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## ABSTRACT

Cheshire, Connecticut, is currently conducting a longitudinal study of the effectiveness of Project Concern, in which children from the urban ghettos of New Haven are transported daily by bus to area suburban towns. The subjects in this study are 25 minority group children who are presently enrolled in the Cheshire schools for the second year. The influence of the Cheshire educational environment is being assessed by academic progress (The California Achievement Test, grades); attitudes toward school, peers, and self; self-image; and, attendance records. The preliminary results show a positive trend. (Author/JW)



DEPARTMENT OF EDUCATION

Cheshire, Connecticut

PROJECT CONCERN IN CHESHIRE

A PRELIMINARY REPORT

January 1970

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Stephen August, Superintendent of Schools
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Cheshire is currently conducting a longitudinal study of the effectiveness of Project Concern, a program sponsored by state and federal funds, in which children from the urban ghettos of New Haven are transported daily by bus to area suburban towns. The subjects involved in this study are twenty-five inner-city minority group children who are presently enrolled in the Cheshire schools for the second year. Of this group of twenty-five, only twenty-four were tested in 1968. Sixteen children are in their second year at Humiston School and are now placed in grades 2, 3, 4 and 5. Of this group, two children are spending an extra year in grade 2 and one child is spending an extra year in grade 3. Norton School is receiving ten Project Concern youngsters for the second year and these children are presently in grades 3, 4, and 5. Three Project Concern children at Norton School are spending an extra year in third grade.

The influence of the Cheshire educational environment on inner-city children is being assessed by:

- 1. Academic progress as measured by the standardized California Achievement Test, 1957 Edition, 1963 Norms.
- 2. Academic progress as measured by teacher grades.
- 3. Child's attitudes toward school, peers, and self as measured by teacher's ratings.
- 4. Child's self-image and adjustment as measured by a sociometric test.
- 5. School attendance records.

The Project Concern Cheshire children were first administered the California Achievement Test in November 1968 as part of a study of Project Concern children in New Haven area suburban towns. The children were retested in April 1969 and the data obtained was incorporated in an evaluation study of 200 youngsters who were being bused to nine area towns in the school year 1968-69.

In October 1969, Dr. Stephen August, Cheshire Superintendent of Schools requested that a follow-up of the Clinton Study be made for the Cheshire Project Concern youngsters and other dimensions be added. Cheshire is interested not only in the academic achievement of its Project Concern children but also how they adjust to their new suburban environment, how they react to their teachers and suburban peers; what happens to their self-image under these circumstances; and how regularly they attend school.



<sup>1</sup> Clinton, Ronald R. "A Study of the Improvement in Achievement of Basic Skills of Children Bused from Urban to Suburban School Environments." S.C.S.C. Masters' Thesis, May 1969.

The California Achievement Test was readministered in November 1969. One more testing in May 1970, will be carried out before final conclusions of academic progress as measured by the California Achievement Test are drawn.

Raw scores were converted to grade placement units, an empirically scaled derived score based on a sample from a national norm group as specified by the test publisher. The grade placement score represents the average achievement of children of a designated chronological age in the national norm sample whose median I Q is 100. Each year or unit of the grade placement scale is subdivided into decimal values corresponding to ten months of the normal school year. A grade placement score of 3.2 indicates that it is the average achievement of students in the month of November in the third grade. A score of 5.0 represents the average achievement of a child in the fifth grade in the month of September.

This preliminary report will examine the results of the California Achievement Test in three specific areas: Reading, Arithmetic and Language, as well as the overall total battery scores. The results of the testing in November 1968 as compared to November 1969 will be approached from two points of view. First, difference scores in the three component parts of the test plus total battery scores will be discussed to indicate the individual growth that has been achieved by the Project Concern children in a year's time. Secondly, the difference between the individual's component parts plus total battery score and the grade level standard score at the time of each testing will be compared to indicate the status of the children in November 1968 at the initial testing and their status a year later when comparing them to grade level.

Because the California Achievement Test was administered in November 1968, and the children were retested in November 1969, the average difference score expected would be one year in each of the achievement test areas (reading, arithmetic, language) and total battery scores.

