

FOLLOW-UP STUDY OF THE 1966 EMPORIA
HEAD START PROGRAM

A Thesis

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by

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CHAPTER I

DEFINITION OF PROBLEM

Statement of the Problem

The purpose of this study was to determine the relative effectiveness of the Head Start program as set up in Emporia during the summer of 1966. This "relative effectiveness", as measured by the Anton Brenner Developmental Gestalt Test of School Readiness (BGT), was determined by comparing three groups. The first group (Group E) consisted of culturally deprived children who completed Head Start in the summer of 1966 and attended kindergarten in the school year of 1966-1967. The second group (Group C₁) consisted of culturally deprived children who attended kindergarten in the 1966-1967 school year but did not participate in any Head Start program. The third group (Group C₂) consisted of children who were above the economic criterion for Head Start, and thus did not attend; but did attend kindergarten in the school year of 1966-1967.

Definition of Terms

Anton Brenner Developmental Gestalt Test of School Readiness (BGT). The BGT is a test "based on developmental

and learning principles, perceptual and conceptual differentiations of the child."¹

Culturally deprived children. Cultural deprivation is determined on the basis of the financial standing of the family. For instance, for non-farm household the income must be less than 1,500 dollars for one person with 500 dollars step increments for each additional person; for farm households the income must be less than 1,050 dollars for one person with 350 dollars step increments for each additional person; for welfare recipients there are no stated income levels. For a culturally deprived child to be eligible for Head Start under these criteria, he must be four years of age on or before June 5.²

Group C₁. Group C₁ consists of those culturally deprived children who attended kindergarten in Eureka, Kansas, during the school year of 1966-1967 but did not participate in any Head Start Program.

Group C₂. Group C₂ consists of those children who were above the economic criterion for Head Start, and thus

¹Anton Brenner, The Anton Brenner Developmental Gestalt Test of School Readiness Manual (Beverly Hills, California: Western Psychological Services, 1964), p. 5.

²Criteria for Cultural Deprivation, (unpublished paper compiled by the Federal Projects Co-ordinator for Kansas Unified School District #253).

did not attend; but did attend kindergarten in Emporia during the school year of 1966-1967.

Group E. Group E consists of those culturally deprived children who completed the Emporia Head Start program in the summer of 1966 and attended kindergarten in Emporia during the 1966-1967 school year.

H₀. H₀ is a symbol representing a null hypothesis.

Kindergarten. Kindergarten is defined according to Webster's dictionary as: "A school or class for young children, usually 4 to 6 years old, that develops basic skills and social behavior by games, exercises, toys, simple handicrafts, etc."³

the school board of any common-school district in the state or the board of education of any city of the first or second class shall have power to establish and maintain free kindergartens in connection with the public schools of said district or city, and may establish such courses of training, study and discipline and such rules and regulations governing such preparatory or kindergarten schools as said board may deem best. Such courses of training shall not be a prerequisite for the first grade of elementary school entrance.⁴

Thus kindergarten will be defined as any place meeting the above criteria.

³Webster's New World Dictionary of the American Language (College Edition), New York: World Publishing Company, 1962, p. 804.

⁴Adel F. Throckmorton, School Laws of Kansas, 1963 (Topeka, Kansas: Timberlake, State Printer, 1964), Statute Number 72-1201.

Mu (μ). Mu is defined as the "mean of a finite population of size N. . . given by the sum of its elements divided by N."⁵

Null hypotheses. A null hypothesis is defined as a "hypotheses of 'no difference' in tests of significance."⁶

Project Head Start. Project Head Start can best be defined by stating its purpose. It is a program:

. . . to organize and operate pre-school child development centers which create an environment to bring children to their full potential by improving the health and physical abilities of the poor, developing their self-confidence and ability to relate to others, increasing their verbal and conceptual skills, involving parents in activities with their children and providing appropriate social service for the family.⁷

Further,

. . . it is a local action program for the neediest children who will enter kindergarten or first grade in September, and will provide learning activities, medical and dental care, supervised field trips, balanced meals and contact with middle-class children and adults.⁸

⁵J. E. Freund and F. J. Williams, Dictionary / Outline of Basic Statistics (New York: McGraw-Hill Book Company, 1966), p. 62.

