

Effects of YMCA Middle School Youth  
Institute Participation on School  
Performance and Attendance  
Academic Year: 2011 - 2012

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## **Introduction**

The YMCA Middle School Youth Institute (MSYI) is a school-based, academic support and enrichment program that uses technology as an integral mechanism for promoting positive youth development and enhancing the academic success of low-income, culturally-diverse middle school students at Stephens Middle School in the Long Beach Unified School District (LBUSD). Program participants can be involved in the program in several ways. First, some participants are part of a daily, school-based after-school program that incorporates homework assistance, recreation, technology, academic enrichment and community service. Second, some participants are accepted into a smaller, five-week summer program which includes a week-long wilderness retreat that focuses on team-building and leadership skill development which is followed by three weeks of immersion into high-end technology and movie-making. Finally, some program participants are involved in both program components.

The primary program goals are: (a) To improve the technology knowledge and skills of participants, (b) To use positive youth development principles and project-based learning to develop leadership and decision-making skills, and (c) To improve youth attitudes toward education and their academic achievement. The purpose of this report is to present the effects of the program on participants' academic performance including grades, tests scores and school attendance during the 2011 – 2012 school year.

## **Methods**

### ***Data Collection***

All of the data used for this research was collected from secondary sources. Both youth and their parents signed consent forms agreeing to allow the YMCA and school district to release information to the research team. The YMCA provided the researchers with a computer file that contained school district identification numbers, days of attendance in the after-school program

between September, 2011 and June, 2012, and whether the participant had attended the summer program in 2011. LBUSD then provided the researchers with academic grade point average (GPA), cumulative academic GPA, total GPA, cumulative total GPA, absences, truancies, and standardized test scores from all students enrolled at Stephens. The two files were then matched by student identification numbers so program participants could be classified for analysis.

The academic measures used in this study came from the semester prior to the start of or at the beginning of the 2011 – 2012 school year (pre-test) and the final semester of the 2011 – 2012 school year (post-test). For 6th graders, the pre-test measure was taken from the first semester of the 2011 – 2012 school year since the elementary school report card was substantially different. For 7th and 8th graders, the pre-test measure was taken from the last semester of the 2010 – 2011 school year. One study limitation is that youth may have been involved in the program prior to the collection of these pre-test measures since the first grading point for 6th graders may have come after they started the program and 7th and 8th graders may have been in the program the prior year as well.

### *Sample*

One-hundred and sixty-nine youth participated in the MSYI program at least once over the last two years. However, in order to be designated as a MSYI participant for these analyses, participants had to attend at least 30 days of the after-school program in the 2011-12 school year, or 50 days over the last two years. The attendance ranged from 36 to 374 days over the last two years, with an average of 201 days attended per youth and a standard deviation of 110. Of the 169 MSYI youth, 140 (82%) met this criteria and were designated as MSYI participants. Of these, 95 (68%) had both parent and youth consents as well as useable data and were included in these analyses. The district provided data on 781 Stephens students who had not participated in

the MSYI program. Of the 781 students, 686 (88%) had useable data and were included in these analyses as the comparison group.

Prior to examining program effects, the researchers explored whether there were ethnic, gender or grade differences between MSYI participants and comparison students.. No significant differences were found. Table 1 presents demographic descriptions of the MSYI and comparison sample for the 2011-12 school year.

Table 1

Description of YMCA Middle School Youth Institute Participants and Comparison Students  
(2011- 2012)

	YMCA MSYI Participants (N = 95)		Comparison Students (N = 686)	
	%	N	%	N
<b>Gender</b>				
Male	57%	54	55%	375
Female	43%	41	45%	311
<b>Ethnicity</b>				
Latino	65%	62	63%	434
African-American	20%	19	18%	123
Asian-American/Filipino/Pacific Islander	13%	12	16%	112
European-American	1%	1	1%	5
Other	1%	1	2%	12
<b>Grade</b>				
6 <sup>th</sup>	25%	24	32%	224
7th	36%	34	36%	245
8th	39%	37	32%	217

\* Significant differences between groups at the .05 level

## ***Measures***

The first grade measure was academic grade point average (GPA) which was the mean of the four academic courses required of all middle school students (Language Arts, Math, History, Science) for a specific semester. The second grade measure was total grade point average (GPA) which was the mean of all courses taken for the semester. The third and fourth grade measures, for 7<sup>th</sup> and 8<sup>th</sup> graders only, were cumulative academic GPA and cumulative total GPA. These measures combined GPA across semesters. Absenteeism was measured using the number of days the student missed during that semester. Truancy was the number of unexcused absences from school during that semester. Test scores were measured using the standardized scores from the district content standards tests for English Language Arts (ELA) and Math.

## **Analyses**

Chi square tests were used to compare the demographic differences between the two groups. Multivariate analysis of co-variance (MANCOVA) was used to compare outcome differences between MSYI participants and comparison students while controlling for baseline.

## **Results**

### ***One Year Comparisons between Middle School Youth Institute and Comparison Students on Academic Measures***

As shown in Table 2, MSYI participants had significantly higher academic GPA,  $F(1, 739) = 4.01, p < .05$ ; total GPA,  $F(1, 745) = 5.81, p < .05$ ; and cumulative total GPA,  $F(1, 497) = 3.91, p < .05$ , than comparison students. MSYI participants also had somewhat higher cumulative academic GPA,  $F(1, 497) = 3.09, p < .10$ ; and somewhat fewer absences,  $F(1, 731) = 3.49, p < .10$ , than the comparison group.

Table 2

Comparisons of School Performance between MSYI Participants and Comparison Students for 2011-2012

Measure	MSYI Participants		Comparison Students		F-Value
	Adjusted Mean	N	Adjusted Mean	N	
Academic GPA	2.62	88	2.45	622	4.01**
Total GPA	2.77	93	2.58	643	5.81**
Cumulative Academic GPA	2.64	70	2.56	426	3.09*
Cumulative Total GPA	2.80	70	2.72	430	3.91**
Absences	6.05	91	7.89	643	3.49*
Truancies	2.45	91	3.44	643	1.82
Content Standards					
English Language Arts	334.11	91	328.65	631	1.17
Math	347.74	89	338.05	625	2.37

\* Approaching significance at the .10 level.

\*\* Significant differences between groups at the .05 level

### Discussion

One of the primary goals of the YMCA Middle School Youth Institute is to promote academic success for low-income, culturally-diverse youth. The results of this study provide a strong indication that program involvement did help participants to perform better academically than comparison youth as they evidenced significantly higher academic GPA, total GPA, and cumulative GPA at the end of the school year. In addition, they had somewhat higher cumulative academic GPA and somewhat fewer absences than comparison students.

These findings represent something of an improvement over the evaluations of the program over the past few years when the primary findings were primarily related to school attendance, although academic improvement was sometimes apparent over two years of program

participation. It is unclear whether the positive results found here were the result of program modifications or other factors. However, it appears that MSYI participation can, as hypothesized, have a positive effect on academic achievement. Staff should continue to focus their efforts on maintaining and enhancing academic supports given the important role grades and test scores will have on their high school programs.