Positive Youth Development Life Skills Gained at the Iowa 4-H Youth Conference

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Abstract: Research suggests 4-H programs build Life Skills such as leadership, communication, citizenship and learning. However, 4-H programs vary from long-term on-going experiences to shorter, more intense opportunities. This paper discusses a program evaluation articulating the life skill development of participants in a 3-day residential State 4-H Conference on a Midwestern college campus. The Life Skills assessed were in the areas of leadership, citizenship, communication, and learning as part of overall Life Skill development. Participants were youth ages 14-18 years. A retrospective pretest-posttest was used to evaluate skill development and understanding. Analysis, including paired sample t-tests, indicated growth in each of the 12 common outcome measures evaluated. This study supports the importance of purposeful planning and youth engagement in the learning process to achieve desired life skill outcomes.

Introduction

Lerner, Almerigi, Theokas, & Lerner (2005) define positive youth development as a strength-based conception of adolescence. Derived from developmental systems theory, positive youth development (PYD) emerges when the potential plasticity of human development is aligned with developmental opportunities and supports appropriate for the individual adolescent. As Kress (2006) summarized, the outcomes of positive youth development are based on
experiences and include complex dynamics such as the development of character, citizenship, and leadership—things not taught didactically.

Participation in high quality, structured activities outside of school can situate youth in safe environments, prevent youth from participating in delinquent activities, teach youth general and specific skills, beliefs, and behaviors, and provide youth opportunities to develop relationships with peers and mentors (Simpkins, 2003). One of the most pressing issues facing the United States and its youth-serving organizations is how to best facilitate the development of our youth. To become productive and contributing individuals who can be effective and proactive in determining the course of tomorrow’s world as well as today’s, youth must develop positive leadership knowledge, attitudes, skills and aspirations (Kleon & Rinehart, 1998).

According to Kress (2006), youth leadership development efforts must focus on creating environments in which youth matter, where youth skill development is encouraged through hands-on participation and by recognizing that experiences are transformed by the youth who participate in them to be effective. One of the hallmarks of the 4-H Youth Development Program has been an emphasis on youth leadership development (Radhakrishna & Doamekpor, 2009; Seevers & Dormody, 1995; Worker, 2014. Currently, most 4-H programs in the United States hold various leadership events or statewide conferences for youth in addition to local and county activities. However, each state event is configured differently.

In their assessment of the Virginia State 4-H Congress, Garst and colleagues (2006) shared that although several states conduct one-week residential 4-H events that serve as the culmination of county/city and district 4-H competitions, few have published studies reporting on the life skill outcomes of this type of event. Duncan (2000) examined youth leadership Life Skills at camps in West Virginia, but this study was less generalizable due to the specific research on camp counselors at residential camps. Most recently, Worker (2014) shared results of adolescent satisfaction of the California 4-H leadership conference and the impact satisfaction has on youths’ continued participation. But to date, there are few other documented efforts in the area of life skill development through 4-H events. One can see by the few examples shared how different each can be with many programs existing across the country.

The Iowa 4-H Youth Development program also has a rich tradition of providing a statewide leadership conference for its youth for close to 100 years. The Iowa state 4-H council, a group of 40 Iowa high school students, partners with professional staff from the Iowa 4-H Youth Development program to plan a three-day leadership conference for Iowa high school youth held at Iowa State University each year. This program is open to all Iowa high school youth. Approximately 850 youth from across Iowa attend annually. The experience includes three keynote motivational speakers, three educational workshop experiences, a service learning project, team-building, and recreational activities. This experience encompasses much of what Kress (2006) and Lerner, et., al. (2005) explain and define as positive youth development, and more specifically, focuses on the developmental outcomes and Life Skills of leadership, communication, citizenship, and learning, for Iowa’s youth.

