1. ISSUE: Experiential Education Theory and Training

1.1 Matching Practice with Theory in the SLO County 4-H YD Program, 2000-2002

Background, rationale, and objectives: Individuals involved in 4-H often tout the program’s hands-on or experiential approach to learning and discuss the importance of teaching and learning in an experiential manner. Many staff and volunteers point to 4-H’s experiential approach as unique in the world of youth development programs and sometimes use this reasoning as an argument for 4-H’s continued existence. Experiential education is a very powerful method of teaching and learning and should be the most consistent instructional model used in 4-H. Many leaders really don’t understand experiential learning (EL) - as distinct from “hands-on” learning - and I know that the vast majority of leaders in SLO Co. have not utilized an EL approach when working with members. My objective was to bring about an increase in knowledge and understanding of EL and to bring about a change in behavior in 4-H project leaders’ work.

Research methods: I lead the development of an extensive plan for research evaluation on the series of trainings, which included immediate post-training surveys, as well as 4-6 month follow-up surveys

Extension methods: I used a two-fold approach to try to reach my objectives. I consistently presented information to the 4-H key leaders (those responsible for project cluster areas and the 4-H key leader responsible for 4-H adult leader training) on EL and how to incorporate the cycle into 4-H projects and meetings. I usually presented the information in an experiential manner (i.e., I modeled the experiential instructional approach) at 4-H Program Development Board meetings and followed-up individually with the key leaders. The objective with this component was to have the key leaders become extenders of the knowledge to project leaders. My other approach was to work directly with 4-H project leaders, involving them in an EL workshop in October 2001. I also prepared an information packet on EL for 12 individuals responsible for conducting subject matter project area training for 4-H project leaders. Either the appropriate key leader or I met with the trainers to review the materials on the EL model and assist them in planning their workshops. I also conducted an EL workshop for SLO Co. Leaders in August 2002.

My role: In addition to my roles described above, I was the initiator and driving force behind the project. I also served as the instigator for a leader-training day in 2001, which the 4-H Adult Leadership Key Leader and Program Development Committee took on as a goal. I acted as the educational resource to the committee as its members designed the training day.

Results: Approximately 55 4-H leaders attended the 4-H Leader Training Day in October 2001 and 25 attended my session (or returned the evaluation sheet) on Experiential Learning in 4-H. Thirteen other sessions, covering various project areas and EL were delivered to attendees by trained leaders; all of the leaders stressed the EL cycle. The program evaluation of my workshop indicated that 100% of the participants gained useful information; 60% rated the workshop as excellent, and 36% rated it as good (one participant did not check the rating).

Impacts: Numerous positive comments were written on the evaluation form in response to the question: How will you use what you learned today? Some comments follow:
Less emphasis on final outcome of project (i.e., winning competitions) and more emphasis on the process (i.e., experiential/learn by doing).
-I will apply the information in projects I lead and pass on the info to leaders in other projects.

Not only have the key leaders applied their new knowledge in working with the other leaders who offered trainings, but also the newly trained leaders have reported that they are going to train and help other leaders. All key leaders are publicizing and encouraging the use of the newest 4-H curricula, which emphasize experiential learning. In a six-month follow-up survey mailed to all program participants in April 2002, 88% indicated that they had made a behavioral change as a result of the EL Workshop.
1. ISSUE: Experiential Education Theory and Training

1.2 Theory Development and Dissemination in 4-H Beyond SLO County, 2000-present

Collaborators: Science, Technology, and Environmental Literacy (STEL) Workgroup

Grant support: STEL Workgroup, $12,300.

Background, rationale, & objectives: Much of the background presented in 1.1 applies to this project. Experiential education theory development & dissemination is important because it is a powerful method of instruction used by CE Advisors throughout the state & nation. However, not all Advisors utilize the method or feel comfortable enough with the components of the experiential learning cycle in order to use it with clientele, incorporate it in curriculum being developed, or train others (such as 4-H volunteers & other volunteer extenders) in its use. Objectives include leading a STEL “action group” on experiential education to conduct applied research, share results, develop a website & provide training for UCCE Advisors & volunteer extenders.

Research methods: I led the development of an extensive plan for evaluation research on the series of trainings, which included immediate post-training surveys, as well as 4-6 month follow-up surveys.

Extension methods: I co-wrote, with R. Ponzio, the component of the STEL workgroup 2001-2003 proposal entitled “Development & Dissemination of an Effective, Research-Based Experiential Learning Model.” I also presented an example of an experiential education training model & workshop to the members of the STEL workgroup in order to recruit members for the project. I either lead or co-lead numerous EL trainings from 2002-2003; for example, I, along with STEL EL Workgroup member M. Smith, presented at Fall & Spring Statewide 4-H Trainings in 2003 & 2004. I presented with L. Schmitt McQuitty at the 2003 CA 4-H Leaders Forum.

