by an analytic approach to phonics. (Ginn Basic Readers published by Ginn and Co.) The former group attended school a full day from the beginning of school; the latter group had only half-day sessions until after Thanksgiving vacation.

#### Gathering Data

In order to make sure that the Hawthorne Effect did not have a strong influence on the results of the study it was decided to do a bare minimum of special testing, to gather information as quietly as possible, and to avoid any publicity concerning the study. Since both Head Start and non-Head Start children were intermixed in about the same proportion in all classrooms, the teacher variable was held constant for both groups.

The only special testing done was the administration of the California Test of Mental Maturity. This was given to all first graders by the researchers in December. This was necessary because the two school systems do not normally give such tests to first grade children.

At the end of the 1965-66 school year the mental maturity test data and other information gathered from cumulative records were analyzed to determine (1) how the Head Start and non-Head Start



groups differed, (2) Variables correlating with end-of-the year reading achievement scores, (3) the nature and significance of differences in end-of-the-year reading achievement scores of the two groups, and (4) which approach (the synthetic or analytic) seemed to better exploit the benefits of Head Start. Test results that were available (in addition to the California Mental Maturity) were those from the Metropolitan Readiness Test (administered in October) and the Stanford Achievement Test (administered in May).

#### Differences In Groups

When compared with the non-Head Start group, the Head-Start group had a similar proportion of boys to girls (51% girls in Head Start versus 52% girls not in Head Start) contained a significantly higher proportion of Negroes (30% versus 3.5% in the non-Head Start group), contained a slightly higher proportion of children of unskilled laborers (37.5% vs. 25.5%) and a lower proportion of children of parents in the professions (15.7% vs. 31.3%). The difference between the two groups in occupation of parents was significant at the .02 level. (Occupations of parents were categorized by use of The Socio-Economic Scale of Occupations devised by A. M. Edwards). Figures in the full version of the study clearly revealed that the Head Start distribution clusters towards the unskilled end of the distribution.

In readiness for reading (as measured by the Metropolitan) the Head Start group measured slightly less ready for reading but the difference was only marginally significant at the .15 level. It is noteworthy that over sixty per cent of both groups ranked below the fiftieth percentile in readiness. The median score of both groups was in the third decile of the test. The Head-Start group had fewer children scoring in the top quartile.

Mental age differences between the two groups were significant at the .02 level--the Head Start group was four months below the other group at the time of testing (December). Fifty-six percent of the Head Start group was below the mental age of 6.6 while only forty seven per cent of the non-Head Start group were below that level---the minimum mental age at which a child is likely to learn to read with ease.

The differences between the mental age and readiness score distributions are interesting. Whereas the mental-ages-in-months pattern is an almost normal curve, the readiness scores pattern is almost random, with peak populations in the 0-10 decile. The correlation between the two scores is only .41. Does this suggest that the readiness test measures results of more formal pre-school experiences than any of these children experienced?

In other important variables for which information was available there seemed to be no significant differences in the two groups. These included chronological age, state of the family (whole or broken), number of children in the family, sibling rank of the child, and presence of health limitations.

#### Achievement Results

A comparison of reading achievement scores at the end of the year revealed that there was no significant difference in the mean reading level of the two groups, although a high proportion (over 60%) of both groups scored below expected grade level. The Head Start group had a higher proportion of children scoring very low (35.5% scoring below 1.5 vs 22.4% of non-Head Start group who scored that low.)

Five variables were found to correlate positively with reading achievement as follows:

Reading Readiness Score	.52
Mental Age	.49
Race	.35
Approach to Reading	.30
Occupation of Parent	.22

#### Equating for Variables

In order to determine if each of the above variables exerted a real difference on reading achievement the two groups were equated for each variable and achievement scores compared. When equated for race it was found the Head Start Negro reading mean was a month higher than the non-Head Start Negro mean but the difference was not significant.

Equating the groups for occupation of the wage earner produced an interesting phenomenon. The means of the professional group differed in favor of the non-Head Start group but only at the .12 level. As the skill of the wage earner (in the non-Head Start group) went up the reading scores went up. Head Start scores went up from the unskilled to the skilled category, but dropped again in the professional category. This cannot be explained with the data available.

In the socio-economic levels for whom Head Start is designed, the two groups exhibited no significant difference in achievement. The same was found to be true when the groups were equated by readiness scores.

When equated for mental age a significant difference in reading achievement was noted in only one mental age group--the 71-80 months group. The difference was in favor of the Head Start group at the .06 level. It appeared that in this study that for the child of approximately 6.6 years of mental age the Head Start experiences were not enough to bring him up to his non-Head Start counterpart in reading achievement at the end of first grade. Yet the brighter Head-Start child tended to achieve as well as the brighter non-Head Start child.

Equating for two variables produced interesting results. When groups were equated for occupation and mental age it was found that among the children of skilled workers the Head Start group with mental ages above seventy-seven months achieved significantly higher than the non-Head Start group of the same mental age.

When equated for approach to reading (synthetic vs. analytic) and mental age the only difference found was in the group using the synthetic approach. In the mental age group below 6.5 the non-Head Start group achieved significantly higher than their Head Start counterparts.

