

**Evaluation of the Effects of the 2009 Long  
Beach YMCA High School Youth Institute  
Summer Program on Leadership Skills,  
Technology Skills, Educational Attitudes and  
Positive Youth Development**

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

**Julie O'Donnell, Ph.D., M.S.W.  
Professor and Director of Research**

**Child Welfare Training Centre  
Department of Social Work  
California State University, Long Beach**

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## Methods

### *Data Collection*

Self-report survey data was collected from all entering 2009 YMCA Youth Institute Summer Program participants prior to the start and on the last day of the program. Two surveys were completed. The first was the Leadership Skills Inventory (Karnes & Chauvin, 2000), a standardized leadership instrument which measures nine areas of leadership skills. The instrument has been shown to have strong reliability and validity. The second instrument, The YMCA Youth Institute Survey is a combined 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 use, technology competence, 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 use and competence measure was originally created by Dr. Jo Ann Regan to evaluate this project, however, the measure was revised last year to reflect the current technology curriculum at the Youth Institute. 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*

Forty-eight (81%) of the 59 YMCA High School Youth Institute (HSYI) participants who completed the 2009 summer program had both pre- and post-test data and were included in these analyses. As shown in Table 1, these program participants ranged from 13 to 17 years of age. The majority were 13 to 15 (87%). Fifty-eight percent were male. Latinos (48%) were the largest ethnic group, followed by Asian-American/Pacific Islanders and African-Americans

(21% each). Three-quarters (75%) of participants were in 8th or 9th grade when they started the HSYI summer program. Twelve (25%) youth had participated in the YMCA Middle School Youth Institute before entering the high school program.

Table 1  
Description of Summer 2009 High School Youth Institute Participants  
(N = 47)

	%	N
❖ Age at Start of Program		
13	21%	10
14	36%	17
15	29%	14
16	10%	5
17	4%	2
❖ Gender		
Male	58%	28
Female	42%	20
❖ Ethnicity		
Latino	48%	23
Asian American/Pacific Islander	21%	10
African-American	21%	10
Bi/Multicultural	6%	3
European-American	4%	2
❖ Grade		
8 <sup>th</sup>	40%	19
9 <sup>th</sup>	35%	17
10 <sup>th</sup>	17%	8
11 <sup>th</sup>	6%	3
12 <sup>th</sup>	2%	1

## Analysis

### *Measures*

#### *Leadership Skills*

Nine types of leadership skills were measured including fundamentals of leadership ( $\alpha = .79$  to  $.85$ ), written communication ( $\alpha = .85$  to  $.89$ ), speech communication ( $\alpha = .89$  to  $.91$ ), character-building ( $\alpha = .87$  to  $.90$ ), decision-making ( $\alpha = .87$  to  $.89$ ), group dynamics ( $\alpha = .88$  to  $.94$ ), problem-solving ( $\alpha = .86$ ), personal skills ( $\alpha = .87$  to  $.92$ ), and planning skills ( $\alpha = .90$  to  $.94$ ). 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.

#### *Educational Attitude Scales*

Three educational attitudes were measured including academic self-perceptions ( $\alpha = .74$  to  $.82$ ), goal valuation ( $\alpha = .89$ ), and motivation/self-regulation ( $\alpha = .84$  to  $.85$ ). The academic self-perception scale consisted of 6 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 intelligent.” The goal valuation scale consisted of 6 items that measured how much students valued a task. 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 10 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 ( $\alpha = .78$  to  $.80$ ) consisted of 11 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 ( $\alpha = .75$  to  $.80$ ) consisted of 11 items measuring proficiencies that allow youth to transition into and achieve successful adulthood. Questions included "I am making friends" and "I make good decisions."