The Iowa 4-H Youth Development program is making an intentional effort to examine the primary youth development outcomes from each of the extended learning experiences offered. This will help Iowa 4-H to have more purposeful programming and be able to tell the Iowa 4-H story in a more meaningful and accurate way. To create consistency, 4-H staff members have
utilized a set of common measures across program delivery opportunities. As explained by Payne & McDonald (2012), common measures are standardized assessment instruments or items across programs used to evaluate impact and effectiveness and assist in cross-program comparison. With that premise, this project includes an evaluation of participants after the Iowa 4-H Youth Conference with the administration of an electronic assessment of common measures of skills gained and attitudes changed as a result of this experience and as they relate to the outcomes we hope youth achieve through the 4-H program: leadership, communication, citizenship, and learning Life Skills. Leadership as an outcome in the Iowa 4-H program is the ability to influence and support others toward a common goal. The communication outcome includes the exchange of thoughts, information, or messages between individuals, as well as the sending and receiving of information using speech, writing, and gestures. The citizenship outcome is defined as understanding the opportunity, right, and responsibility to contribute to shaping the world around you and provide service to others (Allen, et. al., 2005). In short, the goal of this study is to identify and measure Iowa 4-H Youth Conference youth participants’ Life Skill outcomes in the areas of leadership, citizenship, communication, and learning as part of overall Life Skill development.

**Literature Review**

Bruce, Boyd, and Dooley (2004) found that leadership life skill development dramatically increased when 4-H members experienced leadership roles beyond the club level, positively affecting development. Further, Bruce, Nicola, & Menken (2006) identified that youth sharpen their leadership skills and become more equipped for roles of progressively greater responsibility as a result of leadership experiences beyond the club. As Radhakrishna & Doamekpor (2009) share, youth enrolled in 4-H programs do better in school, develop leadership skills and help others in communities more than those enrolled in other organizations; even after leaving 4-H, youth continue to engage in leadership and community related activities. This provides promise for 4-H organizations and other youth serving agencies that the work they are doing is making a positive impact, but more research must be done to define why and how it does so.

According to Libby, Sedonaen, & Bliss (2006) and Seevers & Dormody (1995), youth leadership is clearly relevant to youth development, but it remains remarkably undefined. Over the last decade, the research base on youth leadership has seen some focus on personal characteristics, while others on demonstrated actions or processes. Learning leadership happens experientially, through involvement in opportunities to practice the skills, experiment with approaches, and try on the role of leader (MacNeil & McClean, 2006). This may happen in formal or informal experiences, but needs to occur with intentionality. To be most effective at supporting youth leadership development, it is important to identify or create more authentic opportunities for those youth to practice leadership skills. Through opportunities to increase their group process and job search skills, as well as facilitation, presentation, interview, and decision-making skills, youth gain confidence and competence as leaders. Self-determination theory describes students as needing a sense of competence, relatedness to others, and autonomy (Bruce, Boyd, & Dooley, 2004). At the Iowa 4-H Youth Conference, this occurs through workshop selection, leadership within break-out and recreation activities, and floor meeting discussions.

From a positive youth development perspective, leadership development experiences are good for all youth, providing them with supportive relationships and opportunities to see themselves
(and be seen by others) as having valuable contributions to make to the world. Further, their active engagement can help them develop self-esteem, confidence, and essential social and intellectual competencies and can provide an important foundation for future civic involvement (MacNell, 2006). Additionally, nurturing young people’s civic actions, motivations, and skills can have lasting benefits for both youth and society. One way this is accomplished is through service learning. Through service learning, young people experience valued civic participation in their communities and learn to identify community problems, prioritize solutions, and implement problem-solving strategies, which are all important leadership skills. Evidence shows that across the high school years, service learning experiences tend to help young people become more informed and engaged citizens (Zaff & Lerner, 2010). This is significant because the Iowa 4-H Youth Conference includes service learning as part of its program experiences for delegates.

The Lerner and Lerner (2012) 4-H longitudinal study confirmed the impact of on-going 4-H experiences in the development of the 5 C’s: competence, confidence, connection, character and caring/compassion. The Iowa 4-H Youth Conference meets basic federal guidelines for an on-going 4-H experience because it includes more than six hours of educational programming (Gleason, 2013). However, it is an intense experience over the course of three days, more like a camp and thus may not lead to the same results documented by Lerner and colleagues (2005). Through more research to help define what components and experiences create significant and lasting impacts on positive youth development and Life Skills outcomes, we can better inform communities of practice and positive youth development programming in the future, regardless of format of the 4-H experience. This requires that evaluation and outcome assessment from all types of programs be measured and shared, including this particular experience, the Iowa 4-H Youth Conference.

**Evaluation Purpose**

Residential programs and events may be particularly suited to affect youth participants in positive ways. Residential programs and events, particularly those located outside of a participant’s resident county/city, such as 4-H camp, state 4-H Conferences, and National 4-H Conference, remove youth from their home communities and expose them to unique learning environments (Garst, et. al., 2006). This reflects one of the essential elements of positive youth development settings—youth are given the opportunity to develop a sense of hope in the future by being exposed to new environments and opportunities for learning (Garst, et. al., 2006).

