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The Effects of the Wildlife Habitat Evaluation Program on Targeted Life Skills

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Abstract: Does participation in the Wildlife Habitat Evaluation Program (WHEP) help develop life skills? 4-H members and coaches who participated in the National WHEP Contest between the years 2003 - 2005 and 2007 - 2009 were asked to complete an evaluation at the end of each contest. A portion of the evaluation asked participants and coaches to determine if six specific life skills (teamwork, oral communication, written communication, social skills, decision making, and leadership) were enhanced as a result of participation in the WHEP. Results suggest that participation in the WHEP has a positive influence on the development of these life skills.

Introduction

The 4-H Wildlife Habitat Evaluation Program (WHEP) is a hands-on environmental education program designed to teach youth the fundamentals of wildlife and fisheries science and appropriate management practices. Beginning as a statewide "Wildlife Judging" program in Tennessee in 1978, the program soon grew to include other Southeastern states. The first regional contest was held in Mississippi in 1987. "Wildlife Judging" went nationwide in 1989, with the first national contest being held in West Virginia. The program was officially named WHEP in 1990. Participation has grown from five states in 1989 to 26 states in 2009. Currently, over 10,000 4-H members nationwide participate in the WHEP (WHEP, 2010).

The National WHEP contest includes three individual events and two team events that cover wildlife identification, wildlife knowledge, wildlife management practices, a written wildlife management plan, and an oral defense of their written plan. The national contest is open to senior division 4-H members and now

moves to a different region of the country each year, exposing participants to wildlife habitats and practices unique to those regions (WHEP, 2010).

Through participation in the WHEP, applied natural resources management knowledge is acquired as youth learn that managing for wildlife includes management of habitat and wildlife populations. Members must then apply this knowledge as they participate in the WHEP Contest. Research indicates that youth education and development is enhanced by participatory and experiential learning through carefully planned programming efforts that provide context to content through hands-on learning projects (Bourdeau, 2004; Skelton & Dormody, 2009).

The WHEP manual <<http://www.whep.org>> is provided to teach wildlife habitat management concepts and to prepare participants for 4-H natural resources competitive events. While the manual and associated activities focus on developing content knowledge in the wildlife management field, the WHEP program structure of applying this knowledge may be responsible for participants' life skill development in the components of teamwork, written/oral communication, decision making, and leadership.

Teamwork is essential because teams must work together to develop a management plan for a defined site that meets the objectives established on a field conditions sheet provided. Participants must work cooperatively and efficiently while supporting each other in order to perform well during the team portion of the contest.

Written and oral communication skills are enhanced as participants develop their management plan and defend this plan before a panel of judges. This requires that participants communicate their ideas effectively and with supporting evidence.

Participants must evaluate the quality of habitat for select wildlife species. Based on each participant's site evaluation, members must recommend wildlife management practices that will benefit each select wildlife species. Participants must apply the knowledge base they have developed from studying the WHEP manual to a real-world scenario, requiring decision making and analytical thinking to make accurate and appropriate wildlife management recommendations.

Leadership may be developed as members work together to meet their objectives. One or more of the team members may assume leadership roles to aid, support, and guide their team towards reaching their common goal. As suggested by Dionne, Yammarino, Atwater, and Spangler (2004), this transformational leadership may be a critical teamwork factor in developing team communication, conflict management skills, and promote team cohesion.

Interacting and communicating with team members, coaches, and other teams may improve an individual's social skills. Participating in the National WHEP Contest requires members to relate with others in a positive manner, communicate effectively, and build relationships based on trust and respect.

Several studies have examined life skill development among 4-H members and alumni regarding the development of life skill associated with membership in 4-H (Boyd, Herring, & Briers, 1992; Fox, Schroeder, & Lodl, 2003; Ladewig & Thomas, 1987; Maass, 2004, 2006; McKinley, 1999; Seever & Dormody, 1995). Life skills are defined as the abilities that individuals learn that help them to be successful in living a productive and satisfying life. Life skills serve as the foundation for the 4-H program (Boyd et al., 1992), which has a long history of success in the development of life skills of its members (Ladewig & Thomas, 1987; Maass, 2004; Maass, Wilken, Jordan, Culen, & Place, 2006; McKinley, 1999; Mustian, 1988). Results from these studies indicate that youth learn important life skills, such as decision making, leadership, communication, teamwork, and social skills through 4-H participation.

Additional studies suggest that life skills are learned by being involved with a specific 4-H project over

time (Diem, 2001; Fitzpatrick, Gagne, Jones, Loble, & Phelps, 2005; Maass et al., 2006).

While general participation in 4-H has been shown to develop life skills in participating youth, the study reported here specifically evaluated 4-H members and their coaches who participated in the National WHEP Contest to gain their perceptions related to life skills improvement through involvement in the WHEP.

Methodology

The populations used in the study were 4-H members and their adult coaches who participated in the National WHEP Contest from 2003 - 2005 and 2007 - 2009. Evaluations prior to 2003 and for the year 2006 were not available for the study. During the time frame that was measured, 248 members and 95 adult coaches participated in the National WHEP Contest.

At the end of each national contest, members and coaches were asked to complete an evaluation regarding the contest. Members of the WHEP national committee members created the instrument used in the study as a program evaluation to gather adult and youth input relating to their experiences in the WHEP and for use in improving future events.

