

A Twenty-Year Evaluation of the California Agricultural Leadership Program

Linda S. Whent, Supervisor of Teacher Education/Lecturer
James G. Leising, Supervisor of Teacher Education
University of California, Davis

California is the leading agricultural state in the United States. Its diverse agricultural production, increasing international trade, and growing urban population create an environment where agriculturalists must be equipped to assume leadership responsibilities in order to address the many challenges that face agriculture. There are three major trends that challenge agricultural leaders to be able to influence and communicate with the people of California, the nation, and the world. First, California has a rapidly-growing, diverse population. Urban growth is encroaching on prime agricultural land. Communication between rural and urban interests is becoming increasingly vital for promoting and maintaining understanding of rural and urban needs. Second, global economies are becoming increasingly more interdependent and the California agricultural industry plays a major role in international trade. Agricultural leaders must become familiar with the needs and concerns of other nations. Third, large numbers of diverse agricultural products are grown in California. Close ties must be built and maintained within the agricultural industry in order to present a common vision that will benefit all agricultural sectors.

The California Agricultural Leadership Program (CALP) was initiated in 1970 to address these trends. The program was designed to further develop leadership capabilities in people from the agricultural sector who had already demonstrated leadership potential. The intent of the program was not to teach participants about agriculture, but rather to instill in them a greater capacity to accept leadership responsibility in any part of society, and to develop a better understanding of the viewpoints and situations of people from a variety of backgrounds, societies, cultures, and countries.

Theoretical Framework

Educational evaluation is the process of making judgements about the merit, value, or worth of educational programs, materials, and techniques. Administrators have come to view evaluation as a necessary tool in policy analysis, in the decision-making process, and in program management. Evaluations are conducted in order to generate data that will help directors and program managers make sound decisions relating to program design, personnel, and content (Borg & Gall, 1983). An evaluation pays off to the extent that it offers ideas pertinent to pending actions and more effective decisions are made as a result. To speak broadly, an evaluation ought to inform and improve the operations of the system (Cronbach. 198 1).

Numerous studies have been conducted on adult agricultural leadership programs throughout the nation. In 1986, an evaluation was done of the Leadership Education Action Development (LEAD) program in Nebraska. The study assessed LEAD alumni responses about the program and compiled alumni suggestions on how the program could be improved. The study used a static-group comparison design involving three groups. Researchers found that when the LEAD alumni group was compared with the other two groups, they tended to be more active and hold offices in a greater variety of organizations. They had a broader view of the agricultural industry and tended to be more understanding and tolerant of others not directly involved in agriculture (Leadership Education/Action Development Program, 1986).

Martin (1977). Howell and Wilkinson (1977) conducted a study of the three-year Pennsylvania Leadership Program. Martin (1977) post-tested participants immediately after graduation from the program, while Howell and Wilkinson (1977) post-tested participants two years following graduation. After the initial group began the program, a nonequivalent comparison group was identified and similar information was gathered. Martin (1977) found that all three program groups increased significantly in political participation when compared to the comparison group. Martin also found that the effects of socio-economic status, age, and sex variables were not related to political participation or membership in public affairs-related organizations and economic associations. Howell and Wilkinson (1977) found that participants had significantly higher participation in public affairs-related and economic organizations than the comparison group. They identified a trend away from participation in nongovernmental, voluntary public service organizations and an increase in participation in organizations having legislative authority to act on behalf of the community.

In 1976, the W. K. Kellogg Foundation sponsored a comparative evaluation of four leadership programs in four states: Pennsylvania, Montana, Michigan, and California. The Pennsylvania Public Affairs Leadership Program was a state-wide educational program designed to further develop adult men and women rural leaders. Participants in the two- and three-year program had greater gains in public affairs organization participation than participants in the one-year program. It was concluded that the program length and scope were factors associated with increased participation in public affairs activities. Participants reported increased interest in public affairs, personal growth, and self-worth as a result of the program. Additional findings suggested that the program had little impact on strain and tension between respondents and others in the community. Responses also indicated that the programs had an increased effect on participation in social, economic, and environmental programs (Howell, Weir, & Cook, 1979).

A 1979 Kellogg study represents the only prior study of the California Leadership Program (CALP). The results of this study indicated that the California Agricultural Leadership Program was fulfilling its goals and objectives. The graduates were more involved in public affairs activities, had improved self-worth and self-esteem, and were more successful in their career and professional goals (Howell, Weir, & Cook, 1979).

It has been eleven years since the last formal program evaluation of the California Agricultural Leadership Program was conducted. As a result, questions were raised by program donors, the board of directors, and others regarding the success of the program in achieving its objectives and whether or not the program was meeting the needs of the participants and industry. Program stakeholders were also concerned with keeping pace with the changing agricultural industry and addressing current and future issues confronting agriculture.

