

**End of Year One Evaluation of Leadership,  
Technology, Educational Attitude and  
Positive Youth Development Outcomes for  
Long Beach YMCA High School Youth  
Institute 2010 Alumni**

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**September, 2011**

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## **Introduction**

The YMCA of Greater Long Beach High School Youth Institute (HSYI) 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, academic advising/homework assistance, personal/home 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 enhance positive youth development, 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 2010 YMCA Youth Institute participants prior to the start of the summer program, and, from as many as possible, approximately one year later. Two 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 YMCA Youth Institute Survey is an instrument measuring positive youth development (cultural competency, life skills, positive core values, sense of self, social competency-responsible choices, community involvement, and positive adult relationships), technology skills, and educational attitudes. The positive youth development measures were created by the researchers specifically to evaluate this project based on The Toolkit for Evaluating Positive Youth Development (The Colorado Trust, 2004). The technology skills measure was originally created by Dr. Jo Ann Regan to evaluate this project, however, the measure has been revised several times to reflect the current technology curriculum at the YI. The three educational attitude measures (self-perceptions, goal valuation, and motivation/self-regulation) came from The School Attitude Assessment Survey – Revised Edition (McCoach & Siegle, 2003). This instrument has been shown to have strong reliability and validity.

### *Sample*

Twenty-five youth completed the summer HSYI in 2010. Of these, 16 (64%) completed beginning of summer and end of year one surveys and are included in these analyses. As shown in Table 1, the participants who were included in this study ranged from 13 to 16 years of age, with the average age of 14 at the start of the program. Sixty-three percent of the participants were male. Latinos (37%) were the largest ethnic group, followed by African-Americans (31%), Asian-American/Pacific Islanders (26%), and European Americans (6%). Three-fourths (75%) were in 8th or 9th grade at program entry. Due to the small sample size, a valid attrition analysis could not be completed.

Table 1  
Description of 2010 Youth Institute Alumni Subsample  
(N = 16)

	%	N
❖ Age at Start of Program		
13	6%	1
14	56%	9
15	19%	3
16	19%	3
❖ Gender		
Male	63%	10
Female	37%	6
❖ Ethnicity		
Latino	37%	6
African-American	31%	5
Asian American/Pacific Islander	26%	4
European-American	6%	1
❖ Grade		
8 <sup>th</sup>	25%	4
9 <sup>th</sup>	50%	8
10 <sup>th</sup>	19%	3
11 <sup>th</sup>	6%	1

## Analyses

### *Measures*

#### *Leadership Skill Scales*

Nine types of leadership skills were measured including fundamentals of leadership ( $\alpha = .82$  to  $.87$ ), written communication ( $\alpha = .77$  to  $.84$ ), speech communication ( $\alpha = .87$  to  $.91$ ), character-building ( $\alpha = .89$  to  $.91$ ), decision-making ( $\alpha = .63$  to  $.85$ ), group dynamics ( $\alpha = .91$  to

.96), problem-solving ( $\alpha = .80$  to  $.89$ ), personal skills ( $\alpha = .87$  to  $.94$ ), and planning skills ( $\alpha = .91$  to  $.96$ ). Participants rated themselves on a scale ranging from 0 “Almost Never” to 3 “Almost Always.” Higher scores indicated better self-perceived skills. Changes in skills were investigated using paired t-tests.

### ***Technology Skills***

All of the technology skill questions were analyzed separately using paired t-tests.

### ***Educational Attitude Scales***

Three educational attitudes were measured including academic self-perceptions ( $\alpha = .66$  to  $.84$ ), goal valuation ( $\alpha = .90$  to  $.95$ ), and motivation/self-regulation ( $\alpha = .93$  to  $.94$ ). The academic self-perception scale consisted of six items that measured the perception/confidence that students had in their own skills. Questions included “I feel that I can learn new ideas quickly” and “I feel smart in school.” The goal valuation scale consisted of six items that measured how much students valued educational tasks. Questions included “It is important to me to get good grades” and “I want to do my best in school.” The motivation/self-regulation scale consisted of ten items and measured how self-motivated students were and how good they were at self-monitoring. Questions included “I use a variety of strategies to learn new material in high school” and “I am a responsible student.” Participants rated their agreement with each statement on a scale ranging from 1 “Strongly Disagree” to 7 “Strongly Agree.” Higher scores indicated more positive attitudes. Changes in attitudes were investigated using paired t-tests.

