LONGITUDINAL STUDY REPORT

For The

Early Childhood Workgroup
SJC Human Services Commission

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By

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INTRODUCTION

It is customary to assess the immediate effects of early education programs. For example, did the child achieve developmental milestones, did parents demonstrate greater knowledge about child rearing, and did the quality of parent-child interaction increase? It is less common, but equally important, to assess long-term program effects, particularly how well the program prepared the child to succeed in school. This report presents preliminary findings on the third grade MEAP scores of children that participated in St. Joseph County's Head Start and Great Start Readiness Programs (GSRP)

METHODOLOGY

Reading, writing, and mathematics MEAP scores were sought for all children in the sample. Data were entered into a database and analyzed using the Statistical Package for the Social Sciences (SPSS, Version 16). All data and findings are presented in ways that makes it impossible to identify any individual student, parent, teacher, or school.

SAMPLE

There were **365** students in the sample. Fifty-four percent (**n=196**) were in Head Start and **46% (n=169)** in GSRP (See Table 1). MEAP scores were attained for **229** students or **63%** of the sample. Three Rivers had the highest percentage of obtained MEAP scores at **81%** and Head Start the lowest at **52%** (See Table 2). There were **127** MEAP's found for GSRP and **102** for Head Start. Table 3 has the percentage of MEAP tests found for the three subject areas of reading, mathematics, and writing. **Sixty-three percent** of the MEAPS for Head Start were in all three areas and **37%** were for reading and mathematics. For GSRP, **68%** were in all three areas and **31%** in reading and mathematics.

Table 1: Total Sample

Program/Site	N	%
Head Start	196	54
Colon*	59	16
Three Rivers	37	10
Sturgis	37	10
White Pigeon/Constantine	36	10
Total	368	100

*Colon includes Burr Oak, Centreville, Mendon, and Nottawa

Table 2: Have MEAP Scores

Program/Site	Have MEAP	Sample	% of Sample	% of Sample Missing MEAP's
Head Start	102	196	52	48
Colon*	43	59	73	27
Three Rivers	30	37	81	19
Sturgis	27	37	73	27
White Pigeon/Constantine	27	36	75	25
Total Head Start	102	196		48
Total GSRP	127	169		25
Total	229	365		63

*Colon includes Burr Oak, Centreville, Mendon, and Nottawa

Table 3: MEAP Scores for Subject Areas

	Read &Math		ALL Areas		Math		Have MEAP
	N	%	N	%	N	%	N
Head Start	38	37	63	63	--	--	102
MSRP	39	31	86	68	2	2	127

Data were collected on the total number of days that students attended and had unexcused absences from Head Start or GSRP programs. These data were obtained to stratify students by their level of attendance and total number of days of program participation. For Head Start, the total days of program participation ranged from **8 to 201** days with a mean of **92** and a median of **103**. There was considerable variance as evidenced by a standard deviation of **41** days. Days attended were broken into three groups: **8 to 49** days, **56 to 98** days, and **101 to 201** days. Attendance percentages were sorted into three categories: **28 to 67**, **70 to 89**, and **90 to 100**. Table 4 has these figures.

Table 4: Days Attended and Attendance Percentage for Head Start

Days Attended	N	%
8 to 49	19	19
56 to 98	30	29
101 to 201	53	52
Attendance Percentage	N	%
28 to 67	18	18
70 to 89	41	40
90 to 100	43	42

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For GSRP, the total days of program participation ranged from **20 to 136** days with a mean of **108** and a median of **110**. There was moderate variance with a standard deviation of **22** days. Days attended were broken into three groups: **20 to 99** days, **100 to 119** days, and **120 to 136** days. Attendance percentage was reduced to three categories: **38 to 69**, **77 to 89**, and **90 to 100**. Table 5 has these figures.

Table 5: Days Attended and Attendance Percentage for GSRP

Days Attended	N	%
20 to 99	26	20
100 to 119	61	48
120 to 136	40	32
Attendance Percentage	N	%
38 to 69	4	3
77 to 89	30	24
90 to 100	93	73

All students with a MEAP score had attendance data.

MEAP SCORES ASSESSMENT

The third grade MEAP measures what Michigan educators believe all students should know in reading, mathematics and writing. Although students were tested in writing in 2009, this subject area was dropped from third grade testing. A state writing average is available but district averages are not. Scores are divided into four levels. Table 6 below has MEAP levels.

Table 6: MEAP Levels

Statewide	Level 4 Not Proficient	Level 3 Partially Proficient	Level 2 Proficient	Level 1 Advanced
Reading	196-279	280-299	300-337	338-419
Writing	254-273	274-299	300-356	357-409
Math	198-278	279-299	300-326	327-416

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Table 7 below has mean averages. The columns are as follows:

State:	All students tested in the state.
District:	All students in the district (Mean average of 9 county school districts).
EE:	Students who participated in Head Start or GSRP
GSRP:	Students in the GSRP program
HS:	Students in the Head Start program

**Table 7: MEAP Mean Averages for State,
District and Early Education Students**

	State	District	EE	GSRP	HS
Read	331	326	328	329	325
Math	330	336	328	328	327
Writing	303	---	301	303	299

MEAP Findings

Reading

- EE is 3 points below the state average and ***2 points above district average***.