In reading, the variance of individual difference scores ranged from a loss of two months to a gain of three years, three months. The mean score difference between the two years was one year, three months, a gain of three months above the average expected score. The median or halfway point in the distribution of reading scores was also one year, three months, indicating that half of the children gained more than a year and three months and half gained less. Of the twenty-four children for whom there were difference scores, seventeen children or 71% grew one year or more in their reading achievement.

There were difference scores for twenty-three children in arithmetic. This discrepancy in number is due to one child's absence during the arithmetic testing in the fall of 1968. The range of difference scores between the two years in arithmetic was from a loss of two months to a



gain of two years, one month. The mean score difference (average gain of the group) was one year, one month; one month above the expected gain for a year. The median difference score was one year, two months, pointing out that half of the children had difference scores ranging one year, two months growth or more and half had scores below one year, two months. Thirteen out of twenty-three children, or 56% achieved the expected gain of one year or more in arithmetic.

The language difference score results displayed a range of a loss of two months to a gain of two years, six months. Both the mean and median language difference score was one year, one month, denoting that the average difference score of twenty-four students was a gain of one year, one month, and half of the children had this score or higher. Fourteen out of twenty-four students, or 58% accomplished the expected gain of a year's growth.

The total battery score of the California Achievement Test is a combination of the three component areas of the test. The range of difference scores for the total battery was a gain of one month to a gain of two years, six months. The average gain for the twenty-three students, for whom total battery scores were available, was one year, two months. The median difference score was one year, three months, and fourteen out of twenty-three children or 61% had achieved the expected gain of one year or more in the total battery score.

A summary of the results of the individual grade level difference scores for the three sections of the California Achievement Test and total battery scores is presented in Table I below.

TABLE I

Grade Level Difference Scores of Individual Children from November 1968 to November 1969

	No. of Subjects	Mean	<u>Median</u>	Range	No.of Children Achieving Expect- ed Gain or Above	<i>%</i>
Reading	24	1.3	1.3	2 to 3.3	17	71
Arithmetic	23	1.1	1.2	2 to 2.1	13	56
Language	24	1.1	1.1	2 to 2.6	14	58
Total Battery	23	1.2	1.3	.1 to 2.6	14	61

A t l test was employed to test the null hypothesis that the difference



l t test, A statistical test to prove significant differences.

in grade level scores over a one year period was not significant. At a level of confidence of .05, the hypothesis could not be rejected either for the component parts or the total battery.

The individual grade level reading, arithmetic, language and total battery scores for November 1968 and November 1969 were also examined to compare the relationship of the grade level scores the children obtained, and their equivalent grade level at the time of the testing. For example: if a third grade child achieved a score of 3.6 in the November 1968 testing, the equivalent grade level is 3.2 and the score would be considered four months above grade level for that year. If in November 1969, the same child, who is now in fourth grade, scored 4.8, the equivalent grade level is 4.2 and his score would be considered six months above grade level.

The range in grade level scores in reading, when compared to equivalent grade level at the time of the initial testing, spread from one year, one month, below grade level, to nine months above grade level in November 1968. One year later, the range was seven months below grade level to one year, seven months, above grade level. At the first testing, the mean or average score in reading was three months below grade level. The following year, the mean was one month above grade level. The median score was five months below grade level the first year and one month above grade level in November 1969. When the initial testing was done, six children out of twenty-four or 25% of the children were on or above grade level in reading. A year later, fifteen children out of twenty-five or 60% scored on grade level or above in the reading section of the California Achievement Test.

When the children's obtained scores for each year of testing were compared to their equivalent grade level score at the time of the two testings, the arithmetic section of the California Achievement Test revealed the following information. The Nov 1968 testing showed a range of nine months below grade level to one year, one month, above grade level. A year later, the range was eight months below grade level to one year, one month, above grade level. The mean score in 1968 was one month below grade level. The median score the first year was two months below grade level. The median score one year later was grade level. The first year the children were tested, nine children out of twenty-three or 39% of the group tested, scored on grade level or above in arithmetic. In November 1969, fourteen out of twenty-five children, or 56% scored on or above grade level.

