# End of Year One Evaluation of Leadership, Technology, Educational Attitudes and Positive Youth Development Outcomes for Long Beach YMCA High School Youth Institute 2015 Alumni

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**Introduction**

The YMCA of Greater Long Beach High School Youth Institute (HSYI) is a year-round program that uses technology as an integral mechanism for promoting positive youth development and enhancing the academic success and career readiness of low-income, culturally-diverse high school students.  Classes enter each summer with an intensive eight-week program.  Upon graduation from the summer program, participants become "Youth Institute Alumni," who are then able to voluntarily participate in a wide range of year-round activities throughout their high school and college years.  Involvement opportunities vary by year but include digital art labs, academic advising/homework assistance, personal/home advising, college readiness, surfing/hiking club, community service, equipment check-out, field trips, paid internships, community leadership positions and social work support.

The goals of the Youth Institute are to: (a) improve the technology, career, leadership and decision-making skills of these youth to promote readiness for higher education or career entry after graduation; (b) improve academic achievement and stimulate interest in higher education among low-income, culturally-diverse, urban high school youth; and (c) promote bonding to pro-social adults and community attachment among urban youth to ensure that they remain engaged in their schools and communities.  This report investigates year-round program participation and the effects of the program on achieving these goals after one-year of program participation.

**Methods**

*Data Collection*

Program staff collected self-report data from all entering 2015 YMCA Youth Institute participants prior to the start of the summer program, at the end of the summer, and, from as many as possible, approximately one year later.  Two surveys were completed.  The first was the revised version of the Leadership Skills Inventory, a standardized inventory measuring nine

areas of leadership.  The instrument has strong reliability and validity (Karnes & Chauvin, 2000).

The second instrument, The Youth Institute Survey, measures positive youth development,

technology skills, and educational attitudes.  The positive youth development measures were

created by the researchers based on The Toolkit for Evaluating Positive Youth Development

(The Colorado Trust, 2004).  The technology skill items reflected the most recent YI technology

curriculum.  The three educational attitude measures came from The School Attitude Assessment

Survey – Revised Edition.  This instrument has strong reliability and validity (McCoach &

Siegle, 2003).

*Sample*

Thirty youth completed the summer Long Beach High School YI in 2015.  Of these, 14

(47%) had the necessary consents and surveys to be included in these analyses.  As shown in

Table 1, the participants in this study ranged from 13 to 16 years of age, with the average age of

14 at the start of the program.  Fifty-seven percent were male.  Latinos (72%) were the largest

ethnic group, followed by Multicultural (14%).  Seventy-two percent were in 9th grade at

program entry.  An attrition analysis was used to determine demographic differences between the

youth in the "analysis group" and those who did not have the necessary data.  No significant

differences were found for gender or age level (13-14 year olds vs. 15-17 year olds). Valid chi-

square analyses could not be run for ethnicity or grade level due to low numbers in some of the

groups.

Table 1

Description of 2015 Youth Institute Alumni Subsample

(N = 14)

|  | % | N |
|---|---|---|
| Gender |  |  |
| Male | 57% | 8 |
| Female | 43% | 6 |
| Ethnicity |  |  |
| Latino | 72% | 10 |
| Multicultural | 14% | 2 |
| African-American | 7% | 1 |
| Asian-American | 7% | 1 |
| Age at Start of Program |  |  |
| 13 | 43% | 6 |
| 14 | 43% | 6 |
| 15 | 7% | 1 |
| 16 | 7% | 1 |
| Grade |  |  |
| 9th | 72% | 10 |
| 10th | 21% | 3 |
| 11th | 7% | 1 |

**Analysis**

*Measures*

*Leadership Skill Scales*

Nine types of leadership skills were measured including fundamentals of leadership

($\alpha$ = .76 to .80), written communication ($\alpha$ = .79 to .89), speech communication ($\alpha$ = .60 to .88),

character-building ($\alpha$ = .70 to .80), decision-making ($\alpha$ = .67 to .71), group dynamics ($\alpha$ = .83 to

.89), problem-solving ($\alpha$ = .72 to .78), personal skills ($\alpha$ = .80 to .82), and planning skills ($\alpha$ = .69

to .80).  Participants rated themselves on a scale ranging from 0 "Almost Never" to 3 "Almost

Always." Higher scores indicated better self-perceived skills. Changes were investigated using paired t-tests.