### ***Positive Youth Development Scales***

The cultural competence scale ( $\alpha = .60$  to  $.79$ ) consisted of eight items measuring respect for and comfort with their own and others’ cultures. Questions included “I have respect for teens of other cultures, races or ethnic groups” and “I feel pride for my own culture, race or ethnic group.”

The life skills scale ( $\alpha = .72$  to  $.77$ ) consisted of 10 items measuring proficiencies that allow youth to transition into and achieve successful adulthood. Questions included “I am good at making friends” and “I make good decisions.”

The positive core values scale ( $\alpha = .68$  to  $.70$ ) consisted of six items measuring caring, empathy, integrity, honesty, responsibility, equality and fairness. Questions included “I am good at taking responsibility for my actions,” and “I am good at speaking up for people who have been treated unfairly. The sense of self scale ( $\alpha = .62$  to  $.74$ ) consisted of five items measuring how youth view themselves and their abilities to cope with the basic challenges of life. Questions included “I can handle whatever comes my way” and “I feel that I can make a difference.”

The social competency/responsible choices scale ( $\alpha = .66$ ) consisted of six items measuring good behavior, hard work, personal responsibility and fairness. Questions included “I can identify the positive and negative consequences of my behavior” and “I think I should work to get something if I really want it.”

The community involvement scale ( $\alpha = .66$  to  $.73$ ) consisted of four items measuring feelings of connectedness to the community and volunteer activities. Questions included “I feel a strong connection to my community” and “I feel good about myself because I help others.”

The positive adult relationships scale ( $\alpha = .90$  to  $.94$ ) consisted of four items measuring amount of perceived social support received from adults outside of the family. Questions included “There is a caring adult outside my family in my life who is around when I need him/her” and “There is a caring adult outside of my family in my life who cares about my feelings.”

## 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 2010 in the YI Alumni program during the year immediately following their graduation. Total involvement ranged from 3 to 181 with a mean of 44. Participants were most likely to have used the digital arts lab.

Table 2  
Extent and Type of Involvement in Program Activities  
2010 Youth Institute Alumni  
August, 2010 – May, 2011

<b>Class of 2010</b>				
<b>Activity</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>
Digital Arts Lab	15	29	30	3 - 121
Personal/Home Advising	13	7	7	1 - 24
Academic Advising	11	6	5	1 - 16
Equipment Checkout	5	2	1	1 - 3

### *Changes in Leadership Skills*

As shown in Table 3, study participants reported significant skill level improvements in eight of the nine leadership skills including fundamentals of leadership,  $t(15) = 3.82, p < .05$ , written communication,  $t(15) = 4.48, p < .05$ , speech communication,  $t(15) = 2.59, p < .05$ , group dynamics,  $t(15) = 2.47, p < .05$ , decision-making,  $t(15) = 3.19, p < .05$ , problem-solving,  $t(15) = 3.53, p < .05$ , personal,  $t(15) = 3.84, p < .05$ , and planning skills,  $t(15) = 4.16, p < .05$ , at the end of their first year in the High School YI program.



Table 3  
Participant Report of Changes in Leadership Skills  
2010 Youth Institute Alumni

Scale	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.11	.56	16	2.59	.41	.48**
Written Communication	1.73	.49	16	2.33	.48	.60**
Speech Communication	1.87	.50	16	2.24	.56	.37**
Character Building	2.40	.45	16	2.58	.34	.19
Group Dynamics	2.09	.66	16	2.47	.41	.38**
Decision-Making	2.37	.43	16	2.69	.22	.32**
Problem-Solving	2.11	.59	16	2.56	.38	.45**
Personal	2.30	.47	16	2.65	.30	.35**
Planning	2.18	.56	16	2.56	.36	.38**

\*\*p<.05

\*p<.10

### *Changes in Technology Use*

As shown in Table 4, 2010 HSYI Alumni reported significantly more use of creating graphic designs with computer applications,  $t(15) = 2.66, p < .05$ , using the computer to complete school assignments,  $t(15) = 2.41, p < .05$ , using digital music software,  $t(15) = 6.62, p < .05$ , and using digital editing software,  $t(15) = 5.84, p < .05$ , at the end of year one. These participants also reported somewhat more use of digital video equipment,  $t(15) = 1.99, p < .10$ , at the end of the first year.