⁶Ibid., p. 72.

⁷Congressional Presentation, Office of Economic Opportunity, Volume 1 (April, 1965), p. 59.

⁸Ibid., p. 60.

Relative effectiveness. Relative effectiveness is an evaluation of the Head Start program in Emporia as based on BGT scores which indicate a child's degree of school readiness for first grade.

Significance. Significance will be operationally defined for this study as that level of confidence where $p \leq 0.05$ for a given t ratio. A t with a $p \leq 0.01$ will be "very significant."

Two-sample t test. It is

. . . a test concerning the difference between the means of two normal populations having the same standard deviation; it is based on independent random samples from the two populations.⁹

Hypotheses

The following null hypotheses were tested in this study.

1. There is no significant difference on the BGT between Group E and Group C_1 when both groups complete kindergarten ($H_0: \mu_E = \mu_{C_1}$).

2. There is no significant difference on the BGT between Group E and Group C_2 when both groups complete kindergarten ($H_0: \mu_{C_1} = \mu_{C_2}$).

⁹ Freund and Williams, op. cit., p. 108.

3. There is no significant difference on the BGT between Group C_1 and Group C_2 when both groups complete kindergarten ($H_0: \mu_{C_1} = \mu_{C_2}$).

Assumptions

The researcher made three assumptions for this thesis. First, it was assumed that all the children who participated in the Head Start program were culturally deprived. Second, it was assumed that kindergarten was a constant for all three groups in that no one group received differential treatment. And third, it was assumed that the BGT was not only a reliable (on test-retest, r 's range from 0.55 to 0.96)¹⁰ and valid (r BGT. Metropolitan Reading Test = 0.75)¹¹ instrument but that it was the single best instrument for measuring school readiness.

Limitations

For the purpose of this study certain variables were not considered even though they may play some part in creating school readiness.

1. Even though teacher differences, sex, interest, and motivation may be variables in creating school readiness they were not considered because they are outside the scope of this study.

¹⁰Brenner, op. cit., p. 24.

¹¹Ibid., p. 26.

2. In 1967 all the children in the study were between the ages of five to six years, therefore, age was not considered to be a variable.

3. The study is limited to the children who participated in the Emporia Head Start program in the summer of 1966 and to those children who were enrolled and attending the Emporia and Eureka kindergartens. The findings will be generalized only to those children from those schools who were used in this study.

4. Any differences that may exist between the culturally deprived children of Emporia and Eureka were not considered to be significant because of the economic similarities of the two communities and their close geographical proximity.

5. I.Q. variables are outside the scope of this study since it was not a factor in the selection of the groups.

6. The study is also limited to the findings of the BGT since no other instrument of measure was used in the Emporia Head Start program.

7. It is the purpose of this study to determine the effectiveness of the Head Start program in Emporia in the summer of 1966 as indicated by the children's degree of readiness for first grade as measured by the BGT.

CHAPTER II

REVIEW OF THE LITERATURE

The Head Start program was instituted on a national scale in 1965 by the Office of Economic Opportunity as one of the means to attack the poverty problem through children. Poverty is contagious in that poverty breeds poverty, but it is believed that this condition may be alleviated through education. This was reflected by Brown when he stated that:

. . . Head Start represented the first massive attack on the nation's poverty problem through an attempt to give pre-school children of the poor a chance to catch up with their kindergarten and first-grade classmates and reduce the likelihood of their becoming 'drop-out' candidates.¹

Brown went on to connect the theory of Head Start to the poverty problem.

Fundamental to Head Start was the belief that the early childhood years are the most critical point in the 'poverty cycle', a period when the creation of learning patterns, emotional development, and the formation of individual expectations and hopes take place at a rapid pace.²

Thus it becomes fairly evident that early childhood education has an important role in breaking up this 'poverty cycle'.

