

**End of Year One Evaluation of Leadership,  
Technology and Educational Attitude Outcomes for  
Long Beach YMCA High School Youth Institute  
Alumni Summer 2007**

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## **Introduction**

The YMCA of Greater Long Beach Youth Institute is a program that uses technology as an integral mechanism for promoting positive youth development and enhancing the academic success and career readiness of low-income, culturally-diverse high school students. Classes enter each summer with an intensive eight-week program. Upon graduation from the summer program, participants become “Youth Institute Alumni,” who are then able to voluntarily participate in a wide range of year-round programs throughout their high school and, potentially, college years. Involvement opportunities include, but are not limited to, digital art labs, homework assistance, academic advising, community service, equipment check-out, field trips, paid technology and mentoring assignments, community leadership positions and social work support.

Three of the goals of the program are: (a) To improve the technology knowledge and skills of participants by providing intensive, year-round enrichment experiences that fully integrate and emphasize state-of-the-art technology, (b) To use youth development principles and project-based learning to develop leadership and decision-making skills, and (c) to improve youth attitudes toward education and learning. This report investigates the effects of the program on achieving these goals after one-year of program participation.

## **Methods**

### *Data Collection*

Program staff collected self-report data from all entering 2007 YMCA Youth Institute participants on their first day of the program, and, from as many as possible, approximately one year later. Three surveys were completed. The first was the Leadership Skills Inventory (Karnes & Chauvin, 2000), a standardized leadership measure. The inventory measures nine areas of leadership skill. The instrument has been shown to have strong reliability and validity. The second instrument, The Long Beach YMCA Technology Skills Inventory, was created by Dr. Jo

Ann Regan formerly of the California State University, Long Beach, Department of Social Work, specifically to evaluate this project. The Technology Inventory measures technology competency. The third survey was the School Attitude Assessment Survey – Revised Edition (D. B. McCoach, 2002). This survey measures three areas of education attitudes. This instrument has been shown to have strong reliability and validity.

### *Sample*

Thirty-five students entered the YMCA Youth Institute in 2007. Of these, 21 (60%) returned both the beginning and end of year one surveys. Attrition analyses were conducted to determine if the participants included in the sample differed from those who did not have pre-test and post-test data. There were no significant gender differences. While the sample size was too small to do a valid analysis on ethnicity and grade at start of program, by looking at the percentages, it appears that a slightly higher percentage of Latino participants (73%) returned the one-year post-test than Asian-Americans/Pacific Islanders (67%) and African-Americans (61%). More of the 10<sup>th</sup> and 11<sup>th</sup> graders (100%) also returned the end of one year survey than 8<sup>th</sup> (62%) and 9<sup>th</sup> graders (40%). Eight (38%) of the students in the sample had attended the Middle School Youth Institute Program before entering the High School Youth Institute Program.

As shown in Table 1, the participants who were included in this study ranged from 13 to 17 years of age at the start of the program. Almost two-thirds of the youth were 13 or 14 at the start of the program. Sixty-two percent of the participants were male. Latinos (52%) were the largest ethnic group, followed by Asian-Americans/Pacific Islanders (29%). Seventy-one percent of the sample was in 8<sup>th</sup> or 9<sup>th</sup> grade at program entry.

Table 1  
Sample Description of 2007 Youth Institute Alumni  
(N=21)

	%	N
◆ Gender		
Female	38%	8
Male	62%	13
◆ Ethnicity		
Latino	52%	11
Asian-American/Pacific Islander	29%	6
African-American	9%	2
Mixed Ethnicities	5%	1
Caucasian	5%	1
◆ Age at Start of Program		
13	33.5%	7
14	38%	8
15	14%	3
16	9.5%	2
17	5%	1
◆ Grade		
8 <sup>th</sup>	62%	13
9 <sup>th</sup>	19%	4
10 <sup>th</sup>	14%	3
11 <sup>th</sup>	5%	1

## Analyses

### *Measures*

#### *Leadership Skills*

Cronbach's Alpha ( $\alpha$ ) was used to examine the reliability of the leadership skill scales. Nine types of leadership skills were measured including fundamentals of leadership ( $\alpha = .82$  to  $.88$ ), written communication ( $\alpha = .74$  to  $.86$ ), speech communication ( $\alpha = .70$  to  $.87$ ), character-building ( $\alpha = .86$  to  $.90$ ), decision-making ( $\alpha = .77$  to  $.81$ ), group dynamics ( $\alpha = .82$  to  $.92$ ), problem-solving ( $\alpha = .72$  to  $.83$ ), personal skills ( $\alpha = .89$  to  $.90$ ), and planning ( $\alpha = .88$  to  $.92$ ). Participants rated themselves on engaging in each behavior on a scale ranging from 0 "Almost

Never” to 3 “Almost Always.” Higher scores indicated better self-perceived skills. Changes in skills from program entry until the end of Year One were investigated using paired t-tests.