One section of the evaluation asked adults and youth to rate the perceived influence that participation in the WHEP had on the development of targeted life skills. Adults were asked to rate the influence the WHEP had on youth participating in the program, and youth were asked to rate their perceptions. A four point scale defined as: 1 = *Strongly Agree*, 2 = *Agree*, 3 = *Disagree* and 4 = *Strongly Disagree* was used to collect this information (Table 1). Data is measured at the ordinal level where numbers indicate relative position and not the magnitude of difference.

Table 1.
Evaluation Questions on Life Skills

On a scale of 1 to 4, do you feel that involvement in the WHEP improves an individual's abilities in:				
WHEP Improves	SA	A	D	SD
Teamwork	1	2	3	4
Oral Communication	1	2	3	4
Written Communication	1	2	3	4
Social Skills	1	2	3	4
Decision Making	1	2	3	4
Leadership Skills	1	2	3	4

The information gained from these evaluations was used by professionals in 4-H and natural resource programs to determine if participation in the WHEP has an effect in the development of targeted life skills. Means and standard errors (SE) were used to examine responses. A test for the equality of variances indicated that the means of adults and youth responses were statistically different. Because of this difference, for each life skill measured, a two-sample t-test was performed that does not assume equal variance (Freund & Wilson, 1997). We considered all inferential tests with $p < 0.05$ to be significant.

Results

Usable evaluations were collected from 200 4-H member and 78 coaches. Evaluations were collected at the end of the contest before teams departed, resulting in a return rate of 81% for members and 82% for adults.

The life skills measured were teamwork, oral communication, written communication, social skills, decision making, and leadership. Responses from both youth and adults suggest that both groups believed that participation in the WHEP had a positive effect on the improvement of the targeted life skills.

Participants' and coaches' responses were all within the strongly agree to agree range (Table 2). Results from t-tests indicate that the adults more strongly agreed than youth that participation in the WHEP had a positive effect on teamwork ($t_{187}=1.97, p < 0.001$), oral communication ($t_{167} = 1.97, p < 0.001$), written communication ($t_{154} = 1.98, p = 0.004$), social skills ($t_{166} = 1.97, p < 0.001$), decision making ($t_{169} = 1.97, p < 0.001$), and leadership skills ($t_{161} = 1.97, p < 0.001$) in youth.

Table 2.
Influence of the WHEP on Life Skills Improved in Youth Participants

	<i>Youth</i> <i>N=200</i>		<i>Adult</i> <i>N=78</i>	
Life Skill Improved	\bar{x}	<i>SE</i>	\bar{x}	<i>SE</i>
Teamwork*	1.49	.04	1.19	.05
Oral Communication*	1.59	.05	1.30	.06
Written Communication*	1.61	.04	1.40	.06
Social Skills*	1.59	.05	1.33	.06
Decision Making*	1.53	.04	1.23	.05
Leadership Skills*	1.59	.06	1.33	.06
*Denotes statistical difference at the $p = .05$ level of significance				

Conclusions and Recommendations

Based upon evaluation results from both youth and adults, participation in the 4-H WHEP has a positive influence on the development of life skills in youth. Both groups indicated that participation in the WHEP had the most influence on the development of teamwork, followed by decision making. These results are consistent with findings reported in a study of the WHEP program in Texas by Feldpausch (2006) where it was determined that program involvement had a positive impact in the development of life skills on participants. Perceived increase in life skills was less apparent to youth, but past participants claimed a significant increase when reflecting on their experiences with the program. Parents and coaches also gave high ratings to current participants' life skills when asked about their observations. While a posttest design can be utilized to evaluate a program when no pretest data exists (Royse, Thyer, & Padgett, 2006), we cannot ascertain if any changes occurred between the time members and coaches began their WHEP involvement and participation in the national contest.

While the contest itself is 1 day in length, members attending the national contest indicate on average they participate in the WHEP for 3 years and annually spend over 71 hours in learning activities related to this program. This long-term involvement by members, in combination with their evaluation responses, appears to support finding of previous studies (Diem, 2001; Fitzpatrick et al., 2005; Maass et al., 2006) that suggest that being involved with a specific 4-H project over time is important to learning life skills. Further, our results are consistent with other studies (Boyd et al., 1992; Fox et al., 2003; SeEVERS & Dormody, 1995; Ward, 1996) that indicate that 4-H members and adults believe that through participation in 4-H activities and events participants develop valuable life skills. Research conducted by Cantrell, Heinsohn, and Doeblner (1989) found that participation in 4-H activities and events beyond the county level had an even greater impact on perceived life skill development.

Because data was only received from members and coaches attending the national contest, it is unknown whether respondents' perspectives were similar or different from those who did not attend this contest. Future research is needed to determine if all members and coaches participating in the WHEP share the same perspectives as were determined in the study reported here.

In summary, it appears that the structure of the WHEP program, providing context to content through participatory learning, is well designed to develop life skills. Further, as can be seen from the results of our evaluation analysis, both adult volunteers and youth participants believe that the WHEP does in fact accomplish this purpose. Extension professionals should continue to support the WHEP as well as recruit new members to participate and grow this program. Several studies (Boyd et al., 1992; Fox et al., 2003; Ladewig & Thomas, 1987; Maass et al., 2006) have found the skills and attitudes acquired during 4-H participation help youth develop into society-ready adults. The life skills gained by the WHEP participants could benefit them long after their 4-H career is finished. Additionally, the WHEP has the potential to create an interest in youth to pursue careers in natural resources. Future research should evaluate how the WHEP and similar 4-H programs impact long-term youth development and whether participation can be attributed to future outcomes.

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