

# **Leadership & Technology Evaluation of the 2005 Long Beach YMCA Youth Institute Intensive Summer Program**

**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 2005 YMCA Youth Institute Intensive Summer Program participants on their first and last day of the program. 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 Long Beach YMCA Technology Skills Inventory, was created by Dr. Jo Ann Regan of the California State University, Long Beach, Department of Social Work, specifically to evaluate this project. The Technology Inventory consists of two sections, one on frequency of technology use and one on technology competency. Unfortunately, the frequency of technology use section was inadvertently left off the majority of surveys, so the effects are explored only on technology competencies.

### *Sample*

As shown in Table 1, the participants of the 2005 YMCA Youth Institute Intensive Summer Program ranged from 13 to 17 years of age. The majority of youth were in the 13 to 14 year age range (68.5%). There were more females (58%) than males (42%). Latinos (44.5%) were the largest ethnic group, followed by African-Americans (23.5%), and Asian-American/Pacific Islanders (13.5%). Almost three-quarters (73.5%) of the sample were 8<sup>th</sup> or 9<sup>th</sup> graders when they began the YMCA program.

**Table 1**  
**Sample Description of Summer 2005 Youth Institute Participants**  
**(N = 38)**

	<u>%</u>	<u>N</u>
◆ Age at Start of Program		
13	21.0%	8
14	47.5%	18
15	16.0%	6
16	13.0%	5
17	2.5%	1
◆ Gender		
Female	58.0%	22
Male	42.0%	16
◆ Ethnicity		
Latino	44.5%	17
African-American	23.5%	9
Asian American/Pacific Islander	13.5%	5
Bi/Multicultural	10.5%	4
European-American	8.0%	3
◆ Grade		
8 <sup>th</sup>	34.0%	13
9 <sup>th</sup>	39.5%	15
10 <sup>th</sup>	18.5%	7
11 <sup>th</sup>	8.0%	3

### Analysis

#### *Leadership Skills*

Nine types of leadership skills were measured including fundamentals of leadership ( $\alpha = .87$ ), written communication ( $\alpha = .85$ ), speech communication ( $\alpha = .88$ ), character-building ( $\alpha = .87$ ), decision-making ( $\alpha = .80$ ), group dynamics ( $\alpha = .89$ ), problem-solving ( $\alpha = .88$ ), personal skills ( $\alpha = .92$ ), and planning ( $\alpha = .92$ ). 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 were investigated using paired t-tests.

### Results

As shown in Table 2, teens who participated in the 2005 YMCA Youth Institute Intensive Summer Program reported significant improvements in eight of the nine areas of leadership. Significant improvements were found on Fundamentals of Leadership,

$t(37) = 3.07, p < .05$ , Written Communication,  $t(36) = 3.21, p < .05$ , Speech Communication Skills,  $t(36) = 4.19, p < .05$ , Group Dynamic Skills,  $t(36) = 3.60, p < .05$ , Decision-Making Skills,  $t(37) = 4.28, p < .05$ , Problem-Solving Skills,  $t(36) = 3.27, p < .05$ , Personal Skills,  $t(37) = 2.96, p < .05$ , and Planning Skills,  $t(37) = 3.96, p < .05$ . Prior to attending the program, these teens rated themselves lowest on speech communication, written communication and fundamentals of leadership and highest on character building, personal skills and decision-making. The greatest gains were found in speech communication, problem-solving and fundamentals of leadership.

**Table 2**  
**Participant Report of Changes in Leadership Skills**  
**(N = 38)**

<u>Skills</u>	<u>Pre-Summer</u>			<u>Post-Summer</u>		<u>Differenc e</u>
	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	
Fundamentals of Leadership	2.20	.51	38	2.50	.43	.30*
Written Communication	2.15	.55	37	2.42	.37	.27*
Speech Communication	1.92	.57	37	2.34	.37	.42*
Character Building	2.52	.33	38	2.55	.34	.03
Group Dynamics	2.21	.37	37	2.45	.42	.24*
Decision-Making	2.32	.36	38	2.59	.34	.27*
Problem-Solving	2.21	.62	37	2.57	.45	.36*
Personal	2.40	.39	38	2.58	.38	.18*
Planning	2.22	.44	38	2.48	.45	.26*

\* $p < .05$

### *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." Prior to program participation, teens reported their highest levels of knowledge in the area of working collaboratively with others to use technology to compile, synthesize, produce and disseminate information and use of input and output devices to successfully operate computers, VCRs, audiotapes, etc. Their lowest levels of knowledge were in the areas of the use; (a) a variety of media and formats to communicate information and ideas effectively, (b) technology tools for managing and communicating personal/professional information, and (c) technology in the development of strategies for solving problems in the world.