Table 4  
Participant Report of Changes in Technology Use  
2010 Youth Institute Alumni

	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Use the computer at home/school	3.38	.72	16	3.25	.86	-.12
Send e-mail	2.88	1.26	16	2.69	.79	-.19
Access the Internet	3.44	.81	16	3.69	.60	.25
Create web pages	1.25	.77	16	1.25	.45	.00
Create graphic designs with computer software applications	1.50	.89	16	2.31	1.01	.81**
Use word processing software applications to write text	3.13	.81	16	2.94	.77	-.19
Use data processing software for databases or spreadsheets	1.81	1.05	16	2.31	.95	.50
Use digital video equipment	2.06	1.12	16	2.69	1.01	.62*
Participate in Internet chat rooms/listservs	2.63	1.31	16	2.63	1.09	.00
Use the computer to complete school assignments	2.94	.85	16	3.38	.62	.44**
Use digital music software	1.44	.89	16	2.75	.93	1.31**
Use presentation software	2.31	1.08	16	2.81	.83	.50
Use digital editing software	1.31	.79	16	2.56	.96	1.25**

\*\*p<.05

\*p<.10

### *Changes in Technology Competence*

As shown in Table 5, study participants reported significant improvements in seven of the eight technology competencies, including using a variety of media and technology resources to create presentations for audiences inside and outside the classroom,  $t(15) = 3.76, p < .05$ , working collaboratively with others to use technology to compile and disseminate information,

$t(15) = 3.34, p < .05$ , creating multimedia products with support from staff and student partners,  $t(15) = 6.06, p < .05$ , using technology tools to locate, evaluate and collect information,  $t(15) = 4.79, p < .05$ , using technology tools to process data and report results,  $t(15) = 4.00, p < .05$ , using technology tools for managing and communicating personal/professional data,  $t(15) = 3.76, p < .05$ , and using a variety of media and formats to communicate information effectively to multiple audiences,  $t(15) = 4.70, p < .05$ , at the end of year one.

Table 5  
Participant Report of Changes in Technology Competencies  
2010 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.	3.13	.88	16	3.50	.52	.37
Use a variety of media and technology resources (software, graphic designs, etc.) to create presentations.	2.38	.88	16	3.31	.48	.94**
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information.	2.69	.87	16	3.63	.50	.94**
Create multimedia products (digital video, movies, etc.) with support from staff or student partners.	1.94	.85	16	3.50	.52	1.56**
Use technology tools to locate, evaluate, and collect information from a variety of sources.	2.13	.88	16	3.50	.52	1.37**
Use technology tools to process data and report results.	2.00	1.13	16	3.33	.62	1.33**
Use technology tools for managing and communicating personal/professional information.	2.25	1.06	16	3.19	.65	.94**
Use a variety of media and formats to communicate information and ideas effectively.	2.06	1.00	16	3.31	.60	1.25**

\*\* $p < .05$

\* $p < .10$

### *Changes in Educational Attitudes*

As shown in Table 6, study participants reported significantly higher academic self-perceptions,  $t(14) = 3.25$ ,  $p < .05$ , and academic motivation/self-regulation,  $t(14) = 4.40$ ,  $p < .05$ , at the end of year one.

Table 6  
Participant Report of Changes in Educational Attitudes  
2010 Youth Institute Alumni

Scale	Beginning of Program			End of Year One		Difference
	Mean	SD	N	Mean	SD	
Academic Self-Perceptions	4.97	1.07	15	5.80	.66	.83**
Goal Valuation	6.04	.94	15	6.42	.82	.38
Motivation/Self-Regulation	4.61	1.23	15	5.61	.95	1.01**

\*\* $p < .05$

\* $p < .10$

### *Positive Youth Development*

As shown in Table 7, teens who participated in the 2010 YMCA Youth Institute Program self-reported significant improvement in four of the positive youth development scales at the end of year one. Positive, significant improvements were found in life skills,  $t(15) = 3.98$ ,  $p < .05$ , sense of self,  $t(15) = 2.71$ ,  $p < .05$ , social competency/personal responsibility,  $t(15) = 2.46$ ,  $p < .05$ , and in caring adult relationships,  $t(15) = 2.51$ ,  $p < .05$ . Participants also reported some improvement in positive core values,  $t(15) = 1.91$ ,  $p < .10$ , at the end of year one.