### *Technology Use*

Technology use was measured by participants’ self-report of their frequency of use of eleven types of technology. Items included “use the computer to complete school assignments” and “use digital video equipment.” Participants rated themselves on a scale ranging from 1 “Never” to 4 “Daily.” Higher scores indicated greater frequency of use.

### *Technology Competencies*

The Technology Inventory consists of eight questions investigating changes in technology competencies. These items were looked at individually. Questions included: “I can use technology to locate, evaluate, and collect information from a variety of sources,” and “I can use a variety of media and technology for presentations.” The response categories ranged from “1” No Knowledge to “4” Excellent Knowledge.

### *Educational Attitudes*

Cronbach’s Alpha ( $\alpha$ ) was used to examine the reliability of the school attitude scales. Three areas of attitudes toward education were measured including academic self-perceptions ( $\alpha = .91$  to  $.92$ ), goal valuation ( $\alpha = .88$  to  $.92$ ), and motivation/self-regulation ( $\alpha = .87$  to  $.97$ ). Participants rated their attitudes on a scale ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Higher scores indicate better attitudes toward education. Examples of questions from the academic self-perceptions scale include “I feel that I can learn new ideas quickly” and “I feel intelligent.” Examples of questions from the goal valuation scale include “It is important for me to get good grades” and “I spend a lot of time on my schoolwork.” Examples of questions from the motivation/self-regulation scale include “I check my assignments carefully before turning them in” and “I work hard in school.”

## Results

### *Extent and Type of Program Involvement*

As shown in Table 2, there were different types as well as levels of involvement, among the Class of 2007, in the YI Alumni Program during the year immediately following their graduation. The Digital Arts Lab, Community Service activities, and Personal/Home Advising had the highest levels of participation among this group.

Table 2  
Extent and Type of Involvement in Program Activities  
2007 Youth Institute Alumni  
August, 2007 – May, 2008

<b>Class of 2007</b>				
<b>Activity</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>
Digital Arts Lab	21	55	39	3 - 138
Personal/Home Advising	19	5	4	1 – 18
Community Service Projects	19	9	6	1 – 23
Academic Advising	18	5	3	1 – 11
Spring Meeting	15	1	0	1
San Francisco Field Trip	15	1	0	1
Holiday Party	15	1	0	1
Equipment Checkout	4	2	1.5	1 - 4
Total	21	74	49	4 - 175

### *Changes in Leadership Skills*

As shown in Table 3, study participants did not report any significant improvements on any of the leadership skills.

Table 3

Participant Report of Changes in Leadership Skills  
2007 Youth Institute Alumni

Scale	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.33	.46	21	2.57	.45	.24
Written Communication	2.36	.38	21	2.43	.41	.07
Speech Communication	2.28	.42	21	2.38	.43	.10
Character Building	2.50	.33	21	2.64	.34	.13
Group Dynamics	2.42	.30	21	2.51	.39	.09
Decision-Making	2.42	.38	21	2.56	.33	.14
Problem-Solving	2.44	.38	21	2.48	.45	.03
Personal	2.50	.33	21	2.63	.32	.13
Planning	2.51	.31	21	2.44	.44	-.07

\*p<.05

*Changes in Technology Use*

As shown in Table 4, study participants reported significantly more use of the computer at home and at school,  $t(19) = 2.93, p < .05$ , and participation in Internet chat rooms/discussion boards,  $t(18) = 2.59, p < .05$ .

Table 4  
Participant Report of Changes in Technology Use  
2007 Youth Institute Alumni

	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Use the computer at home/school	3.30	.80	20	3.75	.55	.45*
Send e-mail	2.65	.87	20	3.05	.94	.40
Access the Internet	3.61	.85	18	3.83	.38	.22
Create web pages	1.76	1.03	17	2.00	.94	.24
Create graphic designs with computer software applications	2.31	1.14	16	2.69	.87	.37
Use word processing software applications to write text	3.10	.97	20	3.40	.82	.30
Use data processing software for databases or spreadsheets	2.30	.98	20	2.20	.70	-.10
Use digital video equipment	2.42	1.43	19	3.05	.85	.63
Participate in Internet chat rooms/listservs	2.11	1.15	19	2.84	1.07	.74*
Use the computer to complete school assignments	3.55	.69	20	3.40	.75	-.15

\* $p < .05$

#### *Changes in Technology Competence*

As shown in Table 5, study participants reported significant improvements in their competencies with using a variety of media and technology resources to create presentations for audiences inside and outside the classroom,  $t(18) = 2.82, p < .05$ , and creating multimedia products with support from staff and student partners,  $t(18) = 2.73, p < .05$ , at the end of year one.



