

THE EDUCATIONAL VALUE OF 4-H ACTIVITIES AS PERCEIVED BY LOUISIANA 4-H AGENTS

Michael F. Burnett, Professor and Director
Earl C. Johnson, Cooperative Extension Specialist
Louisiana State University

Lanette Hebert, Associate Home Economist
New Iberia, Louisiana

Abstract

The primary purpose of this study was to determine the educational value of 4-H activities as perceived by Louisiana 4-H agents. Data were obtained using a researcher-designed survey completed by 914-H agents during the Louisiana Cooperative Extension Service's annual conference. Findings of the study indicated that 4-H camp had the highest educational value rating and was the only activity perceived as having a very high educational value. Overall, 20 activities were rated as high, 25 as moderate, and four as low in educational value. Agents were also asked to estimate the number of hours they worked on each activity. Based on the findings in this study, it was concluded that 4-H agents perceive most 4-H activities to have educational value for the program participant. The researchers also concluded that there is room for improvement through elimination and addition of selected activities. Activities recommended for elimination were honey bee essay, beef posters, dairy posters, and seed rice essay. Activities recommended for addition were career development events, area short course, wildwood wanderings, agriculture in the classroom, and health and fitness activities. The researchers recommend that any program identified for elimination be further examined on the number of clientele being reached before it is eliminated.

Introduction and Rational

The Cooperative Extension Service is an educational program that exists due to a partnership between a federal agency, the United States Department of Agriculture; a state agency, the respective land grant universities; and a local agency, usually the county/parish governing body. The state land grant university system was established by the Morrill Acts of 1862 and 1890 (Blackburn, 1984). The Smith-Lever Act of 1914 established the Cooperative Extension Service, as the educational outreach part of land grant universities (Blackburn, 1984).

Extension's work consists of providing practical instruction to non-college residents through educational programs in agriculture, home economics, and related fields. The 4-H youth

program is administered through the state Cooperative Extension Service. The mission of 4-H is to assist youth in acquiring research-based knowledge in agriculture, home economics, and related subjects that contribute to human development, positive life skills, and good attitudes that will enable them to become self-directing, productive, and contributing members of society.

Programs are based on the needs of the community which are identified through advisory committees. Field extension personnel assigned to youth programming organize, guide, and supervise 4-H programs based on advisory committee recommendations and extension priorities. (Roberts, 1994a).

This 4-H mission is reached through a wide

range of educational activities, which include projects, club meetings, educational demonstrations, workshops, contests, leadership opportunities, trips, and camps. The goals set forth to reach the mission are to: (1) strengthen young people's skills and competencies in building a positive self-image to help them develop to their full potential; (2) teach youth effective decision-making skills to prepare them for problems they face now as well as for a productive adulthood; (3) provide a wide range of project and personal skill experiences to prepare youth for the world of work; (4) provide a broad spectrum of educational experiences using the land-grant university research and subject-matter base and community resources to strengthen 4-H youth programs; (5) improve the capacity of youth to effectively interact with peers and members of their families; (6) develop a strong awareness in youth regarding environmental and community concerns to acquaint them with opportunities for involvement; (7) provide youth and adult volunteers opportunities for constructive activity and continued growth; and (8) recruit, train, and utilize more adult volunteers to support youth education programs (Roberts, 1994a).

According to Navaratnam (1991), designing and implementing 4-H programs to be responsive to the needs of academic education seems to be very appropriate to the 4-H mission. Four-H can be a true complement to the educational system, and 4-H programs can be an asset in improving academic performance at any level. The assortment of programs provided by 4-H are usually practical applications of research-based knowledge. Improved academic education through complementary 4-H programs would bring credibility, prestige, and public support to extension programs (Navaratnam, 1991).

Benefits and Evaluation of Youth Organizations

A study on educational youth organizations was conducted by Kleinfield (1982). According to

the study, well-run groups provide many benefits to participants. The benefits noted were increased contact with adults, development of practical skills, cultivation of leadership and organizational roles, awareness of responsibilities to community, and an increase of family involvement in education.

For youth to benefit from any program, the program must reach its goals. This can be measured by various evaluation processes. Program decisions should be based on evaluation results (Blackburn, 1984). Points such as organizational changes, teacher/leader participation and parental involvement should be included in the evaluation process (Hagborg, 1994). Anspach (1991) suggested in his research that an evaluation plan must be supported by administration for it to be effective. Developing and utilizing evaluations can help formulate future program goals in establishing measurable criteria. Educational accountability should be put into practice in the evaluation process.

