

Champs After-School Program  
MetaAnalysis of Outcome Evaluations  
FY2003-FY2005

Executive Summary  
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**Champs Program Description**

In FY2003, a consortium of private foundations, non-profits organizations, and the School District of Palm Beach County joined efforts to create Champs, an academic enrichment component added to an existing District supported after-school childcare programs. The objectives of the Champs program are twofold: (1) To increase after-school staff skills in facilitating academic enrichment curriculum and (2) To increase the academic achievement of students who participate in the Champs program.

The program is implemented by an Executive Director, a Program Manager, three Program Specialists who support approximately 13 sites each, and one site based head teachers assigned to each school. Students in grades pre-kindergarten through sixth grade participated in the program across 40 implementation sites which was expanded in the second year of implementation to include a Beacon school centers and community based organizations (CBO).

After-school program staff who completed 12 hours of facilitative teaching strategies training delivered one of three curriculum titles created by Foundations, Inc. each year the program was implemented and evaluated. The content and activities of all curriculums were aligned to the Sunshine State Standards Language Arts, Literacy, and Mathematics strands by the curriculum developers. The curriculum was designed to be implemented with third grade students and was modified so that the content and activities were developmentally appropriate for students in either higher or lower grade levels.

The Champs program was designed to be implemented in the same way across all program sites. During the after-school programs, students rotated through activities including snack time, free time to play outdoors, homework assistance, Champs, and indoor recreational activities tailored to meet the interests of students and resources of each site. Students participated in Champs for one hour a day, four days per week. On average, students complete 1 lesson per day.

**Evaluation Description**

Two purposes guided this evaluation. The first purpose of this evaluation is to determine which disaggregated groups of students in grades three through five derived the greatest academic impact by participating in Champs. The second purpose of the evaluation is to describe which teacher behaviors are most implemented during any given Champs lesson.

Evaluation Questions:

1. Were average spring achievement test scores of CHAMPS participants greater than those of comparable nonparticipants?
2. Did students who participated in CHAMPS achieve greater reading and mathematics gains on the FCAT and SRI-I than comparable students who did not participate in Champ?
3. Which of the daily instructional practices that are expected to be used with every Champs lesson are implemented with greatest skill?

Measures

The Champs program was evaluated by examining data that describes 1) student achievement and 2) instructional behaviors. Student Achievement data including scores from Florida Comprehensive Assessment Reading and Math Tests and Scholastic Reading Inventory were made available by the School District of Palm Beach County. Champs instructor instructional behavior data was collected by the Champs program managers during their winter instructor observations. Effect sizes were computed on statistically significant results ( $p < .05$ ) to quantify the effectiveness of program activities.

## Subjects

### *Students*

An outcome evaluation was conducted each year for three years. Third through fifth grade students<sup>1</sup> who participated in Champs were included in the studies. A randomly selected demographically matched group of students who attended the same schools, but not aftercare or Champs, was selected to serve as a comparison group.

### *Instructors*

In FY2006, Champ instructor behaviors were observed and rated on a three point rubric. The behaviors were aggregated and reported by program site.

To answer question one, a one-way analysis of covariance for unbalanced groups was used to analyze the data. Questions two was analyzed using a repeated measures analysis of covariance for unbalanced groups. For all analysis, the group's prior reading and mathematics performance was equated statistically by using a covariate. Question three was answered by tabulating information gathered by the Champs program management observation checklist. Effect size measures were computed for F-tests that were statistically significant ( $p < .05$ ) by calculating Cohen's  $d$  from F-tests when you don't have MSE (Thalheimer and Cook, 2002).

## Findings

### **Question 1: Were average spring achievement test scores of CHAMPS participants greater than those of comparable nonparticipants?**

In mathematics, among third graders, the average spring FCAT Mathematics score for **LEP** students at SACC sites was significantly higher than their counter parts in the comparison group ( $p < .05$ ). The effect sizes was small ( $d = .16$ ). At Beacon and CBO sites, the average spring FCAT Mathematics scores for Champs students did not differ from comparison group students. Among fourth and fifth graders, the average spring FCAT Mathematics scores for Champs students at SACC, Beacon, and CBO sites did not differ from comparison group students overall or by disaggregated groups.

In reading:

Third Grade

#### **SACC**

- Among third graders, **Hispanic** students were significantly higher on spring FCAT Reading compared to students in the comparison group ( $p < .05$ ,  $d = .28$ ).

