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Life Skill Development of Youth Participants of the Tennessee 4-H Beef Skillathon

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Abstract: The purpose of this study was to examine youth leadership life skill development among Tennessee beef skillathon participants and determine factors influencing their motivation to participate. Youth perceived the skillathon to have a moderate impact on their leadership life skill development. As a result, we recommend the skillathon continue to be an integral part of the overall livestock program in Tennessee. The reasons for participating in the skillathon mainly focused on testing knowledge, future careers, winning an award, fun, friends, 4-H agent or school-based agricultural education teacher, and personal development. Thus, utilizing both short-term and long-term influences during recruitment may increase skillathon participation. Future research should be conducted on a national level to determine youth leadership life skill development and reasons for participating in the skillathon competition.

Introduction

Youth can be prepared to meet the economic, environmental, and social challenges facing the United States if the formal and nonformal learning experiences in which they participate develop 21st century skills and knowledge needed for adult roles (National Research Council, 2012). Current assessment and accountability systems, rarely include life skills such as communication, critical thinking, collaboration, and self-management, even though, these skills are needed to be successful in the 21st century (National Research Council, 2012). The development of life skills through 4-H programming is a cornerstone of 4-H (Boyd, Herring, & Briers, 1992).

With that in mind, initial research indicates participation in 4-H livestock skillathons may contribute to the development of life skills among youth (Powell, 2004). Presently, livestock skillathons are viewed as a valuable educational experience for youth to learn a variety of topics related to the production and management of livestock (Coffey, 2015). More specifically, youth learn different breeds of livestock, anatomy of livestock animals, feedstuffs used in livestock diets, equipment used in raising and showing livestock, processing meat, wholesale and retail cuts of meat derived from livestock, common calculations used to measure animal performance and profitability, and so forth (Coffey, 2015). The Tennessee livestock skillathon competitions conducted at the beef, sheep, swine, and dairy expositions are a staple of the Tennessee 4-H livestock program (Powell, 2004). Youth are not required to participate in skillathon, but many choose to do so because the skillathon offers youth a chance to excel in their animal science project outside of the show ring (A. Pederson, personal communication, October 26, 2014). According to Loveday (2013):

> skillathon is an educational delivery method where a facilitator conducts a learning station where youth can gain knowledge or demonstrate their knowledge and skills learned by doing livestock project work. In some programs, a computer is used to present educational materials and activities. (p.1)

Livestock skillathons provide youth the opportunity to achieve livestock project goals, build self-confidence, self-esteem, and earn recognition (Loveday, 2013).

However, approximately 27% of Tennessee beef exhibitors are not participating in the beef skillathon. This is troubling since Powell (2004) purported life skills are developed by youth participating in skillathon, and the National Research Council (2012) has called for the development of 21st century skills that are transferable to any career. What is more, the literature is sparse in regard to life skill development among participants of skillathon and youth's reason for choosing to participate. Therefore, this study investigated Youth Leadership Life Skill Development (YLLSD) as a result of participation in the beef skillathon and reasons for participating.

Literature Review

Theoretical Framework

Participation in a livestock skillathon is experiential (Powell, 2004), thus the theoretical framework chosen for this study was experiential learning (Kolb, 1984; Norman & Jordan, 2012). Enfield (2007) stated "the basis of all experiential learning is that experience matters" (Experiential learning section, para. 1), and some educators believe that without an experience, there can be no true learning or real understanding of a concept or situation (Enfield, 2001;

Kolb, 1984). However, the experience alone does not necessarily lead to or mean that learning has taken place (Norman & Jordan, 2012). "Learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38), and the way in which learning shapes the course of a child's development can best be described by the amount of integration in the four learning modes of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984).