#### Advantage of Approach

One of the objectives of the study was to determine which of the two reading approaches seemed to better exploit the benefits of Head Start. An analysis of the data showed that the non-Head Start group did better than its counterpart in the synthetic groups but the difference was not significant. Among those learning to read by the analytic approach the non-Head Start group achieved significantly better than



the Head Start group. It would appear, therefore, that the synthetic approach was better able to exploit the benefits of Head Start.

### Summary of Findings

In summarizing and drawing implications from the study several points should be made. The Head Start and non-Head Start children who were intermixed in first grade classrooms differed in several important respects. The Head Start group tended to come from the lower socioeconomic levels and contained a higher proportion of Negroes. The group measured less ready to read and had a lower mental age than the non-Head Start group. At the end of first grade the Head Start group had the larger proportion of poor readers. Although all of the above were true, it is significant to note that a straight, unequated comparison of the reading scores of the two groups revealed no significant difference in achievement. This would indicate, to this writer, that the Head Start Program achieved signal success in accomplishing one of its goals: preparing children for better academic learning. That it was not more successful is unfortunate but probably explainable.

In all likelihood the factors influencing the usual academic retardation of disadvantaged children are too complicated for an eight week pre-school program to make a tremendous difference. In all probability a full-year kindergarten of compensatory quality would better meet the readiness needs of all five-year olds in Scott County, Kentucky, as well as for most of the children for whom Head Start is intended. Though concrete research evidence is lacking, the same could be said of Head Start programs for four-year-olds.

## A Look Ahead

The intent of legislation to finance Head Start programs is to create an opportunity to enrich the lives of disadvantaged children. By providing programs full of new experiences such children are helped to begin school more nearly ready to read.

An approach to beginning reading that would seem to grow naturally out of the Head Start activities is the language experience approach. Typical basal reader stories in the first grade materials are not suited to the experience-starved, language-underdeveloped six-year-old from Appalachia or the inner city. When taught by teachers who have been using it a number of years, the basal reader approach can be particularly sterile.

A language experience approach would permit children and teachers to create their own stories, using experiences and language patterns that are more typical of the children involved. The experiences of Stauffer (3), Vilscek, Morgan and Cleland (4) in Delaware and Pittsburgh in using the language experience approach with disadvantaged children is evidence supporting this idea.

The level of competence of teachers is an important variable in such a program. Following a basal reader guidebook provides a systematic program in skill development. Working out a skills program to fit language experience stories, as well as the needs of individual children, demands a higher level of knowledge, a greater degree of creativeness, and a deeper degree of self confidence than many first grade teachers possess. If Head Start is to be followed up in an effective manner, a way must be found to help teachers

acquire these traits.

A way must also be found to reduce the pupil load of first grade teachers of Head Start children. A greater sensitivity to individual needs seems required of those working with the disadvantaged first grader. The presence of a large number of poor readers among Head Start children in this study underscores the need.

Many such children come from environments in which they have had very little undivided attention from an adult. Teachers with reasonable pupil loads can find time to listen to them, provide language feedback of a type that will help them alter their speech to fit more mature patterns, and encourage them to engage in the kind of language activity leading to higher levels of linguistic development.

The success of the "Rooms of Twenty" in St. Louis schools (1) provides evidence that reducing the pupil load can result in some rather spectacular results.

About one-third of the children in this study were Negro. The mean reading achievement of Negro Head Starters was below that of White Head Starters, though not drastically so. This may have been due to the use of the basal approach to reading or to some factors not revealed in this study. The very real difference in phonology and syntax between Negro speech and the speech of white children as revealed in at least one study (by Labov, 2) causes difficulties for the teacher--as several teachers of Title I remedial reading have

indicated to the writer. Experimentation with various practices is in order to find that works most effectively in helping these children learn to read.

A study presently underway in Washington will supply us with information concerning the exact nature of Negro dialect in that area and provide materials for teaching the dialect group. Entitled "The Urban Language Study," the research is under the direction of Dr. J. H. Dillard and is supported by the Center for Applied Linguistics. Accompanying sociological and anthropological studies seek to discover familial, social, group and other characteristics influencing dialect and holding implications for writing materials for learning to read.

Experimentation with an approach that may seem drastic to many purists is proposed by this writer. Early reading material for disadvantaged dialect groups (and especially Negro) should be written in their dialect--with its phonological and syntactical deviations from standard English represented in the graphic form. In this manner the child who says "Ah needs tin cints by fo' o'clock" or in response to the question "Where is John?" says "He home" can be helped to read material closely representing his dialect. When he learns to speak standard English (perhaps as a second language taught by oral-aural methods in a language laboratory situation) he can be taught to read standard English. In the meantime, his development in reading need not wait, or be complicated and retarded by his inability to speak standard English.

In the judgment of the writer Head Start holds a lot of promise for the future. However, experimentation with various patterns of organization and different types and lengths of programs is in order. The approach taken in teaching reading to children, once such instruction is begun, should be one that naturally supplements and follows up what has been begun in the Head Start program. The typical basal program (even when supplemented with synthetic phonics) does not do this. Classes of thirty to thirty-five children are too large to enable teachers to do the kind of teaching that is needed. Some radical approach to teaching reading to children whose normal dialect is non-standard English is needed. Substantial further experimentation and study will enable us to refine our approaches and techniques so we can help Head Start to achieve its full promise.

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