

4-H Wildlife Habitat Education Program: A Qualitative Study in Career Exploration

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Previous studies have documented the Wildlife Habitat Education Program (WHEP) builds life skills of 4-H participants. Furthermore, youth education and development of life skills are enhanced through 4-H educational efforts that provide hands-on learning projects and concepts that ultimately assist in career development (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Bourdeau, 2004). The purpose of this study is to describe WHEP participants' perceptions of careers in wildlife management after the completion of the annual program. The central research question guiding this study was how do 4-H members view careers in wildlife management after participating in WHEP? A focus group comprised of nine WHEP participants was conducted at the Tennessee 4-H Wildlife Judging contest to determine participants' perceptions of careers in wildlife management after completion of the annual program. Focus group participants indicated participating in WHEP peaked their interest in wildlife and provided an opportunity to experience the importance of natural resource management. Future research should be conducted on a national level that measures the perceptions of outdoor enthusiasts regarding the fundamentals of wildlife management. This question could give insight on the transfer of knowledge between adults and youth.

Introduction

Participation in 4-H programs has resulted in students taking more science-related classes in high school, which is a direct result of life-skill development in those areas (Heck, Carlos, Barnett, & Smith, 2012). Furthermore, students who have participated in 4-H have shown substantial growth in life-skill development (Diem, 2001). Life skills are competencies that enable youth to function within society (Ratkos & Knollenburg, 2015). Moreover, youth education and development of life skills are enhanced through 4-H educational efforts that provide hands-on learning projects and concepts that ultimately assist in career development (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Bourdeau, 2004). Heck, Carlos, Barnett, and Smith (2012) suggested 4-H programming may influence career interest in science-related fields and enable long-term application of content learned. Moreover, career development is a lifelong process of workforce engagement where opportunities are available for professional growth through choosing among employment prospects made available to individuals (Ferry, 2006).

The Wildlife Habitat Education Program (WHEP) has a rich history developed over the past 40 years in Tennessee. After beginning in 1978 (National 4-H Council, 2014), the 4-H Wildlife Judging Contest expanded to a national program in 1989 (Harper, 2015). The national program was named WHEP and is the only national youth program that teaches wildlife and fisheries management with a scientifically based curriculum created and managed by wildlife professionals (Allen, Elmore, & Harper, 2013). More than 10,000 4-H youth have participated in WHEP, and the numbers continue to grow (Harper, 2015). Previous research indicated WHEP participants were more likely to implement wildlife management practices and teach others about wildlife management principles (Allen et al., 2013; Kleist, Moorman, DePerno, & Bardon, 2010). Furthermore, Allen and Elmore (2012) found both youth and adults perceived participation in WHEP had a positive effect on the improvement of life skills, such as teamwork, oral communication, written communication, social skills, decision making, and leadership.

Although WHEP provides life skills, it is not clear if the program stimulates career exploration among participants. More importantly, 4-H professionals must ensure youth are provided opportunities to apply career choices learned in their 4-H project to bring 4-H programs full circle in the education cycle (Carlson & Maxa, 1998).

Purpose

The purpose of this study was to describe WHEP participants' perceptions of careers in wildlife management after the completion of the annual program. The central research question that guided this study was how do 4-H members view careers in wildlife management after participating in WHEP?

Theoretical Framework

Bandura's (1986) social cognitive theory served as the theoretical framework for this study. Social cognitive theory seeks to explain the process of learning and human behaviors (Schunk, 2012). Schunk (2012) explained how the assumptions made by this theory "address the reciprocal interactions among persons, behaviors, and environments; enactive and vicarious learning (i.e., how learning occurs); the distinction between learning and performance; and the role of self-regulation" (p. 119). Furthermore, according to Bandura (1997), individuals have an aspiration "to control the events that affect their lives" and view themselves as an agent (p. 1). A key component of this process is self-regulation, which is "the process whereby individuals activate and sustain behaviors, cognitions, and affects," and these mechanisms work towards the fulfillment of goals (Schunk, 2012, p. 123). Behaviors are associated with self-regulation and how an individual regulates their behaviors affects their achievement of goals (Schunk, 2012).