### Technology Skills

All of the technology skill questions were analyzed separately using paired t-tests.

### Educational Attitude Scales

The academic self-perception scale ($\alpha = .77$ to $.86$) consisted of seven items related to the perception/confidence that participants had in their own skills. Questions included "I feel that I can learn new ideas quickly" and "I feel smart in school." The goal valuation scale ($\alpha = .93$ to $.94$) consisted of six items that measured how much participants valued educational tasks. 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 ($\alpha = .80$ to $.87$) consisted of ten items and measured levels of self-motivation and 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 were investigated using paired t-tests.

### Positive Youth Development Scales

The cultural competence scale ($\alpha = .65$ to $.84$) consisted of seven items on 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 connected to and proud of my own culture." The life skills scale ($\alpha = .69$ to $.82$) consisted of 6 items measuring proficiencies that allow youth to transition into and achieve successful adulthood. Questions included "I am good at making friends" and "I am good at listening to other people."

The positive core values scale (α = .56 to .82) consisted of six 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 (α = .76 to .83) consisted of five 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 believe I can make a difference." The personal/social responsibility choices scale (α = .54 to .66) consisted of five 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 should work to get something if I really want it."

The community involvement scale (α = .69 to .87) consisted of five 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 (α = .84 to .88) used five items to measure 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 whom I trust."

While a few of the positive youth development scales had reliabilities at the low end at post-assessment, based on the pre-assessment scales being well within range and strong reliability, in general, for these scales in the past, they were included in this report.

## Results

### *Extent and Type of Program Involvement*

As shown in Table 2, there were different types, as well as levels, of involvement among the YI Class of 2015 during the year immediately following their graduation. Total involvement

ranged from 3 to 336 with a mean of 80. The largest number of participants used the digital arts lab ($n = 30$) or received personal ($n = 29$) or academic advising ($n = 25$). The digital arts lab was also the most frequently used. There were four community service activities including 19 meetings of the Haunted House ($n = 18$), six months of Technology Tutoring ($n = 10$), and one each the United Way Home Walk ($n = 4$) and the Annual Cambodian Parade ($n = 9$). There were three YI holiday celebrations or dinners including the YI Holiday Feast (November, $n = 16$), the YI Holiday Party (December, $n = 14$), and the Senior Honors Dinner (May, $n = 4$). There were two recreational events including the Mulligan Family Fun Center ($n = 7$) and fishing at the pier ($n = 2$).

Table 2
Extent and Type of Involvement in Program Activities
2015 Youth Institute Alumni
August, 2015 – June, 2016

| Activity | Class of 2015 | | | |
|---|---|---|---|---|
| | N | Mean | SD | Range |
| Digital Arts Lab | 30 | 39 | 51 | 2 - 165 |
| Personal/Home Advising | 29 | 17 | 22 | 1 - 67 |
| Academic Advising | 25 | 21 | 29 | 1 - 89 |
| Celebrations/Dinners (3) | 22 | 2 | 1 | 1 - 3 |
| Recreation Events (2) | 9 | N/A | N/A | N/A |
| Community Service: Haunted House (19), (Technology Tutoring (6), United Way Walk (1) and Cambodian Parade (1) | 19 | 9 | 8 | 1 - 23 |

### *Changes in Leadership Skills*

As shown in Table 3, participants self-reported significant improvement in eight (89%) of the nine leadership skill areas including, fundamentals of leadership, $t(13) = 4.53$, $p < .05$; written communication, $t(13) = 2.84$, $p < .05$; speech communication, $t(13) = 2.59$, $p < .05$;

character building, $t$ (13) = 2.63, $p$ < .05; group dynamics, $t$ (13) = 3.09, $p$ < .05; problem-solving, $t$ (13) = 3.84, $p$ < .05; personal skills, $t$ (13) = 2.97, $p$ < .05; and planning skills, $t$ (13) = 2.99, $p$ < .05, at the end of the first year.  Correlation analyses were run to examine the relationship between level of attendance and changes in self-ratings on each of the leadership skills.  Higher levels of participation in the digital arts lab, academic advising and personal advising were significantly related to a more positive self-rating in decision-making.

