

**Evaluation of the Effects of the 2008 Long
Beach YMCA Middle School Youth Institute
Summer Program on Technology Skills,
Educational Attitudes and Positive Youth
Development**

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Methods

Data Collection

Self-report survey data was collected from all entering 2008 YMCA Middle School Youth Institute Summer Program participants prior to the start and on the last day of the program. The instrument was The YMCA Youth Institute Survey which 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 items in 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 this 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

Although 83 youth started the 2008 Summer YMCA Middle School Youth Institute program at two middle school sites, only 60 (72%) had signed parent and youth consent forms and completed a Youth Institute survey at the beginning and end of the summer and were included in these analyses. As shown in Table 1, these program participants ranged from 9 to 15 years of age. The majority were 11 to 13 (86%) years of age. Fifty percent were female. Latinos (42%) were the largest ethnic group, followed by African-Americans (30%), Asian-American/Pacific Islanders (18%), Bi-racial/Mixed ethnicities (8%), and European Americans (2%). Sixty-nine percent were in 7th or 8th grade when they started the Middle School Youth

Institute. Forty-three (72%) youth had attended the YMCA Middle School program in the 2007-08 school year, before entering the 2008 Summer MSYI program.

An attrition analysis was conducted to determine if there were any demographic differences between the youth who had all of the necessary information versus those who were not included in these analysis. No significant differences were found on school site, gender, ethnicity, age, or grade level. Thus the findings here should be generalizable to the larger middle school summer cohort.

Table 1
Description of Summer 2008 Middle School Youth Institute Participants
(N = 60)

	%	N
Middle School Site		
Stephens	52%	31
Hughes	48%	29
Age at Start of Program		
9	2%	1
11	26%	16
12	33%	20
13	27%	16
14	10%	6
15	2%	1
Gender		
Male	50%	30
Female	50%	30
Ethnicity		
Latino	42%	25
African-American	30%	18
Asian American/Pacific Islander	18%	11
Bi/Multicultural	8%	5
European-American	2%	1
Grade		
5 th	5%	3
6 th	18%	11
7 th	40%	24
8 th	29%	17
9 th	8%	5

Analysis

Educational Attitude Scales

Three educational attitudes were created to measure academic self-perceptions ($\alpha = .80$ to $.92$), goal valuation ($\alpha = .83$ to $.92$), and motivation/self-regulation ($\alpha = .90$ to $.93$). 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 ($\alpha = .73$ to $.75$) consisted of 7 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 ($\alpha = .81$ to $.86$) 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 ($\alpha = .74$ 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 ($\alpha = .70$ to $.77$) 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 ($\alpha = .81$ to $.86$) 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 ($\alpha = .70$ to $.82$) consisted of 4 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 ($\alpha = .75$ to $.81$) consisted of 3 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

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 2, study participants reported significantly more frequent use of creating web page software and digital code applications, $t(58) = 4.05, p < .05$, participating in Internet chat rooms/discussions boards, t

(56) = 2.96, $p < .05$, using digital music creation software $t(57) = 2.88$, $p < .05$, and using digital editing software $t(57) = 2.34$, $p < .05$, at the end of the summer program.

Table 2

Summer 2008 MSYI 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.	3.22	.87	59	3.25	.84	.03
I send email.	2.16	1.12	58	2.34	1.18	.19
I access the Internet (websites, surf the web).	3.25	.88	59	3.41	.75	.15
I create web pages using computer software and code applications (HTML, Dreamweaver, etc.).	1.41	.79	59	1.85	.96	.44**
I use word processing software (Word) applications to write text.	2.59	.84	58	2.55	.82	-.03
I use data processing software applications for databases or spreadsheets.	1.95	1.03	57	2.05	.91	.11
I use digital video equipment (cameras/video).	2.61	1.11	57	2.67	1.06	.05
I participate in Internet chat rooms/discussion boards/listservs.	2.12	1.10	59	2.47	1.21	.36**
I use the computer to complete school assignments.	2.74	.87	58	2.84	.91	.10
I use digital music creation software (GarageBand, Reason, Logic Pro).	2.16	.99	58	2.48	.92	.33**
I use presentation software (PowerPoint, Keynote, Inspiration).	2.11	.79	55	2.27	.95	.16
I use digital editing software (iMovie, Final Cut).	1.88	.96	58	2.24	1.00	.36**

**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." As shown in Table 3, these program participants reported a significant

improvement only on creating multimedia products with support from staff or student partners, $t(56) = 3.51, p < .05$.

Table 3

Summer 2008 MSYI 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.	3.12	.85	57	3.25	.93	.12
I can use a variety of media and technology resources (Word, PowerPoint) to create presentations.	3.02	.92	54	3.04	.91	.02
I can work in a group to use technology to produce and share information (presentations, reports).	3.02	.93	55	3.13	.82	.11
I can create multimedia products (digital videos, movies, newsletters) with support from staff or student partners.	2.46	.91	57	2.93	.92	.47**
I can use technology tools to locate, evaluate, and collect information from a variety of sources.	2.75	.99	57	2.86	.90	.11
I can use technology tools to process data and report results.	2.65	.90	57	2.68	.95	.04
I can use technology tools for managing my schedules, addresses, etc.	2.71	.85	56	2.61	.97	-.11

** $p < .05$

Educational Attitudes

As shown in Table 4, the Middle School Youth Institute teens reported significant improvement in academic motivation/self-regulation, $t(59) = 2.36, p < .05$ at the end of summer.

