

Understanding Life Skills Gained from and Reasons for Youth Participation in the Tennessee 4-H Sheep Skillathon

Abstract

The high number of U.S. youth exhibiting at-risk behavior points to a lack of life skills development. We determined the effects of participating in one state's 4-H sheep skillathon on youths' life skills development and the youths' reasons for participating. The target population was 2014 Tennessee 4-H Sheep Skillathon participants ($N = 153$), and we obtained a 90% response rate. Participants perceived that they had a moderate gain in their life skills development, and a majority identified nine reasons for participation. Recommendations include informing parents/guardians of the benefits of skillathon participation and ensuring that skillathon participants have an opportunity to process and generalize content knowledge and life skills acquired through skillathon participation.

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Introduction

Business leaders, educational organizations, and researchers claim that for youth to achieve success once they enter the workforce, they must develop 21st-century skills (National Research Council, 2012). However, research has shown that in comparison to youth in other industrialized nations, U.S. youth possess average or below average competence in being able to analyze, reason, and communicate effectively as they solve problems (National Research Council, 2012). Leffert, Saito, Blyth, and Kroenke (1996) found that experiences young people have during early adolescence provide the foundation on which they develop their personalities and life skills.

Agricultural youth organizations, such as 4-H, develop leadership life skills (Anderson, Bruce, Jones, & Flowers, 2015). One way 4-H teaches life skills is through livestock projects. In Tennessee, the 4-H Sheep Project is comprised of two parts: (a) raising and exhibiting animals and (b) participating in a skillathon. The skillathon portion of the project provides youths the opportunity to participate in activity stations that may include breed identification, selection, feed identification, identification of retail and wholesale cuts, equipment identification, and quality assurance health practices (Ingram, 2003). However, research on the leadership life skills gained

through 4-H livestock projects is limited (Anderson et al., 2015). Furthermore, Powell (2004) professed the need to determine reasons for participation in the skillathon portion of livestock projects.

Purpose and Objectives

The purpose of the research reported in this article was to determine the effects of participation in the 4-H sheep skillathon on youths' life skills development and the youths' reasons for participating in the skillathon. The following objectives framed the research:

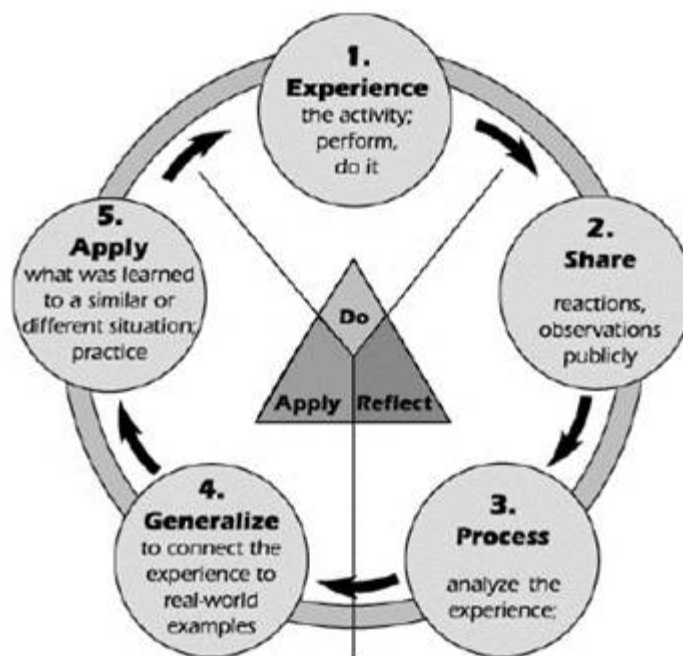
1. Determine youths' perceptions of their youth leadership life skills development.
2. Determine the reasons youths participated in the sheep skillathon.

Review of Literature Theoretical Framework

Kolb's experiential learning theory (1984) framed our research. Experiential learning is defined as "the process whereby knowledge is created through the transformation of experience" (Kolb, Boyatzis, & Mainemelis, 1999, p. 2). According to Kolb (1984), experiential learning is represented by a four-stage learning cycle that includes (a) concrete experience, (b) reflective observation, (c) abstract conceptualization, and (d) active experimentation. Based on Kolb's work, 4-H developed an experiential learning model (Figure 1). The 4-H model has five steps instead of Kolb's original four steps, and 4-H relies heavily on its experiential learning model to teach life skills (Norman & Jordan, 2012). Livestock skillathons are one example of an experiential learning opportunity offered by 4-H (Powell, 2004).

Figure 1.

4-H Experiential Learning Model



From Norman & Jordan, 2012, "Exploring the Experiential Learning Model," para. 1.