The positive core value scale ( $\alpha = .64$  to  $.75$ ) consisted of seven 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 ( $\alpha = .63$  to  $.78$ ) consisted of 5 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 ( $\alpha = .75$  to  $.82$ ) consisted of 6 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 ( $\alpha = .80$  to  $.83$ ) consisted of 5 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 ( $\alpha = .88$  to  $.95$ ) consisted of 4 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

### *Leadership Skills*

As shown in Table 2, these HSYI youth self-reported significant improvements in eight of the nine areas of leadership including Fundamentals of Leadership Skills,  $t(47) = 4.91, p < .05$ , Written Communication Skills,  $t(47) = 3.90, p < .05$ , Speech Communication Skills,  $t(47) = 4.30, p < .05$ , Decision-Making Skills,  $t(47) = 2.51, p < .05$ , Group Dynamic Skills,  $t(47) = 2.92, p < .05$ , Problem-Solving Skills,  $t(47) = 2.91, p < .05$ , Personal Skills,  $t(45) = 2.75, p < .05$ , and Planning Skills,  $t(46) = 3.80, p < .05$ . These teens also self-reported somewhat higher skills for Character Building,  $t(47) = 1.70, p < .10$ , at the end of the summer program. The greatest gains were found in fundamentals of leadership, written communication and speech communication.

Table 2  
Summer 2009 YI Participant Report of Changes in Leadership Skills

Skills	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.12	.52	48	2.56	.37	.44**
Written Communication	1.99	.59	48	2.30	.52	.31**
Speech Communication	1.99	.54	48	2.30	.53	.31**
Character Building	2.40	.41	48	2.50	.42	.11*
Decision-Making	2.27	.52	48	2.47	.49	.20**
Group Dynamics	2.18	.44	48	2.38	.49	.20**
Problem-Solving	2.14	.58	48	2.39	.53	.25**
Personal	2.36	.38	46	2.51	.41	.16**
Planning	2.14	.48	47	2.40	.54	.26**

\* $p < .10$

\*\* $p < .05$

### *Technology Use*

Technology use was measured by participants' self-report of their frequency of use of 13 types of technology. Participants rated themselves on a scale ranging from 1 "Never" to 4 "Daily." Higher scores indicated greater frequency of use. As shown in Table 3, study participants reported significantly more frequent use of sending email,  $t(47) = 2.79, p < .05$ , creating web pages,  $t(47) = 5.72, p < .05$ , creating graphic designs with computer software,  $t(47) = 3.38, p < .05$ , using digital video equipment,  $t(47) = 2.53, p < .05$ , participating in Internet chat rooms/discussions boards  $t(47) = 3.24, p < .05$ , using digital music software  $t(45) = 5.93, p < .05$ , and using digital editing software  $t(45) = 5.32, p < .05$  at the end of the summer program. Participants also reported somewhat more frequent use of using presentation software  $t(45) = 1.95, p < .10$ . The greatest gains were found in the use of digital music software, digital editing software and creating web pages and participating in Internet chat rooms/discussions boards.



Table 3

## Summer 2009 YI Participant Report of Changes in Technology Use

Technology Use	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
I currently use the computer at home and school.	3.42	.85	48	3.44	.74	.02
I send email.	2.38	1.08	48	2.77	.93	.40**
I access the Internet (websites, surf the web).	3.40	.89	48	3.50	.68	.10
I create web pages.	1.31	.59	48	1.88	.76	.56**
I create graphic designs with computer software and code applications (HTML, Dreamweaver, etc.).	1.77	1.02	48	2.31	.93	.54**
I use word processing software applications to write text.	3.04	.80	48	2.92	.77	-.12
I use data processing software applications for databases or spreadsheets.	2.15	.85	48	2.23	.90	.08
I use digital video equipment (cameras/video).	2.48	.94	48	2.79	.77	.31**
I participate in Internet chat rooms/discussion boards/listservs.	2.08	1.16	48	2.65	1.10	.56**
I use the computer to complete school assignments.	3.20	.75	46	3.07	.83	-.13
I use digital music software (GarageBand, Reason, Logic Pro).	1.91	.96	46	2.87	.91	.96**
I use presentation software (Powerpoint, Keynote, Inspiration).	2.41	.91	46	2.67	.76	.26*
I use digital editing software (iMovie, Final Cut).	1.70	1.03	46	2.50	.91	.80**