In comparing the individual language grade level scores for the two years with equivalent grade level placement scores, the following results were obtained. The range of scores in language in November 1968 was from one year below grade level to seven months above grade level. The following year the range widened from one year, six months, below grade level to one year, five months, above grade level. The mean of the distribution of scores the first year was four months below grade level. The mean score



the second year was grade level. The median score in 1968 was five months below grade level. In 1969 the median or halfway point in the distribution was one month above grade level. The initial testing results disclosed that three out of twenty-four children or 13% were on or above grade level in language when they were tested in 1968. Out of twenty-five children tested in 1969, fourteen or 56% were on grade level or above at the time the test was administered.

Individual grade level total battery scores when compared to equivalent grade level scores presented the following results. When the children were initially tested in November 1968, their scores ranged from eight months below grade level to nine months above grade level for the total battery. A year later the range was from nine months below grade level to one year, two months, above grade level. The mean score the first year was three months below grade level. A year later the mean score was one month above grade level. In November 1968, the group median score was five months below grade level. The next year, the median score was one month above grade level. In November 1968, seven children out of twenty-three or 30% of the group scored on grade level or above. One year later, thirteen out of twenty-five or 52% of the children were on or above grade level at the time of the testing.

Table II on the next page summarizes the results of comparing individual grade level scores to their equivalent grade level at the time of the test administrations.



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TABLE II

Obtained Grade Level Scores on California Achievement Test as Compared to Equivalent

Grade Level at the Time of Testing

ldren rel	0901	707	09	76	₹	99	Ω	₹
	or Above	1300	25	30	77	13	000	2
No. of Children Grade Level		496T	15		<del>*</del>	174	, ,	<del>-</del> -
	or Above	1968	9	c	٨	М		~
	Range	1969	7 to +1.7		8 to +1.1	-1.6 to +1.5		9 to +1.2
		1968	-1.1 to + .9  7 to +1.7		9 to +1.1  8 to +1.1	-1.0 to + .7		8 to + .9
	ian	1369	+		0		1 -	<b>↑</b>
	Med	961 8961	7.	`	2.5	יר אראאט	ì	1.5
	Mean Mean	6961	2° +	1	+.1			+
		1968	*	·.	1.1	. •	<b>†.</b> -	 
			;	Reading	Δrit.hmet.ic		Language	Total Battery

\* -: Indicates months below grade level

\*\* + : Indicates months above grade level

\*\*\* 0 : Indicates on grade level

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To test the null hypothesis that there was no significant difference between grade level scores obtained and equivalent (anticipated) grade scores a 't' test was used for each component part and total battery score for the testings in November 1968 and November 1969 yielding the following results. In 1968, the null hypothesis was rejected for the reading and language components and the total battery score. Both the reading and language components were significantly under the grade equivalent level at the .001 level of confidence and the total battery was significantly under the grade equivalent score at the .01 level of confidence. The null hypothesis could not be rejected for either the arithmetic component score in the November 1968 testing or any of the component or total battery scores in the November 1969 testing. Table III presents the 't' values for each of the component parts and total battery scores for each administration of the test.

## TABLE III

't' Values When Comparing Obtained Grade Level Scores to Grade
Equivalent Scores for November 1968 and November 1969

	November	1968	November 1969		
	't' score	$\mathbf{P}_{n'}^{n}$	't' score	P	
Reading	-4.705**	.001	1.223	N.S.##	
Arithmetic	1.347	N.S.	1.274	N.S.	
Language	-4.984**	.001	.110	N.S.	
Total Batter	ry-3.256*	.01	1.017	N.S.	

<sup>\*</sup> Indicates this would occur one time in a hundred by chance.



<sup>\*\*</sup> Indicates this would occur one time in a thousand by chance.

y'' Probability

<sup>##</sup> Non-significant

These results are preliminary but they show a positive trend. The following statistical interpretation can be applied. When the Project Concern children were initially tested in November 1968, their obtained scores were significantly below grade level in the component sections of reading and language and also in the total battery scores. One year later, there was no significant difference between the grade equivalent scores and the children's obtained scores in either the component parts or total battery. In other words, the variance from grade equivalent scores could occur by chance most of the time.

According to differences in results between these two testings over a one year period, preliminary conclusions confirm that the Cheshire suburban educational environment has been academically beneficial to the urban ghetto child.