My role: In addition to my role presented throughout, I was the individual who originally developed the concept for the STEL workgroup proposal, & discussed it with the STEL workgroup chairs & the entire workgroup before the proposal was submitted to DANR in April 2001. I also conducted a literature review & assembled a list of relevant manuals from 4-H/CE in other states. I adapted & first used the Beginning Experiential Learning Workshop that the workgroup is using, & I trained all the members of the workgroup in its use. I developed & pilot tested the post-workshop & 4-6 month follow-up surveys for the participants in the EL I Workshop. I was responsible for all follow-up mailings & compiling & analysis of the survey data.

Results: The workgroup project was funded at $12,300 & nine workgroup members signed-on as members. Over 150 individuals have participated in Beginning EL Workshops that I have led or co-led. Of 145 immediate post-training surveys returned, 138 individuals (95%) indicated that they “learned useful information” as a result of their participation in the EL workshop. Four individuals (3%) indicated that they did not “learn useful information as a result of their participation & three individuals (2%) were not sure if they had learned useful information.

Impacts: In addition to the immediate post-training survey, a 4 to 6 month follow-up survey was sent to Workshop I participants. A number of questions were asked, including whether or not the participant had changed any of her/his practices when working with young people as a result of attending the workshop. Of 56 surveys returned, 59% (33 individuals) said they had changed their practices when working with children by using ideas presented in the workshop; 13% (7 individuals) said they were not sure, & 28% (16 individuals) said they had not changed their practices. The EL website is in production & will be a very valuable tool for Extension and other educators & practitioners when completed in 2005.
1. ISSUE: Experiential Education Theory and Training

1.3 Theory Development and Dissemination Beyond SLO County, 2001-present


Background, rationale, & objectives: Much of the background presented in 1.1 applies to this project. Experiential education theory development & dissemination is important because it is a powerful method of instruction used by educators throughout the state & nation. 4-H has much to offer to academics & practitioners on the subject of experiential learning.

Extension methods: I led or co-led a number of workshops on Experiential Learning at either the regional or the national levels since 2001, including:

- Presentation of a paper entitled *Head, Heart, Hands and Health: Experience and Education by Dewey’s Criteria* (Bibliog. NPR 31) at the American Educational Research Association (AERA) Conference in 2001. Selected by the John Dewey Society for presentation at the AERA Conference.
- A paper that I wrote entitled *Connections Between 4-H and John Dewey’s Philosophy of Education* (Bibliog. PR 10) was accepted for publication as a 4-H CYD monograph in 2001.
- A workshop presentation *(Understanding the Power of Experiential Learning)* with Carver at the Western Region of the Association of Experiential Education (WRAEE) Meeting in Santa Barbara in March 2002.
- Presentation of a paper with Ponzio entitled *From Dewey to Doing: How Experiential Education Theory can be Effectively used as a Best Education Practice* at the Best Education (BEPs) for Water Outreach Professionals Conference in Wisconsin in June 2004 (publication exp. 3 & Bibliog. PR 16).
- A workshop presentation *(Dewey’s Principals of Interaction and Continuity are Alive and Well in 4-H)* with Carver at the AEE International Conference in Virginia in November 2004.

My role: In addition to the presentations above, I was involved in the writing of the workshop or research presentation proposals. I wrote the research paper presentation for the 2001 AERA Conference, I co-authored (with Carver) the workshop proposal for the 2002 WRAEE meeting in Santa Barbara, I co-authored (with Ponzio) the workshop proposal for the 2004 BEPs conference in Wisconsin, & I sole-authored the workshop proposal for the 2004 AEE Conference in Virginia.

Results: As a result of the workshops and research paper presentations above, approximately 125 individuals were directly introduced to ideas on the connection of Experiential Learning, John Dewey and 4-H. In addition to the workshops & presentations, the three papers have reached, and will continue to reach, individuals with the ideas expressed in the workshops. The papers or abstracts are available on the web either at the respective University site, or in the case of the AERA paper, at the SearchERIC website.

