Leadership, Technology and School Attitudes Evaluation of the 2007 Long Beach Stephens 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

September, 2007

Methods

Data Collection

Self-report survey data was collected from all entering 2007 Stephens YMCA Youth Institute Summer Program (SYI) 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 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 (D. B. McCoach, 2002). This survey measures three 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 2007 Stephens YMCA Youth Institute Intensive Summer Program ranged from 11 to 15 years of age. The majority of youth were in the 12 to 14 year age range (90%). About half (57.5%) of the participants were female. Latinos (52.5%) were the largest ethnic group, followed by Asian-American/Pacific Islanders (25%), African-Americans (17.5%), and Caucasians (5%). Close to half (42.5%) of the sample were 8th graders when they began the SYI program. It should also be noted that 10 of the 2007 SYI participants were continuing the program from the 2006 class.

Table 1
Sample Description of Summer 2007 Youth Institute Participants
(N = 40)

	%	N
♦ Age at Start of Program		
11	7.5%	3
12	30.0%	12
13	25.0%	10
14	35.0%	14
15	2.5%	1
♦ Gender		
Male	42.5%	17
Female	57.5%	23
♦ Ethnicity		
Latino	52.5%	21
Asian American/Pacific Islander	25.0%	10
African-American	17.5%	7
Caucasian	5.0%	2
♦ Grade		
6^{th}	22.5%	9
7^{th}	35.0%	14
8^{th}	42.5%	17

Analysis

Leadership Skills

Nine types of leadership skills were measured including fundamentals of leadership (α = .84 to .90), written communication (α = .88 to .90), speech communication (α = .85 to .87), character-building (α = .86 to .92), decision-making (α = .84 to .89), group dynamics (α = .91 to .94), problem-solving (α = .77 to .82), personal skills (α = .90 to .92), and planning (α = .90 to .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.

School Attitude Scales

Four areas of school attitudes were measured including academic self-perceptions (α = .87 to .91), attitudes toward school (α = .89 to .90), goal valuation (α = .88 to .89), and motivation/self-regulation (α = .92 to .94).

Results

As shown in Table 2, youth who participated in the 2007 SYI Summer Program reported significant improvements Fundamentals of Leadership, t (39) = 4.76, $p < .05$, Written Communication, t (38) = 4.33, $p < .05$, Speech Communication Skills, t (38) = 5.08, $p < .05$, Character-Building, t (39) = 2.71, $p < .05$, Group Dynamic Skills, t (39) = 2.72, $p < .05$, Decision-Making Skills, t (38) = 3.76, $p < .05$, Problem-Solving Skills, t (39) = 3.93, $p < .05$, Personal Skills, t (39) = 3.12, $p < .05$, and Planning Skills, t (39) = 4.49, $p < .05$. The greatest gains were found in fundamentals of leadership, speech communication, and written communication

Table 2
Summer 2007 SYI Participant Report of Changes in Leadership Skills

	Before Summer			After Summer		
Skills	Mean	SD	N	Mean	SD	Difference
Fundamentals of Leadership	2.14	.59	40	2.57	.55	.43**
Written Communication	2.07	.63	39	2.41	.53	.34**
Speech Communication	2.01	.54	39	2.39	.48	.38**
Character Building	2.45	.39	40	2.64	.41	.19**
Group Dynamics	2.29	.49	40	2.50	.51	.22**
Decision-Making	2.30	.51	39	2.60	.46	.29**
Problem-Solving	2.31	.53	40	2.62	.44	.31**
Personal	2.39	.45	40	2.58	.42	.20**
Planning	2.25	.50	40	2.55	.44	.30**

**p<.05
*Approaching significance, p<.10

Technology Use

Technology use was measured by participants' self-report of their frequency of use of 12 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 at home and at school, accessing the Internet and playing computer games. Their least frequent use was in the areas of buying things on the Internet, using data processing software applications for databases or spreadsheets and creating graphic designs with computer software and code applications.