Table 5  
Participant Report of Changes in Technology Competencies  
2007 Youth Institute Alumni

	Beginning of Program			End of Year One		Difference
	Mean	SD	N	Mean	SD	
Use input and output devices to successfully operate computers, VCR's, audiotapes, etc.	3.74	.56	19	3.79	.42	.05
Use a variety of media and technology resources (software, graphic designs, etc.) to create presentations.	2.89	3.58	19	3.58	.51	.68*
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information.	3.21	.85	19	3.53	.77	.32
Create multimedia products (digital video, movies, etc.) with support from staff or student partners.	2.53	1.07	19	3.37	.60	.84*
Use technology tools to locate, evaluate, and collect information from a variety of sources.	3.33	.69	18	3.33	.59	.00
Use technology tools to process data and report results.	3.00	.82	19	3.16	.60	.16
Use technology tools for managing and communicating personal/professional information.	2.79	.98	19	2.95	.91	.16
Use a variety of media and formats to communicate information and ideas effectively.	2.79	.79	19	3.16	.76	.37

\*p<.05

### *Changes in Educational Attitudes*

As shown in Table 6, study participants did not report any significant improvements on education attitudes.

Table 6  
Participant Report of Changes in Educational Attitudes  
2007 Youth Institute Alumni

Scale	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Academic Self-Perceptions	5.40	.87	18	5.49	1.03	.09
Goal Valuation	6.36	.71	18	6.27	.97	-.10
Motivation/Self-Regulation	5.67	.65	16	5.65	1.24	-.02

\*p<.05

### Conclusions

While it is important to explore whether program effects are maintained over a period of time and persist even in the context of participants' "typical" school and social lives, it is worth noting that the end of the school year does not mark the end of participation in the Youth Institute Alumni program, and, thus, may not accurately reflect the potential of the program to positively influence the skills and attitudes of these youth. The types and extent of activities offered, and involvement by Youth Institute participants, has remained relatively stable throughout the four years of program evaluation. This was the first year that personal-home advising was documented. The top attended activities throughout the year were the Digital Arts Lab, Community Service Projects, Personal-Home Advising, and Academic Advising. The extent of participation in most of the activities was similar to prior years.

As found at the end of the YI summer 2007 program, at the end of one year of Youth Institute involvement, these participants did not evidence significant skill gains in any of the leadership areas. It is possible that, since 38% of the sample had already attended the Middle School Youth Institute, they may have learned these skills previously. However, it is a little discouraging that additional program participation did not further enhance their leadership skills. The leadership results found are in contrast to the prior two years where alumni evidenced

significant or approaching significant gains in seven (78%) of the nine leadership skill areas. The reason for this large difference in leadership results is unclear. It is possible that youth may need more structured activities to build leadership skills; activities that they can choose to participate in. Similar to what is done in the summer, staff may also want to process or discuss “lessons learned” after an activity so the youth can reflect on what they have accomplished and learned regarding leadership as well as what skills they may have used.

At the end of one year, these participants showed significant increases in two (20%) of the ten technology use categories; using computers at home and at school, and participating in Internet chat rooms/discussion boards. There were also only a few significant changes in technology use for these alumni at the end of summer 2007 including increases in e-mail, Internet use and creating web pages. It is possible that youth had more time during the summer to e-mail, surf the Internet, and create web pages, whereas during the school year they may be doing more school-related work. The number of significant differences found within this group, at both time points, was substantially fewer than those found for 2005 and 2006 alumni. It is possible that those Middle School alumni who entered in 2007 were already using more technology because of their prior experiences with the program.

At the end of summer, these participants only showed significant increases in two (22%) of the nine technology competencies; creating multimedia products with support from staff or student partners, and using a variety of media/technology to create presentations. However, these significant changes were maintained at the end of the year. The current number of significant competency changes are much less than those found last year when eight (89%) of the nine competencies changes were significant. Given the unexpected lack of changes in technology use and competence, it may be important for program staff to review and revise their current technology curriculum and support.

Participants reported no significant changes in academic self-perceptions, goal valuation, and motivation/self-regulation at the end of one year, or during the summer program. These findings are similar to what was found the last two years. Thus, project staff should again consider what supports should be put in place if they truly want to have an impact on educational attitudes. To some extent, the findings reported here are difficult to explain, in part, because they are so different than those of past years. However, it is important, particularly with more and more participants entering from the Middle School Youth Institute to ensure that the High School program is designed to further enhance and build on their skills.