Table 4
 Summer 2008 MSYI Participant Report of Changes in Educational Attitudes

Educational Attitude Scale	Before Summer			End of Summer		
	Mean	SD	N	Mean	SD	Difference
Academic Self-Perceptions	5.67	.91	60	5.77	1.11	.10
Goal Valuation	6.45	.89	60	6.44	.83	-.02
Motivation/Self-Regulation	5.57	.96	60	5.79	.95	.22**

****p<.05**

Positive Youth Development

As shown in Table 5, Middle School Youth Institute teens did not evidence any significant self-reported gains in the seven youth development areas between the start and end of the summer program.

Table 5

Summer 2008 MSYI Participant Report of Changes in Positive Youth Development
Scales

Development Scale	Before Summer		N	End of Summer		Difference
	Mean	SD		Mean	SD	
Cultural Competence	3.51	.40	60	3.47	.40	-.04
Life Skills	3.16	.41	60	3.14	.46	-.01
Positive Core Values	3.17	.43	60	3.14	.46	-.02
Sense of Self	3.23	.50	60	3.25	.49	.03
Social Competency/Personal Responsibility	3.28	.55	60	3.31	.58	.03
Community Involvement	2.91	.58	60	2.96	.62	.06
Positive Adult Relationships	3.14	.75	59	3.17	.84	.02

**p<.05

Planned Level of Educational Achievement

Participants were also asked what level of education they planned to complete. As shown in Table 6, 69% of 2008 Summer Middle School Youth Institute participants said that they planned to attain at least a Bachelor's Degree or higher, at the end of the summer program.

Table 6
 Planned Highest Level of Educational Achievement
 2008 Middle School Summer Youth Institute Participants (Post-Summer)
 (N = 60)

	%	N
Doctorate or Professional Degree (6+ years)	23%	14
Master's Degree (5 years)	23%	14
Bachelor's Degree (4 years)	23%	14
Associate's Degree (2 years)	3%	2
Specialized Training Program/Technical/Trade School (less than 2 years)	2%	1
Less than a High School Diploma	2%	1
Undecided	22%	13
Missing	2%	1

Conclusions

At the end of summer, 2008, these MSYI participants self-reported significantly more frequent use on four (33%) of the 12 technologies measured; webpage creation software, Internet chat rooms, digital music software, and digital editing software. To some extent, these findings are not surprising given that, with the exception of the increased use of chatrooms, these are the technology areas that were emphasized during the summer program. However, the extent to which youth reported increased technology use, has declined somewhat over the last three years of the middle school program. If the program staff think it is important that youth develop skills in some of the areas during the summer program, curriculum and project assignments might need to be reviewed or the program might need to be longer.

These MSYI youth reported significantly greater competence in only one (14%) of the seven competence areas measured; creating multimedia project. Of course, this item encompassed most of the primary foci of the summer program. However, it does represent an

overall decline in perceived technology competence found over the last two years. For example, 2006 MSYI participants reported significant competence gains in all areas and 2007 youth evidenced significant gains in six of the competency areas. It is possible, to some extent, that the lack of significant growth in most of these areas may have been partially influenced by the fact that the majority (72%) of youth in the summer program had been in the year-round program and were exposed to similar technology prior to program entry. Program staff should consider the use and competency findings from the summer when reviewing and possibly revising their summer technology curriculum so that participants will continue to be challenged to learn and master new and different technology throughout the middle school program. They should also design projects and tasks to require higher knowledge capabilities than those that may have been offered to participants in prior programs. It is quite possible to appropriately revise the summer curriculum since it was successfully done by YMCA Youth Institute High School staff this past year.

In terms of educational attitudes, after the summer program, participants reported significantly higher motivation/self-regulation. This finding is encouraging given the MSYI summer program has not, in the past, appeared to have much of an influence on educational attitudes. Hopefully, this change will remain as students return to school and contribute to them becoming more productive and responsible students.

These MSYI participants did not report significant change in any of the seven positive youth development areas measured in this study. These findings are quite puzzling given the program emphasis on positive youth development and findings from prior program years. Since this is the first year this instrument was used, direct comparisons are not possible, however, it is worth noting that typically middle school youth in the summer program have reported significant improvement in related areas such as leadership and decision-making skills. Given these

outcomes, program staff may want to review their current positive youth development program strategies and discuss ways to enhance this aspect of the program. This might be particularly necessary given that many of these youth now entering the summer program will have been exposed to such practices in the year-round program.

In conclusion, the findings reported here are very different than those of prior years. The lack of change in some of these areas may be an anomaly or may indicate the need to review and revise the summer program curriculum and training experiences to take into consideration the heightened technology and social skills of incoming youth.

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