While each state’s conferences are structured differently, there are the beginnings of research identifying the significance of those experiences in youth leadership development. Some focus on competitions, while others are a broader-based life skill discovery experience, thus requiring more exploration on the impacts of the various structures of statewide events to increase this body of work and create stronger opportunities for comparison and measurement of applicability.

The Iowa 4-H Youth Conference is a unique leadership experience because it not only incorporates educational workshops on subject matter of participants’ choice, but also a service learning component within the conference. In addition, youth choose the educational opportunities they would like to pursue throughout the event. State 4-H council members lead their peers in communication and teambuilding exercises throughout the week. The setting of a university campus affords opportunities that some programs may not currently incorporate, including exposure to future opportunities and a chance to consider application of current learning to potential areas of study or career fields. Finally, while some states include
competitions and/or have selection criteria as a part of their events, the Iowa program is open to all youth, is focused on motivation, belonging, education and skill development, and is predominantly led by youth. These components all lead to the need for better evaluation regarding youths’ experiences and subsequent outcomes from this particular experience to better tell the story.

This study focuses on the Life Skill development of youth as a result of their participation in the Iowa 4-H Youth Conference. Life Skills are learned competencies known to assist individuals with leading constructive and rewarding lives. They include decision-making, accepting differences, teamwork, self-responsibility, cooperation, leadership, and communication, among others (Hendricks, 1998; Maass, et. al., 2006). These skills contribute to the broader goal of positive youth development as we equip youth with knowledge and abilities to make good decisions, take ownership, make a difference and be an active member of one’s community, and positively influence and work with others through leadership roles and responsibilities (Tallman, 2009). As such, the 4-H program has a set of common measures to assess the development of these Life Skills utilized throughout the program (LeMenestrel, 2014). Life Skills looked at in this study include leadership skills, communication skills, an understanding of citizenship roles and responsibilities, and learning skills.

This study is framed by positive youth development theory. Positive youth development focuses on the outcomes we desire for all young people, such as becoming economically self-sufficient, remaining mentally and physically healthy, developing caring and cooperative relationships, and becoming a responsible member and contributor to the community (Kress, 2006). Opportunities for youth to experience independence and autonomy and to extend their influence are also important elements of youth development. Using group experiences to facilitate adolescent development is one of the most constructive ways to ensure that teens increase their Life Skills. The Iowa 4-H Youth Conference offers these opportunities through workshop groups, recreation groups, and service learning experiences. The purpose of this study is to analyze what the outcomes of the Iowa 4-H Youth Conference are for youth participants in the area of leadership development, citizenship understanding, confidence in communication, and the ability to use effective learning strategies. This will be identified through responses by the youth on a set of common life skill measures.

**Program Evaluation Plan**

At a certain point, evaluation of youth programming becomes critical to the process of nurturing adolescents’ development (van Linden & Fertman, 1998). In addition, demonstrating impact in Extension programs is necessary to maintain funding and ensure their continuation. Nielsen (2011) explains that “post-then-pre” or retrospective pretest-posttest evaluations have been useful for documenting self-assessed changes that occur as a result of the particular intervention and in many settings have provided a more accurate assessment of program outcomes relative to the traditional pre-posttest format. The “post-then-pre” design accounts for changes in learners’ knowledge by allowing participants to first report present behaviors (post); and then rate how they perceived these same behaviors just before taking the course (then pre). The retrospective pretest at the end of the program is more accurate because it’s answered in the same frame of reference as the posttest (Nielsen, 2011, Rockwell & Kohn, 1989). Thus, using a retrospective pretest-posttest design to identify self-reported behavioral changes can provide substantial evidence for program impact. Clientele, including youth, can easily complete a post-then-pre instrument in a relatively short time frame.
In addition to saving time and being more enjoyable to participants (they only have to complete one questionnaire), retrospective pretest posttests also help to avoid a response-shift effect whereby a respondent’s frame of reference or evaluation standard changes during participation in the program (Garst, et. al., 2006, Nielsen, 2011). Davis (2003) concurred, sharing that enabling audiences to more accurately assess their baseline level of understanding after the program he conducted provided participants an opportunity to better illustrate the degree of change as a result of the program and provided stakeholders more meaningful data. This study employed a retrospective pretest-posttest questionnaire to reach the study’s aim.