4-H Skillathons

Powell (2004) found that youths perceived that they had gained communication skills, critical thinking skills, and self-esteem as a result of participation in a livestock skillathon. Powell (2004) also investigated the motivational factors for participation in Tennessee skillathons and identified the following motivational factors: (a) encouragement to participate by volunteer leader, 4-H agent, or agriculture teacher; (b) desire to be a premier exhibitor; (c) expectation of having fun; and (d) desire to evaluate knowledge of project. According to Ingram (2003), the main reason beef and sheep skillathon participants participated was for a good experience, and when asked about their perceptions of gain in life skills, the most common answers were (a) *a little* gain in communicating with an adult, (b) *some* gain in critical thinking and problem-solving skills, and (b) *none* (no gain) in leadership skills. Furthermore, Ingram (2003) found that the majority of Tennessee adults assisting with skillathon believed that they had seen *quite a bit* of improvement in critical thinking and problem-solving skills among youth participants.

4-H Livestock Projects

Beyond skillathons, 4-H livestock projects overall have enhanced youths' life skills (Anderson et al., 2015; Boleman, Cumming, & Briers, 2004; Walker, 2006; Ward, 1996). 4-H alumni in New Jersey indicated that participating in the 4-H animal science program had had a positive influence on their life skills development, and 62% stated that it significantly influenced their career choices (Ward, 1996). Boleman et al. (2004) found a positive relationship between years of youth participation in the 4-H beef project and parents' perceptions about levels of life skills development in their children. Furthermore, Anderson et al. (2015), Morris (1996), and Walker (2006) investigated youth leadership life skills development among livestock exhibitors. They reported that youths perceived having high development of youth leadership life skills. More specifically, Walker (2006) and Anderson et al. (2015) reported that perceptions of the highest development related to the following skills: (a) showing a responsible attitude, (b) setting goals, and (c) setting priorities. Morris (1996) found that the top five leadership life skills developed among Iowa 4-H members were (a) setting goals, (b) showing a responsible attitude, (c) getting along with others, (d) respecting others, and (e) having a friendly personality.

Two studies relate to the reasons youths participate in 4-H livestock projects. Walker (2006) studied Georgia beef exhibitors and found that parents were an essential influence on a youth's decision to exhibit a beef project. Baney and Jones (2013) reported that a majority of livestock project participants remained active in 4-H for the following reasons: (a) fun/enjoyment, (b) 4-H activities, (c) other 4-H events, (d) opportunities to try new things, (e) potential to earn awards, (f) interaction with other youths, and (g) potential for leadership experiences.

Methodology

The target population for the study discussed in this article was youths who participated in the 2014 Tennessee 4-H Sheep Skillathon ($N = 153$) at the Tennessee 4-H Sheep Expo. As youths completed the skillathon and turned in their contest materials, they were informed of the study and given the opportunity to participate. Youths were allowed to participate only after assent and/or informed consent was obtained. Of the target population, 90%, or 139 youths, 51 males and 88 females, completed the study. The average age of the youths in the sample was 13.5 years ($SD = 2.5$), and the youths' ages ranged from 8 to 18. The most recently completed grade among youths in the sample ranged from grade 4 to grade 12; data about grades most recently completed are displayed in Table 1.

Table 1.
Grades Most
Recently
Completed by
Study
Participants

Grade	%
4	11.5
5	12.9
6	10.8
7	13.7
8	9.4
9	11.5
10	18.7
11	7.2
12	4.3

The Skillathon Life Skills Questionnaire was used for data collection. To address the objectives of the research reported here, we combined relevant sections of multiple instruments to develop the Skillathon Life Skills Questionnaire. The questionnaire consisted of three demographics questions (age, grade, gender), the 30-item Youth Leadership Life Skills Development Scale (YLLSDS) (Dormody, Seevers, & Clason, 1993), 11 items that assessed possible reasons for participating in the skillathon (Powell, 2004), and an open-ended question that allowed youths to state other reasons they participated in the skillathon. The YLLSDS items were measured on a 4-point scale (0 = *no gain*, 1 = *slight gain*, 2 = *moderate gain*, 3 = *a lot of gain*). Face validity and content validity were established by an expert panel consisting of two agricultural education faculty and one Extension faculty from The University of Tennessee. On the basis of recommendations from the expert panel, a few of the options for possible reasons for participating in the skillathon were revised for clarity. Dormody et al. (1993) reported a Cronbach's alpha coefficient of .98 for the YLLSDS. For the results reported here, the post-hoc reliability for the YLLSDS was .97. Additionally, frequencies, percentages, means, and standard deviations were calculated to summarize demographics, youth leadership life skills development, and reasons students participated in the skillathon.