Purpose of Study

The purpose of this study was to evaluate the impact of the California Agricultural Leadership Program on its participants and identify suggestions for curriculum modification and program change. The specific objectives of the study were to:

Describe the demographic characteristics of the CALP graduates.

Determine the impact of the program as measured by respondent self-reported change from pre-measure to post-measure on three major areas of the survey instrument including: achievement of program objectives, family and peer relationships, and leadership skills.

Identify program areas that benefited the participant.

Identify participant characteristics and situational variables that predict participant success in achieving the program objectives, increasing family and peer relationships, and developing leadership skills.

Identify suggestions for program and curriculum changes.

Methods and Procedures

Population

The evaluation of the CALP was based on a cohort descriptive design. The population for this study consisted of CALP graduates spanning the years from 1973 to 1990 (nineteen classes totaling 565 graduates).

Instrumentation

Two instruments were developed to measure dependent variables and to record personal, situational, occupational, and formative data. One instrument, the California Agricultural Leadership Program Twenty-year Follow-up Survey, was developed to collect quantitative data. The second instrument, the Personal Interview Reporting Questionnaire, was developed to collect qualitative data during personal interview sessions. Questions on the survey were derived following a review of literature and corresponded to the objectives of the study. The survey consisted of three sections: background information regarding personal, situational, educational, and occupational data; participant self-reported ratings of program perspectives; and open-ended questions that sought to obtain respondents' perceptions of specific program benefits and suggestions for program improvement.

Respondents were asked to rate themselves on the various items both before and then as a result of their participation in the CALP. They rated themselves on three subscales (program objectives, family and peer relationships, and leadership) in the program perspectives section of the survey using the following five-points Likert scale: 1=low, 2=moderate, 3=average, 4=above average, and 5=high. Respondent self-rated responses to items before participation in the program were analyzed as a pre-measure. Respondent self-rated responses to items as a result of participation in the program were analyzed as post-measure.

The survey instrument was reviewed for content validity by a panel of experts which consisted of university program coordinators and members of the board of directors. The instrument was pilot tested by the researchers using selected program graduates. The program perspectives portion of the instrument was subjected to a reliability estimate using Cronbach's coefficient alpha. This analysis provided a Cronbach's coefficient alpha estimate of .96 for all items in the pre-measure and .94 for all items in the post-measure.

The Personal Interview Questionnaire consisted of fourteen open-ended questions asked during personal interviews with program graduates. This instrument included questions about the benefits of the program, curriculum, teaching styles, assignments, and suggestions for program improvement.

Data Collection

The survey was mailed to 565 program graduates. The packet mailed to each graduate included a cover letter, survey and postage-paid return envelope. Two follow-up mailings were made to nonresponding graduates. Out of a possible 565 program graduates, surveys were received from 313 respondents (55.4%). In order to ensure that the remaining 44.6

percent of the population were not significantly different from the respondents, the researchers telephoned 100 nonrespondents and secured a promise that they would mail in their survey. Of the 100 graduates called, 18 surveys were received from the nonrespondent group. A group t-test analysis revealed no difference in mean program perspectives scores between the respondent and nonrespondent groups on both the pre-measure and post-measure scores. The nonrespondent group data were pooled with those of the respondent group. Since only fifty-five percent of the program graduates returned completed surveys, they were considered a sample of the population for the purpose of this study. Inferential statistical analyses were employed in order to generalize to this population.

Personal interviews were conducted to enrich the data by providing more in-depth insights into graduate perceptions of the CALP. A stratified random sample of 60 graduates were selected from classes one through 19 (all classes that had completed the CALP). In-person interview times and places were arranged by personal phone calls. Researchers attempted to interview at least two graduates from each class. Graduates who were not interviewed were unable to arrange time away from their schedules or were unable to be reached by phone. A total of thirty-eight graduates (33 men and 5 women) were interviewed. Responses to the personal interview questions were recorded on audio cassette and transcribed onto the personal interview questionnaire forms.

Data Analysis

The Statistical Package for the Social Sciences (SPSSx) was used in conducting the analyses. Demographic data were analyzed using frequencies, percentages, and means. Descriptive statistics and paired t-tests were employed to analyze data from the five-point scale items. The enter method of multiple regression analysis was used to identify specific respondent characteristic and situational variables which contributed to self-reported program perspective scores. One-way analysis of variance was used to compare specific independent and dependent variables. Data from transcribed tapes were coded using content analysis procedures and analyzed using counts and frequencies procedures.

Results

The majority of the respondents were married white males. Only seven percent were from minority groups and less than thirteen percent were female. The mean years of education for program graduates was 16.4. Sixty percent of the respondents had a B.S. or B.A. degree and twenty-one percent had an M.S. or M.A. degree. Approximately fifty percent of the respondents lived in rural areas (small towns or farms) and fifty percent lived in urban and suburban areas.