**Methods**

**Sample**
Electronic surveys were sent to all youth who both participated in the Iowa 4-H Youth Conference in the summer of 2014 and supplied a valid e-mail address as part of their registration documentation. This totaled 600 of the 751 youth in attendance. 229 youth completed the survey, for a 38% response rate. Completing the evaluation were 171 females and 57 males and one youth who did not report gender. The youth were distributed across grades: 41 eighth-graders, 40 ninth-graders, 70 tenth-graders, 52 eleventh-graders, and 22 twelfth-graders. Six youth had no or less than one year experience in 4-H; 4 had one year; 4 had two years; 9 had three years; 14 four-years, 36 five-years, 40 six-years, 51 seven-years, 33 eight-years, 17 nine-years, and 12 youth had ten or more years of experience. Finally, participants were categorized by their place of residence, including farm (52%), rural non-farm (30%), town (15%), urban (1%), and suburban (2%).

**Procedure**
A retrospective pretest-posttest of participants was conducted via electronic Qualtrics survey sent to youth approximately two weeks following their participation in the Iowa 4-H Youth Conference experience to assess participants’ ratings on a series of Life Skill items.

**Measures/ Variables**

**12 Life Skills Outcomes.** In an effort to improve consistency in program evaluation and reporting and to provide a more comprehensive evaluation plan in our state, Iowa 4-H has identified a set of common measures to assess Life Skill outcomes. As Payne & McDonald (2012) explain, common measures are the standardization of assessment instruments and questions used across various programs to evaluate the overall impact and effectiveness of programs with similar topics or objectives.

The 12 items (See Table 1) used in this assessment are part of a selection of Life Skill Outcomes the Iowa 4-H youth program evaluates throughout the program to measure leadership, citizenship, communication, and learning Life Skills in 4-H (National 4-H Council, 2015). Youth were asked to consider both “Now and Before, participating in this 4-H program (Iowa 4-H Youth Conference) how do your actions show you can...” Each Life Skill was evaluated on a five-point Likert-type scale: 1-Not at all; 2-Very little; 3-Some; 4-Quite a bit; or 5-A great deal (Jones, 2009). The same options were used for both the Now and Before components of the pretest-posttest. This tool has been found to be reliable by the ISU office of Research Institute for Studies in Education (2015).
First, the 12 items were assessed independently and then as compiled composites in the areas of citizenship, leadership, communication, and learning. Items were grouped based on the outcome they addressed. For example, Items 1-4 from Table 1 were summed together to create a *citizenship* composite. The same was done to address the *leadership* construct using items 5-7. A *communication* composite was created using items 8–10. Finally, items 11 and 12 were summed to address *learning skills*. A pre- and post-composite was created for every youth for the four aforementioned constructs.

