

**End of Year One Evaluation of Leadership,  
Technology, Educational Attitudes and  
Positive Youth Development Outcomes for  
Long Beach YMCA High School Youth  
Institute 2014 Alumni**

**Sandra L. Kirkner, M.A.-R.  
Research Associate**

**Julie O'Donnell, Ph.D., M.S.W.  
Professor**

**School of Social Work  
California State University, Long Beach**

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## **Introduction**

The YMCA of Greater Long Beach High School Youth Institute (HSYI) is a year-round 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 activities throughout their high school and college years. Involvement opportunities vary by year but include digital art labs, academic advising/homework assistance, personal/home advising, college readiness, surfing/hiking club, community service, equipment check-out, field trips, paid internships, community leadership positions and social work support.

The goals of the Youth Institute are to: (a) improve the technology, career, leadership and decision-making skills of these youth to promote readiness for higher education or career entry after graduation; (b) improve academic achievement and stimulate interest in higher education among low-income, culturally-diverse, urban high school youth; and (c) promote bonding to pro-social adults and community attachment among urban youth to ensure that they remain engaged in their schools and communities. This report investigates year-round program participation and 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 2014 YMCA Youth Institute participants prior to the start of the summer program, at the end of the summer, and, from as many as possible, approximately one year later. Two surveys were completed. The first was the revised version of the Leadership Skills Inventory, a standardized inventory measuring nine

areas of leadership. The instrument has strong reliability and validity (Karnes & Chauvin, 2000). The second instrument, The Youth Institute Survey, measures positive youth development, technology skills, and educational attitudes. The positive youth development measures were created by the researchers based on The Toolkit for Evaluating Positive Youth Development (The Colorado Trust, 2004). The technology skill items reflected the most recent YI technology curriculum. The three educational attitude measures came from The School Attitude Assessment Survey – Revised Edition. This instrument has strong reliability and validity (McCoach & Siegle, 2003).

### *Sample*

Fifty-four youth completed the summer Long Beach High School YI in 2014. Of these, 32 (59%) had the necessary consents and surveys to be included in these analyses. As shown in Table 1, the participants in this study ranged from 13 to 16 years of age, with the average age of 14 at the start of the program. Fifty-nine percent were male. Latinos (78%) were the largest ethnic group, followed by African-Americans (13%). Fifty-nine percent were in 9th grade at program entry. An attrition analysis was used to determine demographic differences between the youth in the “analysis group” and those who did not have the necessary data. No significant differences were found for gender, ethnicity, or grade level. Although a valid chi-square analysis could not be run for age, it appears that younger youth (13-14 years old at program start) were more likely to be retained than older youth (15-16 years old at program start). Thus, the results found here may be more representative of younger participants.

Table 1  
Description of 2014 Youth Institute Alumni Subsample  
(N = 32)

	%	N
<b>Gender</b>		
Male	59%	19
Female	41%	13
<b>Ethnicity</b>		
Latino	78%	25
African-American	13%	4
Asian-American	3%	1
Multicultural	6%	2
<b>Age at Start of Program</b>		
13	47%	15
14	34%	11
15	6%	2
16	13%	4
<b>Grade</b>		
9 <sup>th</sup>	59%	19
10 <sup>th</sup>	22%	7
11 <sup>th</sup>	13%	4
12 <sup>th</sup>	6%	2

## Analysis

### *Measures*

#### *Leadership Skill Scales*

Nine types of leadership skills were measured including fundamentals of leadership ( $\alpha = .68$ ), written communication ( $\alpha = .70$  to  $.81$ ), speech communication ( $\alpha = .83$  to  $.86$ ), character-building ( $\alpha = .81$  to  $.85$ ), decision-making ( $\alpha = .82$  to  $.87$ ), group dynamics ( $\alpha = .87$  to  $.88$ ), problem-solving ( $\alpha = .82$  to  $.87$ ), personal skills ( $\alpha = .84$  to  $.88$ ), and planning skills ( $\alpha = .90$ ). Participants rated themselves on a scale ranging from 0 “Almost Never” to 3 “Almost Always.” Higher scores indicated better self-perceived skills. Changes were investigated using paired t-tests.

#### *Technology Skills*

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

#### *Educational Attitude Scales*

The academic self-perception scale ( $\alpha = .88$  to  $.90$ ) consisted of six items related to the perception/confidence that participants 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 ( $\alpha = .85$  to  $.93$ ) consisted of six items that measured how much participants 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 ( $\alpha = .95$ ) consisted of ten items and measured levels of self-motivation and 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 were investigated using paired t-tests.