Culturally deprived children from impoverished

¹Holmes Brown, "Project Head Start," Ohio Schools (October, 1965), p. 24.

²Ibid., p. 24.

homes are deficient in many areas other than just being poor and this was emphasized repeatedly in numerous reports. For instance one author stated that:

. . . one of the most obvious lacks in the lives of these children was a meaningful father figure. In many homes, it was obvious . . . that there was no father or that the mother was left with the full responsibility for rearing the children.³

In addition to the absence of a "meaningful father figure", children from culturally deprived homes also are handicapped by other severe developmental disabilities.

They [culturally deprived children] are unable to relate themselves to other people. They tend to do poorly in language. They often have small vocabularies and are often unable to speak up or out. They often do not know the names of things or that things have names. They tend to feel uncertain as to who they are, what they look like or how they fit into the world. They often have never seen or worked with paper, pencils, crayons, scissors, puzzles or blocks and, frequently, they do not know how to use them in play.⁴

Since culturally deprived children are deficient in so many areas of intellectual growth and development, it is inevitable that they will have trouble in competition with their age mates in an "average" school. Probably due to their failures in school at this early age, they will not be able to relate themselves to or identify with the attitudes and values presented there. However, Head

³LeRoy Stahl, "Head Start-Flying Start," Montana Education, XLIII (September, 1965), p. 18.

⁴Ibid., p. 18.

Start attempts not only to broaden the culturally deprived child's experience in those things which he will encounter at school but attempts to involve the parents of these children in the Head Start program itself.

The parents [*italics in the original*] of the disprivileged child must be made to feel that the program is important and valuable for their child. The parents must be encouraged to come into the school for advice, for counseling and to help whenever possible. They must be given "know how" about the program so that they will understand what the child is doing in school and why he is doing it.⁵

Head Start, then, is not only a program to expand the culturally deprived child's experiences at a "school" but an attempt to help treat the child's cultural deficiencies through communication with his parents. One of the methods to help get parents acquainted with what schools and Head Start are trying to accomplish is through parental participation in Head Start programs. Thus the Head Start personnel hope to gain overt support of education in the home environment and, in a measure, help to further the child's growth and development.

The importance of furthering the growth and development of culturally deprived children by helping to alleviate deficiencies in the disadvantaged home was stressed by Shaw.

⁵Edith Cooper, "Program Aids Disadvantaged Pre-School Child," Pennsylvania School Journal (May, 1965), p. 405.

Program Head Start (1965) was also an attempt to remedy the deficiencies of the disadvantaged homes. . . . It was also based on research by Bloom (1964), who discovered that the period of most rapid growth for general intelligence and intellectuality came at the age of four and that the child's environment was one of the principal determinants of school achievement. The early years of growth were crucial, he found, for they served as the base for later development. He suggested compensation for environmental deprivation in the form of 'therapeutic procedures and conditions'.⁶

Since the early years of growth serve as a base for later development, it is apparent that the environmental conditions during these years have an important part in determining the course of the growth and development of the child. Thus Head Start may be one of the means to increase the experiential base necessary for school success while at the same time helping to facilitate the culturally deprived child's adjustment to the larger society.

Whether or not some type of extra "therapeutic procedures and conditions" in addition to Head Start will need to be instituted depends upon the outcome of longitudinal studies of the Head Start Project. However, these studies may vary considerably since it soon becomes apparent upon searching the literature that the types of curriculum utilized in Head Start programs are as variant as the number of local Head Start program reports.

⁶Frederick Shaw, "The Changing Curriculum," Review of Educational Research, XXXVI (June, 1966), p. 347.

If, though, the Head Start programs have lacked homogeneity, practically all of the literature on Head Start has pointed to the over-whelming immediate success of Project Head Start. However, the newness of Project Head Start has caused some authors to question whether or not the immediate success of the program is longitudinally retentive.