- GSRP is 2 points lower than state average and ***3 points above district average***.

- HS is 6 points lower than state average and ***1 point below district average***.

Mathematics

- EE is 2 points below state average and ***8 points below district average***.

- GSRP is 2 points lower than state average and ***8 points below district average***.

- HS is 3 points lower than state average and ***9 points below district average***.

Writing

- EE is ***2 points below*** state average.

- GSRP is ***the same*** as the state average.

- HS is ***4 points lower*** than state average.

All but one of the EE averages is in the "Proficient" categories. The Head Start writing average is only one point below "proficient." These findings are very positive and particularly noteworthy when considering the educationally at-risk status of students participating in Head Start and GSRP programs. Generally speaking, Head Start enrolls the most educationally at-risk student population.

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Table 8 has MEAP scores for GSRP children controlled by program participation. *MEAP scores positively correlate with participation rates*.

Table 8: Mean Averages for State, District and GSRP Students by Participation Intensity

	State	District	GSRP	Total Number of Days			Attendance Percentage		
				20-99	100-119	120-136	38-69	77-89	90-100
Read	331	326	330	316	333	332	306	325	332
Math	330	336	328	319	331	329	305	326	330
Writing	303	---	303	295	304	308	276	303	304

Reading

- Enrolled 100-119 days have an average score *17 points higher than 20-99 days*.

- Enrolled 120 to 136 days have an average score *16 points higher than 20-99 days*.

- Attendances of 77-89 percent have an average score *19 points higher than 38-69 percent*.

- Attendances of 90-100 percent have an average score *26 points higher than 38-69 percent and 7 points higher than 77-89 percent*.

Mathematics

- Enrolled 100-119 days have an average score *12 points higher than 20-99 days*.

- Enrolled 120 to 136 days have an average score *10 points higher than 20-99 days*.

- Attendances of 77-89 percent have an average score *21 points higher than 38-69 percent*.

- Attendances of 90-100 percent have an average score *25 points higher than 38-69 percent and 4 points higher than 77-89 percent*.

Writing

- Enrolled 100-119 days have an average score *9 points higher than 20-99 days*.

- Enrolled 120 to 136 days have an average score *13 points higher than 20-99 days*.

- Attendances of 77-89 percent have an average score *27 points higher than 38-69 percent*.

- Attendances of 90-100 percent have an average score *28 points higher than 38-69 percent.*

Table 9 has MEAP scores for Head Start children controlled by program participation.

Table 9: Mean Averages for State, District, and Head Start Students by Participation Intensity

	State	District	HS	Total Number of Days			Attendance Percentage		
				8-49	56-98	101-201	28-67	70-89	90-100
Read	331	326	325	324	328	324	322	327	326
Math	330	336	328	323	328	328	317	330	328
Write	303	---	298	302	305	294	300	301	296

The Head Start findings are perplexing compared to the GSRP findings. For example,

- For reading, the group with ***the lowest number of days had the same score as the group with the highest number of days.*** The ***middle group has the highest*** averages (+4).

- For math, the ***middle and highest groups has a 5 point higher average*** than the lowest number of day's group.

- For writing, the ***lowest day's group average is 8 points higher*** than the highest day's group. However, the ***middle group has the highest average score***.

- For reading and math, the groups with ***the middle and highest attendance percentage have higher averages than the lowest percentage group.***

- For writing, the highest attendance percentage group had the ***lowest MEAP average score.***

These findings may be due to **small samples or other variables** that need to be factored into the analysis. No conclusions can be drawn on the data currently available.

MAJOR FINDINGS AND RECOMMENDATIONS

All but one of the EE averages is in the "Proficient" categories. The Head Start writing average is **just one point below** "proficient." These findings are very positive since both Head Start and GSRP serve educationally at-risk students. Head Start enrolls the most educationally at-risk student population.

GSRP MEAP scores **positively correlate** with participation rates. This pattern was **not found** for Head Start children. A **larger sample** that **controls for other important variables** (e.g., children's special needs, parent's last grade completed, housing density) would be helpful when analyzing Head Start MEAP data.

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These study findings serve as a springboard for **constructive dialogue** between early education program staff, teachers, administrators, parents, and community groups. It is recommended that the Early Childhood Workgroup **identify the best measures** for determining the school readiness and school performance of children that participate in early education programs. This includes **demographic data** such as parents' last grade completed, family income, and special needs. Measures should encompass **academic, behavioral, and social domains**. A **relational database** that **coordinates important data from all county school districts** would be invaluable.

It would be valuable to **merge a subsequent cohort of EE students** in this database. Cohorts should only be merged if the eligibility criteria and program curriculum is **relatively equivalent** between program years.