Outcome Evaluation of the 2004 Long Beach Communities Organizing Resources to Advance Learning (CORAL) Youth Institute Intensive Summer Program

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Methods

Self-report survey data was collected from all entering 2004 CORAL 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 CORAL Technology Skills Inventory, was created by Dr. Jo Ann Regan of the California State University, 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.

Sample

As shown in Table 1, the participants of the 2004 CORAL Youth Institute Intensive Summer Program ranged from 12 to 16 years of age. The majority of youth were in the 13 to 15 year age range (85%) while the rest were 12 or 16. There were more males (61%) than females (39%). Latinos (49%) were the largest ethnic group, followed by Asian-American/Pacific Islanders (21%) and African-Americans (15%). Slightly more than half (54%) of the sample were 8^{th} graders.

Table 1
Sample Description of Summer 2004 Youth Institute Participants
(N = 33)

	%	N
♦ Age at Start of Program		
12	3%	1
13	37%	12
14	27%	9
15	21%	7
16	12%	4
♦ Gender		
Male	61%	20
Female	39%	13
♦ Ethnicity		
Latino	49%	16
Asian American/Pacific Islander	21%	7
African-American	15%	5
Bi/Multicultural	9%	3
European-American	6%	2
♦ Grade		
8th	54%	18
9th	21%	7
10th	25%	8

Leadership Skills

Nine types of leadership skills were measured including fundamentals of leadership (alpha = .90), written communication (alpha = .91), speech communication (alpha =.92), character-building (alpha = .89), decision-making (alpha = .82), group dynamics (alpha = .91), problem-solving (alpha = .89), personal skills (alpha = .91), and planning (alpha = .94). 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.

As shown in Table 2, teens who participated in the 2004 CORAL Youth Institute Intensive Summer Program reported significant improvements in all nine areas of leadership. Significant improvements were found on Fundamentals of Leadership,

t (32) = 4.50, *p* < .05, Written Communication, *t* (32) = 3.87, *p* < .05, Speech Communication Skills, *t* (32) = 3.67, *p* < .05, Character-Building Skills, *t* (32) = 2.12, *p* < .05, Group Dynamic Skills, *t* (32) = 2.12, *p* < .05, Decision-Making Skills, *t* (31) = 5.04, *p* < .05, Problem-Solving Skills, *t* (32) = 3.93, *p* < .05, Personal Skills, *t* (31) = 4.81, *p* < .05, and Planning Skills, *t* (31) = 6.27, *p* < .05. Prior to attending the program, these teens rated themselves lowest on written communication, speech communication, and problem-solving skills and highest on character-building and personal skills. The greatest gains were found in fundamentals of leadership, problem-solving and planning skills.

Table 2
Participant Report of Changes in Leadership Skills
(N = 33)

Skills	Pre-Summer			Post-Summer		Difference
	Mean	SD	N	Mean	SD	
Fundamentals of Leadership	2.23	.60	33	2.60	.41	.37*
Written Communication	2.08	.64	33	2.41	.50	.33*
Speech Communication	2.08	.58	33	2.39	.43	.31*
Character Building	2.55	.33	33	2.64	.30	.09*
Group Dynamics	2.34	.48	33	2.49	.40	.15*
Decision-Making	2.39	.39	33	2.67	.27	.28*
Problem-Solving	2.18	.52	33	2.53	.48	.35*
Personal	2.45	.39	33	2.67	.29	.22*
Planning	2.24	.47	33	2.58	.37	.34*

*p<.05

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 school, accessing the Internet and using computers to complete schoolwork. Their least frequent use was in the areas of graphic design, buying things on the Internet and creating web pages.

As shown in Table 3, teens who participated in the 2004 CORAL Youth Institute Intensive Summer Program reported significantly more frequent use of e-mail, t (32) = 3.55, p < .05, access of the Internet, t (32) = 2.87, p < .05, creation of web pages, t (32) = 5.29, p < .05, creation of graphic designs with computer software and code applications, t (31) = 6.23, p < .05, use of word processing software applications to write text, t (32) = 4.73, p < .05, use of data processing software applications for databases or spreadsheets, t (31) = 3.83, p < .05, use of digital video equipment, t (32) = 3.56, p < .05, participation in Internet chat rooms/discussion boards, t (32) = 3.38, p < .05, use of the Internet to buy things, t (31) = 2.33, p < .05, and use of computers to complete school assignments, t (32) = 3.08, p < .05. The greatest gains in frequency of technology use were found on creating graphic designs, creating web pages and using digital video equipment.