Individuals who implement a learning-goal orientation have a "higher self-efficacy, task value, and achievement" (Schunk, 2012, p. 431). In the learning process, goals are essential for success as the aspiration provides individuals with "tunnel vision" to accomplish tasks (Schunk, 2012, p. 139). Task value often refers to the students' view of the task. Also, motivation can be achieved through the process of modeling (Schunk, 2012). This process involves individuals observing others who receive rewards as a result of specific actions; therefore, the individuals model those actions observed to achieve the same rewards (Schunk, 2012).

As stated by Schunk (2012), "self-efficacy is a belief about what one is capable of doing; it is not the same as knowing what to do" (p. 146). Self-efficacy is imperative for success (Schunk, 2012). The stronger the student's personal self-efficacy, the greater their efforts and probability of success (Bandura, 1986). What people think, believe, and feel affect their behaviors (Bandura, 1986). The effects of these reactions then determine an individual's thought patterns and emotional reactions (Bandura, 1986). As Extension agents are charged with the full circle of education (Carlson & Maxa, 1998), an agent should strive to develop a learning environment that incorporates the interactions of human behaviors and personal factors as described by Bandura (1986). Therefore, by obtaining an understanding of Bandura's (1986) social cognitive theory, Extension agents can use the theory to enhance their specific programs and improve their facilitation of learning in youth development.

Methods and Procedures

The population for this study was the participants in the Tennessee 4-H Wildlife Judging contest (called WHEP at the national level). The purposive sample consisted of nine participants who were selected based on their 4-H agent's recommendation to represent each region of Tennessee. A purposeful sample uses select participants who can provide relevant information about the topic (Ary, Jacobs, Sorensen, & Walker, 2014) and assumes the investigator wants to gain insight and must select a sample that will provide the most learning opportunities (Dooley, 2007). The nine students who were selected were comprised of senior-high 4-H members, ninth through twelfth grades, who participated in the Tennessee State 4-H Wildlife Judging program and represented the Eastern, Central, and Western Regions of The University of Tennessee Extension.

A semi-structured interview guide was created to provide a clear set of instructions for the interviewer (Ary, et al., 2014). In addition, the semi-structured interview provided the opportunity for identifying new ways of seeing and understanding the topic through the answers of the participants (Ary, et al., 2014). The researcher provided the interview guide to the participants before the focus group session. The benefits of this guide provided the participants with ample time to think about the question before the focus group session but also the freedom to express individualistic views on the topic (Ary, et al., 2014). The focus group participants were asked the following questions:

1. Has your knowledge of wildlife management transformed after participating in WHEP?
2. How has your attitude toward a career in wildlife management changed after participating in WHEP?
3. Have your views on what wildlife professionals actually do changed since participating in WHEP? If so, how?
4. Do you think you are more likely or less likely to pursue a career in wildlife management, given your experiences in this program?
5. What kind of things do you think you would do to prepare for a career in wildlife management?
6. What is a wildlife management career to you?
7. What do you think you do in a career in wildlife management?
8. What are the challenges in preparing for a career in wildlife management?

The researcher served as the moderator during the focus group meetings and directed the dialogue by using open-ended questions from the interview guide that could lead into discussions (Israel & Galindo-Gonzalez, 1992) related to the central research question. The researcher made notes as a second observer collected data on the dialogue and on the interactions between participants of the focus group (Israel & Galindo-Gonzalez, 1992). Also, the researcher directed the interview questions around the purpose and needs of WHEP and the specified characteristic of views towards a career in wildlife (Israel & Galindo-Gonzalez, 1992). The viewpoints expressed within the focus group were tape-recorded and promptly transcribed to maintain accuracy of the focus group discussion (Ary, et al., 2014). Also, data saturation was achieved through the nine participants' responses as responses to the questions were either agreed upon or

repeated. Individual participants were assigned a letter by the researcher (A, B, etc.) to protect their identities. The focus group conversation was transcribed and provided a documentation trail for the data to be analyzed (Ary, et al., 2014). In addition, a reflective log was recorded to capture the researcher's thoughts as they occurred.