\*p &lt; .10

\*\*p &lt; .05

*Technology Competence*

Technology competence was measured by participants' self-report of knowledge in nine different areas. Participants rated themselves on a scale ranging from 1 "No knowledge" to 4 "Excellent knowledge." As shown in Table 4, these program participants reported significant

improvement in all competence areas including using input devices,  $t(45) = 4.09, p < .05$ , using a variety of media and technology resources,  $t(45) = 3.54, p < .05$ , working cooperatively with others to use technology to produce and share information,  $t(45) = 3.34, p < .05$ , creating multimedia products,  $t(45) = 4.98, p < .05$ , using technology tools to locate, evaluate, and collect information from a variety of sources,  $t(45) = 3.43, p < .05$ , using technology tools to process data and report results,  $t(45) = 5.95, p < .05$ , using technology tools for managing and communicating personal/professional information,  $t(45) = 6.16, p < .05$ , and using a variety of media and formats to communicate information and ideas effectively to multiple audiences,  $t(45) = 3.33, p < .05$ . The greatest gains were found in using technology tools for managing personal/professional information, using technology tools to process data and report results and in creating multimedia products.

Table 4

## Summer 2009 YI Participant Report of Changes in Technology Competencies

Technology Competence	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
I can use input devices (mouse, keyboard, remote control) and output devices (monitor, printer) to successfully operate computers, VCRs, audiotapes, etc.).	3.20	.75	46	3.59	.58	.39**
I can use a variety of media and technology resources (word processing, presentation, graphic design software) to create presentations both inside and outside of the classroom.	2.87	.88	46	3.30	.84	.43**
I can work cooperatively with others to use technology to produce and share information.	3.00	.67	46	3.35	.71	.35**
I can create multimedia products (digital videos, movies, magazines, newsletters, invitations) with support from staff or student partners.	2.61	1.02	46	3.37	.71	.76**
I can use technology tools to locate, evaluate, and collect information from a variety of sources.	2.85	.94	46	3.28	.78	.43**
I can use technology tools to process data and report results.	2.48	.84	46	3.26	.71	.78**
I can use technology tools for managing and communicating personal/professional information (finances, schedules, addresses, correspondence).	2.22	.81	46	3.09	.69	.87**
I can use a variety of media and formats to communicate information and ideas effectively to multiple audiences.	2.46	1.00	46	3.07	.71	.61**

\* $p < .10$ \*\* $p < .05$ *Educational Attitudes*

As shown in Table 5, the Youth Institute teens reported significant improvement in academic self-perceptions,  $t(47) = 3.21, p < .05$ , and somewhat of a decrease in goal valuation,  $t(47) = -1.93, p < .10$ .

Table 5  
 Summer 2009 YI Participant Report of Changes in Educational Attitudes

Educational Attitude Scale	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Academic Self-Perceptions	5.27	1.08	48	5.58	1.12	.32**
Goal Valuation	6.21	1.00	48	5.97	1.30	-.24*
Motivation/Self-Regulation	5.36	1.10	48	5.31	1.32	-.05

\* $p < .10$

\*\* $p < .05$

#### *Positive Youth Development*

As shown in Table 6, teens who participated in the 2009 YMCA Youth Institute Summer Program self-reported some or significant improvement in four (57%) of the seven positive youth development areas at the end of the summer program. Positive, significant differences were found in life skills,  $t(47) = 3.07, p < .05$ , positive core values  $t(46) = 2.63, p < .05$ . and in sense of self,  $t(46) = 2.24, p < .05$ . Youth also report somewhat higher social competency/personal responsibility,  $t(46) = 2.00, p < .10$ , at the end of the summer program.

