

**Evaluation of the Effects of the 2006
Long Beach YMCA Youth Institute
Intensive Summer Program on
Leadership and Technology Skills and
School Attitudes**

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Methods

Data Collection

Self-report survey data was collected from all entering 2006 YMCA Youth Institute Intensive Summer Program participants on their first and last day of the program. 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 consists of two sections, one on frequency of technology use and one on technology competency. The third survey was the School Attitude Assessment Survey – Revised Edition (McCoach & Siegle, 2003). This survey measures five areas of school attitudes. This instrument has been shown to have strong reliability and validity.

Sample

As shown in Table 1, the participants of the 2006 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 (67%). There were an even number of females and males (50% each). Latinos (44%) were the largest ethnic group, followed by Asian-American/Pacific Islanders (25%), African-Americans (17%), Bi-racial/Mixed ethnicities (11%) and Caucasians (3%). More than three-quarters (80%) of the sample were 8th or 9th graders when they began the YMCA program.

Table 1
Sample Description of Summer 2006 Youth Institute Participants
(N = 36)

	%	N
◆ Age at Start of Program		
13	36%	13
14	31%	11
15	19%	7
16	11%	4
17	3%	1
◆ Gender		
Female	50%	18
Male	50%	18
◆ Ethnicity		
Latino	44%	16
Asian American/Pacific Islander	25%	9
African-American	17%	6
Bi/Multicultural	11%	4
European-American	3%	1
◆ Grade		
8 th	50%	18
9 th	30%	11
10 th	14%	5
11 th	6%	2

Analysis

Leadership Skills

Nine types of leadership skills were measured including fundamentals of leadership ($\alpha = .81$ to $.89$), written communication ($\alpha = .78$ to $.81$), speech communication ($\alpha = .82$ to $.85$), character-building ($\alpha = .82$ to $.88$), decision-making ($\alpha = .82$ to $.84$), group dynamics ($\alpha = .83$ to $.88$), problem-solving ($\alpha = .65$ to $.76$), personal skills ($\alpha = .70$ to $.85$), and planning ($\alpha = .62$ to $.90$). 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.

School Attitude Scales

Five different areas of school attitudes were measured including academic self-perceptions ($\alpha = .85$ to $.86$), attitudes toward teachers ($\alpha = .88$ to $.93$), attitudes toward school ($\alpha = .89$ to $.93$), goal valuation ($\alpha = .78$ to $.80$), and motivation/self-regulation ($\alpha = .91$ to $.92$). The academic self-perception scale measured the perception/confidence that students had in their own skills. One question was “I feel that I can learn new ideas quickly.” The attitude toward teachers and classes scale measured how students saw their teachers’ personality and organization of the classroom. One question was “My teachers make learning interesting.” The attitudes toward school scale measured students’ self-reported interest in and affect toward school. One item was “My school is a good match for me.” The goal valuation scale measured how much students valued a task. One question was “It is important to me to get good grades.” The motivation/self-regulation scale measured how self-motivated students were and how good they were at self-monitoring. One question was “I use a variety of strategies to learn new material in high school.”

Results

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. As shown in Table 2, teens who participated in the 2006 YMCA Youth Institute Intensive Summer Program reported significant improvements in six of the nine areas of leadership. Significant improvements were found on Fundamentals of Leadership Skills, $t(35) = 3.91, p < .05$, Written Communication Skills, $t(35) = 3.96, p < .05$, Speech Communication Skills, $t(35) = 4.32, p < .05$, Group Dynamic Skills, $t(35) = 2.05, p < .05$, and Decision-Making Skills, $t(35) = 2.45, p < .05$. The greatest gains were found in speech communication, fundamentals of leadership and written communication skills.

Table 2
 Summer 2006 Participant Report of Changes in Leadership Skills

Skills	Start of Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.30	.54	36	2.61	.35	.31**
Written Communication	2.18	.46	36	2.47	.36	.29**
Speech Communication	2.09	.55	36	2.42	.37	.33**
Character Building	2.60	.33	36	2.71	.26	.11**
Group Dynamics	2.43	.51	36	2.59	.34	.16**
Decision-Making	2.52	.38	36	2.67	.35	.14**
Problem-Solving	2.53	1.01	36	2.66	.34	.13
Personal	2.57	.47	35	2.71	.25	.14
Planning	2.50	.50	35	2.58	.38	.08

**p<.05

Technology Use

Technology use was measured by participants' self-report of their frequency of use of twelve types of technology. Participants rated themselves on a scale ranging from 1 "Never" to 4 "Daily." Higher scores indicated greater frequency of use. Prior to entering the program, participants rated their frequency of use highest on using computers to complete schoolwork, accessing the Internet and playing computer games. Their least frequent use was in the areas of creating web pages and buying things on the Internet.