The research staff asked whether two months of intensive summer education could compensate for a large number of social and developmental failures which often severely cripple. Even if these children were to demonstrate remarkable improvement over the course of the summer, would this be maintained through the school year.⁷

This, then, has come to be one of the important questions that must be answered if the Head Start project is to be evaluated properly. However, little seems to have been done in this area as of yet, or at least little seems to have been published. Whether or not Head Start is effective on a longitudinal base depends upon many factors, one of which is the degree to which learning is facilitated. According to Goldsmith:

. . . each child must learn at his own rate of speed and according to his own readiness and capacity. None of these are static. Every child has a built-in inner mechanism for exploration, finding out,

⁷R. U. Siberstein, and others, "Can Head Start Help Children Learn?," The Reading Teacher, XIX (February, 1966), p. 350.

trying out, testing, learning. If he doesn't use it, can't use it, is prevented from using it, it atrophies, and a human potential diminishes.⁸

Thus it becomes apparent that it is important that each child have the facilities necessary for growth and development available at the time when they are needed to foster and stimulate these processes. And it is also important to realize that learning:

. . . is the process by which the child assimilates and absorbs, or accepts or rejects, uses or discards, remembers or forgets. The child's environment of things and of people, or opportunities and challenges, or monotony and meaninglessness, can stimulate or discourage learning, help or hinder growth and development.⁹

While Head Start programs have, in general, stimulated most areas of learning and development, one author believed that:

. . . perhaps the most significant boost that Head Start children are given is their introduction to the world of words. Coming from homes without books, where English is spoken poorly if at all, this vocabulary expansion (both in terms of exposure and actual use) gives them a real jump in their ability to learn through reading and conversation.¹⁰

⁸Cornelia Goldsmith, "Our Concerns for Young Children Today," Young Children (November, 1966), p. 74.

⁹Ibid., p. 75.

¹⁰C. S. Carleton, "Head Start or False Start?," American Education (September, 1966), p. 20.

Even though it is generally accepted that Head Start has an important role to play in fostering child growth and development, especially in the area of learning, the program should be approached with caution if other organized school facilities are not evaluated, for as one author pointed out:

. . . the best pre-school program can do more harm than good if the children don't have an appropriate kindergarten program into which they can step--and if early grade years are not designed to carry through what was begun in the preschool program.¹¹

The importance of an appropriate kindergarten program for Head Start children was further emphasized by Knoll in the following statement.

Educational gains, observers believe, have been dissipated where children entered regular classrooms that were unprepared to capitalize on the 'head start' of the summer session.¹²

It seems to be evident that Head Start is effective in fostering the growth of children. The advantages instituted by Head Start may be lost or at least some what impaired if some type of regular school preparation is not made to capitalize on them. It is generally agreed that Head Start is effective in promoting an increase in the growth of culturally deprived children over what they normally would experience without the program. Further,

¹¹Erwin Knoll, "Will Public Schools Control Head Start?," Nation's Schools, LXXVII (June, 1966), p. 48.

¹²Ibid., p. 49.

there is agreement that some type of "school" preparation needs to be made in order to take advantage of the results of Head Start. But, there seems to have been few objective research studies published as most of the literature was subjective and based upon people's impressions of what happened to Head Starters. However, one author did report the following material.

. . . Members of John Hopkins University department of child psychiatry found that Head Start pupils gained 30 to 40 points on the Peabody Picture Vocabulary Test, as compared with children not enrolled. Head Start pupils also gained about 10 points in a standard I. Q. test. And in a University of Texas study, first grade teachers reported Head Start children to be more proficient in learning, more intellectually curious, and better adjusted in the classroom than other children.¹³

It is evident from the previous review of literature that Head Start is effective in promoting the growth of culturally deprived children and may be one of the means of breaking the 'poverty cycle'. It has also been indicated that there is a need for a more objective assessment of Head Start, especially in what is done for the child in terms of establishing a longitudinal learning base. These objective studies are needed not only for an assessment of Head Start programs, but for determining what types of early grade programs are necessary to continue the optimal expansion of the child's growth.

¹³Erwin Knoll, "Results and Problems of Project Head Start," Education Digest, XXXII (September, 1966), p. 5.