Table 6

## Summer 2009 YI Participant Report of Changes in Positive Youth Development Scales

Development Scale	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Cultural Competence	3.44	.37	48	3.49	.42	.05
Life Skills	3.06	.39	48	3.22	.44	.16**
Positive Core Values	3.23	.39	47	3.38	.45	.15**
Sense of Self	3.20	.46	47	3.34	.54	.14**
Social Competency/Personal Responsibility	3.30	.46	47	3.44	.46	.14*
Community Involvement	2.77	.56	48	2.86	.60	.09
Caring Adult Relationships	3.14	.73	47	3.31	.74	.16

\*p &lt; .10

\*\*p &lt; .05

## Conclusions

Overall, the evaluation results of the 2009 Youth Institute Summer Program were very positive. In particular, HYSI summer program participation, as envisioned, appears to have positively influenced both leadership skills and technology competence. Participants reported significant improvement in eight out of nine leadership skill areas, with the last one approaching significance. This suggests the summer wilderness retreat and the project-based learning experiences helped participants to develop a wide range of skills that should enable them to be effective leaders in a variety of settings. These skills should be particularly useful both in school and as they enter the work force as many of the items measured by this instrument have been identified as critical 21<sup>st</sup> century work place skills (The Partnership for 21<sup>st</sup> Century Learning Skills, 2003). The perceived improvement in written and speech communication skills should also prove helpful as they continue their school careers.

These HYSI summer participants also self-reported some or significantly more technology use on eight (61%) of the 13 types of use measured and significant improvement in all eight areas of technology competence. Thus, it appears that participation in the Youth Institute, as hypothesized, exposed these youth to a variety of technology applications and helped them to gain a broad array of technology skills that should prove valuable to them in their future academic and career endeavors. The changes in technology usage, not unexpectedly, primarily reflected the major areas of technology emphasis in the summer program. For example, it is not unexpected that using the computer to complete school assignments remained unchanged since these youth were not involved in school. It is possible that offering HSYI workshops focusing on some of the other areas (word processing, spreadsheets) during the year-round might also help to encourage further use and competence in these areas. It is worth noting that these youth reported these significant technology competence gains in all areas even though a quarter of them had already been exposed to technology training during their tenure in the YMCA Middle School program. This suggests the HSYI program is able to build different or higher level technology skills even among youth who have some technology expertise, providing some support for the viability of a “technology learning continuum” as envisioned by the YMCA.

Another anticipated outcome of the HSYI is improved educational attitudes. The findings in this area were somewhat mixed. While these youth reported a significant improvement in academic self-perceptions or self-confidence in their ability to learn, at the end of the summer, they also reported somewhat of a decline related to goal valuation or their belief regarding the importance of working hard in school, and no change in their motivation self-regulation. While it is positive that these youth evidenced greater belief in their ability to learn, HSYI staff may want to continue to reinforce the importance of school work and grades since teens, particularly ninth graders, do not always recognize the fact that early high school grades

may positively or negatively influence their ability to access higher education. The addition of the new higher education initiative to the HSYI year-round program should also prove helpful in improving educational attitudes among these youth.

The HSYI is designed to incorporate positive youth development strategies into all aspects of the program since participation in youth development programs have 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). There were some indications that involvement in the summer HSYI program had a positive influence on youth development, for example, there were significant improvements in life skills, positive core values, sense of self, and some improvement on social competency/personal responsibility. In contrast, no changes were evidenced in cultural competence, community involvement and caring adult relationships, all of which showed significant improvement last summer. It is possible that positive changes in community involvement might be forthcoming as these youth will have the opportunity to engage in community activities in the alumni phase of the program. It may be that the lack of change in the area of caring adult relationships may have resulted from the large number of youth who participated in the program this past summer, perhaps limiting the amount of adult-child interaction. It should prove beneficial for staff to continue to work on creating these positive relationships with individual youth given that positive adult relationships have been linked to overall program goals such as school commitment and academic achievement, as well as less involvement in delinquency and other problem behaviors (Gabarino, 1993; Paxton, Valois, Huebner & Drane, 2006).

In conclusion, the results of this evaluation strongly suggest that the HSYI summer program positively influenced the youth who participated in the 2009 summer program in most

of the key areas hypothesized by the program model; leadership, technology, and positive youth development and evidenced some ability to increase academic self-perceptions. It may prove useful during the coming academic year for staff to focus on educational support and encouragement, further development of caring adult relationships, community involvement, and continued exposure to various technology programs.



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