Impacts: The paper written for AERA and the monograph have been well received and widely disseminated. After presenting at AERA, I received a dozen requests for copies of the paper. The monograph has been more widely distributed. Sherri Wright (Nat’l. Program Leader, Families, 4-H, & Nutrition), distributed copies of the monograph to all the 4-H YD professionals working with the USDA/Army Project. Even though the paper, *From Dewey to Doing: How Experiential Education Theory can be Effectively used as a Best Education Practice*, was not yet posted on the web as of 12/1/04, I received an email from an interested environmental education professional from Washington State requesting more information about Dewey, 4-H and El. He contacted me as a result of the paper abstract being posted on the University of Wisconsin, Water Quality Program National Facilitation Project website. The papers will contribute to the academic footprint of the CA 4-H YDP in the years to come.
1. ISSUE: Experiential Education Theory and Training


Collaborators: Jeanne George, 4-H YDA, and Martin Smith, CE Specialist, Vet Med Extension, UCD

Background, rationale, and objectives: As experiential education programs are developed, it is critical that evaluation methods are built in from the beginning in order to ensure necessary and seamless evaluation. As Advisors become more involved with applied research and other projects either through workgroups, other collaboratives, or self-directed projects, it is necessary for them to have the skills to think about and make informed decisions on evaluation techniques. My goal with this project was to assist colleagues to develop a deeper understanding of evaluation techniques already known, learn about techniques they may not have been familiar with, and understand how and when to use certain methods with experiential education methods.

Extension methods: I presented at the DANR Odyssey Conference in February 2001 on using scoring rubrics in experiential education settings. I also presented twice at the In-Service Workshop on Evaluation at UC Davis; I presented on conducting and using data from focus group interviews, and as a co-presenter with J. George, I presented on data reliability (see education presentations, 9/7/01). In collaboration with M. Smith, I organized the full day statewide training. There were 10 presenters and 13 presentations; 4-H YD Advisors, program reps and specialists attended. I, along with M. Smith, also planned the agenda for the day and recruited the presenters.

My role: In addition to my presentations and organization of the in-service workshop already discussed, I spent several months planning the day with Martin Smith and talking to potential presenters about the in-service and the roles they could play; I spoke with and recruited Carole MacNeil, Stephen Russell, Rebecca Carver, and Keith Prior (Consultant, UCD Division of Education) as speakers.

Results: Twenty-four UC colleagues attended the “Scoring Rubric” presentation at the DANR Conference and 22 attended the full-day in-service workshop on evaluation at UCD. A compendium of journal articles covering all of the research/evaluation topics covered during the UCD in-service was distributed at the workshop. Carole MacNeil asked all members of the 4-H Statewide Evaluation Committee to attend the workshop and had it serve as a “kickoff” event for the newly formed committee. An immediate post workshop evaluation was given to all workshop participants and 20 responded:
-95% of the respondents agreed or strongly agreed that the workshop improved their understanding of research and evaluation methods and procedures.
-85% of the respondents agreed or strongly agreed that they would attend additional, more advanced workshops on research and evaluation, if offered.
-85% of the respondents agreed or strongly agreed that the topics covered in the workshop were relevant to their current work.

Impacts:
After the workshop I was contacted by two colleagues to let me know they thought it was an excellent day, and even though they are familiar with evaluation research, they learned new information and appreciated the time and effort that was put into the workshop. M. Smith asked me to assist him with a script for focus groups to be used in a project in Sacramento. Members of the 4-H Statewide Evaluation Committee were asked to review the compendium before the first meeting of the committee in October 2001. CE Nutrition Specialist, Marilyn Townsend, contacted me after the DANR Conference in February to further discuss scoring rubrics and their adaptability to youth nutrition programs.
2. ISSUE: Resiliency and Asset Development Theory and Application

2.1 Building a Collaboration for Positive Youth Development (PYD) in SLO County, 1999-Present

Collaborators: San Luis Obispo County Office of Education

Background, rationale, & objectives: The project is aligned with HR PPAC #4, Promoting Community Collaborations for Positive Youth Development, of 2001, & the earlier (2000) target issue on Emerging Models for Positive Youth Development. Research in the area of resiliency theory has focused on the characteristics of “resilient” youth & how families, schools & communities can help contribute to the development of these resiliency characteristics or assets in youth. Although this approach to PYD is familiar to 4-H, it has not been the standard approach in numerous organizations, communities & schools. The objective of this project was to promote, build, & sustain a collaboration for PYD in SLO County in order to promote & bring about individual, societal & institutional change.

Research methods: I designed & conducted a series of focus group interviews. These interviews were aimed at obtaining information about changes in social norms &/or institutional changes as a result of the collaborative’s efforts. During 2001-2002, I developed a plan for a series of in-depth focus group interviews with the business & faith communities & teens. These interviews explored any changes in behavior or policy that have already occurred, as well as ideas for further involvement in the collaborative & its activities. The plan included my training of teens & adults to conduct the interviews.