CHAPTER III

DESIGN OF STUDY

Introduction

The general approach of this study was to analyze each of the test or tests for the three groups and to make inter and intra-group comparisons on the basis of these tests. All generalizations were made solely on the basis of these tests.

Subjects

The population of this study consists of three groups. These three groups are (1) culturally deprived children with Head Start and a year of kindergarten (Group E), (2) culturally deprived children without Head Start and with a year of kindergarten (Group C₁), and (3) children above the economic criterion of Head Start, but with a year of kindergarten (Group C₂). With the exception of Group C₁ (these children attended Eureka, Kansas, schools during the same time period as the other children in the study), the children in this study were enrolled in the Emporia Public Schools for the 1966-1967 school year. The findings of this study were generalized to only the children who participated in this study and to no others.

The culturally deprived children with Head Start (Group E) are the ones who completed the Head Start program in the summer of 1966 and attended kindergarten in Emporia during the 1966-1967 school year. These children were given the BGT before and after the Head Start program and at the end of kindergarten.

The culturally deprived children without Head Start (Group C₁) did not participate in a Head Start program. They attended the Eureka Public Schools in kindergarten during the 1966-1967 school year and were given the BGT at the end of kindergarten.

The children of families who were above the economic criterion for Head Start and thus did not participate in that program constituted Group C₂. These children attended Emporia kindergarten in the school year of 1966-1967 and were given the BGT at the beginning and end of kindergarten.

Instrumentation

The data gathered consists of the test scores made on the BGT by subjects. The BGT was administered to each subject individually and the collective scores analyzed. The "BGT norms" are based on Michigan kindergarten

pupils with an age range from 4 years and 9 months through 6 years and 10 months."¹ The BGT norms are based on 748 children taken from the same school system.² Further, the

. . . BGT is most predictive when used with children of 5 years and 6 years; but it reaches its ceiling with normal, average children of 7 years or 8 years. Most normal, average children of 7 years and 8 years will achieve performances of 100% on the BGT.³

The BGT has an r of .75 with $n = 258$ for validity.⁴ The reliability for the BGT and its several subtests has r 's which vary between .55 with an $N = 100$ and .96 with an $N = 95$.⁵

The BGT was chosen because first, it was easy to administer and score; and, second, it measured school readiness which was one of the principal functions of Head Start.

¹ Anton Brenner, The Anton Brenner Developmental Gestalt Test of School Readiness Manual (Beverly Hills, California; Western Psychological Services, 1964), p. 27.

² Ibid.

³ Ibid., p. 5.

⁴ Ibid., p. 26.

⁵ Ibid., p. 24.

Procedures

The data for Group E tests 1 and 2 and for Group C₂ test 1 was taken from the records available of the 1966 Head Start Project in Emporia. Testing schedules were set up for a final administration of the BGT to Groups E, C₁ and C₂. Inasmuch as the number of culturally deprived children in Emporia who had not participated in Head Start was not sufficiently large enough to constitute Group C₁, the BGT was administered to children in Eureka, Kansas, who met the criteria of cultural deprivation and had never participated in a Head Start program.

The data for tests 1 and 2 of Group E and test 1 of Group C₂ as well as the data collected by the author (Group E test 3, Group C₁ test 1, and Group C₂ test 2) was compiled for analysis.

Analysis of Data

On the basis of the six tests that were given, inter and intra-group comparisons were made and the t test (two-sample) was used to test for a statistically significant difference between two means. A t test was run between the means of the following tests for comparative purposes: Group C₁ test 1 and Group C₂ test 2, Group C₁ test 1 and Group E test 3, Group C₂ test 2 and Group E test 3, Group C₂ test 1 and Group C₂ test 2, Group E test 1 and Group E test 2, Group E test 1 and Group

test 3, Group E test 2 and Group E test 3. From these obtained t ratios the level of significance can be found by entering it into a t table with the given degrees of freedom. Then, from the level of significance, the hypotheses can either be accepted or rejected.