Many 4-H programs include participation in fair activities. In a study conducted by Grott (1971), fairs were evaluated according to their educational value to youth as perceived by leaders, educators, and fair judges. The data gathered in Grott's study strongly suggest that county and district fairs fill important educational, social, and vocational needs. Of those surveyed, 83% of youth leaders, 82% percent of agriculture teachers, 76% percent of county agents and 70% of fair judges felt youth participants learned "much" or "very much" from fair activities (Grott, 1971).

Hammerschmidt (1994) suggested an evaluation of the effectiveness of curriculum by studying the acceptability of program material by leaders, parents, and youth. This varies from traditional testing methods of pre and post knowledge. By conducting this evaluation, extension agents may receive important and valuable 4-H program materials. Information

obtained can aid staff in developing and implementing programs that can be used effectively to reach a target audience.

Baker (1991) conducted a study evaluating the educational benefits from participants in 4-H animal science projects of the Mississippi 4-H program. Club members, parents, and extension agents were respondents to the survey. Findings indicated that the highest rated skill learned from raising animals was developing the life skill of responsibility. Other skills receiving high ratings included getting along with others, helping others, patience, and sportsmanship (Baker, 1991). Of those surveyed, 94% stated that 4-H club members did benefit from showing animals.

In a S.W.O.T. profile of the Louisiana 4-H program conducted by Roberts (1994a), the Strengths, Weaknesses, Opportunities, and Threats of the program were identified by Louisiana 4-H agents. Strengths identified most frequently by agents surveyed were the wide variety of educational projects and activities for all types of youth; access to conduct 4-H meetings in school systems; and support of local governing bodies, businesses, and the general public.

Identified weaknesses were poor marketing, traditional agricultural image, lack of trained volunteers, and the addition of programs without any programs being eliminated. Agents surveyed suggested that the greatest opportunities offered through 4-H were travel, scholarships, and development of life and social skills. Threats identified by S.W.O.T. participants were competition of other youth programs, loss of funds from national sources for projects/scholarships, budget cuts, failure to take risks/address current youth problems, and agent overload.

Roberts (1994b) conducted an evaluation of the Louisiana 4-H short course program by surveying delegates. Participants were asked to rate pre-training received, contest procedures,

educational programs, and educational value of the activity. Short course contests rated as excellent in educational value were personal development, plant science, and home economics demonstration.

Louisiana 4-H is recognized as having co-curricular status in most Louisiana school systems. Monthly 4-H club meetings are conducted within the school day by 4-H agents. Besides the monthly meeting, agents conduct educational activities such as contests and workshops. At times some agents have stated that too many unnecessary activities are consuming valuable time which could be used in more productive ways. In addition, budget reductions over the past few years have led to a decrease in the number of 4-H agents employed. These reductions have increased the work load on the remaining agents. Often agents feel overburdened, which may lead to a lack of quality in programs, decrease in job satisfaction and productivity of employees and possible loss of employees.

Agents have also felt the crunch of lack of funding for state and national 4-H programs. This lack of funds has led some agents to question the educational value of some programs, especially as this value relates to agent man hours expended.

Purpose and Objectives

The primary purpose of this study was to determine the educational value of 4-H activities as perceived by Louisiana 4-H agents. Specific objectives of the study included to:

1. describe 4-H agents of the Louisiana Cooperative Extension Service on selected personal and professional demographic characteristics;
2. determine the educational value of activities conducted by the Louisiana 4-H program as perceived by 4-H agents;

3. determine if a relationship exists between perceived educational value of 4-H activities and number of work hours spent by agents on the activities;
4. determine which 4-H activities should be eliminated from the 4-H program as perceived by 4-H agents; and
5. determine which 4-H activities should be added to the 4-H program as perceived by 4-H agents.

Methodology

Population and Sample

The population of this study was defined as 4-H agents of the Louisiana Cooperative Extension Service who had been employed for two or more years. A total of 136 agents were determined to be classified as 4-H, and all of them were included as initial participants in the study. Therefore, the study can be classified as a census study.