**Table 1**

Outcomes before and after youths’ experience at Iowa 4-H Youth Conference

<table>
<thead>
<tr>
<th>Common Measure: “How much do your actions show you”:</th>
<th>N</th>
<th>Mean “Before”</th>
<th>SD</th>
<th>Mean “After”</th>
<th>SD</th>
<th>Change Score</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make a difference in your community through service learning projects</td>
<td>218</td>
<td>3.53</td>
<td>.92</td>
<td>3.97</td>
<td>.88</td>
<td>.67</td>
<td>.000</td>
</tr>
<tr>
<td>2. Apply knowledge in ways that solve “real life” problems through service projects</td>
<td>215</td>
<td>3.38</td>
<td>.91</td>
<td>3.76</td>
<td>.90</td>
<td>.59</td>
<td>.000</td>
</tr>
<tr>
<td>3. Work on service projects to meet a need in your community</td>
<td>216</td>
<td>3.55</td>
<td>1.01</td>
<td>3.88</td>
<td>.92</td>
<td>.66</td>
<td>.000</td>
</tr>
<tr>
<td>4. Gain skills through serving your community that will help you in the future</td>
<td>216</td>
<td>3.57</td>
<td>.98</td>
<td>3.95</td>
<td>.94</td>
<td>.62</td>
<td>.000</td>
</tr>
<tr>
<td>5. Work together in a team</td>
<td>215</td>
<td>3.92</td>
<td>.93</td>
<td>4.28</td>
<td>.87</td>
<td>.62</td>
<td>.000</td>
</tr>
<tr>
<td>6. Listen and talk to others before making decisions</td>
<td>215</td>
<td>3.83</td>
<td>.91</td>
<td>4.14</td>
<td>.84</td>
<td>.58</td>
<td>.000</td>
</tr>
<tr>
<td>7. Handle conflict respectfully</td>
<td>214</td>
<td>3.86</td>
<td>.94</td>
<td>4.11</td>
<td>.87</td>
<td>.61</td>
<td>.000</td>
</tr>
<tr>
<td>8. Feel confident when speaking in front of others</td>
<td>213</td>
<td>3.66</td>
<td>1.17</td>
<td>3.99</td>
<td>1.07</td>
<td>.73</td>
<td>.000</td>
</tr>
<tr>
<td>9. Use good listening skills when others are talking</td>
<td>214</td>
<td>4.06</td>
<td>.90</td>
<td>4.31</td>
<td>.86</td>
<td>.65</td>
<td>.000</td>
</tr>
<tr>
<td>10. Ask questions</td>
<td>212</td>
<td>3.64</td>
<td>.93</td>
<td>3.93</td>
<td>.97</td>
<td>.59</td>
<td>.000</td>
</tr>
<tr>
<td>11. Identify what is going well and what needs to change to achieve goals</td>
<td>216</td>
<td>3.72</td>
<td>.92</td>
<td>4.12</td>
<td>.87</td>
<td>.63</td>
<td>.000</td>
</tr>
<tr>
<td>12. Apply what is learned to new or different experiences</td>
<td>214</td>
<td>3.73</td>
<td>.97</td>
<td>4.14</td>
<td>.91</td>
<td>.65</td>
<td>.000</td>
</tr>
</tbody>
</table>

Citizenship Composite (Items 1 – 4) | 208 | 13.95 | 3.44 | 15.39 | 3.36 | 1.60 | .000 |
Leadership Composite (Items 5 – 7) | 207 | 11.56 | 2.44 | 12.43 | 2.40 | 2.07 | .000 |
Communication Composite (Items 8 – 10) | 216 | 10.19 | 4.01 | 12.04 | 2.58 | 1.29 | .000 |
Learning Composite (Items 11 & 12) | 207 | 7.42 | 1.74 | 8.20 | 1.67 | .81 | .000 |
Demographics. In addition to the common measures listed above, demographic information was requested that served as covariates in this study including gender, grade in school, residence, years in 4-H, state 4-H council membership, years of conference attendance, and conference track. Delegates could participate in one of three tracks: the traditional Conference track, Animal Science Round-Up, or CSI: Crops. Therefore, analyses were done to see if participation in a particular track impacted outcome identification. State 4-H council members have a unique leadership experience as they plan and carry-out the conference so council membership participants were compared with the overall participant evaluations.

Youth Reflections. Three open-ended questions were included on the assessment to further explain youths’ experience at the Iowa 4-H Youth Conference, including:

1) What was the most important skill or knowledge you gained from participating in the Iowa 4-H Youth Conference?
2) What does leadership mean to you after participating in the Iowa 4-H Youth Conference? and
3) How will you use the skills or knowledge you gained from the Iowa 4-H Youth Conference in other parts of your life?

These questions provided participants the opportunity to share impacts or outcomes that may not be addressed in the pretest-posttest evaluation. They also enhance the assessment by providing further explanation regarding responses to the common items above.

Analysis Plan
Using SPSS 22.0, descriptive analyses were conducted on the study variables. First, comparative analysis was done regarding the differences between the pre-test and post-test responses to identify growth. As suggested by Payne & McDonald (2012), responses to each question were examined individually using paired t-tests to analyze perceived changes in participants’ knowledge or competence level. Second, to assess whether any of the four life skill composites varied based on the demographic data collected, a series of nested regressions were conducted with demographic data included as covariates. Finally, open-ended question responses were compiled and analyzed for themes and trends. These responses were then cross-analyzed with the 12 items to look for agreement or further expansion and explanation of any themes identified from the items. The open-ended questions were also studied for new themes that should be addressed further or in later evaluations.

Results

Descriptive and Bivariate Statistics
Table 1 shows the means, standard deviations, and results of the paired t-tests of the 12 items and four Life Skill constructs. Growth in Life Skills occurred in youth for all 12 Life Skills and all 4 constructs - citizenship, leadership, communication, and learning. These results overwhelmingly demonstrate the positive impact of participation in this event for youth.