CHAPTER IV

RESULTS OF THE STUDY

The first set of t analyses, in Table I, were done on the means of the last test for each group or Group E test 3, Group C_1 test 1, and Group C_2 test 2 to determine if there was any statistically significant difference in their readiness for first-grade as measured by the BGT. A t of 4.547 ($p < 0.01$) was found between the means of Group C_1 test 1 versus Group C_2 test 2; Group C_2 was significantly better than Group C_1 . A t of 2.101 ($p < 0.05$ but > 0.02) was found between the means of Group C_1 test 1 versus Group E test 3; Group E was significantly better than Group C_1 . A t of -2.838 ($p < 0.01$) was found between the means of Group C_2 test 2 versus Group E test 3; Group C_2 was significantly better than Group E. Thus, while Groups C_2 and E both did significantly better than Group C_1 , Group C_2 also did significantly better than Group E.

The second t analysis was done between the means of the first and last tests of Group C_2 . The resulting t ratio ($t = 3.838$) for the analysis was found to have a $p < 0.01$, which means that there was a significant difference between the two means; or, one is 99 per cent confident that a nonchance difference between the two

means exists. Here, as shown in Table 1 and Figure 1, Group C_2 test 2 was significantly better than Group C_2 test 1.

TABLE I

A COMPARISON OF THE MEAN SCORES ON THE ANTON BRENNER
DEVELOPMENTAL GESTALT TEST OF SCHOOL READINESS
FOR GROUPS E, C₁ AND C₂

Group	Test	Mean	Standard Deviation	Degrees of Freedom	<u>t</u> ratio	Level of Confidence (<u>p</u>)
E	1	23.357	11.97	82	2.058	0.05 > p > 0.02
E*	2	29.190	13.94			
E	1	23.357	11.97	82	13.249	< 0.01
E*	3	56.976	11.28			
E	2	29.190	13.94	82	10.041	< 0.01
E*	3	56.976	11.28			
C ₁	1	50.815	12.78	67	2.101	0.05 > p > 0.02
E*	2	56.976	11.28			
C ₂ *	2	64.033	9.01	70	-2.838	< .01
E	3	56.976	11.28			
C ₁	1	50.815	12.78	55	4.547	< 0.01
C ₂ *	2	64.033	9.01			
C ₂	1	52.267	14.16	58	3.838	< 0.01
C ₂ *	2	64.033	9.01			

*Group and test which did significantly better.