#### **Beacon**

- Among third graders at Beacon sites, **All** students were significantly higher on spring FCAT Reading compared to students in the comparison group; however, the effect size was negligible ( $p < .05$ ,  $d = .13$ ). **Hispanic** third grade students were significantly higher on spring SRI-I than comparison groups ( $p < .05$ ,  $d = .29$ ). The effect size was small.

#### **CBO**

- Among third graders at CBO sites, **LEP** students were significantly higher on spring FCAT Reading than students in the comparison group. The effect size was small ( $p < .05$ ,  $d = .32$ ).

Fourth Grade

#### **SACC**

- Among fourth graders, **All, African-American, and LEP** students were significantly higher on spring FCAT Reading than respective comparison groups. Effects sizes spanned negligible for all ( $p < .05$ ,  $d = .11$ ), and small for African-American ( $p < .05$ ,  $d = .21$ ) and LEP ( $p < .05$ ,  $d = .35$ ).

#### **Beacon**

- At Beacon, the average spring FCAT Reading and SRI-I scores for fourth grade Champs students did not differ from comparison group students.

#### **CBO**

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<sup>1</sup> Students in second through tenth grade participate in the School District of Palm Beach County district wide testing program. However, there is no way to determine prior achievement for second grade students.

- Among fourth graders, **All, African-American, and FRL** students were significantly higher on spring FCAT Reading than the comparison group ( $p < .05$ ). Their respective effect sizes were small (.17, .20, .20).

#### Fifth Grade

##### **SACC**

- Among fifth graders, **All, African-American, Hispanic, FRL, and LEP** students were significantly higher on spring SRI-I Reading than respective comparison groups. Respective effects sizes spanned negligible to moderate ( $p < .05$ ,  $d = .16, .21, .50, .19, .42$ ).

##### **Beacon**

- Among fifth graders, **Hispanic** students were significantly higher on spring SRI-I than respective comparison groups. The effect size approached moderate ( $p < .05$ ,  $d = .44$ ).

##### **CBO**

- At CBO sites, the average spring FCAT Reading and SRI-I scores for fifth grade Champs students did not differ from comparison group students.

### **Question 2: How does the FCAT and SRI-I reading and mathematics gains of students who participated in Champs compare to the reading and mathematics gains of students who did not participate in Champs?**

Tables 13-21 in Appendix A show the group sizes, average scores, standard deviations, F-test values and significance level for each of the scores and program types analyzed.

#### Answer:

#### *MATHEMATICS*

#### Fourth-Fifth Grade

##### **SACC, Beacon, and CBO**

- Among fifth graders at SACC sites, **All** students demonstrated greater gain on FCAT Mathematics than their counterparts in the comparison group ( $p < .05$ ,  $d = .10$ ) although the effect size was negligible.
- Among fourth graders at SACC, Beacon, and CBO sites, the average gain demonstrated on FCAT Mathematics for Champs students did not differ from comparison group students overall or by disaggregated groups.
- Among fifth graders at Beacon and CBO sites, the average gain demonstrated on FCAT Mathematics for Champs students did not differ from comparison group students overall or by disaggregated groups.

#### *READING*

#### Third Grade

##### **SACC, Beacon, and CBO**

- Among third graders at SACC, Beacon, and CBO sites, the average gain demonstrated on SRI-I between fall and spring for Champs students did not differ from comparison group students overall or by disaggregated groups.

#### Fourth Grade

##### **SACC**

- Among fourth graders, **All, African-American, and FRL** students demonstrated significantly greater gains spring FCAT Reading than respective comparison groups. Respective effects sizes spanned negligible to small for ( $p < .05$ ,  $d = .11, .21, .35$ ).

##### **Beacon**

- Among fourth graders, **African-American** students demonstrated significantly greater gains spring FCAT Reading than respective comparison groups ( $p < .05$ ,  $d = .17$ ). The effect size was small.

##### **CBO**

- Among fourth graders, **All, African-American, and FRL** students demonstrated significantly greater gains spring FCAT Reading than respective comparison groups. Respective effects sizes were small ( $p < .05$ ,  $d = .17, .20, .19$ ).

## Fifth Grade

### SACC

- Among fifth graders, **All**, students demonstrated significantly greater gains on FCAT Reading than the comparison groups ( $p < .05$ ,  $d = .10$ ). While **All**, **Hispanic**, **FRL**, and **LEP** students demonstrated significantly greater gains on SRI-I Reading than respective comparison groups. Respective effects sizes spanned small to moderate ( $p < .05$ ,  $d = .16, .40, .24, .51$ ).