After reading through the transcriptions multiple times, the initial researcher and an outside researcher, experienced in qualitative research, utilized thematic analysis to arrive at three common themes that surfaced (Bogdan & Bilken, 2007). The themes that surfaced occurred by coding the transcription of the focus group first by words or phrases that emerged from the conversation (Bogdan & Bilken, 2007). After specific codes were labeled, those codes were placed into categories (Bogdan & Bilken, 2007). The researchers then examined the categories and revisited the literature to arrive at three themes (Bogdan & Bilken, 2007). The three themes developed directly related to What people think, believe, and feel affect their behaviors (Bandura, 1986). The effects of these reactions then determine an individual's thought patterns and emotional reactions (Bandura, 1986). Therefore, the three themes that evolved from this process were participants (a) interest and excitement regarding wildlife management, (b) importance of wildlife professionals, and (c) benefits/challenges to wildlife management.

Triangulation ensured validity throughout the study, maintaining credibility. Triangulation occurs when researchers agree on specific outcomes throughout the study, which yields the same understanding of the outcomes (Bogdan & Bilken, 2007). All documents utilized throughout this study were triangulated, including the interviews themselves, personal observations, and reflections which are also representative of credibility.

To represent dependability of this study and minimize bias during the interview process, a peer reviewer, which is a university-trained faculty member in qualitative studies, scanned for consistency among participant responses, researcher notes, and observations, and served as peer reviewer by facilitating the guidance of both the analysis of data and theme development (Bogdan & Bilken, 2007). To maintain transferability, the use of participant interview responses, the literature review, and reflective notes and observations were utilized (Bogdan & Bilken, 2007). All participants of this study facilitated a check of individual transcripts, establishing confirmability (Bogdan & Bilken, 2007).

Subjectivity Statement

Two researchers were involved in this study: (a) an agricultural leadership and communication master's student and (b) a professor of agricultural leadership and education. The master's student researcher has completed a bachelor's degree in wildlife management and fisheries science. In addition, this researcher is employed as a county extension director with responsibilities in both adult and youth natural resources education. The professor of agricultural leadership and education is a former school-based agricultural education teacher and has recently published works in the areas of leadership, STEM, education, and college instruction. In addition, this researcher has prior experience with qualitative data collection techniques, including facilitating focus

groups, and has published qualitative works. Collectively, we believe 4-H members construct attitudes, beliefs and behaviors towards career exploration before they pursue a career. We believe participation in 4-H play a role in member's ability to comprehend life skills, critical thinking skills and setting goals. Furthermore, we believe 4-H can be an asset to the youth's livelihood by allowing members to apply the newly learned skills in their communities. These beliefs influenced and provided the basis for the theoretical lens of this study.

Findings

The research question was how do 4-H members view careers in wildlife management after participating in WHEP? The participants provided detailed information about their perceptions of a career choice in wildlife management. Many of the responses brought forth deeper understanding of the validity of WHEP. The researcher was able to distinguish the three themes: interest and excitement regarding wildlife management, importance of wildlife professionals, and benefits/challenges to wildlife management.

Interest and Excitement Regarding Wildlife Management

The results showed the focus group in agreement that WHEP peaks an interest in wildlife management and creates excitement about helping wildlife. Two participants gave intricate descriptions of how each participant looked forward to learning more about wildlife management. For example, one of the participants stated, "WHEP definitely piques your interest in wildlife, and this program makes the participants excited, so they tell other people about it." The consensus of the focus group was the excitement created by WHEP translated to a desire of applicability. Participant B affirmed, "In this program, I have seen there is a lot to learn. WHEP opens the door to do so and to apply what we learn." Focus group members agreed WHEP was extremely content based and offered a reasoning component that contributed to the interest in the program. Participant A added, "The most difficult part is the reasoning component, but it adds quality to the program. I think the focus shifts to the ability to apply what is learned."