Table 7  
Participant Report of Changes in Positive Youth Development Scales  
2010 Youth Institute Alumni

Development Scale	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Cultural Competence	3.53	.33	16	3.67	.37	.14
Life Skills	3.07	.32	16	3.38	.36	.31**
Positive Core Values	3.25	.43	16	3.45	.35	.20*
Sense of Self	2.99	.51	16	3.26	.36	.27**
Social Competency/Personal Responsibility	3.23	.36	16	3.47	.33	.24**
Community Involvement	2.67	.64	16	2.92	.57	.25
Caring Adult Relationships	2.94	.98	16	3.47	.50	.53**

\*\*p<.05

\*p<.10

### Conclusions

The 2010 Youth Institute Alumni group continued to report numerous significant improvements in the areas of leadership skills, technology use, and technology competence at the end of one year of involvement in the program. In addition, these alumni reported significant improvement in their academic self-perception and motivation and there were significant improvements reported in the majority of the positive youth development areas. Thus, all of the significant improvements these youth reported at the end of the 2010 summer program, when they were totally immersed in the Youth Institute, were maintained, and further skill improvements were made on several measures nine months later, after they had returned to school and, “the real world.”

These participants appeared to benefit substantially from the year-round program in terms of leadership skills. While participants only reported significant improvements in three of the leadership skill areas at the end of the summer program, by year-end, they reported significant

improvements in five additional leadership areas including fundamentals, decision-making, group dynamics, problem-solving and planning skills. Thus, it appears that the program was effective in helping these youth to retain their end of summer leadership improvements, and, in some cases, improve upon them. For example, in comparison with their end of summer scores, these youth reported significantly higher personal skills and somewhat higher decision-making skills at the end of the first year. These leadership gains should prove beneficial to these youth as they attend school, enter the workforce or participate in other community activities or organizations.

In terms of technology use, 2010 alumni reported significant improvements on eight (62%) of the 13 areas measured and on all but one of the technology competency areas as well. Thus, it appears that the YI greatly enhanced the technology skills of participants as hypothesized, and that these technology competency gains, for the most part, were maintained a year after program participation. As might be expected, the technology use gains were primarily found in the areas of program focus (graphic design, digital video equipment, computer use for school assignments, digital music, digital editing). It is possible that providing alumni with workshops on some of the technology areas in which changes were not found (web design, word processing, database management, presentations) may help them to develop additional technology skills that should prove useful to them in their personal, academic and career life.

In terms of educational attitudes, 2010 alumni evidenced significantly higher academic self-perceptions and academic motivation/self-regulation at the end of one-year. This finding too, is an improvement over prior years when only somewhat or no changes were found on the educational attitude scales. Hopefully, over time, these increased academic self-perceptions and motivation may help these youth to improve their grades or increase the likelihood that they will go on to higher education.

These alumni also reported significant improvement in four of the seven (57%) positive youth development measures, including life skills, sense of self, social competency/personal responsibility and caring adult relationships, and some gain in positive core values at the end of year one. These outcomes were better than those found among youth from the last year the program was evaluated when only two significant gains were found on positive youth development measures. The gains found at the end of year one for this group did vary from those found at the end of the summer. For example, at the end of the summer, this group reported significant improvement in cultural competence and community involvement but no change in life skills or positive core values, and the change found in caring adult relationships only approached significance. It is possible the lack of change in community involvement was related to the fact that no community service activities were held in the last year due to budget cuts. It appears that the program was effective in enhancing most areas of positive youth development for these youth.

Overall, the findings here, provide strong support for the notion that Youth Institute involvement can positively influence leadership, technology skills, educational attitudes and positive youth development as hypothesized and that these gains can be maintained and potentially enhanced by participation in the year-round program. Thus, it appears that in many ways the Youth Institute program is meeting its core goals.

### **References**

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