Results

Objective 1: Determine Youths' Perceptions of Their Youth Leadership Life Skills Development

The summated mean for the YLLSDS was 2.1 ($SD = 0.6$), which corresponds to moderate gain. As shown in Table 2, a majority of the youths had at least moderate gain on all 30 items of the YLLSDS. The top five YLLSDS items for which the youths perceived that they had a lot of gain resulting from their participation in the skillathon were (a) "respect others," (b) "can use information to solve problems," (c) "can set goals," (d) "have good manners,"

and (e) "can solve problems." The percentage of no gain reported on the YLLSDS items ranged from 2.2% to 13.7%.

Table 2.
Youths' Perceptions of Their Youth Leadership Life Skills Development

Item	No gain		Slight gain		Moderate gain		A lot of gain	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Can determine needs	10	7.2	30	21.6	68	48.9	31	22.3
Have a positive self-concept	10	7.2	25	18.1	61	44.2	42	30.4
Can express feelings	19	13.7	31	22.3	47	33.8	42	30.2
Can set goals	7	5.0	21	15.1	45	32.4	66	47.5
Can be honest with others	6	4.3	21	15.2	47	34.1	64	46.4
Can use information to solve problems	3	2.2	18	13.0	48	34.8	69	50.0
Can delegate responsibility	10	7.2	31	22.5	55	39.9	42	30.4
Can set priorities	8	5.8	32	23.2	50	36.2	48	34.8
Am sensitive to others	17	12.3	34	24.6	47	34.1	40	29.0
Am open-minded	6	4.3	31	22.3	51	36.7	51	36.7
Consider the needs of others	6	4.3	28	20.1	52	37.4	53	38.1
Show a responsible attitude	5	3.6	21	15.1	52	37.4	61	43.9
Have a friendly personality	6	4.3	29	21.0	48	34.8	55	39.9
Consider input from all group members	6	4.3	27	19.4	51	36.7	55	39.6
Can listen effectively	5	3.6	23	16.7	50	36.2	60	43.5
Can select alternatives	7	5.0	41	29.5	51	36.7	40	28.8
Recognize the worth of others	9	6.5	29	20.9	46	33.1	55	39.6
Create an atmosphere of acceptance	7	5.0	29	20.9	55	39.6	48	34.5
Can consider alternatives	6	4.3	34	24.5	57	41.0	42	30.2
Respect others	8	5.8	16	11.6	41	29.7	73	52.9
Can solve problems	6	4.3	17	12.3	49	35.5	66	47.8
Can handle mistakes	7	5.0	16	11.6	57	41.3	58	42.0
Can be tactful	5	3.6	31	22.3	56	40.3	47	33.8
Can be flexible	4	2.9	35	25.2	52	37.4	48	34.5

Get along with others	8	5.8	25	18.0	40	28.8	66	47.5
Can clarify my values	9	6.5	26	18.8	58	42.0	45	32.6
Use rational thinking	3	2.2	29	21.0	55	39.9	51	37.0
Am open to change	8	5.8	32	23.2	53	38.4	45	32.6
Have good manners	11	7.9	22	15.8	40	28.8	66	47.5
Trust other people	10	7.2	23	16.5	47	33.8	59	42.4

Objective 2: Determine the Reasons Youths Participated in the Sheep Skillathon

As indicated by Table 3, youths were asked why they participated in the sheep skillathon. A majority agreed that they participated for the following reasons: (a) "4-H agent or ag teacher," (b) "I wanted to be a premier exhibitor," (c) "I thought it would be fun," (d) "I wanted to see how much I knew about my project," (e) "to achieve a goal," (f) "build self-confidence," (g) "challenge myself to try new things," (h) "competition," and (i) "interested in an animal science career." The remaining two reasons—"volunteer leader" and "spend time with friends"—did not garner majority agreement.

Table 3.
Youths' Reasons for Participating in the 4-H Sheep Skillathon

Reason	Agreement %				
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4-H agent or ag teacher	10.1	5.0	17.3	28.8	38.8
Volunteer leader	13.7	8.6	31.7	20.1	25.9
I wanted to be a premier exhibitor	7.2	5.8	14.4	26.6	46.0
I thought it would be fun	12.2	7.9	15.8	29.5	34.5
I wanted to see how much I knew about my project	6.5	6.5	18.7	25.9	42.4
To achieve a goal	5.8	5.8	20.9	29.5	38.1
Spend time with friends	12.2	12.2	33.1	18.0	24.5
Challenge myself to try new things	5.0	6.5	22.3	32.4	33.8
Build self-confidence	7.9	10.1	18.7	30.9	32.4
Competition	8.6	10.8	15.1	22.3	43.2
Interested in an animal	10.1	10.1	12.9	16.5	50.4

Table 4 shows the responses to the open-ended question, "Are there other reasons you participated in the sheep skillathon?" The youths provided 15 additional reasons. The most frequent answers were (a) "parents made me," (b) "I just wanted to learn more about the sheep project," (c) "ag teacher made me," and (d) "to show my knowledge of the sheep project."