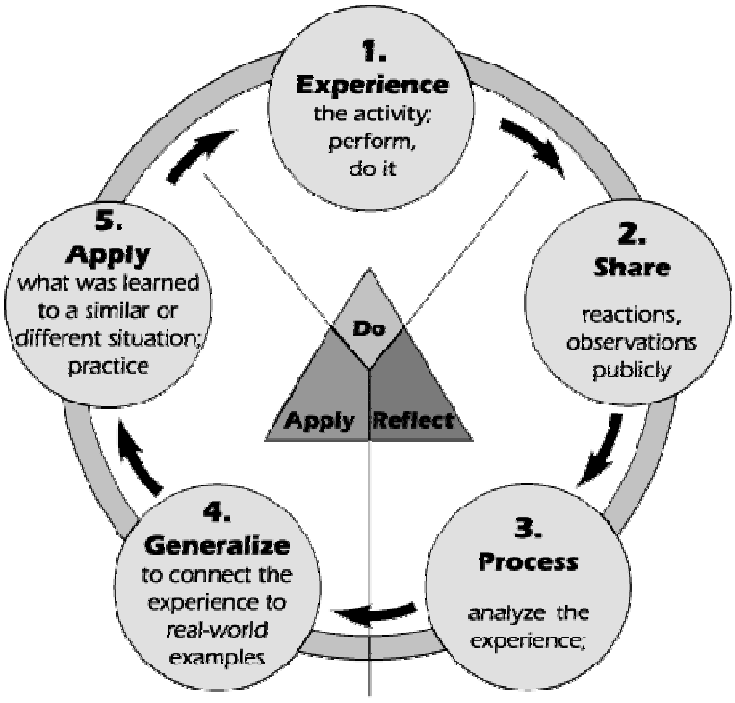
Utilizing Kolb's (1984) work, 4-H derived an experiential learning model with five steps to be utilized by 4-H leaders/volunteers during 4-H programming (Norman & Jordan, 2012; Figure 1). "The sequential steps of the model help youth identify what they have learned from a 4-H experience or activity and to apply that learning to other experiences or situations" (Norman & Jordan, 2012, p. 1). According to Norman and Jordan (2012), there are several advantages to using the 4-H experiential learning model. Advantages for 4-H volunteer leaders/volunteers include:

a) assessing knowledge and building upon it,
b) serving as a coach,
c) using a variety of instructional methods, and
d) learning together with youth.

Advantages for youth include:

a) learning from each other;
b) working together, sharing information, and assessing self and others;
c) taking responsibility for learning; and
d) relating learning experiences to their lives (Norman & Jordan, 2012).

Figure 1



The 4-H Experiential Learning Model (Adapted from Reference Guide to Handbook and Annuals, Pfeiffer & Jones, 1983; Retrieved from https://4h.tennessee.edu/Pages/experientiallearning.aspx).

Agricultural Youth Programming, YLLSD, and Livestock Skillathon Participation

A few studies have been conducted regarding YLLSD in agricultural youth organizations (Boyd et al., 1992; Seevers & Dormody, 1994; Wingenbach & Kahler, 1997). These studies concluded youth develop leadership life skills through participation in agricultural youth organizations. Anderson, Bruce, Jones, and Flowers (2015) reported YLLSD scores of livestock exhibitors at the North Carolina State Fair were high, and the high scores are an indicator that livestock project exhibition may facilitate YLLSD. Similarly, Walker (2006) and Morris (1996) stated youth perceived livestock exhibition to cultivate YLLSD. Boleman, Cummings, and Brier's (2004) found parents perceived their child's life skills were being enhanced by 4-H beef project participation. Their study also indicated there was a positive relationship between years of participation and life skill development (Boleman, Cummings, & Briers, 2004). New Jersey 4-H Alumni reported the 4-H animal science program fostered life skill development (Ward, 1996).

Powell (2004) investigated life skill development as a result of participation in a livestock skillathon. Powell randomly selected 200 youth who exhibited livestock in Tennessee and investigated life skill development as a result of participating in the skillathon. Powell found youth developed life skills such as responsibility, communication, public speaking, and self-confidence. More specifically, the majority of skillathon participants felt they had developed communications skills and could listen to what others say, clearly state their thoughts and ideas to adults, follow instructions, and share their knowledge with others (Powell, 2004). Also, youth strongly agreed they had developed critical thinking skills and were better able to list their options before making a decision, work out problems presented to them, and evaluate their decision making skills (Powell, 2004).

In addition, Powell (2004) identified motivation factors for participating in the skillathon. Powell found a majority of participants consider parents to not be a motivational factor. Whereas a majority indicated a volunteer leader, 4-H agent, or agriculture teacher were a reason for their participation. What's more, 88% agreed they participated because they wanted to be premier exhibitor, and 89.7% agreed they participated because they thought it would be fun (Powell, 2004).