Importance of Wildlife Professionals

Responses indicated WHEP participants were introduced to wildlife officers, land managers, and wildlife educators. In addition, Participants A, D, E, H, and I indicated WHEP gave a purpose to be in the outdoors. Participant D stated, "This program [WHEP] gave me a practical aspect of going out in the woods and looking at birds and studying animals." Although the consensus was the participants had experience in wildlife before participating in WHEP, the program gave purpose to wildlife management and demonstrated a need for wildlife management. Participant H mentioned, "I have always been into wildlife, but this gives me a reason to learn about it and how to do something about it." The participants also stated that each understood the importance of wildlife professionals. For example, Participant H expressed, "I always thought of nature as something that nobody necessarily had to help with, but the more I learn about WHEP and the Tennessee Wildlife Resources Agency the more I understand how important these careers are."

WHEP introduces a career in the field of wildlife management and other fields of science. According to Participant C, “WHEP gives us some really good connections with the professionals who run the science and wildlife programs and make it fun to learn. This also allows us how to show others what we learned, and the principals involved and how to treat the resources involved.” Participant E added, “This program has made me realize how relevant other sciences are in principles of wildlife, especially engineering. That is the field I want to go into.”

Benefits and Challenges of Wildlife Management

The focus group participants believed WHEP integrated other fields of science. Participant E said,

I think WHEP has not necessarily made me more or less interested in a career in wildlife, but it has opened my eyes to how relevant wildlife is and natural resources in general tied into other career fields, particularly engineering. That is the field that I want to go in.

Participants E, G, and J believed WHEP connected other career fields by allowing individuals to practice decision-making skills and accomplish objectives. In addition, the focus group participants indicated WHEP gave them a perspective of how other fields of science interact upon each other. Participant E stated, “This program emphasizes we do not exist in a bubble and being involved in WHEP would be great way to gain experience in dealing with these complex systems of natural resources.”

According to the responses given during the focus group meeting, Participants A, C, D, and H understood some of the challenges associated with a career in wildlife management. A common response was working with people can create challenges for wildlife professionals. Participant C and G believed it was more about managing people than wildlife. Participant G shared “This program has also opened doors to wildlife management and showed me it is more than just managing animals and the environment, but it also involves people and people are hard to manage sometimes. The difference in opinions can be a challenge.” Participant C added
The challenge is not just between educated people vs. uneducated people but within differences by opinions. These are very complex systems to work in. There are gray areas; there are slight differences in techniques, and sometimes it is not necessarily right or wrong.

However, Participants E, G, and J indicated WHEP teaches the benefits of wildlife management. Participant H also mentioned, “This program sheds light to the challenges, but also goes into detail about the benefits of wildlife management. This program shows us the benefits are worth the challenge.”

Focus group participants also indicated WHEP gave them value for wildlife and other components of nature. Stewardship was mentioned throughout the focus group meeting. Participant G stated, “I feel WHEP is about doing what we can to achieve landowners’ objectives. The challenges are time and resources, like money, but ultimately, being a good steward is what it takes to be a wildlife manager.”

Discussion

Career development is a lifelong process of engaging the workforce through choosing among employment opportunities made available to them (Ferry, 2006). Youth are influenced by many factors involving career development, such as their personal ability and educational fulfillment (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Bandura's (1986) social cognitive theory perpetuates that individuals should consider participants' environment, behavior, and personal factors in influencing one's decision making. Therefore, Extension agents are challenged to provide programs that support youth in their career choice (Ferry, 2006) and to do this, one's personal factors must be understood.