Instrumentation

The instrument used to collect data was a researcher-designed questionnaire. The instrument consisted of three sections. The first section provided respondents with a list of all 4-H activities currently recognized by the state 4-H office and requested them to respond to each item in two areas including: (a) their perception of the educational value of each activity on a five-point scale with values ranging from 1 = no value to 5 = very high value, and (b) the approximate number of hours they spend annually on each activity. Section two of the instrument requested that respondents identify and rank items they felt could be eliminated from or needed to be added to the 4-H program. The third section of the instrument requested selected demographic information.

The content and face validity of the instrument was established by a panel of experts including members of the Louisiana state 4-H staff and former 4-H agents. The Cronbach's alpha internal consistency coefficient was used to estimate the reliability of the 50-item scale on perceived educational value. The instrument was found to be reliable ($\alpha = .94$).

Data Collection

Data for this study were collected using the researcher-designed questionnaire. The instrument was distributed at the Louisiana Cooperative Extension Service's annual conference. Most of the 4-H agents were in attendance at the conference. Members of the population not at the conference or who did not respond at the conference were subsequently mailed a copy of the questionnaire with a self-addressed, stamped return envelope.

One hundred thirty (130) surveys were distributed at the conference. Of these, 126 were completed and returned. Six (6) surveys were mailed to agents not in attendance at the conference; but only two of these were completed and returned. Of the 128 questionnaires completed and returned, 37 were identified as not being members of the defined population since they reported less than two years total experience with the Louisiana Cooperative Extension Service. Therefore, the population was revised to include only those who met the specified criteria ($N = 99$), and 91 useable responses were received from these agents for a response rate of 91.9%.

Findings

Objective One - Characteristics of Respondents

One characteristic on which respondents were described was the years of service in the parish where they were currently employed. The number of years in the parish ranged from a low of 1 year to a high of 26 years with a mean of 8.36

(SD = 7.47). Respondents were also asked to indicate their total years of service with the Louisiana Cooperative Extension Service. The total number of years of service ranged from a low of 2 years to a high of 26 years with a mean of 11.75 (SD = 11.23).

Another characteristic on which respondents were described was the type of parish in which they were working. The majority of responding agents reported that the parish where they were employed was primarily rural (n = 44, 52%). Sixteen (19%) reported that the parish where they worked was primarily urban, while 25 (29%) indicated that their parish included both rural and urban areas. Six of the study participants did not respond to this item.

Respondents were asked to indicate their current job title. The largest group of responding agents (n = 24, 27%) was Home Economists. The next largest group (n = 20, 22%) reported their job title as Assistant County Agent. Equal numbers (n = 12, 14% each) reported their title as Assistant and Associate Home Economist. Eleven (12%) indicated that they held the position of County Agent, and the smallest group (n = 9, 10%) were classified as Associate County Agents. Three participants did not respond to this item.

Responding agents were asked to indicate their highest level of education completed. The majority (n = 49, 57%) had completed a master's degree, and 30 (35%) indicated that they had completed some graduate work but less than a master's degree. In addition, six (7%) reported a bachelor's degree as their highest level of education completed and only one (1 %) reported having completed a doctorate (PhD or EdD). Five of the agents did not respond to this item.

Objective Two

Objective two was to determine the educational value of 4-H activities as perceived by

Louisiana 4-H agents. Agents rated the 50 activities on an anchored scale of one to five with one being none, two being low, three being moderate, four being high and five being very high. For interpretation of mean ratings, an interpretive scale was established by the researchers on a mid-point rating as follows: Very High = 4.50 or higher; High = 3.50 to 4.49; Moderate = 2.51 to 3.49; Low = 1.51 to 2.50; and None = 1.50 or lower.

The item rated highest by the respondents was 4-H Camp with a rating of 4.56. This was the only item rated in the very high educational value category. Some items rated high included 4-H Club Meetings (mean = 4.46), 4-H Challenge Camp (mean = 4.36), and 4-H Short Course (mean = 4.28). The items receiving the lowest ratings by respondents included Southern Horse Show (mean = 2.07) and Honey Bee Essay (mean = 2.27). No item received a rating in the no-value category. Overall educational values included one item rated as very high, 20 items rated as high, 25 items rated as moderate, and four items rated as low. The ratings of the items are presented in Table 1.