Table 4.

Additional Reasons Youths Participated in the 4-H Sheep Skillathon

Reason	f
Parents made me	5
I just wanted to learn more about the sheep project	3
Ag teacher made me	2
To show my knowledge of the sheep project	2
I had seen it in the newspaper the year before I started that people from my county had won and then I wanted to	1
To get a scholarship	1
To motivate and drive myself to achieve what I want	1
Skillathon only has benefits so why not participate	1
I like these types of quizzes	1
I needed something for my 4-H vet science project	1
It's a tradition	1
Just wondering how I would do	1
I want to know about animals to study animal science when I'm older	1
To get a better grade for a chance to be on the state skillathon team	1
It will allow me to find my strengths and weaknesses in the different categories	1

Conclusions and Recommendations

Objective 1: Determine Youths' Perceptions of Their Youth Leadership Life Skills Development

As a result of participating in the sheep skillathon, participants perceived that they had a moderate gain in their life skills development. This finding is consistent with work by Powell (2004) but not consistent with findings by Ingram (2003). Ingram found that the most common answers regarding sheep skillathon participants' perceptions of gain were (a) *a little* in communicating with an adult, (b) *some* in critical thinking and problem-solving skills, and (c) *none* in leadership skills. Also, similar to our findings, Ward (1996) reported that 4-H alumni perceived that an animal science program had had a positive influence on their life skills development. Anderson et al. (2015) and Walker (2006) purported that livestock exhibition increases youth leadership life skills. Furthermore, Morris (1996) reported that 4-H members perceived a moderate gain in leadership life skills development from their 4-H involvement.

Kolb (1984) and Norman and Jordan (2012) posited that learning can occur through experience. According to Powell (2004), "the skillathon is an experiential learning model that involves young people in challenging, learn-by-doing activities and helps youth develop life skills and project skills" (p. 7). Our findings support the use of the sheep skillathon as an experiential means for developing youth leadership life skills. Additionally, the use of the YLLSDS forced participants to process and generalize their experiences. These acts coincide with the third and fourth steps of the 4-H experiential learning model (shown in Figure 1), perhaps helping the participants progress through the steps of the 4-H experiential learning process.

Objective 2: Determine the Reasons Youths Participated in the Sheep Skillathon

Our findings about reasons youths participated in the sheep skillathon (shown in Table 3) are similar to those of Baney and Jones (2013), Ingram (2003), and Powell (2004). The most common response to our open-ended question about reasons for participating in the skillathon was "parents made me," and this response is consistent with findings of Walker (2006). The finding that youths received motivation from various adults indicates that youths may need external motivation to participate in experiential learning activities such as the skillathon.

Recommendations for Practice

On the basis of our findings, we make the following recommendations for practice:

- University of Tennessee Extension should continue to offer the sheep skillathon as a means for developing youth leadership life skills.
- To encourage greater participation among 4-H and school-based agricultural education programs, University of Tennessee Extension should consider providing professional development to 4-H agents and school-based agricultural education teachers to increase their content knowledge and skills related to the sheep skillathon. If agents and teachers are comfortable with the content and skills, they may be more likely to encourage youths to participate and to train youths.
- To encourage greater participation of youths, University of Tennessee Extension and other land-grant universities of the Cooperative Extension System should consider providing information about the benefits of

the skillathon to parents/guardians.

- Because the act of completing the YLLSDS forced participants to process and generalize the skillathon experience, the skillathon should include an opportunity for participants to process and generalize the content knowledge and life skills acquired to help them complete the steps of the 4-H experiential learning process.

Recommendations for Future Research

On the basis of our findings, we make the following recommendations for further research:

- The research reported here involved only sheep skillathon participants in Tennessee. Replication should be done in other states to further investigate life skills development and reasons youths participate in sheep skillathons.
- Future research should seek to determine whether the reasons for participating in the sheep skillathon are more intrinsic or extrinsic.
- As noted in the preceding "Recommendations for Practice" section, professional development for Extension agents and school-based agricultural education teachers is recommended. Therefore, future research should determine the most efficient and effective means for delivering such professional development.
- Also noted in the "Recommendations for Practice" section, the incorporation of an opportunity for participants to process and generalize knowledge and skills acquired to help them complete the steps of the 4-H experiential learning process is recommended. Thus, future research should seek to quantify the relevant effects and to determine the most effective and efficient way to structure a reflection activity.
- There are many aspects to a sheep skillathon, such as studying, teaching younger youths, performing the required skills, and learning from adults. Thus, further research should investigate which of these aspects contribute to the development of youth leadership life skills.
- Future research should seek to determine the content and technical knowledge gained by youths who participate in the 4-H sheep project.

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