### Beacon

- Among fifth graders, **Hispanic** students demonstrated significantly greater gains on SRI-I than the comparison group. The effect size was small ( $p < .05$ ,  $d = .38$ ). FRL students demonstrated significantly greater gains on FCAT Reading than the comparison group. The effect size was small ( $p < .05$ ,  $d = .18$ ).

### CBO

- Among fifth graders at CBO sites, the average gain demonstrated on FCAT Reading and SRI-I for Champs students did not differ from comparison group students overall or by disaggregated groups.

### Questions 3: Which of the daily instructional practices that are expected to be used with every Champs lesson are implemented with greatest skill?

Tables 1-3 in Appendix B shows the percent of instructors demonstrating unsatisfactory, basic, and proficient skill implementing the key components included in each Champs lesson.

#### Answer:

- There is no statistically significant difference between the instructor performance by program site.
- 60% or more instructors demonstrate proficient skill
  - *Teacher and Student Report*: Interaction with students is supportive and positive, reflecting warmth, caring, and reciprocal respect. Students are valued for who they are, regardless of developmental or cultural norms.
- 50% - 59% of instructors demonstrate proficient skill
  - *Monitoring and Response to Student Behavior*: Teacher is alert to student behavior. Monitoring by teacher is subtle and preventative. Teacher response to misbehavior is appropriate, consistent, and respectful of the students' dignity. Student behavior is generally appropriate.
  - *Delivery of Directions and Procedures*: Directions and explanations are clear to students and seldom require clarification. Directions are modeled effectively. The teacher addresses misunderstanding and adjusts directions accordingly.
  - *Evidence of Student Engagement*: Teacher successfully engages majority of the students in activities.
- 49% or less instructors demonstrate proficient skill
  - *Expectations and Procedures for Behavior, Learning*: Expectations for behavior and procedures are clearly communicated and appear to have been developed keeping the needs of the students in mind. The teacher and the students model the values of respect, dignity, honesty, responsibility, and teamwork.
  - *Knowledge of Content*: Demonstrates extensive knowledge of subject matter, is able to connect learning to real world and uses cross-curricular applications, where appropriate.
  - *Lesson Structure*: Establishes and articulates goals for learning with high expectations for all students. Instructional activities are inter-related are clearly aligned with the curriculum and lesson format.
  - *Structure and Pacing of Lesson*: The lesson has a clearly defined structure around which the activities are organized, allowing for reflection and closure as appropriate. Pacing of the lesson is appropriate.

### Limitations

This study compared the reading and mathematics achievement outcomes for students participating in Champs to a demographically matched, randomly selected group of students attending the same schools during the day as program participants. All students participating in schools implementing Champs through SACC sites had the opportunity to participate in the Champs program. The eligibility criteria required to participate in a community based organization and subsequently a Champs program sponsored by a CBO, vary by site. Beacon school program

staff selected students to participate in Champs on a case by case basis. No effort was made to control the effects that program self-selection could have on the academic achievement of students in Champs. In a study of the benefits of different types of after-care arrangements, Posner and Vandell (1994) found significant relationships between race, maternal education, and family income. Findings suggested that differences among these variables affected the type of care parents chose for their children and differences in student achievement based on the type of after-school in which students participated.

The instructor behavior ratings are reported but should be interpreted cautiously as interrater reliability has not been established. The instructor behaviors should be interpreted as an aggregate of an employee performance evaluation.

### **Discussion**

In addition to comparing Champs students to students who are similar but do not attend school provided aftercare programs each year Champs was implemented, this meta-analysis was conducted to determine which students Champs after-school enrichment program has the greatest effect regardless of the curriculum being used. Determining which students benefit most by Champs is challenging due to two limitations. First, because students self select to participate in Champs, the numbers representing each FCAT achievement level is not adequate for a separate analysis by FCAT achievement level. Second, variation contained in the findings of each year's individual evaluation suggests that each curriculum may have varying strengths in specific content areas. Multiple evaluations of a single curriculum may help answer the question of who benefits most by allowing each evaluation to determine if program effects are consistent over multiple years with specific groups of students. In spite of the data limitations, the instructor behavior data, suggest that the instructional behaviors are consistent across program site types. Therefore, variations in student achievement by program site type are not attributable to instructor performance. Even though a complete analysis by achievement level is not possible, the data suggests, and has suggested over multiple years, that students participating at SACC sites benefit the most from participating in Champs. The majority of students participating at SACC sites are FCAT Achievement Level 3 and above.