Objective Three

Objective three of this study was to determine if a relationship existed between perceived educational value of 4-H activities and the number of hours spent by agents on the activities. Respondents were asked to indicate the approximate number of hours they spent annually on each of the activities. The item on which agents reported that they spent the greatest number of hours was 4-H club meetings (mean = 416.46), followed by 4-H Short Course (mean = 213.53), and Jr. Livestock Show (mean = 105.60). Mean hours spent on activities are presented in Table 1.

To accomplish objective three, a Pearson Product Moment correlation coefficient was calculated between the grand mean of the

Table 1. Educational Value Rating; of and Hours Spent Annually on State Approved 4-H Activities

Activity	Educational Value Rating			Hours Spent Annually	
	<u>M</u> ^a	<u>SD</u>	Category ^b	<u>M</u>	<u>SD</u>
4-H Camp	4.56	.60	Very High	89.08	39.46
4-H Club Meetings	4.46	.76	High	416.46	258.61
4-H Challenge Camp	4.36	.75	High	38.74	23.63
4-H Short Course	4.28	.74	High	213.53	123.28
National 4-H Week	4.13	.81	High	16.58	18.74
4-H Scholarships	4.08	.87	High	18.70	20.06
4-H Educational Trip	4.08	1.07	High	8.59	22.99
4-H Club Congress	3.98	1.12	High	6.53	24.24
4-H Jr. Leader Conference	3.81	.89	High	11.86	25.68
Marsh Maneuvers	3.81	1.31	High	5.59	16.04
Jr. Livestock Show	3.80	1.08	High	105.60	176.58
4-H Beef Cookery	3.69	.84	High	12.97	14.81
4-H Seafood Cookery	3.67	.85	High	13.28	15.03
Records Only Contest	3.67	1.02	High	43.58	40.96
4-H Egg Cookery	3.64	.89	High	13.17	15.14
4-H Poultry Cookery	3.63	.88	High	13.04	15.17
Citizenship Focus Trip	3.63	1.13	High	5.13	25.50
National 4-H Conference	3.61	1.13	High	6.41	52.36
4-H Leader Forum (Ga)	3.58	.95	High	2.45	4.11
Sew w/Cotton /Fashion Board Trip	3.55	1.29	High	11.12	24.03
4-H Clothing Camp	3.53	1.22	High	2.30	4.47
Nat'l 4-H Conf. Appl. & Interviews	3.44	1.08	Moderate	3.15	4.68
Fashion Board	3.43	1.19	Moderate	4.67	14.55
4-H Records (Jan. Contest)	3.42	.92	Moderate	16.10	19.51
District Horse Show	3.39	1.09	Moderate	17.34	29.54
4-H Light Horse Show	3.39	1.12	Moderate	19.96	36.89
4-H Textile Symposium	3.32	1.35	Moderate	.23	.83
6th Grade Environmental Camp	3.27	1.06	Moderate	6.39	18.82
Jr. Wildlife Tour	3.27	1.07	Moderate	2.69	5.80
Sew w/Cotton Contest	3.24	1.15	Moderate	11.12	24.03
La. State Fair	3.23	1.10	Moderate	46.64	102.60
State 4-H Executive Comm.	3.14	1.11	Moderate	1.55	3.33
Co-op Conference	3.12	1.03	Moderate	3.80	7.03

(table continues)

Activity	Educational Value Rating			Hours Spent Annually	
	<u>M</u> ^a	<u>SD</u>	Category ^b	<u>M</u>	<u>SD</u>
Sr. Wildlife Tour	3.10	1.10	Moderate	10.10	78.74
Good Provider Contest	3.08	1.00	Moderate	2.84	4.40
Rural Electric Essay & Tour	2.96	1.04	Moderate	3.22	10.75
Beef Poster	2.88	.97	Moderate	9.67	13.81
Dairy Poster	2.86	.98	Moderate	8.70	9.00
Swine Elimination	2.83	1.01	Moderate	3.70	12.35
Southern Livestock & Poultry Show	2.80	1.14	Moderate	19.73	96.11
LSU Quarter Horse Show	2.76	1.20	Moderate	2.33	11.77
Dairy Elimination Show	2.73	1.16	Moderate	2.73	16.00
Southern Rabbit Show	2.71	1.15	Moderate	1.29	3.14
Fall Quarter Horse Show	2.64	1.10	Moderate	2.23	8.12
Paint Horse Show	2.58	1.06	Moderate	.04	.30
Southern Rabbit & Goat Show	2.52	1.11	Moderate	1.45	4.00
Sugarcane Judging	2.39	1.05	Low	.31	1.60
Seed Rice Essay	2.32	.95	Low	.59	2.57
Honey Bee Essay	2.27	.95	Low	.89	1.77
Southern Horse Show	2.07	1.07	Low	.24	1.64

^aResponse Scale Ranged from 1=no value to 5=very high value.