Personal factors are influenced by behavior and the environment (Bandura, 1986). In the context of this study, the personal factor of interest was attitudes of participants towards a career in wildlife management (Schunk, 2012). Attitudes can be measured to show perceptions of Extension's clientele towards program goals (Schunk, 2012). The environment WHEP creates appears to spawn perceptions of a career in wildlife management. When asked if the youth were more likely to pursue a career in wildlife management, Participant G responded, "Yes, it has also opened my mind about going into wildlife and the management of it."

In addition to WHEP facilitating an environment that promotes perceptions of career development, Participants B, C, G, and H indicated WHEP made them realize how important wildlife management and wildlife professionals are for Tennessee's natural resources. This has implications broader than career development as it suggests that knowledge gained through participating in WHEP assist individuals in being stewards to the land.

4-H professionals must ensure youth are provided opportunities to apply what the youth have learned from involvement in their 4-H project (Carlson & Maxa, 1998). This application of knowledge gained during their 4-H experiences comes full circle in the education cycle (Carlson & Maxa, 1998). 4-H professionals are charged with youth development and when positive impacts from a program are demonstrated, the success of the program is revealed (Carlson & Maxa, 1998). Overall, this study found WHEP fits the education cycle by peaking interest in wildlife management. The integration of life skills and career exploration increase the validity of WHEP. The program associates life skills, career exploration, and the fundamentals of wildlife management to the youth.

This study found that the impact of WHEP was even greater than its stated purpose providing hands-on environmental education opportunities to teach youth the fundamentals of wildlife and fisheries science and appropriate management practices (Allen & Elmore, 2012). WHEP assists in building life skills for participants and demonstrates the importance and justification of wildlife management and wildlife professions. This study found WHEP not only enables 4-H participants to see the complexity of the available natural resources but helped participants see the connections to other fields of discovery such as science and engineering.

Implications and Recommendations

The study found WHEP peaked an interest in wildlife management among participants of the Tennessee 4-H Wildlife Judging contest. This interest can often lead to a desire to apply the

skills learned to the participants' communities. Therefore, 4-H can use this research to demonstrate the impact of the organization's programming efforts. Historically, 4-H has strived to teach fundamental practices to youth and relay the knowledge back to the communities (National 4-H Council, 2014). To sustain this desire of applicability, WHEP should continue to promote being a part of and sharing the common good in wildlife management. Research should be conducted to identify what elements of WHEP peak interest and excitement.

Responses indicated participation in 4-H Wildlife Judging allowed an understanding of how important wildlife management careers are in protecting and enhancing natural resources. Furthermore, the professionals who conduct 4-H Wildlife Judging communicate a justification and purpose for wildlife management. This study found these professionals were successful models that cued emotional arousal. In addition, participants indicated perceptions of a behavioral change regarding career exploration.

4-H should examine the models of WHEP to facilitate change. For example, 4-H could adopt similar models and incorporate it into the curriculum in other programs offered to youth. With models communicating a justification and purpose of wildlife management, 4-H members should relay the information they have learned through WHEP to adults. By relaying this information to other people, it could achieve greater compliance with the science associated with wildlife management and regulation. Furthermore, research should be conducted on a national level that measures the perceptions of outdoor enthusiasts regarding the fundamentals of wildlife management. This question could give insight on the transfer of knowledge between adults and youth.

This study indicated the 4-H Wildlife Judging participants expanded their knowledge of the benefits and challenges related with a career in wildlife management. Participants' claimed wildlife management incorporates other fields of science in the career as well. 4-H could advertise this inclusiveness in promoting WHEP to others who may be interested. 4-H professionals could offer this to students who have interests other than wildlife management. Further research needs to be conducted to examine WHEP's ability to incorporate other fields of science into their careers.

Setting goals and objectives are two key elements in 4-H programming. The participants of this study claimed working with people could be a challenge sometimes; however, working with objectives and setting goals could address this challenge. 4-H professionals could include the fundamentals used by WHEP when teaching youth how to set and reach goals. Further research should investigate participants' ability to achieve goals while working in a team.