As shown in Table 3, study participants reported significantly more frequent use in creating web pages, $t(32) = 2.20, p < .05$, creating graphic designs with computer software and code applications, $t(32) = 4.75, p < .05$, using word processing software to write text, $t(35) = 2.60, p < .05$, using data processing software applications for databases or spreadsheets, $t(33) =$

2.17, $p < .05$, and using digital video equipment, $t(35) = 4.59$, $p < .05$, at the end of the YI summer program. The greatest gains in frequency of technology use were found on creating graphic designs with computer software and code applications, using digital video equipment, and using data processing software applications for databases or spreadsheets.

Table 3
Summer 2006 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.	3.39	.93	36	3.61	.73	.22
I send email.	2.72	1.08	36	2.67	1.15	.06
I access the Internet (websites, surf the web).	3.51	.78	35	3.71	.62	.20*
I create web pages.	1.36	.86	33	1.76	.90	.39**
I create graphic designs with computer software and code applications (HTML, Dreamweaver, etc.).	1.64	1.08	33	2.55	1.09	.91**
I use word processing software applications to write text.	2.94	.92	36	3.31	.82	.36**
I use data processing software applications for databases or spreadsheets.	1.88	1.07	34	2.32	1.04	.44**
I use digital video equipment (cameras/video).	2.25	1.10	36	3.03	.84	.78**
I participate in Internet chat rooms/discussion boards/listservs.	2.21	1.20	34	2.26	1.26	.06
I play computer games.	2.34	.91	35	2.54	.92	.20
I buy things on the Internet.	1.33	.54	33	1.52	.87	.18
I use the computer to complete school assignments.	3.28	.74	36	3.39	.84	.11

** $p < .05$

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 use of input and output devices to successfully operate computers, VCRs, audiotapes, etc., working collaboratively with others to use technology to compile, synthesize, produce, and disseminate information, and the use of technology tools to locate, evaluate, and collect information from a variety of sources. Their lowest levels of knowledge were in the areas of the use of technology tools for managing and communicating personal/professional information, use of a variety of media and formats to communicate information and ideas effectively, and the use of a variety of media and formats to communicate information and ideas effectively.

As shown in Table 4, teens who participated in the 2006 YMCA Youth Institute Intensive Summer Program reported significant improvements in all technology competencies including: (a) input and output devices to successfully operate computers, VCR's, audiotapes, etc., $t(35) = 2.79, p < .05$; (b) a variety of media and technology resources to create knowledge products for audiences inside and outside the classroom, $t(35) = 5.29, p < .05$; (c) cooperative and collaborative work with peers, experts, family members, and others to use technology to compile, synthesize, produce and disseminate information and creative works, $t(35) = 2.68, p < .05$; (d) the creation of multimedia products with support from teachers, family members or student partners, $t(35) = 4.54, p < .05$; (e) the use of technology tools to locate, evaluate, and collect information from a variety of sources, $t(35) = 2.97, p < .05$; (f) the use of technology tools to process data and report results, $t(35) = 3.26, p < .05$; (g) the use of technology in the development of strategies for solving problems in the world, $t(35) = 3.58, p < .05$; (h) the use of technology tools for managing and communicating personal/professional information, $t(35) = 6.17, p < .05$; and (i) the use of a variety of media and formats to communicate information and ideas effectively to multiple audiences, $t(34) = 4.60, p < .05$.