Table 3
Participant Report of Changes in Technology Use
(N = 33)

	Pre-Summer			Post-Summer		Difference
	Mean	SD	N	Mean	SD	
Use the computer at home/school	3.06	1.12	33	3.33	1.05	.27
Send e-mail	1.88	.89	33	2.73	1.10	.85*
Access the Internet	2.82	1.13	33	3.36	1.05	.54*
Create web pages	1.30	.95	33	2.52	1.00	1.21*
Create graphic designs with computer software applications	1.19	.78	32	2.81	1.15	1.62*
Use word processing software applications to write text	2.58	.97	33	3.27	.91	.70*
Use data processing software for databases or spreadsheets	1.75	.92	32	2.50	1.05	.75*
Use digital video equipment	1.76	.94	33	2.67	1.08	.91*
Participate in Internet chat rooms/listservs	1.67	1.14	33	2.55	1.17	.88*
Play computer games	2.67	1.02	33	2.76	1.00	.12
Buy things on the Internet	1.25	.67	32	1.88	1.36	.62*
Use the computer to complete school assignments	2.82	.98	33	3.30	.77	.48*

*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 2004 CORAL Youth Institute Intensive Summer Program reported significant improvements in their knowledge of: (a) input and output devices to successfully operate computers, VCRs, audiotapes and other technologies, t (31) = 3.28, $p < .05$; (b) a variety of media and technology resources to create knowledge products for audiences inside and outside the classroom, t (31) = 8.40, $p < .05$; (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 (31) = 1.88, $p < .05$; (d) the creation of multimedia products with support from teachers, family members or student partners, t (31) = 5.46, $p < .05$; (e) the use of technology tools to locate, evaluate, and collect information from a variety of sources, t (31) = 3.79, $p < .05$; (d) the use of technology tools to process data and report results, t (31) = 3.84, $p < .05$; (e) the use of technology in the development of strategies for solving problems in the world, t (31) = 5.33, $p < .05$; (f) the use of technology tools for managing and communicating personal/professional information, t (31) = 6.66, $p < .05$; and, (f) the use of a variety of media and formats to communicate information and ideas effectively to multiple audiences, t (31) = 5.40, $p < .05$.

The greatest knowledge gains were found on use of a variety of media and formats to communicate information and ideas effectively, use of technology for managing and the use of media and technology resources to create knowledge products for audiences.

Table 4
Participant Report of Changes in Technology Competencies
(N =32)

	Pre Summer			Post Summer		Difference
	Mean	SD	N	Mean	SD	
Use input and output devices to successfully operate computers, VCR's, audiotapes, etc.	3.03	.86	32	3.56	.56	.53*
Use a variety of media and technology resources to create knowledge products for audiences	2.50	.88	32	3.56	.62	1.06*
Work collaboratively with others to use technology to compile, synthesize, produce, and disseminate information	3.03	.97	32	3.38	.71	.34*
Create multimedia products with support from teachers, family members, or student partners.	2.56	.98	32	3.44	.62	.87*
Use technology tools to locate, evaluate, and collect information from a variety of sources.	2.78	.91	32	3.34	.79	.56*
Use technology tools to process data and report results.	2.59	.91	32	3.19	.82	.59*
Use technology in the development of strategies for solving problems in the world.	2.03	1.03	32	2.94	.62	.91*
Use technology tools for managing and communicating personal/professional information.	2.03	.90	32	3.13	.79	1.09*
Use a variety of media and formats to communicate information and ideas effectively.	2.00	.95	32	3.09	.78	1.09*

*p< .05

Conclusions

Participants in the 2004 CORAL Youth Institute Intensive Summer Program reported significant improvements in almost all areas of their leadership, frequency of technology use,

and their technology competencies. Although the absence of a control group makes it difficult to link these changes specifically to program participation, the results are highly encouraging and in line with the stated goals and objectives of the program. It is also possible to make a stronger case that the observed changes happened as a result of program participation as strikingly similar outcomes were also found within the group from Summer, 2003.

Participants self-reported significant improvements in all nine leadership areas, which are the exact same results as last year. 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 both years, the greatest gains were made on fundamentals of leadership, and problem-solving and planning skills. This suggests that participants are developing skills that could be used in both the school and work arenas.

Participants reported significantly more frequent use on ten (83%) of 12 technology items. The two items that did not show more frequent use after the summer session were playing computer games and use of computers at home/school. This is also an improvement over the 2003 class's improvement on eight (61%) of 12 technology frequency of use items. Given the focus of the summer program, it is somewhat encouraging that there were not significant changes either year in using computers to play games. The lack of findings on more use of computers at home/school was likely impacted by the fact that youth were not at school during the summer. Although most of the participants who entered the program had used the technologies rated here to some degree, program participation appears to have increased their usage in multiple areas. It is likely that the increase in usage can be attributed both to increased access and increased ability.

Participants also self-reported significant knowledge gains on all of the technology competencies. These findings provide additional support for the idea that knowledge and skills

were enhanced above and beyond mere technology use. The breadth of the material covered by the summer program is clearly evident given the broad range of competency gains found here.

Overall, these findings combined with last year's 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. However, it is worth noting, that the summer program is only a small part of the entire Youth Institute experience. It will be interesting to follow these participants and their changes as they progress through the entire program.