Extension methods: I presented the idea of & need for a collaborative for positive youth development to community members at three meetings that I organized (1/99, 3/00, & 4/00), & at a conference on the topic that I organized in March 2000.

My role: In early 1999, I forged an alliance between the Co. Office of Ed & 4-H to foster the concepts of resiliency & assets, which resulted in the Asset Development Network (ADN) of SLO County. I worked very closely with the members of the Network’s “steering committee” on all aspects of the Network & I coordinated numerous meetings & other associated events. Shannon Bond, an Educational Coordinator from the Office of Ed, & I were the driving forces behind the movement & formation of the Network. I served as the chair/co-chair (with a teen) of the ADN from its inception until June 2003.

Results: The beginning of a collaboration for positive youth development was formed in the spring of 1999. The Dept. of Social Services, the Economic Opportunity Commission, & the YMCA joined 4-H & the Office of Education, making up the core group. The collaborative has grown tremendously in the past five years, with numerous organizations, agencies, school districts, & individuals now making-up the Asset Development Network. SLO County Drug & Alcohol Services, the SLO County Teen Council, Children’s Services Network, Friday Night Live & all of the Youth Task Forces in the county are active members of the Asset Development Network.

Impacts: The collaborative is strong & continues to grow. In 2000, it was recognized as a “Healthy Community – Healthy Youth” initiative by Search Institute. The Children’s Services Network (CSN), a body formed by the Board of Supervisors, asked the ADN to apply for membership & the Asset Development Network was accepted as a member in June 2000. The Asset Development Network is often asked to assist organizations, etc., in their desire to move from a deficit/risk model to one that celebrates & promotes the development of the positive attributes of youth. My work on the focus groups in 2001-2002 has helped to shape the current work & efforts of the Asset Development Network, including the conducting of outreach aimed at the business & faith communities in 2004 & 2005. Another impact, one I hope to have an influence on in all of my work, is the incredible number of perceptions about 4-H that I have changed because of my work & leadership in this area.
2. ISSUE: Resiliency and Asset Development Theory and Application

2.2 Educating the Residents of San Luis Obispo County, 1999-Present

Collaborators: The Asset Development Network (ADN) of San Luis Obispo County

Background, rationale, & objectives: This project is very closely aligned with project 2.1. The HR PPAC priorities & target issues presented in 2.1 and the background information apply to this project. In addition, I offer the following background & rationale for this project. Concentration on building resilient traits or using an asset approach to youth development represents a shift from a deficit & risk laden language to one which promotes the development of the positive attributes of all youth, no matter what their race/ethnicity, gender, sexual orientation, socioeconomic status, etc. A considerable amount of research has been done in the past decade strongly indicating that as the number of resilient traits or assets a young person has rises, health compromising or risky behavior decreases & there is a corresponding increase in prosocial, positive & academic behaviors. The object of this project was to reach as many people as possible in SLO Co. with the message of how all individuals, all organizations, businesses, schools & agencies can help build resiliency characteristics or assets, & therefore, contribute to the healthy development of youth.

Research methods: The research methodology from project 2.1 is being utilized for this project.

Extension methods: I presented dozens of workshops/seminars on the topics of resiliency, developmental assets & positive youth development to numerous organizations throughout the county (see educational presentations/workshops, appendix). I also conducted trainings for adults & youth on how to present the information to others. I appeared on 2 local radio talk shows in 2000 (total 120 minutes) to present the topics to the listening audience (see mass media interviews, appendix). I also brought people together, through the collaborative, to sponsor one day-long conference, & one two-day summit for teen & adults as ways to extend knowledge on these topics (see meetings organized, appendix).

My role: I began the process of presenting to audiences in SLO County on the topic of resiliency & assets, & had the idea of training others to present in order to reach more people, partially as a result of the overwhelming demand for appearances. I was also instrumental in obtaining the speakers for the conferences held in the county.

Results: Thousands of individuals have been reached with the message of promoting the development of the positive attributes of youth rather than operating from a deficit model. I personally presented to over 800 people in the 6-year period & I trained over 200 others (at least 150 being teens) to deliver the message of promoting resiliency or asset traits in children & young people. Hundreds of additional workshops/presentations for adults & teens have occurred in the county over the past six years as a result of the trainings-of-trainers.