### *Positive Youth Development Scales*

The cultural competence scale ( $\alpha = .76$  to  $.81$ ) consisted of six items on 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 connected to and proud of my own culture." The life skills scale ( $\alpha = .65$  to  $.77$ ) consisted of 6 items measuring proficiencies that allow youth to transition into and achieve successful adulthood. Questions included "I am good at making friends" and "I am good at listening to other people."

The positive core values scale ( $\alpha = .62$  to  $.79$ ) 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 ( $\alpha = .75$  to  $.82$ ) 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 believe I can make a difference." The personal/social responsibility choices scale ( $\alpha = .78$  to  $.81$ ) consisted of five 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 should work to get something if I really want it."

The community involvement scale ( $\alpha = .89$  to  $.90$ ) consisted of five 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 ( $\alpha = .92$  to  $.95$ ) used five items to measure 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 whom I trust."

## Results

### *Extent and Type of Program Involvement*

As shown in Table 2, there were different types, as well as levels, of involvement among the YI Class of 2014 during the year immediately following their graduation. Total involvement ranged from 1 to 221 with a mean of 50. The largest number of participants used the digital arts lab or received personal or academic advising. The most frequent activity was using the digital arts lab. There were nine special events this year including Color me Long Beach ( $n = 20$ ), the Cambodian New Year's Parade ( $n = 12$ ), United Way Home-Walk ( $n = 11$ ), USS Ranger Forum ( $n = 4$ ), High School and College Art Exhibit ( $n = 2$ ), YMCA Campaign Kickoff ( $n = 1$ ), Young Women's Conference ( $n = 1$ ), National Afterschool Summit ( $n = 1$ ), and Star Wars Movie Day ( $n = 1$ ). There were four outdoor recreation events including fishing at the pier ( $n = 14$ ), a bonfire at the beach ( $n = 12$ ), a YI football game ( $n = 3$ ), and basketball night ( $n = 3$ ). There were three trips including the Alumni Wilderness Retreat ( $n = 15$ ), San Francisco ( $n = 12$ ), and Pink Berry ( $n = 3$ ). There were also six YI meetings, three YI dinners, and two Alumni Advanced Media classes during the year.



Table 2  
Extent and Type of Involvement in Program Activities  
2014 Youth Institute Alumni  
August, 2014 – June, 2015

<b>Class of 2014</b>				
<b>Activity</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Range</b>
Digital Arts Lab	49	27	31	1 - 120
Personal/Home Advising	38	11	11	1 - 38
Academic Advising	37	13	13	1 - 43
YI Meetings (6)	37	2	1	1 - 5
Special Events (9)	24	2	1	1 - 5
Alumni Dinners (3)	21	1	1	1 - 2
Outdoor Recreation Events (4)	21	2	1	1 - 4
Trips (4 – San Francisco, Pink Berry, Youth Adult Retreat and Wilderness Retreat 2015)	20	1	N/A	N/A
Alumni Advanced Media Classes (2)	11	2	N/A	N/A
Community Service: Technology Tutoring (6)	4	6	N/A	6

### *Changes in Leadership Skills*

As shown in Table 3, participants self-reported significant improvement in all nine leadership skill areas including, fundamentals of leadership,  $t(31) = 2.60, p < .05$ ; written communication,  $t(31) = 4.42, p < .05$ ; speech communication,  $t(31) = 3.69, p < .05$ ; character building,  $t(31) = 2.32, p < .05$ ; group dynamics,  $t(31) = 4.59, p < .05$ ; decision-making,  $t(31) = 3.69, p < .05$ ; problem-solving,  $t(31) = 4.70, p < .05$ ; personal skills,  $t(31) = 3.71, p < .05$ ; and planning skills,  $t(31) = 4.86, p < .05$ , at the end of the first year.

Table 3  
2014 YI Alumni Report of Changes in Leadership Skills

Scale	Beginning of Program			End of Year One		
	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.53	.39	32	2.69	.31	.16**
Written Communication	2.08	.63	32	2.52	.38	.43**
Speech Communication	2.14	.60	32	2.54	.47	.40**
Character Building	2.62	.38	32	2.75	.31	.13**
Group Dynamics	2.32	.50	32	2.65	.37	.33**
Decision-Making	2.33	.51	32	2.64	.44	.32**
Problem-Solving	2.18	.54	32	2.60	.46	.42**
Personal	2.41	.42	32	2.68	.37	.27**
Planning	2.22	.55	32	2.58	.42	.36**