Purpose and Objectives

The purpose of this study was to examine YLLSD among skillathon participants and determine factors influencing their motivation to participate in the skillathon.
The following objectives framed this study:

1. Determine beef skillathon participants' perception of their YLLSD.
2. Determine the reasons why youth participated in the beef skillathon.

Methodology

Research Design, Population, and Sample

This study utilized a quantitative research approach. More specifically, a descriptive one-shot case study (Campbell & Stanley, 1963) of youth who participated in the 2014 Tennessee Junior Livestock Exposition Beef skillathon event (N = 160) was used and conceptualized as a slice in time (Oliver & Hinkle, 1982). Fifty percent (n = 80) of the participants in the 2014 Tennessee Junior Livestock Expo beef skillathon completed the *Skillathon Life Skills Questionnaire*. The gender distribution of the sample was 36 males and 44 females. The average age of the sample was 12.9 years old (SD = 2.6) with a range of 8 to 18. The participants most recently

completed grade level ranged from 4th to 11th grade, and the distribution of grade level can be found in Table 1.

We have categorized the sample as a convenience sample, since only 50% of the beef skillathon participants completed the study and the only known demographic variable of the target population was most recently completed grade. To that end, the sample contained a higher percentage of 4th graders than the population and did not include 12th graders. Therefore, we were unable to weight participants' responses based on grade.

Table 1

Grade Level Distribution of Sample (n = 80) verses Population (N =160)

Grade level	% sample	% population
4	21.3	11.9
5-6	25.1	21.9
7-8	23.8	24.3
9-10	20.0	22.5
11-12	10.0	19.4

Note. There were no 12th graders represented in the sample.

Instrumentation

One instrument, the *Skillathon Life Skills Questionnaire*, was developed by combining relevant sections of other instruments to be used for data collection in this study. The researcher-developed questionnaire consisted of three demographic questions (age, grade, and gender), the 30-item *Youth Leadership Life Skills Development Scale* (Dormody, Seevers, & Clason, 1993), 11 items that assessed possible reasons for participating in the skillathon (Powell, 2004), and an open-ended question that allowed youth to state other reasons they participated in the skillathon. The YLLSD scale items were measured on a 4-point scale (0 = *no gain*, 1= *slight gain*, 2 = *moderate gain*, 3 = *a lot of gain*). Face and content validity of the *Skillathon Life Skills Questionnaire* was established by an expert panel consisting of two agricultural education faculty members and one Extension faculty member from the [University]. Based on the recommendations of the expert panel, a few of the possible reasons for participating in the skillathon were revised for clarity. Dormody, Seevers, and Clason (1993) reported a Cronbach's alpha coefficient of .98 for the YLLSD scale and stated the YLLSD scale was developed to provide an evaluation and research tool for measuring YLLSD (Dormody, Seevers, & Clason, 1993). For this study, the post-hoc reliability for the YLLSD scale was .96.

Data Collection and Analysis

As the skillathon participants registered for the 2014 Tennessee 4-H beef skillathon, they were informed of the study and given the opportunity to participate. The questionnaire was distributed to willing participants only after the study and risks were explained and consent and/or assent forms were signed. Thus, data from skillathon participants 18 or older were only collected if informed consent was given, and data from participants under 18 were only collected if guardian/parent informed consent and the minor's assent were given. The assent and consent forms used were approved by the [University]'s Institutional Review Board.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 22 for Windows. Frequencies, percentages, means, and standard deviations were calculated to summarize demographics, YLLSD, and why students participated in the skillathon.

Results

Objective 1: Determine Beef Skillathon Participants' Perception of Their YLLSD.

The summated mean for the YLLSD scale was 2.2 (*SD* = 0.6), which represents moderate gain. Results for the individual items of the YLLSD scale are presented in Table 2. The items in which a majority of youth reported a lot of gain were:

a) can set goals,
b) can be honest with others,
c) can use information to solve problems,
d) have a friendly personality,
e) respect others,
f) can handle mistakes,
g) get along with others, and
h) have good manners.