Multivariate Tests
To test if these mean differences were due to any selection effects or demographic characteristics of the youth, a series of nested regressions were conducted with demographic data included as covariates. Specifically, the pre-test score was regressed on the post-test score while controlling for a host of covariates. Tables 2 and 3 show the regression coefficients for
the 12 Life Skills and the 4 constructs, respectively. As can be seen in each of the regressions, each of the pre-test scores was still significantly linked to the post-test score or the outcome variable. For example, the pre-test citizenship score was positively associated with the post-test score ($\beta = 0.60, p < .001$). In other words a statistically significant change in citizenship was found. These statistically significant changes were found for all 12 Life Skills and the remaining 3 constructs - leadership, communication, and learning.

### Table 2
Regression Coefficients for Citizenship, Leadership, Communication, & Learning

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test Citizenship</th>
<th>Post-Test Leadership</th>
<th>Post-Test Communication</th>
<th>Post-Test Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizenship</td>
<td>0.60 (0.05)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td>0.60 (0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td>0.37 (0.05)</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td></td>
<td></td>
<td></td>
<td>0.54 (0.05)</td>
</tr>
<tr>
<td>Covariates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>0.78 (0.38)</td>
<td>0.62 (0.30)</td>
<td>0.68 (0.36)</td>
<td>0.52 (0.21)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.05 (0.39)</td>
<td>0.25 (0.31)</td>
<td>-0.33 (0.37)</td>
<td>0.34 (0.21)</td>
</tr>
<tr>
<td>Years in 4-H</td>
<td>-0.05 (0.09)</td>
<td>0.04 (0.07)</td>
<td>-0.08 (0.08)</td>
<td>0.03 (0.05)</td>
</tr>
<tr>
<td>Years of Conference Attendance</td>
<td>0.75 (0.37)</td>
<td>0.30 (0.29)</td>
<td>0.86 (0.35)</td>
<td>0.10 (0.20)</td>
</tr>
<tr>
<td>Place of Residence</td>
<td>0.24 (0.46)</td>
<td>0.25 (0.37)</td>
<td>0.21 (0.43)</td>
<td>0.25 (0.26)</td>
</tr>
<tr>
<td>Conference Track</td>
<td>-1.15 (0.41)</td>
<td>-0.73 (0.33)</td>
<td>-0.70 (0.39)</td>
<td>-0.46 (0.23)</td>
</tr>
<tr>
<td>State 4-H council membership</td>
<td>0.27 (0.84)</td>
<td>0.18 (0.67)</td>
<td>0.65 (0.77)</td>
<td>0.45 (0.47)</td>
</tr>
</tbody>
</table>

**Notes:** Covariates include: Grade (8-9 were paired), Gender (male/female), Years in 4-H (mean-centered), Years of conference attendance (1st time attendee compared to returners), Place of residence (urban compared to rural), Conference Track (Round-Up/Crops participants compared to traditional Conference), and State 4-H Council membership (member compared to non-member). The scores above show the coefficients for each when analyzed in a nested regression. When the "Before" scores were pulled out, all scores’ significance diminished greatly. While the "Before" coefficient isn't always highest, it had the greatest affect in the final r-squared and F scores. The parentheses denotes standard error for the covariate.

**Covariates**
The demographic variables are explained as the following: grades 8 and 9 were paired and compared to grades 10-12, years in 4-H became a mean-centered variable, residence was examined as a comparison between rural and urban, attendance was examined as a comparison between first-time attendees and returners, gender included male and female, whether or not delegates were state council members was compared, and the track youth participated in was evaluated as a comparison between traditional Conference participants and those attending Animal Science Round-Up or CSI: Crops.

Participation in Round-Up or Crops tracks rather than the traditional Conference track had a negative impact on each of the four outcomes with the greatest significance being in the citizenship construct. This may be due to the traditional Conference track delegates...
participating in service learning experiences while neither Round-Up nor Crops delegates have that experience. Recognizing the importance of the “before” scores for each of the constructs, grade level had the largest impact on after scores for the four outcomes. Youth who were in eighth or ninth grade showed more growth than youth in tenth to twelfth grades. This may be explained because their “before” scores were lower so they had more room for growth. Being a returning conference delegate rather than a first timer seemed to matter most in regard to communication and citizenship outcomes and showed notable impacts for those two areas but in leadership and learning outcomes, the influence was not as significant. Residence and gender seemed to have very little impact on after scores for any of the constructs. This will be addressed further in the discussion. Additionally, years in 4-H made little difference in scores. State council membership seemed to have the most impact related to communication scores.