4-H stimulates critical thinking skills in educational programs. Participants indicated WHEP's reasoning component forced them to use critical thinking skills. Furthermore, previous literature reported youth seek experience when choosing their ideal career and participants believed WHEP provided skills that aid in college enrollment and career exploration. Another area of discussion is a sense of passion a person has for a career. Tennessee 4-H Wildlife Judging participants believed a person who pursues a career must be passionate about the job a person is performing. The consensus of the focus group was WHEP created emotional triggers regarding wildlife management and created that passion.

Overall, the focus group provided data with positive attitudes regarding a career in wildlife management. Participants indicated WHEP provided experiential learning, which is needed to apply the knowledge learned and to consider a career choice. Furthermore, WHEP enhanced their appreciation of wildlife management professionals and a need for wildlife management. In conclusion, WHEP is providing an opportunity for 4-H participants to experience the full educational cycle by incorporating career exploration, life skills, critical thinking skills, and applicability.

References

- Allen, K. P., & Elmore, R. D. (2012). The effects of the Wildlife Habitat Evaluation Program on targeted life skills. *Journal of Extension*, 50(1). Article 1RIB9
- Allen, K. P., Elmore, R. D., & Harper, C. (2013). The wildlife habitat education program: Moving from contest participation to implementation. *Journal of Extension*, 55(2). Article 2TOT9
- Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2014). *Introduction to research in education* (9th ed.). Belmont, CA: Wadsworth
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A., Barbaranelli, C., Caprara, G.V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development*, 72, 187-206.
- Bogdan, R. C. & Bilken, S. K. (2007). *Qualitative research for education: An introduction to theories and methods* (5th ed). Boston, MA: Pearson
- Bourdeau, V. D. (2004). 4-H experiential education: A model for 4-H science as inquiry. *Journal of Extension*, 42(5). Article 5TOT3.
- Carlson, S., & Maxa, S. (1998). *Pedagogy applied to nonformal education*. The Center. St. Paul: Center for Youth Development, University of Minnesota Extension Service
- Diem, K. G. (2001). National 4-H school enrichment survey. *Journal of Extension*, 39(5). Article 5RIB6.
- Dooley, K. E. (2007). Viewing agricultural education research through a qualitative lens. *Journal of Education*, 48(4), 32-42. doi: 10.50321/jae.2007.04032
- Ferry, N. M. (2006). Factors influencing career choices of adolescents and young adults in rural Pennsylvania. *Journal of Extension*, 44(3). Article 3RIB7
- Harper, C. A. (2015). *Wildlife habitat education program manual*. Retrieved from WHEP.org
- Heck, K. E., Carlos, R. M., Barnett, C., & Smith, M. H. (2012). 4-H participation and science interest in youth. *Journal of Extension*, 50(2). Article 2FEA5.
- Israel, G. D., & Galindo-Gonzales, S. (1992). *Using focus group interviews for planning or evaluating Extension programs*. Agricultural Education and Communication Department,

Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences,
University of Florida

Kleist, A. M., Moorman, C. E., DePerno, C. S., & Bardon, R. E. (2010). Opportunities for planned county-based wildlife programming. *Journal of Extension*, 48(2). Article 2RIB7

National 4-H Council. (2014). *National 4-H headquarters*. Retrieved from <http://www.4-H.org/youth-development-programs/programs-implementation-evaluation>

Neuville, S., Frenay, M., & Bourgeois, E. (2007). Task value, self-efficacy and goal orientations: Impact on self-regulated learning, choice and performance among university students. *Psychologica Belgica*, 47(1-2), 95-117.

Ratkos, J., & Knollenberg, L. (2015). College transition study shows 4-H helps youth prepare for and succeed in college. *Journal of Extension*, 53(4). Article 4FEA7

Schunk, D. H. (2012) *Learning theories: An educational perspective*. (6th ed.) Boston, MA: Person Education Inc.