Impacts: As a direct result of my work in extending knowledge through my presentations & workshops, as well as my leadership of the ADN, there have been a number of exciting instances of institutional change in the county. For example, youth targeted grants being funded by United Way must contain detailed information on how the programs will build resiliency traits/assets; the SLO County YMCA and Office of Education have adopted resiliency & asset development as a main component of its long-term strategic plan; the 4-H Youth Leadership & the Adult Leadership Program Development Committees both adopted the topics of resiliency & assets as program thrust areas; for more than a year, the local NBC TV affiliate had a once-a-week spot devoted to the topic of developmental assets, each week highlighting youth in positive roles; & school districts are providing parent newsletters & teacher in-service trainings on the topics. As with the preceding project, perceptions about 4-H have changed because of my work.
2. ISSUE:  Resiliency and Asset Development Theory and Application

2.3 Regional and State Efforts, 1998-present

Collaborators: The Asset Development Network (ADN) of San Luis Obispo County (for one seminar)

Background, rationale, and objectives: For all the reasons and rationale described in projects 2.1 and 2.2, I felt it was important to act beyond the county level to try to assist other communities in moving forward on the issue of bringing up resilient and asset-rich children and adolescents. Also, this particular project is aligned with HR PPAC #4, Promoting Community Collaborations for Positive Youth Development as well as the aforementioned HR target issue on Emerging Models for Positive Youth Development. The objective of this project was to assist other communities in their efforts on this issue.

Extension methods: I prepared and presented several workshops on my own on resiliency and developmental assets outside of SLO Co: 1) a 90 minute session on Understanding Assets II at a 4-H CYD Spring Conference, 2) a 60 minute session in Santa Barbara at the National Aqua Pura Leadership Institute (focusing on Reinforcing Youth Resiliency by Engaging Youth and The Community in Environmental Programs), and 3) 90 minute session on Building Resiliency and Developmental Assets in Youth Programming, for the “805 Area Code Cluster” of YMCA staff and executive directors. In total, I reached approximately 110 people with these workshops. In the past three years I also fielded dozens of phone calls from non-UC people from throughout California (e.g., Modesto, Ventura, Placer, Humboldt, Concord, etc.) to discuss resiliency and asset development theory and application and the ADN of SLO County. Also, with three other members of the ADN (2 adults/1 teen), I presented a peer-reviewed seminar on the SLO County Success Story: Building a Dynamic Coalition for Positive Youth Development, at the November 2001 Southern California Institute on Positive Youth Development in Palm Springs. In 2003 I supplied colleague Faye Lee with materials and information on my many presentations & approaches with community groups as a result of her being asked by a community group to present on the topic of developmental assets. In the Fall of 2004, I discussed the movement, research, educational approaches, etc., with colleagues R. Mahacek in Merced Co. & L. Schmitt-McQuitty in Santa Cruz County. I also gathered & sent them appropriate information for their use with community members.

My role: In addition to my presentations and consultations, I prepared the seminar proposal for review by the selection committee of the Southern California Institute on Positive Youth Development.

Results: As a result of my presentations at the various events discussed above, at least 24 counties in California have had exposure to resiliency and asset development theory and methods of application. In 1998, I co-authored, with Ramona Carlos, a 4-H CYD FOCUS Monograph: Resiliency and assets: Understanding the ecology of youth development. I still receive requests for this issue.

Impacts: I have had numerous phone conversations with individuals from outside of SLO Co. who contacted me for further information on changing communities to support and nurture resilient and asset-rich children, rather than focus on the at-risk model or deficit model. The individuals were from Kern Co., Modesto, Nevada City, Pasadena, Santa Barbara Co., and Ventura Co. These individuals either heard me present at one of my seminars/workshops or worked with a colleague who heard me. At least two of the individuals asked me why/how a 4-H Advisor was involved with this type of work or topic; this opened the door for me to discuss the role of a 4-H YD Advisor and the 4-H YD Program. Also, as a result of my workshops/seminars and service on a statewide planning committee, individuals at the California Department of Education (CDE), especially individuals in the Healthy Kids Office, took a keen interest in the CA 4-H YD Program as a potential partner in the area of positive youth development. I arranged one meeting with the Director of the Healthy Kids Office (Gerry Kilbert), C. MacNeil, and myself in 2001, & I am aware that the CA 4-H YDP is now part of a planning & action group organized out of CDE.
2. ISSUE: Resiliency and Asset Development Theory and Application

2.4 Workgroup Organizational Efforts, 1999-present

Collaborators: Sally Stanley, 4-H CYD Research Associate, UCD

Background, rationale, and objectives: The objective of this project was to utilize the workgroup process to attempt to establish a statewide effort for promoting collaborations for positive youth development in California, especially one that could assist with research & evaluation. I felt it was critical to move forward at the state level, through the workgroup process, for a number of reasons. First, numerous states throughout the nation have statewide offices or centers for promoting, coordinating & assisting local efforts around positive youth development; California had no such office or center. Second, this particular project is aligned with 2001 HR PPAC #4, Promoting Community Collaborations for Positive Youth Development as well as the 2000 HR target issue on Emerging Models for Positive Youth Development.