**Reflections**

In addition to the growth identified through quantitative measures, delegates’ responses to three open-ended questions further explain the impact of the Iowa 4-H Youth Conference for delegates. Table 3 shares a summary of those findings.

**Table 3**

<table>
<thead>
<tr>
<th>Skills/Knowledge Gained at Conference</th>
<th>Leadership Understanding</th>
<th>Application of Skills/Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social skills: 51</td>
<td>Motivating others to get things done: 47</td>
<td>Use information learned in school, home or community: 74</td>
</tr>
<tr>
<td>Mastery of specific subject matter: 41</td>
<td>Making a difference: 38</td>
<td>Help 4-H club or program: 31</td>
</tr>
<tr>
<td>Teamwork: 38</td>
<td>Take charge when needed: 28</td>
<td>Improved leadership skills/ as a leader: 30</td>
</tr>
<tr>
<td>Communication skills: 19</td>
<td>Setting an example: 28</td>
<td>Practice service: 27</td>
</tr>
<tr>
<td>Leadership skills: 16</td>
<td>Working with others: 27</td>
<td>Future career choices and decisions: 26</td>
</tr>
<tr>
<td>Taking positive risks/ meeting new people: 14</td>
<td>Good leaders are important: 22</td>
<td>Use communication skills: 24</td>
</tr>
<tr>
<td>Help others: 13</td>
<td>Teaching others: 16</td>
<td>Try new things: 16</td>
</tr>
<tr>
<td>Confidence: 12</td>
<td>Knowing how to follow: 13</td>
<td>Teach others what I learned: 15</td>
</tr>
<tr>
<td>Ability to plan: 7</td>
<td>Having self-confidence: 13</td>
<td>Working with others: 14</td>
</tr>
<tr>
<td>Comfort/familiarity on a new campus: 3</td>
<td>Taking responsibility: 12</td>
<td>Improved confidence: 12</td>
</tr>
<tr>
<td>Public speaking skills: 3</td>
<td>Helping people to enjoy what they're doing: 6</td>
<td>Expanded ideas about subject matter or opportunities: 6</td>
</tr>
<tr>
<td>Navigate/read a map: 3</td>
<td></td>
<td>Being more responsible: 3</td>
</tr>
</tbody>
</table>

**Notes:** The number after each response indicates the number of separate youth who identified that item as an outcome or impact from the Conference. These categories were created and tallied by the evaluator through a qualitative coding process to identify themes.

In the open-ended section of the survey, youth shared a variety of the skills they obtained related to communication, leadership and citizenship. Gains in communication skills, whether they were categorized as social networking, public speaking, or more broad communication skills, were extremely important. One youth stated, “I learned how to make friends and go out from my comfort zone.” A second youth conferred, sharing the most important skill they gained
was “Communication: listening to others’ ideas.” In addition, leadership skills and application carry a tone of service or citizenship understanding with them. Youth demonstrated this with their identification of making a difference, teaching others, helping the 4-H program or working with others as all ways they will take their new knowledge and skills back with them. “The most important skill I learned (was) that you need to help others and it really does not take that much time.”

**Discussion**

As a flagship experience for the Iowa 4-H Youth Development program, the Iowa 4-H Youth Conference hopes to both enhance current 4-Hers’ skills and experiences as they move their involvement beyond the local club or county, and serve as an entry point for potential new 4-H’ers and youth outside of the program. The results of this assessment indicate that both are occurring. Youth experienced growth in leadership, citizenship, communication, and learning skills whether they were new to the 4-H program or an advanced member. In addition, while more females are attending the conference, growth occurs at relatively the same rate for both males and females who attend. Thus, this conference provides an un-biased educational opportunity for all of Iowa’s youth regardless of gender, residence, or membership in 4-H. The youth delegates’ responses to open-ended questions indicate that youth’s identification of growth areas from the Iowa 4-H program match those assessed and offer further understanding of the data collected quantitatively. One youth shared, “The most important skill I learned at the Iowa 4-H Youth Conference was how to meet new people and to learn how to interact with one another,” a communication skill. Youth self-identified performing service projects or taking action to improve their communities as a priority upon returning home as well as a way to serve as a leader. “You can make a difference even if you’re working behind the scenes,” reported one youth. This demonstrates an understanding of citizenship. In addition, youth’s definitions of leadership coincide with Iowa 4-H goals for this outcome. “I learned how to lead others while showing them respect and listening to them,” reported a youth delegate.