Table 3
2015 YI Alumni Report of Changes in Leadership Skills

| Scale | Beginning of Program | | | End of Year One | | |
|---|---|---|---|---|---|---|
| | Mean | SD | N | Mean | SD | Difference |
| Fundamentals of Leadership | 2.29 | .48 | 14 | 2.76 | .32 | .47** |
| Written Communication | 2.17 | .60 | 14 | 2.55 | .38 | .39** |
| Speech Communication | 2.22 | .62 | 14 | 2.62 | .30 | .40** |
| Character Building | 2.54 | .35 | 14 | 2.81 | .22 | .26** |
| Group Dynamics | 2.31 | .49 | 14 | 2.69 | .29 | .39** |
| Decision-Making | 2.58 | .38 | 14 | 2.75 | .29 | .17 |
| Problem-Solving | 2.29 | .41 | 14 | 2.71 | .33 | .43** |
| Personal | 2.47 | .39 | 14 | 2.69 | .26 | .23** |
| Planning | 2.41 | .34 | 14 | 2.70 | .23 | .29** |

**$p$<.05; *$p$<.10

### *Changes in Technology Skills*

Technology skills were measured by self-report of skill level with 13 types of technology.  Participants rated themselves on a scale ranging from 1 "No Skills" to 4 "Excellent Skills."  Higher scores indicated greater skill level.  As shown in Table 4, 2015 alumni reported significant gains in 11 of the 12 (92%)  technology skill areas, including email use, $t$ (13) = 3.31, $p$ < .05; word processing software, $t$ (13) = 2.69, $p$ < .05; digital video filming, $t$ (13) = 2.69, $p$ < .05; digital music creation, $t$ (13) = 3.24, $p$ < .05; presentation software, $t$ (13) = 3.32, $p$ < .05;

digital video editing, $t$ (13) = 3.18, $p < .05$; graphic design, $t$ (13) = 4.50, $p < .05$; digital

photography, $t$ (13) = 3.79 $p < .05$; animation, $t$ (13) = 4.95, $p < .05$; Internet use, $t$ (13) = 2.28 $p$

$< .05$; and using computers to complete school assignments, $t$ (13) = 2.28, $p < .05$, at the end of

their first year.

Additional analyses revealed significant improvement in digital video filming $t$ (13), =

3.31, $p < .05$; digital music creation, $t$ (13) = 2.19, $p < .05$; digital video editing, $t$ (13) = 2.88, $p <$

.50; and digital photography, $t$ (13) = 2.48, $p < .05$, between the end of summer and the end of

the first year.

Table 4

2015 Alumni YI Participant Report of Changes in Technology Skills

| Technology | Before Summer | | | End of Year One | | |
|---|---|---|---|---|---|---|
| | Mean | SD | N | Mean | SD | Difference |
| Email use. | 3.21 | .70 | 14 | 3.79 | .43 | .57** |
| Internet use (visit websites/surf web). | 3.64 | .50 | 14 | 3.39 | .27 | .29** |
| Word processing software (Word) to write reports and/or letters. | 3.57 | .51 | 14 | 3.39 | .27 | .36** |
| Data processing software (Excel) for databases or spreadsheets. | 2.79 | .89 | 14 | 3.29 | .73 | .50 |
| Digital Video Filming (Camera, lighting, etc.) | 2.14 | .86 | 14 | 2.86 | .53 | .71** |
| Using the computer to complete school assignments. | 3.21 | 1.05 | 14 | 3.79 | .43 | .57** |
| Digital music creation (GarageBand, Reason, Logic Pro). | 2.14 | 1.10 | 14 | 3.07 | .62 | .93** |
| Presentation software (Powerpoint, Keynote, Inspiration). | 2.57 | 1.02 | 14 | 3.64 | .50 | 1.07** |
| Digital Video Editing (Final Cut Pro, iMovie, After Effects, etc.). | 1.93 | .92 | 14 | 2.93 | .73 | 1.00** |
| Graphic Design (Photoshop, Illustrator, InDesign). | 2.00 | 1.18 | 14 | 3.29 | .47 | 1.29** |
| Digital Photography (DSLR camera, lighting, memory card, Photoshop, etc.). | 2.07 | .83 | 14 | 3.00 | .55 | .93** |
| Animation (Cinema 4D, After Effects, Stop Motion). | 1.64 | .84 | 14 | 2.79 | .70 | 1.14** |