Extension methods: I was instrumental (in collaboration with Sally Stanley) in putting forth two DANR workgroup proposals on positive youth development & community collaboratives. I talked to colleagues within UCCE, as well as other youth development professionals in California, informing them of the workgroup’s research plans, and invited them to become involved in the workgroup. In addition, in April 2004, I wrote the report proposal for extension of the project & re-ratification of the workgroup. After recertification, I sent a recruitment email to the 4-H list serve explaining the research of the workgroup & letting people know that new members were encouraged & welcomed to join.

My role: In addition to the original idea & co-writing the proposals with S. Stanley, I have served as either the co-chair or chair since ratification in 1999. Since 2002, I have been Chair of the workgroup, responsible for all financial, reporting, & certification aspects of the workgroup, as well as organizing & planning all general workgroup meetings. As a leader, I have been a champion for inclusiveness.

Results: Through the DANR workgroup process, a statewide effort for research & evaluation of community collaborations formed to promote positive youth development in their communities. The workgroup, Applied Developmental Science: Taking an Asset Approach in California, was awarded $43,972 in 2001 for a two-year project focusing on evaluation of community collaboratives. In 2004, the workgroup was re-ratified & our remaining research funds (approximately $13,000) stayed in the workgroup’s account for a new research project in Sacramento & Pasadena. All together, $51,972, including operations funds, has been allocated to the workgroup since its certification.

Impacts: I met with and discussed the workgroup’s plans for studying communities involved in promoting resilient & asset-rich children with researchers from the Harvard Graduate School of Education, Michigan State, & Search Institute—all of whom are conducting studies on communities & youth development throughout the nation—they are interested in eventually pooling data & looking for common threads.

The membership of the workgroup is a model of a strong collaboration, with people from UC (including an AES faculty member), the CA State University System, Sacramento Co. Office of Education, CA Recreation Society, & the YMCA; I have worked diligently to have the workgroup serve as a model of collaboration. Since recertification in 2004, four new UC members (three YDAs & an AES YD Specialist at the 4-H CYD) have joined the workgroup & already have participated in meetings & major decisions affecting the workgroup’s future research. Several of the Advisors on the workgroup have told me, in conversations and in writing, about how their involvement & participation in the workgroup has been a tremendously rewarding experience in terms of broadening their knowledge of & involvement in applied research, as well as a fun growth experience. For me, this is a very meaningful impact and I believe it is in line with the ANR goal for workgroups to increase knowledge or skills of workgroup members.
2. ISSUE: Resiliency and Asset Development Theory and Application

2.5 Research & Extension Efforts on Community Collaboratives, 2001-present

Collaborators: Applied Developmental Science: Taking an Asset Approach in California Workgroup, Project Cornerstone of Santa Clara County, Asset Development Network of San Luis Obispo County

Grant support: DANR Workgroup Funding, $51,972

Research methods: A multi-method, qualitative research approach was developed with two main parts: (a) adult stakeholder interviews, & (b) youth photographic surveys. Each component was complemented by additional research strategies: adult interviews were enriched through the review of collaborative documents, & the youth photographic surveys were accompanied by focus groups, which enabled the researchers to clarify & discuss the youth’s answers provided in the photo notebooks. The adult interviews were conducted in order to document the perspectives & perceptions of the collaborative members. The photographic surveys documented the youth perspectives on the community & specifically the community’s responsiveness to youth. NVivo qualitative software was used to assist in data analysis.

Background, rationale, & objectives: The initial purpose of this research project was to study & describe two community initiatives, both of which were making an effort to develop a positive approach towards youth development within their communities. One goal of this project is to document the processes of building the community initiatives around this approach, as well as the techniques used to develop the networks. A second goal is to examine the influences of these approaches on the perceptions of youth within these communities. The second purpose of the project is to apply the findings to assist the start-up of two similar initiatives in CA, & to further study these new initiatives for common threads, etc. The third purpose is to disseminate findings & information to other interested communities & researchers.

My role: I prepared all reports & requests for research approval to the Institutional Review Board at UCD, & I am the Principal Investigator (PI) of the workgroup’s research. I worked closely with the two teams that finalized the research instruments. I worked closely with & co-supervised the UCD Grad Student Researcher using NVivo for the analysis of adult interviews and the photo documentary books. I led or co-led five presentations on the research & initial findings of the workgroup since 2002.