Respondents indicated a decrease in farming, farm management, and production agriculture occupational titles and an increase in consulting and agribusiness management titles. Program participants indicated a trend toward self-employment rather than being an employee. Participants rated their current occupational satisfaction significantly higher at the time of the survey than their occupational satisfaction before entering the program.

Participants were asked to rate themselves both before and then as a result of their participation in the California Agricultural Leadership Program. Paired t-test analyses of subscales of the Program Perspectives portion of the survey revealed significant differences between all subscales of the self-rated pre-measure and post-measures. These data along with group means and standard deviations are presented in Table 1. More specifically, participants positively rated themselves as significantly changing in the program objectives, their family and peer relationships, and their leadership skills as a result of the CALP.

Table 1. Paired t-test Comparison of Pre-measure and Post-measure Program Perspectives Items

Program perspectives test	N	Pre-measure mean	SD	Post-measure mean	SD	t-value	Prob.
Program Objectives Subscale	331	2.85	.50	3.64	.44	31.82	0.00
Family and Peer Relations	329	3.26	.50	3.71	.50	19.63	0.00
Leadership	328	3.07	.55	4.00	.41	33.10	0.00

Respondents with high school or technical school degrees were more impacted by the CALP and had significantly higher self-rated gains in all subscales of the instrument than respondents with higher educational degrees. These data are presented in Table 2.

Table 2. One-way Analysis of Variance of Pre-measure and Post-measure Differences by Educational Degree

Educational degree	N	Mean difference	SD	f value	Prob.
Program Objectives Subscale					
High School	21	1.13	.68	2.73	.01
Bachelor of Science or Arts	197	.79	.42		
Master of Science or Arts	69	.68	.47		
Family and Peer Relationship				3.55	.00
High School	20	.81	.60		
AA or Technical	20	.69	.48		
Bachelor of Science or Arts	196	.51	.39		
Master of Science or Arts	69	.41	.38		
Ph.D. or E.Ed.	3	.11	.91		
Leadership Subscale				4.42	.00
High School	19	1.37	.69		
AA or Technical	20	1.18	.46		
Bachelor of Science or Arts	196	.93	.49		
Master of Science or Arts	69	.76	.44		

Enter regression analysis revealed respondent independent variables which contributed to differences between pm-measures and post-measures on the three subscales. These variables included: years of education (negative contribution); occupational categories producer, producer/nonagriculture, producer/agriculture and agriservice/nonagriculture at the time of the survey; and living in a city of 2500 to 9999 people. These data are presented in Table 3.

Enter regression analyses revealed respondent independent variables which contributed to post-measure scores. These variables included: occupational category producer/agriculture before the program, and occupational category nonagriculture at time of survey; occupational category producer/agriculture before the program, and occupational categories producer/nonagriculture, and agribusiness/agriculture at the time of survey; and occupational category producer/nonagriculture at time of survey. The results of these analyses are presented in Table 4.

Open-ended questions about the benefits of the CALP identified personal contacts and interaction with classmates, increased leadership skills, travel experience, interaction with government and agricultural leaders outside of classmates, and knowledge of other societies, cultures, and groups as the primary benefits they received from the program. Respondents reported that participation in the CALP increased their local community

involvement, helped them attain state association positions, and helped advance their career.

Table 3. Regression Analysis of Selected Respondent Independent Variables and Difference in Respondent Self-reported Pre-measure and Post-measure Survey Scores

Variable	<u>Multiple Adjusted</u>				
	Beta	R	R2	t-value	Prob.
Program Objectives Difference					
Years of Education	-.18	.19	.03	-3.21	.00
Family Relations Difference					
Occupational Category at Time of Survey:					
Producer	.40	.21	.03	2.88	.00
Producer/Nonagriculture	.21	.21	.03	2.55	.01
Producer/Agriservice	.31	.21	.03	2.53	.01
Marital Status Equal Single	-.14	.14	.02	-2.44	.02
Years of Education	-.24	.25	.05	-4.28	.00
Leadership Difference					
Lives in a city of 2500 to 9999	.17	.19	.02	-2.80	.01
Occupational Category at Time of Survey:					
Agriservice/Nonagriculture	.15	.19	.02	2.35	.02
Producer/Nonagriculture	.21	.18	.02	2.60	.01
Years of Education	-.25	.27	.06	-4.53	.00

Table 4. Regression Analysis of Selected Respondent Independent Variables and Respondent Post-measure Survey Scores