\*\*p<.05; \*p<.10

### *Changes in Technology Skills*

Technology skills were measured by self-report of skill level with 13 types of technology. Participants rated themselves on a scale ranging from 1 “No Skills” to 4 “Excellent Skills.” Higher scores indicated greater skill level. As shown in Table 4, 2014 alumni reported significant (91%) and some (9%) gains in 11 of the 13 technology skills, including email use,  $t(31) = 3.00, p < .05$ ; web design,  $t(31) = 2.07, p < .05$ ; word processing software,  $t(31) = 2.77, p < .05$ ; digital video filming,  $t(31) = 5.78, p < .05$ ; digital music creation,  $t(31) = 4.03, p < .05$ ; presentation software,  $t(30) = 2.40, p < .05$ ; digital video editing,  $t(30) = 4.99, p < .05$ ; graphic design,  $t(31) = 3.91, p < .05$ ; digital photography,  $t(31) = 5.13, p < .05$ ; and animation,  $t(31) = 4.40, p < .05$ ; and somewhat more skills in using computers to complete school assignments,  $t(31) = 1.97, p < .10$ , at the end of their first year.

Additional analyses revealed significant improvement in web design,  $t(31) = 2.55, p < .05$ ; and digital music creation,  $t(31) = 2.06, p < .05$ ; and somewhat higher skill levels in digital video filming,  $t(31) = 1.75, p < .10$ ; digital video editing,  $t(30) = 1.76, p < .10$ ; and graphic design,  $t(31) = 1.75, p < .10$ , between the end of summer and the end of the first year.

Table 4  
2014 Alumni YI Participant Report of Changes in Technology Skills

Technology	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Email use.	3.13	.75	32	3.50	.62	.37**
Internet use (visit websites/surf web).	3.69	.53	32	4.66	5.20	.97
Web design (construction, layout, domain registration, maintenance, applications, Dreamweaver, Photoshop, HTML, peripheral configuration).	2.28	1.05	32	2.63	.83	.34**
Word processing software (Word) to write reports and/or letters.	3.28	.81	32	3.63	.66	.34**
Data processing software (Excel) for databases or spreadsheets.	2.16	1.16	31	2.42	.99	.26
Digital Video Filming (Camera, lighting, etc.)	2.06	1.06	31	3.19	.70	1.13**
Using the computer to complete school assignments.	3.47	.72	32	3.72	.46	.25*
Digital music creation (GarageBand, Reason, Logic Pro).	2.19	.96	32	2.88	.75	.69**
Presentation software (Powerpoint, Keynote, Inspiration).	2.81	1.05	32	3.29	.82	.48**
Digital Video Editing (Final Cut Pro, iMovie, After Effects, etc.).	2.03	1.08	31	3.00	.82	.97**
Graphic Design (Photoshop, Illustrator, InDesign).	2.19	1.18	32	3.00	.80	.81**
Digital Photography (DSLR camera, lighting, memory card, Photoshop, etc.).	2.16	1.11	32	2.97	.74	.81**
Animation (Cinema 4D, After Effects, Stop Motion).	1.63	.98	32	2.34	.97	.72**

\*\*p<.05; \*p<.10

### *Changes in Educational Attitudes*

As shown in Table 5, participants self-reported some improvement in motivation/self-regulation,  $t(31) = 2.02$ ,  $p < .10$ , at the end of the first year.

Table 5  
2014 YI Alumni Report of Changes in Educational Attitudes

Scale	Beginning of Program			End of Year One		Difference
	Mean	SD	N	Mean	SD	
Academic Self-Perceptions	5.67	1.01	31	5.96	.82	.29
Goal Valuation	6.38	.72	32	6.46	.56	.08
Motivation/Self-Regulation	5.49	1.15	32	5.81	1.05	.32*

\*\* $p < .05$ ; \* $p < .10$

### *Changes in Positive Youth Development*

As shown below in Table 6, 2014 alumni self-reported significantly higher life skills,  $t(31) = 3.12$ ,  $p < .05$ ; community involvement,  $t(31) = 4.37$ ,  $p < .05$ ; and caring adult relationships,  $t(31) = 2.94$ ,  $p < .05$ ; and somewhat higher positive core values,  $t(31) = 1.80$ ,  $p < .10$ ; and personal/social responsibility,  $t(31) = 1.99$ ,  $p < .10$ , at the end of year one.

Additional analyses revealed significantly higher community involvement,  $t(31) = 2.77$ ,  $p < .05$ , between the end of summer and the end of the first year.