Table 2

Youth Leadership Life Skills Questionnaire Data

	No Gain		Slight Gain		Moderate Gain		A lot of Gain	
	f	%	*f*	%	*f*	%	*f*	%
Can determine needs	5	6.5	9	11.7	33	42.9	30	39.0
Have a positive self-concept	5	6.3	11	13.9	35	44.3	28	35.4
Can express feelings	13	16.5	14	17.7	26	32.9	26	32.9
Can set goals	3	3.8	10	12.5	25	31.3	42	52.5
Can be honest with others	9	11.4	6	7.6	23	29.1	41	51.9
Can use information to solve problems	0	0	5	6.3	30	38.0	44	55.7
Can delegate responsibility	6	7.6	9	11.4	33	41.8	31	39.2
Can set priorities	2	2.5	12	15.0	31	38.8	35	43.8
Am sensitive to others	14	18.2	15	19.5	31	40.3	17	22.1
Am open-minded	5	6.3	15	19.0	27	34.2	32	40.5
Consider the needs of others	8	10.4	11	14.3	25	32.5	33	42.9
Show a responsible attitude	6	7.5	7	8.8	27	33.8	40	50.0
Have a friendly personality	3	3.8	13	16.3	18	22.5	46	57.5
Consider input from all group members	5	6.5	12	15.6	26	33.8	34	44.2
Can listen effectively	2	2.5	14	17.7	26	32.9	37	46.8
Can select alternatives	5	6.4	8	10.3	36	46.2	29	37.2
Recognize the worth of others	6	7.6	9	11.4	28	35.4	36	45.6
Create an atmosphere of acceptance	6	7.8	10	13.0	30	39.0	31	40.3
Can consider alternatives	4	5.0	19	23.8	26	32.5	30	37.5
Respect others	5	6.6	9	11.8	19	25.0	43	56.6
Can solve problems	1	1.3	12	15.0	29	36.3	38	47.5
Can handle mistakes	2	2.5	9	11.4	26	32.9	42	53.2
Can be tactful	6	7.6	16	20.3	28	35.4	29	36.7
Can be flexible	2	2.5	13	16.3	33	41.3	32	40.0
Get along with others	7	9.0	7	9.0	21	26.9	43	55.1
Can clarify my values	5	6.5	12	15.6	34	44.2	26	33.8
Use rational thinking	2	2.6	13	17.1	32	42.1	29	38.2
Am open to change	3	3.9	18	23.4	24	31.2	32	41.6
Have good manners	6	7.6	4	5.1	24	30.4	45	57.0
Trust other people	5	6.3	16	20.0	25	31.3	34	42.5

Objective 2: Determine the Reasons Why Youth Participated in the Beef Skillathon.
Youth's reasons for participating in the skillathon based on the 11 predetermined items can be found in Table 3. The reasons with an agreement percentage greater than 70% were the following: (a) I wanted to see how much I knew about my project, (b) I wanted to be Premier Exhibitor, (c) I thought it would be fun, (d) To achieve a goal, (e) Build self-confidence, (f) Interested in an animal science career, and (g) Challenge myself to try new things. A majority of the participants agreed with all remaining items except volunteer leader as a reason for participating.

Table 3
Reasons for participating in Skillathon

Possible Reasons for Participation	Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%
4-H Agent or Ag Teacher	5	6.4	8	10.3	21	26.9	21	26.9	23	29.5
Volunteer leader	6	7.8	8	10.4	27	35.1	18	23.4	18	23.4
I wanted to be Premier Exhibitor	1	1.3	6	7.7	11	14.1	22	28.2	38	48.7
I thought it would be fun	3	3.8	6	7.7	10	12.8	27	34.6	32	41.0
I wanted to see how much I knew about my project	1	1.3	5	6.3	10	12.5	22	27.5	41	51.3
To achieve a goal	3	3.8	5	6.4	10	12.8	22	28.2	37	47.4
Spend time with friends	9	12.0	7	9.3	18	24.0	16	21.3	25	33.3
Challenge myself to try new things	3	3.8	7	9.0	13	16.7	19	24.4	36	46.2
Build self-confidence	3	3.8	9	11.5	10	12.8	25	32.1	31	39.7
Competition	7	9.1	5	6.5	14	18.2	20	26.0	31	40.3
Interested in an animal science career	4	5.1	6	7.7	12	15.4	15	19.2	41	52.6

In addition to the items provided in Table 3, participants were asked to provide other reasons for participating in the skillathon. Most of the comments provided dealt with learning or trying something new (*f* = 9); *I love learning more about my animals*, *to better my knowledge of beef cuts*, and *to learn more about medical care*. Parental/guardian influence (*f* = 4) was the second most common among the open comments, and to win awards (*f* = 3) was the only other reason provided.