Results: Two collaboratives (Project Cornerstone in Santa Clara Co. & the ADN of SLO Co.) were studied during 2002 & 2003. Abbreviated initial findings on community collaboratives included:

- **Style of the collaborative “founders” is important** - Personally & organizationally passionate
- **Continual engagement of new participants is critical** - infusion of new energy & “drilling deeper”
- **Creative tension & control of capacity building** - between collaborative focus & community
- **Youth empowerment** - Young people have to perceive adults value youth
- **Five-part strategy** - Initiatives followed the same five-step strategy toward community change

Numerous initial research dissemination presentations took place throughout CA, the US, & at an International Conference on Youth Empowerment in Scotland in 2003. I & two other workgroup members co-authored a comprehensive journal article that is out for peer-review.

Impacts: Because of the success of the first round of research, two more collaboratives will be studied in 2005. The new collaboratives are the Sacramento FACES Collaborative & the ADN of Greater Pasadena. I fielded calls from individuals representing community collaboratives throughout CA asking if they could serve as a research site, or at the very least, have a presentation on our research. I expect that the workgroup’s final research findings will be a very important contribution to the body of knowledge on community initiatives promoting positive youth development rather than a deficit-driven model.
3. ISSUE: Nonformal Science Education and Literacy

3.1 4-H SERIES Program in California, 1994-1996

Collaborators: R. Ponzio, 4-H Specialist & SERIES P.I., V Pankow, & the entire California SERIES Training Team (Advisors included S. Dasher, R. Ingram, A. M. Marzolla, R. Mahacek, C. Paterson)

Grant support: Kellogg Foundation ($280,000) & the Hewlett Packard Foundation ($85,000)

Background, rationale, & objectives: The 4-H SERIES (Science Experiences & Resources for Informal Educational Settings) Program was developed under the direction of the State 4-H Science Specialist to address the important & growing concern of science illiteracy. All activities are hands-on, investigative activities that utilize a modified Karplus Learning Cycle & the science processes as outlined in the California Science Framework for grades K-12 (California Department of Education, 1990). Stated goals of the SERIES Project included introducing youth to the process of creating new scientific knowledge, helping them understand how science relates to their everyday lives, & providing opportunities for the participants to use their knowledge in developing & implementing community service projects.

Extension methods: As a member of the 4-H CA SERIES Team, I was involved as a trainer at numerous trainings & a presenter at seminars throughout California. On many occasions, I was the lead or co-lead presenter, & organized or assisted in organizing the trainings. Some examples include:

- **Southern Region SERIES Training - San Diego, February 1994** - A training for teens, adults & 4-H staff. I was the lead presenter for the science processes, the learning cycle, & the *Sciencing With Snails* curriculum. I also closed the training on the second day with roles & responsibilities of teens & adults & developing community service projects.

- **4-H SERIES In-Service, SLO County, May 1994** - I organized a two-day in service for UCCE staff on two 4-H SERIES curricula. I co-taught the *Oak Woodland Wildlife* curriculum with Marzolla. Eight staff from throughout the state attended the training.

- **Agricultural Education Annual Conference - SLO County, June 1994** - I conducted an introductory seminar on 4-H SERIES for 35 schoolteachers at this conference.

- **Los Angeles County SERIES Training, September 1994** - I, with V. Pankow, presented an overview of 4-H SERIES, the learning cycle & the science processes to 4-H YDAs & staff in LA Co. involved in the 4-H After School Program at Housing Authority sites.

- **Skyline High School, Oakland, September 1994**

My role: I was a member of the California 4-H SERIES team. In addition to the trainings, I developed a system for and was then very involved in training new members of the team. I was also involved in decisions on curriculum revisions & I assisted in the final writing/preparation of the two grants.

Results: By the end of 1996, 4-H SERIES was being used in many counties throughout CA, not only in 4-H, but also in schools and numerous youth center sites. Many Advisors, Program Reps, Adult & Teen Volunteers had received training in at least one SERIES unit, as well as in the basics of the science processes & the learning cycle. The SERIES Project became an officially recognized project in CA.

Impacts: First, the SERIES curricula & project changed & expanded people’s views 4-H. For example, the Science Curriculum Specialist at the SLO Co. Office of Education attended one of my local trainings in SLO and became an immediate proponent of the program to teachers. Second, a number of individuals were reached through SERIES who never would have had contact with the program. Hence, the program expanded the public’s vision of 4-H & it expanded our vision of what 4-H could be and become. Stories still come into the 4-H office about how teachers, leaders, & others are using SERIES.
3. ISSUE: Nonformal Science Education and Literacy

3.2 4-H SERIES Program in the United States, 1994-1996

Collaborators: R. Ponzio, 4-H Specialist & SERIES P.I., V. Pankow & the entire CA & National SERIES Training Team (including S. Dasher, R. Ingram, A. M. Marzolla, R. Mahacek, C. Paterson)

Grant support: Kellogg Foundation ($643,000) & the National Science Foundation ($547,000 & 51,000)

Background, rationale, & objectives: The information presented in project 3.1 4-H SERIES Program in California, is the same as for this project, with the addition of national dissemination.