^bResearcher-Established Interpretive Scale: Very High=4.5 or higher; High=3.50 to 4.49; Moderate=2.51 to 3.49; Low=1.51 to 2.50; none=1.50 or lower.

educational value rating assigned to the items and the grand mean of the reported number of hours spent. The calculated coefficient was $r = .47$. To interpret this coefficient, descriptors developed by Davis were utilized (Davis, 1971). The coefficient computed from the data in this objective was found to be moderate. This indicates that a positive moderate association was found between the educational value of 4-H activities perceived by 4-H agents and the number of hours reported to be spent on the activities. Therefore, agents tended to spend more time on those activities which they perceived to have higher levels of educational value.

Objective Four

Objective four was to determine which 4-H

activities should be eliminated from the 4-H program as perceived by 4-H agents. Four-H agents were asked to list and rank activities they would recommend for elimination.

To summarize this information, the researchers computed an elimination score by assigning values to the ranking and summing the rank values. Values assigned included: Rank 1 = 10 points, Rank 2 = 9 points, through Rank 10 = 1 point. Any item not ranked for elimination was assigned a value of 0. Items receiving the highest elimination score were honey bee essay (439), beef poster (305), and dairy poster (285). These findings are presented in Table 2.

Objective Five

Objective five of this study was to

Table 2. Elimination Ratings of 4-H Activities as Recommended by 4-H Agents

Activities	Total Votes	Elimination Score ^a
Honey Bee Essay	49	439
Beef Posters	49	305
Dairy Posters	33	285
Seed Rice Essay	22	179
Co-op Camp	11	92
State Livestock Show	09	73
Cookery Contest	09	67
Citizenship Focus Trip	08	68
Sugarcane Judging	08	66
Record Book Only	07	58
Sew with Cotton	07	60
State Rabbit Show	05	37
Short Course	05	39
Good Provider	05	42
State Fair	05	35
Dairy Elimination	05	34
Paint Horse Show	05	35
Record Book & Short Contest	04	36
Swine Elimination	04	31
District Horse Shows	04	26
State Goat Show	03	25
4-H Challenge Camp	02	17
Clothing Camp	02	15
Crafts	02	13
Jr. Wildlife Tour	02	08

Note. Eight additional items received one vote for elimination.

^aThe elimination scores were calculated by assigning values to the ranking and summing the rank values. Values assigned included the following: Rank 1 = 10 points, Rank 2 = 9 points, through Rank 10 = 1 point. Any item not ranked for elimination was assigned a value of 0.

determine which 4-H activities should be added to the 4-H program as perceived by 4-H agents. Four-H agents were asked to list and rank activities they would recommend for addition. To summarize this information, the researchers computed an addition score by assigning values to the ranking and summarizing the rank values.

Values assigned included the following: Rank 1 = 10 points, Rank 2 = 9 points through Rank 10 = 1 point. Items receiving the highest addition scores were career development (49), area short course (48) and wildwood wandering (46). These findings are presented in Table 3.

Table 3. Addition Ratings of 4-H Activities as Recommended by 4-H Agents

Activities	Total Votes	Addition Score ^a
Career Development	5	49
Area Short Course	5	48
Wildwood Wanderings	5	46
Health & Fitness Activities	4	38
7th-9th Grade Camp/Award Trip	4	38
Gun Safety	4	37
Increased Marsh Maneuvers	4	37
Agriculture in Classroom	4	36
ATV Program/Contest	3	29
Insect & Forestry Camp	3	27
Area Jr. Leader Conference	3	27
LSU Rabbit Show	2	20
Dog/Small Pet Show	2	20
After School Program	2	20
Spring Youth Horse Show	2	20
State Citizenship Show	2	20
State 4-H Nutrition Board	2	19
Short Course Activities for Young Members	2	17
Financial Management Program	2	17
Senior Wildlife Tour	2	14

Note. Twenty seven additional activities received one vote for addition.