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

Table 4
Summer 2006 Participant Report of Changes in Technology Competencies

Technology Competency	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Use input and output devices to successfully operate computers, VCR's, audiotapes, etc.	3.25	.77	36	3.58	.55	.33**
Use a variety of media and technology resources to create knowledge products for audiences	2.81	1.09	36	3.69	.52	.89**
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information	3.17	.84	36	3.56	.50	.39**
Create multimedia products with support from teachers, family members, or student partners.	2.83	1.00	36	3.64	.54	.81**
Use technology tools to locate, evaluate, and collect information from a variety of sources.	2.97	.74	36	3.39	.69	.42**
Use technology tools to process data and report results.	2.61	.90	36	3.14	.76	.53**
Use technology in the development of strategies for solving problems in the world.	2.36	.87	36	3.08	.84	.72**
Use technology tools for managing and communicating personal/professional information.	2.00	.89	36	3.03	.88	1.03**
Use a variety of media and formats to communicate information and ideas effectively.	2.31	.93	35	3.26	.92	.94**

**p<.05

School Attitudes

As shown in Table 5, teens who participated in the 2006 YMCA Youth Institute Intensive Summer Program reported significant improvements in their academic self-perceptions, $t(35) = 2.58, p < .05$, and in their school motivation and self-regulation, $t(35) = 3.24, p < .05$.

Prior to attending the program, these teens rated themselves highest on goal valuation and attitudes toward school, and lowest on attitudes toward teachers and academic self-perceptions. The greatest gains were found in academic self-perceptions and motivation/self-regulation.

Table 5
Summer 2006 Participant Report of Changes in School Attitudes

School Attitude Scale	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Academic Self-Perceptions	5.41	.85	36	5.69	.83	.28**
Attitudes Toward Teachers	5.29	.90	36	5.37	1.11	.09
Attitudes Toward School	5.65	1.18	36	5.69	1.13	.05
Goal Valuation	6.54	.59	36	6.65	.54	.11
Motivation/Self-Regulation	5.47	.95	36	5.84	.77	.37**

** $p < .05$

Conclusions

Participants in the 2006 YMCA Youth Institute Intensive Summer Program reported significant improvements in six out of nine areas of the leadership skills. These results differ somewhat from last years' findings where eight out of nine of the leadership skill areas, including problem-solving, personal and planning skills, showed significant improvement. It is interesting to note that the before-summer self-rating on problem-solving and personal skills were almost as high this year as they were at the end of the summer last year, and, in fact, the planning skills rating was also higher. It appears that the 2006 summer program teens already

had better leadership skills upon entry than other classes. In part, this might be because approximately 20% of the entering class had already graduated from the Stephens Middle School Youth Institute. If this pattern continues, YI staff may want to consider more sophisticated leadership and group activities to help youth further hone their leadership skills. However, the results overall suggest that the program helped participants develop a diverse range of leadership skills that should prove very useful in both the school and work arenas.

Participants also reported gains in five of the 12 technology use areas. Participants self-reported significant increases in technology use in creating web pages, creating graphic designs with computer software, word processing applications for text and databases, and digital video equipment. These findings are not surprising given that each of these areas was emphasized during the summer program. The areas where there were no significant improvements in use; using the computer at home and school, e-mail, accessing the Internet, chat-rooms, computer games, Internet buying; were clearly not program foci, while using the computer to complete school assignments was likely unaffected since the youth were not in school during the time of the program. It does appear the curriculum helped youth to be able to use a variety of technology, yet it did not seem to encourage, the perhaps, more traditional teen uses of technology.

Participants also self-reported significant knowledge gains in all areas of technology competency. These results are similar to last year's findings and suggest that participants gained competency in a broad range of state-of-the-art technology and the effective use of this technology to produce and disseminate products. The breadth of the material covered by the summer program is clearly evident given the broad range of competency gains found here. These competency gains should help participants to do better in school and groups as well as to prepare them for a variety of professional fields.

The YI Intensive Summer Program participants also reported significant gains in two of the five school attitude areas; academic self-perceptions and motivation/self-regulation. These findings suggest that program participation helped these youth to feel more confident in their own academic abilities and more self-motivated and able to work to achieve good grades. These findings are encouraging given that last year there were no positive changes in school attitudes among program participants. If YI staff made program adjustments to encourage positive school attitudes, these efforts should continue. These differences may also have been influenced by the increase on the amount of college-age staff, many of whom were program graduates themselves. It is possible that seeing others, like themselves, be able to go on to college was reaffirming for these youth. In any event, efforts to encourage school performance and motivation should prove particularly beneficial for these youth.

References

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