As shown in Table 4, teens who participated in the 2005 YMCA Youth Institute Intensive Summer Program reported significant improvements in their competencies with: (a) a variety of media and technology resources to create knowledge products for audiences inside and outside the classroom,  $t(36) = 3.88, p < .05$ ; (b) cooperative and collaborative work with peers, experts, family members, and others to use technology to compile, synthesize, produce and disseminate information and creative works,  $t(36) = 2.68, p < .05$ ; (c) the creation of multimedia products with support from teachers, family members or student partners,  $t(36) = 3.88, p < .05$ ; (d) the use of technology tools to locate, evaluate, and collect information from a variety of sources,  $t(36) = 2.06, p < .05$ ; (e) the use of technology tools to process data and report results,  $t(35) = 3.33, p < .05$ ; (f) the use of technology in the development of strategies for solving problems in the world,  $t(35) = 2.82, p < .05$ ; (g) the use of technology tools for managing and communicating personal/professional information,  $t(36) = 2.86, p < .05$ ; and

(h) the use of a variety of media and formats to communicate information and ideas effectively to multiple audiences,  $t(35) = 4.13, p < .05$ .

The greatest knowledge gains were found on using technology resources to create knowledge products for audiences, creating multimedia products with teacher, family or student partners, use of a variety of media and formats to communicate information and ideas effectively, and use of technology for managing and communicating information.

**Table 3**  
**Participant Report of Changes in Technology Competencies**  
(N =37)

	<u>Pre -</u> <u>Summer</u>		<u>N</u>	<u>Post-</u> <u>Summer</u>		<u>Difference</u>
	<u>Mean</u>	<u>SD</u>		<u>Mean</u>	<u>SD</u>	
Use input and output devices to successfully operate computers, VCR's, audiotapes, etc.	3.19	.91	37	3.46	.77	.27
Use a variety of media and technology resources to create knowledge products for audiences	2.68	1.06	37	3.38	.76	.70*
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information	2.78	1.06	37	3.24	.86	.46*
Create multimedia products with support from teachers, family members, or student partners.	2.59	1.01	37	3.30	.74	.70*
Use technology tools to locate, evaluate, and collect information from a variety of sources.	2.86	1.03	37	3.24	.68	.38*
Use technology tools to process data and report results.	2.67	.99	36	3.31	.71	.64*
Use technology in the development of strategies for solving problems in the world.	2.42	.94	36	2.97	.84	.56*
Use technology tools for managing and communicating personal/professional information.	2.22	1.06	37	2.86	.92	.65*
Use a variety of media and formats to communicate information and ideas effectively.	2.36	1.05	36	3.06	.83	.69*

\*p < .05

## Conclusions

Participants in the 2005 YMCA Youth Institute Intensive Summer Program reported significant improvements in almost all areas of their leadership and their technology competencies. Participants self-reported significant improvements in eight of nine leadership areas, which is similar to the findings from the last two years. These results suggest that the wilderness retreat, project-based learning and other program components helped participants further develop a diverse range of leadership skills. It is also worth noting that in all three years, two of the greatest gains were made on fundamentals of leadership and problem-solving abilities. This suggests that participants are developing skills should prove very useful in both the school and work arenas. The large gains in speech communication may be particularly helpful to students as many high school classes include oral presentations.

Participants also self-reported significant knowledge gains on eight of nine technology competencies. These findings provide additional support for the idea that knowledge and skills were as a result of the program. The breadth of the material covered by the summer program is clearly evident given the broad range of competency gains found here. The skill gains, in the latest technologies, should help participants to do better in school as well as to prepare them for a variety of professional fields.

Overall, these findings combined with the last two years' findings strengthen and provide support for ideas incorporated into the Youth Institute Framework. The summer program appears to have helped participants to gain multiple new skills and competencies as theorized in the model. In addition, some of the leadership growth may also serve as proxy indicators of improvement in sense of self-efficacy and self-confidence. Taken together these finding are exciting and suggest the program is achieving most of its stated goals. They also suggest that

“technology” programs, when delivered thoughtfully are able to positively impact other areas in the lives of youth.