As leadership development is a major goal of most youth programs (Seevers & Dormody, 1995), this can provide insight to others’ work in positive youth development.

Community programs for youth are diverse. It is hard to replicate any particular youth program. Even within the 4-H program, one finds variances in structure and experiences from state to state so it may be difficult to generalize the results of this program evaluation to all state 4-H conferences across the country. However, one can look at programs that are reaching particular desired outcomes and the structure used to meet those goals to emulate best practices in the design of future youth experiences. The intentional and rigorous program evaluation process for the Iowa 4-H Youth Conference adds to that body of knowledge and can help to inform future programming efforts both within Iowa and beyond its borders.

Many youth workers like the idea of youth leadership development, but may not understand what outcomes to expect (van Linden & Fertman, 1998). Realistic expectations are critical to the planning, implementation and evaluation process of youth led programs. Being intentional about planning, programming, and evaluation will increase the likelihood of reaching desired outcomes for today’s youth and developing the Life Skills needed in our changing society.

The Iowa 4-H youth staff and state 4-H council have been and will continue to be intentional regarding programming for the Iowa 4-H Youth Conference. This includes providing
opportunities for youth to navigate a college campus, serve others in their community and process those experiences through meaningful service learning opportunities. It also includes opportunities for youth to participate in educational workshops on the subject matter of their choice, participate in recreational activities and break-out experiences led by their peers, and interact with caring adults in floor meetings and other activities. This intentionality has created a formula for growth in leadership, citizenship, communication, and learning skills. Further, youth identified concrete plans to take their knowledge and skills to others through their involvement in local communities, schools, 4-H clubs, churches, and families. Thus, these experiences have far-reaching impacts.

Caldwell (2005) explains that developmental outcomes occur when youth have opportunities to increase competence, bond with peers and adults, experience self-efficacy, discover who one is, develop positive beliefs about the future, experience the ability to be self-determined, and be recognized for one's accomplishments. This study demonstrates those best practices were in place at the Iowa 4-H Youth Conference to create an optimal environment for developmental outcomes and growth to occur. Growth was seen in each of the four constructs of citizenship, leadership, communication, and learning and in all individual indicators of these Life Skills.

As Arnold (2003) explained regarding her own study in Oregon, because so little evaluation had been done for statewide youth leadership events in the past, it was logical to start with a focus on the main outcomes we target in 4-H and to keep the evaluation design and methodology relatively simple. Moving forward and considering future evaluation of this experience, it will be important to address data collection processes regarding race/ethnicity in order to tell a more complete story. In addition, assessing the 12 Life Skills on an annual basis will provide a perspective regarding the consistency of educational programming at the Iowa 4-H Youth Conference. Based on responses from the open-ended questions, it might also be worthwhile to add or adjust the 12 Life Skills assessed to ensure that appropriate outcomes are being assessed. Finally, if electronic survey dissemination continues to be the most practical plan for this evaluation, it will be important to address any e-mail inaccuracies. To that end, on the 2015 Conference registration, there was a space for participants to add an e-mail address different from the family for evaluation and future correspondence.

The youth who attended the Iowa 4-H Youth Conference sum up its impact best. One youth shared, “I think attending Youth Conference has taught me communication, citizenship, and leadership skills. These are all skills that I will use in the future for the rest of my life.” Another explained, “I will become more of a leader and not so much of a follower. I will open up and listen to people more and help them if that’s what they need.” “Conference has expanded my thoughts on what I want to do. I want to remain a leader in my community for years to come, but on the other hand, I also want to expand my knowledge to also think about state council,” stated a youth. Finally, one delegate said, “Some of the things I learned I can use in school and outside of school. I can tell others about the things I learned and they can use it in the things they do too.”

Finally, as additional states adopt the use of Common Measures, it will be important to assess commonalities in programming across states at large leadership-type conferences or events and learn from each other. Evaluation using Common Measures gives us a similar language and measurement tool that can also help to inform the broader positive youth development field regarding best practices for outcomes impact at statewide or other large short-term events.
References