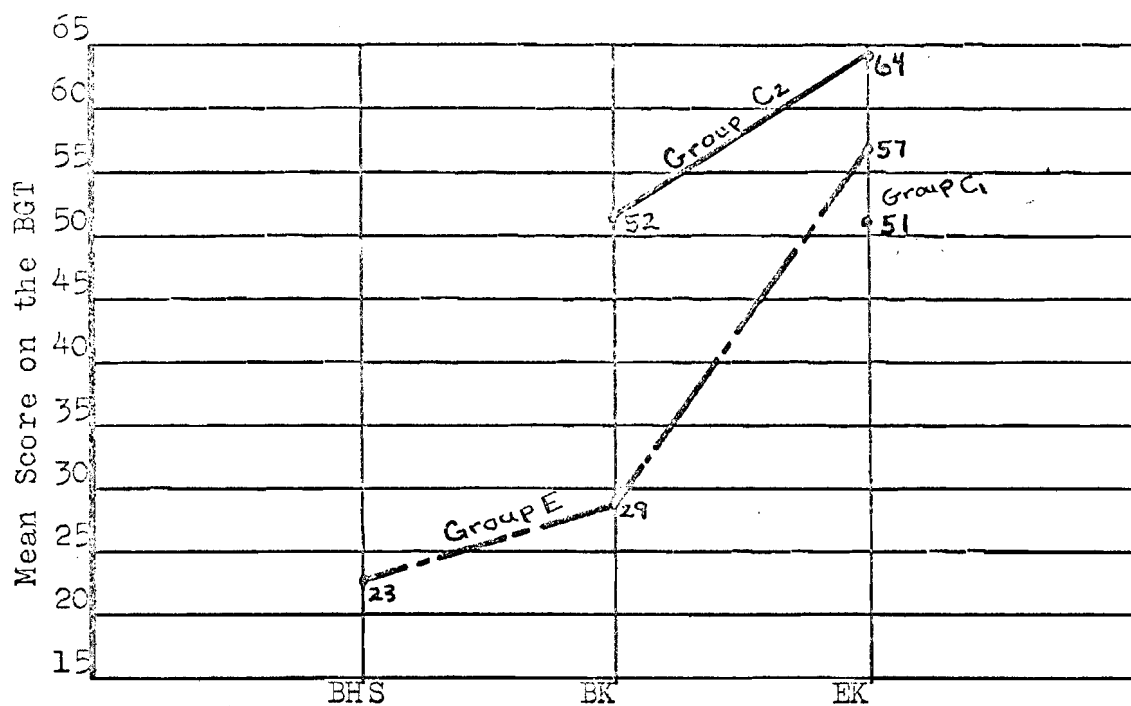


FIGURE I

A COMPARISON OF THE MEAN SCORES ON THE
ANTON BRENNER DEVELOPMENTAL GESTALT
TEST FOR GROUPS E, C₁ AND C₂

BHS: Beginning Head Start

BK: Beginning of Kindergarten

EK: End of Kindergarten

The third analysis was done between the means of the first, second, and third tests of Group E to determine if there was a statistical significant difference between the means of these tests. A t of 2.058 ($p < .05$ but $> .02$) was found between the means of Group E test 1 versus Group E test 2; Group E test 2 was significantly better than Group E test 1. A t of 13.249 ($p < .01$) was found between the means of Group E test 1 versus Group E test 3; Group E test 3 was significantly better than Group E test 1. A t of 10.041 ($p < .01$) was found between the means of Group E test 2 versus Group E test 3; Group E test 3 was significantly better than Group E test 2. Thus test 3 was significantly better than both tests 1 and 2, while test 2 was significantly better than test 1.

Both the second and third analysis serve to show that there was a significant improvement in the mean scores on the BGT between the beginning and end of kindergarten for both Groups E and C₂; and that there was a significant improvement in the mean scores on the BGT between the beginning and end of Head Start for Group E

Since the t ratios between the means of the last test for each of the three groups as compared with each other were all statistically significant, the author

fails to accept the null hypotheses that there was no significant difference on the BGT between Group E versus Group C₁, Group E versus Group C₂, and Group C₁ versus Group C₂ at the end of kindergarten.

CHAPTER V

SUMMARY AND CONCLUSIONS

It was the purpose of this study to determine the effectiveness of the Head Start program in Emporia. As can be seen from the data presented in both Table I and Figure I, the Head Start children not only made a significant improvement ($p < 0.05$) between the beginning and end of the Head Start program on the BGT but continued to show unexpected gain scores on the BGT at the completion of the first year of kindergarten. However, it should be noted that even though the Head Start children made a very significant increase ($p < 0.01$) in performance on the Anton Brenner Developmental Gestalt Test during kindergarten, they still did not come up to the level of performance displayed by the children above the economic criterion for Head Start. But the Head Start children were significantly ($0.05 > p > 0.02$) above those culturally deprived children without Head Start. The data would seem to indicate that while the Head Start program in Emporia was effective in helping to further the school performance of culturally deprived children, it still was not effective enough to bring the Head Start children up to the level of performance of children above the economic criterion for Head Start and thus some form of additional help appears warranted for culturally deprived children.

The author suggests that longitudinal studies be carried out on the 1966 Head Starters and successive groups of Head Starters to help determine whether or not the immediate gain made in school readiness as measured by the Anton Brenner Developmental Gestalt Test is continued in successive years and whether the gap that exists between the children above the economic criterion for Head Start and the Head Starters increases or decreases. A projection of the mean score increases (made on the basis of data presented in Figure I) of Group C₂ and Group E would indicate that by the end of first grade the performance of Group E on the BGT would be the same as or better than Group C₂. However, this conjecture should be verified through research.

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