Table 6  
2014 YI Alumni Participant Report of Changes in Positive Youth Development

Development Scale	Beginning of Program		N	End of Year One		Difference
	Mean	SD		Mean	SD	
Cultural Competence	3.82	.22	32	3.84	.27	.02
Life Skills	3.45	.37	32	3.66	.35	.21**
Positive Core Values	3.56	.33	32	3.68	.37	.12*
Sense of Self	3.42	.42	31	3.55	.48	.13
Personal/Social Responsibility	3.51	.42	32	3.63	.44	.12*
Community Involvement	2.89	.72	32	3.36	.64	.47**
Caring Adult Relationships	3.34	.78	32	3.65	.65	.31**

\*\*p<.05; \*p<.10

### Conclusions

This study investigated changes in leadership, technology, educational attitudes and positive youth development after one year of program participation among YI alumni. It is quite encouraging to note that all of the significant positive leadership and technology outcomes found at the end of the summer were maintained, and, on some of the technology skills, enhanced by participation in the year-round program. Additionally, these alumni maintained some or significant improvement on the positive youth development gains found at the end of the summer, and, at the end of the year, also evidenced a significant improvement in caring adult relationships. There was also some improvement in educational motivation/self-regulation at the end of the first year. Thus, YI youth showed substantial growth in majority of the areas hypothesized to be influenced by the model including leadership and technology skills, and positive youth development. While the absence of a control group makes it difficult to

definitively conclude that YI participation was responsible for these changes, it appears unlikely that so much change would occur in such diverse domains unless some intervention was present.

At the end of one year, alumni reported significant improvement in all leadership skill areas, indicating the leadership gains found after participation in the summer program were maintained over the course of a year, even when youth were in school and had other activities. Although there were no significant changes between the end of the summer and first year, the scores all moved in a positive direction, and many of the gains were larger than those found in the summer. This is particularly positive since many of the leadership skills measured here are similar to the skills that have been identified as necessary to compete in the 21<sup>st</sup> century (The Partnership for 21<sup>st</sup> Century Learning Skills, 2003).

It appears 2014 alumni were also able to maintain the significant technology skill gains they made during the intensive summer program since they reported significantly higher skills in email use, web design, word processing, digital video filming and editing, digital music creation, presentation software, graphic design, digital photography and animation at the end of the first year. They were also somewhat more likely to use computers to complete school assignments. Alumni also rated themselves significantly higher in web design, digital music creation and somewhat higher in digital video filming, digital video editing, and graphic design at the end of the year in comparison with the end of summer. These findings suggest that the YI program, with its intensive technology focus, was able to teach participants a wide variety of high-end digital media skills during the summer that they not only maintained but substantially improved with their involvement in the year-round alumni program. This is encouraging since people with strong technological skills are highly valued in the workforce (Baron, 2002). These findings are also very positive given low-income youth have been shown to have lower levels of technology

access and skill; both of which are critical for school and productive adult employment (Morse, 2004; Warschauer & Matuchniak, 2010).

The YI is also hypothesized to improve educational attitudes. At the end of summer, youth self-reported significantly higher academic self-perceptions, goal valuation, and motivation/self-regulation, however, there was only some improvement in motivation/self-regulation at the end of the first year. While this change is important since research has indicated that motivation/self-regulation has been found to be related to higher levels of achievement among high school students (Suldo, Shaffer & Shaunessy, 2008; McCoach & Siegle, 2003), more emphasis on education, particularly related to goal valuation, during the year-round program may prove beneficial.

The YI is designed to incorporate positive youth development strategies into all aspects of the program, since participation in youth development programs has been shown to enhance academic success (Hall, Yohalem, Tolan & Wilson, 2003) while reducing involvement in adolescent problem behaviors (Roffman, Pagano & Hirsch, 2001; Meltzer, Fitzgibbon, Leahy & Petsko, 2006). At the end of one year, these alumni reported significantly higher levels of life skills, community involvement and caring adult relationships as well as somewhat better positive core values and personal/social responsibility, than at program entry. In particular, the year-round program appears to have positively influenced community involvement, possibly as a result of their involvement in YI service learning activities. This is encouraging as community involvement and civic engagement seem to prepare youth for a successful transition to adulthood (Hamilton & Hamilton, 2009; Philanthropy for Active Civic Engagement, 2010). The increase in positive adult role models should also prove beneficial as having such relationships has also been shown to predict more successful adolescent development (Serido, Borden & Perkins, 2011; DuBois, Portillo, Rhodes, Silverthorn & Valentine, 2011).



Overall, these findings are very positive and suggest participation in the YI helped these youth to develop better leadership and technology skills while increasing protective factors related to positive youth development over the long-term. Program participation appears to have increased the social and interpersonal competence and technology skills of youth, all of which have been found to be useful in higher education and the workforce (Lippman, Atienza, Rivers & Keith, 2008; Warschauer & Matuchniak, 2010). The results of this evaluation provide additional evidence that the YI program can successfully influence youth in all of areas hypothesized in the model, even in the long-term. YI participation appears to have helped youth develop and enhance skills that are critical for positive development, academic achievement, and career success.

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