As shown in Table 3, participants reported significantly more frequent use in creating graphic designs with computer software and code applications, t (28) = 2.25, p < .05, using data

processing software applications for databases or spreadsheets, t (30) = 2.93, $p < .05$, and using digital video equipment, t (34) = 2.54, $p < .05$, at the end of the SYI summer program. Participants also reported somewhat greater frequency of use in using the computer at home and school, t (38) = 1.71, $p < .10$.The greatest gains in frequency of technology use were found on using data processing software applications for databases or spreadsheets, using digital video equipment and creating graphic designs with computer software and code applications.

Table 3
2007 Summer SYI Participant Report of Changes in Technology Use

Technology Use	Before Summer			After Summer		
	Mean	SD	N	Mean	SD	Difference
I currently use the computer at home and school.	3.23	.87	39	3.46	.85	.23*
I send email.	2.28	1.14	36	2.42	1.20	.14
I access the Internet (websites, surf the web).	3.15	.90	39	3.36	.93	.21
I create web pages.	1.67	.96	30	1.67	.92	.00
I create graphic designs with computer software and code applications (HTML, Dreamweaver, etc.).	1.66	.97	29	2.24	1.12	.59**
I use word processing software applications to write text.	2.85	1.02	34	2.97	.90	.12
I use data processing software applications for databases or spreadsheets.	1.61	.88	31	2.26	1.03	.65**
I use digital video equipment (cameras/video).	2.40	.98	35	3.00	.91	.60**
I participate in Internet chat rooms/discussion boards/listservs.	2.30	1.16	33	2.39	1.27	.09
I play computer games.	2.90	.94	39	2.85	.96	-.05
I buy things on the Internet.	1.34	.86	29	1.52	.87	.17
I use the computer to complete school assignments.	2.89	.98	38	3.05	.84	.16

**p<.05
*Approaching significance, p<.10

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 using input and output devices to successfully operate computers, VCRs, audiotapes, etc, using technology tools to locate, evaluate, and collect information from a variety of sources, and working collaboratively with others to use technology to compile, synthesize,

produce and disseminate information. Their lowest levels of knowledge were in using technology in the development of strategies for solving problems in the world, using a variety of media and formats to communicate information and ideas effectively, and using technology tools for managing and communicating personal/professional information.

As shown in Table 4, youth who participated in the 2007 YMCA SYI summer program reported significant improvements in their competencies with creating multimedia products with support from teachers, family members or student partners, t (36) = 3.32, $p < .05$; using technology in the development of strategies for solving problems in the world, t (35) = 2.94, $p < .05$; using technology tools for managing and communicating personal/professional information, t (35) = 2.08, $p < .05$; and using a variety of media and formats to communicate information and ideas effectively to multiple audiences, t (35) = 2.78, $p < .05$. Participants also reported somewhat greater technology competencies in the use of a variety of media and technology resources to create knowledge products for audiences, t (36) = 1.87, $p < .10$, and in working collaboratively with others to use technology to compile, synthesize, produce, and disseminate information, t (36) = 1.94, $p < .10$.

Table 4
2007 Summer SYI Participant Report of Changes in Technology Competencies

Technology Competency	Before Summer			After Summer		
	Mean	SD	N	Mean	SD	Difference
Use input and output devices to successfully operate computers, VCR's, audiotapes, etc.	2.89	.97	37	3.08	.98	.19
Use a variety of media and technology resources to create knowledge products for audiences	2.62	.79	37	3.00	.91	.38*
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information	2.84	1.09	37	3.22	.89	.38*
Create multimedia products with support from teachers, family members, or student partners.	2.51	.96	37	3.22	.95	.70**
Use technology tools to locate, evaluate, and collect information from a variety of sources.	2.85	.91	33	2.97	.98	.12
Use technology tools to process data and report results.	2.68	.88	34	2.85	.93	.18
Use technology in the development of strategies for solving problems in the world.	2.17	1.00	36	2.78	.87	.61**
Use technology tools for managing and communicating personal/professional information.	2.31	1.06	36	2.78	.90	.47**
Use a variety of media and formats to communicate information and ideas effectively.	2.22	.93	36	2.86	.90	.64**

**p<.05
*Approaching significance, p<.10

School Attitudes

As shown in Table 6, there were no significant differences in school attitudes after program participation.