**p<.05; *p<.10

### Changes in Educational Attitudes

As shown in Table 5, participants did not report significant improvement on any of the educational attitude scales, at the end of the first year.  Although there were not significant changes in educational attitudes, more positive changes in goal valuation was significantly related to higher levels of participation in the digital arts lab, academic advising, and personal advising while motivation/self-regulation was significantly related to more frequent use of the digital arts lab and personal advising.

Table 5
2015 YI Alumni Report of Changes in Educational Attitudes

| Scale | Beginning of Program | | | End of Year One | | |
|---|---|---|---|---|---|---|
| | Mean | SD | N | Mean | SD | Difference |
| Academic Self-Perceptions | 5.70 | .94 | 14 | 6.06 | .49 | .35 |
| Goal Valuation | 6.44 | .73 | 14 | 6.69 | .48 | .25 |
| Motivation/Self-Regulation | 5.89 | .78 | 14 | 6.21 | .52 | .32 |

**p<.05; *p<.10

### Changes in Positive Youth Development

As shown below in Table 6, 2015 alumni self-reported significantly higher cultural competence, $t$ (13) = 2.20, $p < .05$; positive core values, $t$ (13) = 2.72, $p < .05$; sense of self, $t$ (13) = 3.41, $p < .05$; personal/social responsibility, $t$ (13) = 2.74, $p < .05$; community involvement, $t$ (13) = 2.73, $p < .05$; caring adult relationships, $t$ (13) = 3.19, $p < .05$; and somewhat higher life skills, $t$ (13) = 1.89, $p < .10$, at the end of year one.

Additional analyses revealed somewhat higher positive adult relationships, $t$ (13) = 1.86, $p < .10$, between the end of summer and the end of the first year. More frequent use of the digital arts lab was significantly, positively related to larger positive changes in cultural competence while higher levels of participation in the digital arts lab, academic advising, and personal advising were significantly positively related to greater levels of improvement in life skills,

positive core values and sense of self.  Finally, better levels of community involvement was positively and significantly correlated with more frequent use of the digital arts lab and personal advising.

Table 6
2015 YI Alumni Participant Report of Changes in Positive Youth Development

| Development Scale | Beginning of Program | | | End of Year One | | |
|---|---|---|---|---|---|---|
| | Mean | SD | N | Mean | SD | Difference |
| Cultural Competence | 3.64 | .38 | 14 | 3.86 | .24 | .21** |
| Life Skills | 3.46 | .44 | 14 | 3.70 | .29 | .24* |
| Positive Core Values | 3.43 | .45 | 14 | 3.73 | .24 | .30** |
| Sense of Self | 3.37 | .47 | 14 | 3.64 | .35 | .27** |
| Personal/Social Responsibility | 3.59 | .35 | 14 | 3.87 | .21 | .29** |
| Community Involvement | 3.20 | .56 | 14 | 3.59 | .33 | .39** |
| Caring Adult Relationships | 3.23 | .71 | 14 | 3.84 | .28 | .61** |

**p<.05; *p<.10

## Conclusions

This study investigated changes in leadership, technology, educational attitudes and positive youth development after one year of program participation among YI alumni.  It is quite encouraging to note that almost all of the significant positive leadership, technology, and positive youth development outcomes found at the end of the summer were maintained throughout the year.  This may be particularly encouraging given that this was a very small sample which limited the power of the statistical tests.  It is also positive to see that some of the technology skills were significantly enhanced by participation in the year-round program. These alumni also reported somewhat higher levels of positive adult relationships at the end of the year than they did at the end of the summer.  Thus, YI youth showed substantial growth in the majority of areas hypothesized to be influenced by the model including leadership skills, technology skills, and

positive youth development. While the absence of a control group makes it difficult to definitively conclude that YI participation was responsible for these changes, it appears unlikely that so much change would occur in such diverse domains unless some intervention was present.