### **Conclusions**

Compared to students who did not attend after-school child care at sites implementing Champs, the data suggests that the Champs after-school program positively impacted the reading achievement of fourth and fifth grade students at SACC sites and fourth grade students at CBO sites. The data suggests that all and minority disaggregated groups demonstrated the greatest effects of the program. Champs programs operating from SACC sites produced the greatest impact on the academic achievement of students. The majority of students participating at SACC sites have a prior FCAT Achievement level of 3 and above.

Table 1. SACC Program Effect Sizes Across Years and Combined for MetaAnalysis

Grade	Group	Reading										
		FCAT Gain			META		SRI Gain			META		FY2003
		FY2003	FY2004	FY2005	GAIN	STATUS	FY2003	FY2004	FY2005	GAIN	STATUS	
3	All					.		.	.		.	
	African American					.		.	.		.	
	Hispanic					X		.	X		.	
	White					.		.	.		.	
	FRL					.		.	.		.	
	LEP					.		X	.		.	
	4	All	X	.	X	.	.	X	X	.		.
African American	X	.	X	X	X	.	.	.		.	.	X
Hispanic	.	.	X	.	.	.	.	.		.	.	.
White	.	.	.	.	.	.	.	X		.	.	.
FRL	X	.	.	.	.	X	X	.		.	.	X
LEP	X	.	X	.	X	X	.	.		.	.	X
5	All	.	X	.	.	.	X	.	.	X	X	.
	African American	.	.	.	.	.	X	.	.	.	X	X
	Hispanic	.	.	.	.	.	.	.	.	X	X	.
	White	.	.	.	.	.	X	.	.	.	.	X
	FRL	.	X	.	.	.	X	.	.	X	X	X
	LEP	.	.	X	.	.	.	.	X	X	X	.

X indicates a statistically significant positive effect with an effect size of .15 or greater. An ‘.’ Indicates that the cell analysis was showed an insignificant result or a significant result with an effect size of less than .15.

Table 2. Beacon Program Effect Sizes Across Years and Combined for MetaAnalysis

Grade	Group	Reading										
		FCAT Gain			META		SRI Gain			META		FY2003
		FY2003	FY2004	FY2005	GAIN	STATUS	FY2003	FY2004	FY2005	GAIN	STATUS	
3	All					.		.	.		.	
	African American					.		.	.		.	
	Hispanic					.		.	.		X	
	White					.		.	.		.	
	FRL					.		.	.		.	
	LEP					.		.	.		.	
	4	All		.	X	.	.		.	.		.
African American		.	X	X	.		.	.		.	.	.

	Hispanic		X	X	.	.		.	.	.	.
	White		.	.	.	.		.	.	.	.
	FRL		.	X	.	.		.	.	.	.
	LEP		.	.	.	.		.	.	.	.
5	All		.	.	.	.		.	.	.	.
	African American		.	.	.	.		.	X	.	.
	Hispanic		.	.	.	.		.	.	X	X
	White		.	.	.	.		.	.	.	.
	FRL		.	.	X	.		.	.	.	.
	LEP		.	.	.	.		.	.	.	.

X indicates a statistically significant positive effect with an effect size of .15 or greater. An '.' Indicates that the cell analysis was showed an insignificant result or a significant result with an effect size of less than .15.

Table 3. CBO Program Effect Sizes Across Years and Combined for MetaAnalysis

Grade	Group	Reading										
		FCAT Gain			META		SRI Gain			META		FY2003
		FY2003	FY2004	FY2005	GAIN	STATUS	FY2003	FY2004	FY2005	GAIN	STATUS	
3	All					.		X	.	.	.	
	African American					.		X	.	.	.	
	Hispanic					.		.	.	.	.	
	White					.		.	.	.	.	
	FRL					.		X	.	.	.	
	LEP					.		X	.	.	X	
4	All		.	X	X	X		.	.	.	.	
	African American		.	X	X	X		.	.	.	.	
	Hispanic		.	.	.	.		.	.	.	.	
	White		.	.	.	.		.	.	.	.	
	FRL		.	X	X	X		.	.	.	.	
	LEP		.	.	.	.		X	X	.	.	
5	All		.	.	.	.		.	.	.	.	
	African American		.	.	.	.		.	.	.	.	
	Hispanic		.	.	.	.		.	.	.	.	
	White		.	.	.	.		.	.	.	.	
	FRL		.	.	.	.		.	.	.	.	
	LEP		.	.	.	.		X	X	.	.	

X indicates a statistically significant positive effect with an effect size of .15 or greater. An '.' Indicates that the cell analysis was showed an insignificant result or a significant result with an effect size of less than .15.