Table 6
2007 Summer SYI Participant Report of Changes in School Attitudes

	Before Summer			After Summer		
School Attitude Scale	Mean	SD	N	Mean	SD	Difference
Academic Self-Perceptions	5.21	1.39	40	5.35	1.11	.14
Attitudes Toward School	4.90	1.48	40	5.28	1.16	.38
Goal Valuation	6.22	1.17	40	6.19	.93	-.04
Motivation/Self-Regulation	5.50	1.20	40	5.55	1.06	.04

**p<.05
*Approaching significance, p<.10

Conclusions

Participants in the 2007 YMCA Stephens Youth Institute Summer Program self-reported significant improvements in all nine leadership areas. These positive results suggest that the wilderness retreat, project-based learning and other program components helped participants develop a diverse range of leadership skills. Participants appeared to develop skills that should prove very useful in both the school and work arenas. The large gains in fundamentals of leadership, speech and written communication may be particularly helpful to students as they continue in middle school or move on to high school.

Participants self-reported significant increases in technology use in graphic design software, data processing software applications, and digital video equipment. These findings are not surprising given that each of these areas was emphasized during the summer program. They also evidenced somewhat greater use of computers at home and school, suggesting the program may have increased access to or provided at least an introduction to these areas. These findings differ slightly from last year where there was a significant gain found on word processing software applications and somewhat significant gains in accessing the Internet and creating web

pages. These differences may reflect changes in program or curriculum emphasis. There were no significant improvements in the use of e-mail, chat-rooms, computer games, and Internet buying, none of which are areas of program foci. If the program wants to increase technology use in some of the other areas, curriculum review, reconsideration of the program length, or purposeful inclusion of the content in the year-round program may prove useful.

Participants self-reported significant knowledge gains in four out of nine areas of the technology competencies including creating multimedia products, using technology to develop strategies for solving world problems, using technology for managing and communicating information, and using a variety of media and formats to communicate information and ideas effectively. Participants also reported somewhat significant knowledge gains in using a variety of media and technology resources to create knowledge products for audiences, and working collaboratively with others to use technology to compile, synthesize, produce and disseminate information. These findings were slightly different from last years' results in which all of the technology competencies showed significant or somewhat significant gains. However, it appears that these youth did gain skills in a number of "state-of-the-art" technology areas which suggests the program was effective in assisting youth to gain diverse technology competencies.

No significant improvements were found in any of the school attitudes. One possible explanation for there being no significant changes in this area could be due to the fact they were not currently in school. However, if a goal of the SYI is to improve school attitudes (motivation, assignment completion), then it may be useful to formalize the program's approach to supporting academic achievement and long-term commitment to college for all participants. Given the short length of the summer program, this might be a component that is emphasized during the academic, year-round program. For example, program staff could meet with participants to

discuss course schedules and progress in school, or workshops could be held with youth or their parents to encourage college readiness and/or study skills.

The SYI summer program appears to have helped participants gain many new skills and competencies as theorized in the program model. Taken together, these findings suggest that the program is achieving some of its' stated goals. Given the leadership outcomes, it is clear that youth technology programs, when well staffed and carefully designed, have the ability to positively impact multiple areas in the lives of youth.

References

Karnes, F. A. & Chauvin, J. C. (2000). *Leadership development program manual.* Scottsdale AZ: Gifted Psychology Press, Inc.

McCoach, D. B., & Siegle, D. (2003). The school attitude assessment survey-revised: A new instrument to identify academically able students who underachieve. *Educational and Psychological Measurement, 63 (3),* 414-429.