^aThe addition scores were calculated by assigning values to the ranking and summing the rank values. Values assigned included the following: Rank 1 = 10 points, Rank 2 = 9 points, through Rank 10 = 1 point. Any item not ranked for addition was assigned a value of 0.

Conclusions and Recommendations

Conclusions and recommendations were developed by the researchers from the findings of this study.

Most 4-H activities have educational value for the program participant. Ninety-two percent of the 4-H activities were rated by the agents as having moderate or higher educational value (2.5 or higher). The researchers recommend that the Louisiana Cooperative Extension Service use this information in accountability to the public by

including these findings in reports to state and local governing bodies. The researchers also recommend that further research be conducted to determine if other stakeholder groups (especially 4-H youth and parents of 4-H members) have similar perceptions regarding the educational value of the programs.

There is a moderate positive relationship between the educational value of 4-H activities as perceived by 4-H agents and the number of hours reported to be spent on the activities. A correlation of $r=.47$ was found between the two

variables. Certainly this does not represent a cause-effect connection between these variables, but it does indicate that agents perceive they are generally investing more of their time on the activities that have the higher levels of educational value.

There is a need for an organizational review of the currently offered 4-H activities. More than half of the activities received ratings of moderate or below in their educational value. In addition, agents cited addition of programs without program elimination as a weakness in a S.W.O.T. survey (Roberts, 1994a). Roberts' survey also reported agent overload as a threat to the 4-H program. The state 4-H program should make definite efforts to eliminate or revise some activities. It is recommended that activity elimination/revision be conducted through the following procedures: (1) Each parish should conduct a local assessment of the educational value of those activities rated moderate or lower and all additional local/parish activities; (2) As part of the review, include local advisory committees and identify programs which are providing the least educational value for the smallest number of clientele; and (3) These programs be eliminated or revised to better meet client needs. There are educational needs that are not being met by the currently offered 4-H programs. A total of 89 recommendations for addition of new activities were provided by the 91 responding 4-H agents. This conclusion is consistent with the findings of Roberts' S.W.O.T. survey (1994a) that identified failure to take risks/address current youth problems as a threat to the 4-H program.

The researchers recommend that identified additional activities of career development, area short courses, wildwood wanderings, agriculture in the classroom and health & fitness activities be reviewed for feasibility, and that some or all of these be implemented on a trial basis in one area of the state.

References

- Anspach, R. (1991). Everyday methods for assessing organizational effectiveness. Social Problems, 38(1), 1-17.
- Baker, J. (1991). The impact of exhibiting 4-H animal projects as perceived by selected participants, parents and extension agents in Mississippi (Four-H). Unpublished master's thesis, Mississippi State University.
- Blackburn, D. (1984). Extension Handbook. University of Guelph.
- Davis, J. A. (1971). Elementary survey analysis. Englewood Cliffs, NJ, Prentice-Hall.
- Grott, H. (1971). Participation and attitudes of idaes, educators and vouth leaders (Preliminary Report No. 3). Wisconsin County and District Fair Study. (Available from University of Wisconsin Extension Service)
- Hammerschmidt, P., Murphy, A., Youatl, J., Sawyer, C., & Andrews S. (1994). Evaluating curriculum effectiveness by asking the users. Journal of Extension, 32(3) 48-50.
- Hagborg, W. J. (1994). Student and teacher perceptions of classroom instructional methods and evaluation procedures. Evaluations and Program Planning. 17(3), 257-260.
- Kleinfield, J. (1982). Youth organizations as a third educational environment particularly for minority group vouth. (Final Report to the National Institute of Education). National Institute of Education, Washington, D.C.
- Navaratnam, K. (1986). 4-H programs: time to complement academic education. (Available from Virginia Cooperative Extension Service, Blacksburg, VA)
- Roberts, N. (1994a). S.W.O.T. Profile of

4-H. Unpublished manuscript. (Available from Louisiana Cooperative Extension Service, Baton Rouge, LA 70803)

Roberts, N. (1994b). Short Course Survey. Unpublished manuscript. (Available from Louisiana Cooperative Extension Service, Baton Rouge, LA 70803)