Conclusions, Discussion, and Recommendations

Objective 1: Determine Beef Skillathon Participants' Perception of Their YLLSD.
Youth participants of the 2014 Tennessee beef skillathon perceived the skillathon to have a moderate impact on their YLLSD, and a majority of youth reported at least moderate gain on all 30 items of the *Youth Leadership Life Skills Development Scale* by Dormody, Seevers, and Clason (1993). This finding is supported by Powell (2004). Powell concluded youth developed life skills such as responsibility, communication, public speaking, and self-confidence as a result of participating in the skillathon offered at Tennessee livestock shows. The findings of this

study are also consistent with others who concluded life skills are developed by participating in agricultural youth organizations (Boyd et al., 1992; Seevers & Dormody, 1994; Wingenbach & Kahler, 1997) and by exhibiting livestock (Anderson et al., 2015). Furthermore, the findings align with Boyd et al.'s (1992) sentiments that youth programming founded upon experiential learning are a means for youth to develop life and leadership skills applicable to adulthood before irresponsible behavior takes root. Thus, the use of the beef skillathon as an experiential learning opportunity to develop youth's leadership life skills appears plausible.

Objective 2: Determine the Reason Why Youth Participated in the Beef Skillathon.

The majority of participants strongly agreed they participated in the beef skillathon because they wanted to see how much they knew about their project and were interested in a career in animal science. Of the 11 predetermined items, a volunteer leader was the only item in which a majority agreement was not reached as a reason for participating in the skillathon. Overall, the reasons for participating in the skillathon focused on testing knowledge, future careers, winning an award, fun, friends, 4-H agent or school-based agricultural education teacher, and personal development. This is consistent with Powell (2004), except Powell found a volunteer leader was a reason for participating. The reason for this may be due to the fact that volunteer leaders were responsible for more programming efforts in 2004, than they are today (H. D. Loveday, personal communication, March 26, 2015). Lerner (2011) professed youth need the encouragement and mentoring that non-parental adults have the unique ability to provide. This may be why youth viewed 4-H agents and school-based agricultural education teachers as a motivating factor. To that end, 4-H agents and school-based agricultural education teachers may have developed stronger rapport with youth who participate in the skillathon than volunteer leaders.

Recommendations for Practice

Based on the findings of this study, the following recommendations were made for practice:

1. Tennessee 4-H should continue to offer experiential learning activities such as the skillathon, and the skillathon should continue to be an integral part of the overall livestock program.
2. Youth perceived they are benefiting from participating in the skillathon, and the life skills developed may be enabling them to become productive leaders and members of society. With that in mind, 4-H agents and school-based agricultural education teachers should consider implementing recruitment strategies and opportunities for growth in their livestock program. Promoting a combination of short-term and long-term outcomes during recruitment may increase participation.
3. Awards and recognition programs should continue to be an integral part of the Tennessee Junior Livestock Exposition, mainly the Premier Exhibitor Award as most participants found the award to be an influencing factor in their participation in the skillathon. Expanding the premier exhibitor program to recognize more individuals could serve as an incentive to keep youth involved and motivate others to participate.

Recommendations for Future Research

Based upon the findings of this study, the following recommendations for future research were made:

1. Further research should be conducted to determine how former skillathon participants are using their skillathon knowledge as adults, and how they are using the life skills they developed.

2. Due to the shortage of postsecondary graduates in agriculture (Goecker, Smith, Fernandez, Ali, and Theller, 2014), future research should explore the relationship between skillathon participation and the youth's career choices and/or major in college, and if skillathon participants are more likely to choose a college major in agriculture than livestock exhibitors that do not participate in the skillathon.
3. This study should be replicated with other populations of skillathon participants and with other types of animal skillathons to determine if YLLSD occurs. The current study only included youth from Tennessee that participated in the beef skillathon.
4. Future research should be conducted on a national level to gauge the perceived YLLSD of youth members that participate in the national skillathon competition held in Louisville, Kentucky each year as part of the North American International Livestock Exposition. Youth from all across the United States participate in this event; therefore it would provide a unique opportunity for research related to life skill development as a result of participating in skillathon.
5. Future research should examine the technical knowledge acquisition of beef skillathon participants to determine if the beef skillathon is an effective means for increasing content knowledge related to the beef industry.

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