Variable	<u>Multiple Adjusted</u>				
	Beta	R	R2	t-value	Prob.
Post-measure Program Objectives					
Occupational Category Before the Program					
Producer/Agriservice	.13	.20	.03	6.07	.00
Occupational Category at Time of Survey					
Nonagriculture	.23	.19	.02	2.20	.05
Post-measure Leadership					
Occupational Category Before the Program					
Producer/Agriservice	.17	.18	.03	5.03	.01
Occupational Category at Time of Survey					
Producer/Nonagriculture	.17	.18	.02	1.99	.05
Agribusiness/Agriservice	.28	.18	.02	2.13	.03
Post-measure Family Relationships					
Producer/Nonagriculture	.20	.17	.01	2.39	.02

When asked to provide suggestions for improving the CALP through open-ended survey questions, most respondents identified the program as working well. Some asked for increased communication with and between participants, applicants, and alumni and a desire for more information from groups with different points of view. Twenty-one participants stated that the program was great or tremendous, and a once in a life time opportunity. Fifteen responded by saying the program was a great educational experience and another fifteen indicated that one of the benefits of the program was close ties and links with fellow class members and other segments of the agricultural industry. Eleven people reported increased leadership effectiveness and media skills as a direct result of the program.

Summarized results from personal interviews revealed that each interviewee made several references to their personal growth and leadership development as a direct result of the program. Benefits from the program included: a broadened awareness of world and global issues, increased knowledge of agricultural issues and commitment to act on agriculture's behalf, personal growth, leadership development, increased communication skills, and friendships with class members. Suggestions for curriculum improvement indicated a strong desire for greater participation by class members during sessions. Interviewees criticized the lecture style of learning and suggested more discussion and class participation would be beneficial. Many of those interviewed indicated a need for more communication development, both in public speaking and written communication. They also suggested a need for more reading and writing assignments and more individualized leadership self-assessment. Although the curriculum did not focus on agriculture, interviewees said they gained most of their knowledge about aspects of California agriculture issues from other class members.

Conclusions

Based on the findings of this study, the following conclusions were drawn concerning the effectiveness of the California Agricultural Leadership Program.

Participants of CALP clearly perceived that the program has directly impacted their personal, career and leadership development and growth in positive and dynamic ways.

CALP has achieved its primary goals and objectives of leadership development, broadening participants perspectives, increasing their understanding of other societies, and helping them better represent agricultural issues to urban groups.

Benefits of the CALP are reaching a limited number of women and minorities in the agricultural industry.

Graduates of the CALP tended to move from production oriented careers before the program to producer/nonagriculture and agribusiness/agriculture careers at the time the survey was conducted.

Graduates with the fewest years of formal education (high school or technical school) appeared to make the greatest gains in meeting the program objective and increasing their leadership skills.

Improved family and peer relationships was experienced as a result of the CALP.

The major benefits to graduates from the CALP were increased personal contacts and interaction with classmates, increased leadership skills, travel experience, interaction with government and agricultural leaders and increased awareness and understanding of other societies and cultures.

Program participants expressed a desire for greater active participation during all segments of the program and increased emphasis on written and verbal communication, self-assessment of individual leadership styles, and effective leadership techniques.

Recommendations

Based on these findings and conclusions, the following recommendations were made.

Increase the number of women and minorities in the CALP to reflect the changing composition of the industry and state.

Based on the fact that program graduates are tending to move into agribusiness occupations from production agriculture, and that being in an agribusiness or agriservice category predicted higher pre-measure and post-measure differences and higher post-measure scores, a change in the admission policy governing the number of agribusiness participants (six out of thirty participants) should be explored.

Since respondents with high school and Associate of Arts or technical school education (fewer total years of education) had greater gains in all three subscales of the instrument than respondents with higher educational degrees or years of education, it is suggested that admission policies reflect this in their consideration of candidates.

The curriculum could be improved by greater active participation of class members during all segments of the program. Increased emphasis should be placed on the following subject matter areas: written and verbal communication, self-assessment of individual leadership styles, and clinical practice of effective leadership techniques.

As part of the program, an on-going evaluation component that includes pre-measures and post-measures should be added to provide annual feedback to the board of directors, executive director and university seminar coordinators.

References

- Borg, W. R., & Gall, M. D. (1983). Educational research. White Plains, NY: Longman.
- Cronbach, L. J. (1981). Toward reform of program evaluation. San Francisco: Jossey Bass.
- Howell, R. E., Weir, I. L., & Cook, A. K. (1979). Public affairs leadership development: An impact assessment of programs conducted in California, Michigan, Montana and Pennsylvania. Pullman, WA: Washington State University, Department of Rural Sociology.
- Howell, R. E., & Wilkinson, K. P. (1977). Participant self-assessments of the effects of an experimental public affairs leadership development program. In Proceedings of the Rural Sociology Society Annual Meetings, Madison, WI.