At the end of one year, alumni reported significant improvement in all leadership skill areas but one, indicating the leadership gains found after participation in the summer program were maintained over the course of a year, even when youth were in school and had other activities. Although there were no significant changes between the end of the summer and first year, almost all the scores moved in a positive direction, and many of the gains were larger than those found in the summer. This is particularly positive since many of the leadership skills measured here are similar to the skills that have been identified as necessary to compete in the 21st century (The Partnership for 21st Century Learning Skills, 2003).

It appears 2015 alumni were also able to maintain the significant technology skill gains they made during the intensive summer program since they reported significantly higher skills in email use, Internet use, word processing, digital video filming and editing, digital music creation, presentation software, graphic design, digital photography and animation at the end of the first year. Alumni also rated themselves significantly higher in digital video filming, digital music creation, digital video editing, and digital photography, at the end of the year in comparison with the end of summer. These findings suggest that the YI program was able to teach participants a wide variety of high-end digital media skills during the summer that they not only maintained but substantially improved with their involvement in the year-round alumni program. This is encouraging since people with strong technological skills are highly valued in the workforce (Baron, 2002). These findings are also very positive given low-income youth have been shown to have lower levels of technology access and skill; both of which are critical for school and productive adult employment (Morse, 2004; Warschauer & Matuchniak, 2010).

The YI is also hypothesized to improve educational attitudes. At the end of summer, youth self-reported significantly higher academic self-perceptions, goal valuation, and motivation/self-regulation. While these alumni continued to report more positive educational attitudes in all three areas, the change did not reach the level of significance, possibly due to the small sample size. It is, however, worth noting that increased involvement in the program, particularly in the digital arts lab, academic advising, and personal advising, did appear to positively impact goal valuation and motivation/self-regulation. Thus, efforts to increase alumni involvement in the year-round program my help improve educational attitudes. It may also be beneficial to increase the focus on education or even provide educational workshops or college field trips if funding is available. Staff may want to more actively reach out to youth and discuss academic performance or discuss personal or home experiences in an effort to maximize growth in this area.

The YI is designed to incorporate positive youth development strategies into all aspects of the program, since participation in youth development programs has been shown to enhance academic success (Hall, Yohalem, Tolan & Wilson, 2003) while reducing involvement in adolescent problem behaviors (Roffman, Pagano & Hirsch, 2001; Meltzer, Fitzgibbon, Leahy & Petsko, 2006). At the end of one year, these alumni reported significantly higher levels of cultural competence, positive core values, sense of self, personal/social responsibility, community involvement and caring adult relationships, than at program entry. In particular, the year-round program appears to have increased the amount of caring adult relationships. This is encouraging as positive adult role relationships have been shown to predict more successful adolescent development (Serido, Borden & Perkins, 2011; DuBois, Portillo, Rhodes, Silverthorn & Valentine, 2011). Several aspects of positive youth development (cultural competence, life skills, sense of self, positive core values, community involvement) evidenced greater gains due

to year-round program participation especially in the digital arts lab and with academic and personal advising support.

Overall, these findings are very positive and suggest participation in the YI helped these youth to develop better leadership and technology skills while increasing protective factors related to positive youth development over the long-term.  Program participation appears to have increased the social and interpersonal competence and technology skills of youth, all of which have been found to be useful in higher education and the workforce (Lippman, Atienza, Rivers & Keith, 2008; Warschauer & Matuchniak, 2010).  The results of this evaluation provide additional evidence that the YI program can successfully influence youth in most of the areas hypothesized in the model, even in the long-term.  YI participation, especially more frequent involvement, appears to have helped youth develop and enhance skills that are critical for positive development and career success.  Efforts to engage youth in the year-round program, and continued academic and personal support are critical to helping youth, particularly in the areas of educational attitudes and positive youth development.

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