Extension methods: As a member of the 4-H National SERIES Team, I was involved as a trainer at numerous trainings & a presenter at seminars throughout the United States, as well as Puerto Rico. On many occasions, I was the lead or co-lead presenter, & also organized or assisted in organizing the trainings. Some examples include:

- **Washington State SERIES Training - Cle Elum, April 1994**
  I was the sole trainer from the National team at this training, where I presented an overview & introduction to 4-H SERIES, *Sciening With Snails* & the entire *It Came From Planted Earth* curriculum. I closed the training on the third day with a workshop on portfolios & community service projects. Working with the WA State 4-H Specialist, I planned & organized the training.

- **Puerto Rico SEE Program Conference - San Juan, Puerto Rico, May 1994**
  I presented information on SERIES at this conference, & met individually for several hours each with three faculty members writing curriculum for the project. I worked with them on curriculum design, hands-on activity design, science processes & the learning cycle.

- **SERIES Training-Western Regional 4-H Leaders Forum-Denver, Colorado, February 1995**
  A training for adult 4-H Leaders from throughout the Western Region. The training was an update session presenting *the Oak Woodland Wildlife* & *From Rivers To Rivers: Watershed Explorations* curricula. I presented the introduction, the information on training tips, teen portfolios & community service applications & I co-presented the extensive training on the *Oak Woodland Wildlife* curriculum with Marzolla. I worked with the organizers of the conference to plan this nine-hour training.

  - In addition to the trainings above, I worked with 4-H Specialists &/or Agents to organize 4-H SERIES trainings in: Nevada, Las Vegas, 2/95, Utah, Farmington, 2/95, Hawaii, Hilo, 1/96.

My role: From 4/1/94 until 12/31/94, I officially devoted 25% of my time to the National 4-H SERIES Project as the 4-H SERIES Western Regional Leadership Center (WRLC) Acting Director. I helped 4-H Agents & Specialists plan, coordinate & conduct SERIES trainings throughout the Western US. During the entire period of the project, I was a member of the National 4-H SERIES team. I assisted in the final writing/preparation of the three grants.

Results: By the end of 1996, 4-H SERIES was being used in 44 states, Guam & Puerto Rico, & it was estimated that over 85,000 youth had been exposed to SERIES. My coordination of trainings & participation as a trainer throughout the west & Puerto Rico contributed to the success & growth of the program. R. Ponzio, V. Pankow, & I collaborated on an article for *Science Scope*. The article, *From Hands-on Science To Community Service*, appeared in the March 1995 issue on “Science in Nontraditional Settings” & it generated many inquiries (Bibliog PR 4).

Impacts: We know that the many more thousand of youth throughout the US were reached through trainings of individuals who received training from the original team in CA. As a result of the success of the SERIES Program, Ponzio and others received a new grant to develop & implement the YES Program.
3. ISSUE: Nonformal Science Education and Literacy

3.3 4-H Science Curricula in SLO County, 1994-present

Background, rationale, and objectives: As reported in both the popular press & research journals, science education in the United States is in a crisis. U.S. students consistently score lower in science than their counterparts in developed (& some developing) countries. When comparing scores of ethnic minority students, the situation is usually much worse. Most studies indicate that this trend can be turned around by: 1) providing direct or "hands-on" experiences, 2) relating science topics to real life experiences, & 3) focusing on the early years of education, when attitudes about science are being formed. I believe the 4-H Program can have a positive impact on science illiteracy through its science programs.

Extension methods: Early in the review period, I held many meetings with 4-H volunteer leaders to explain the need for & to gain support of the concept of incorporating new & existing science curricula into the 4-H Program & making it a priority over the next few years & decade. I devoted time to becoming familiar with & mastering science curricula & then I offered trainings for adults & teens in the curricula. I used various delivery systems to reach youth with science curricula, including the local 4-H unit setting, after school programs & short-term groups. I made special efforts to deliver the science curricula to ethnic minority youth, including the targeting of certain geographic locations with high ethnic minority populations. I also recruited work-study students from Cal Poly to deliver science programs to youth in underrepresented areas.

My role: In addition to my roles described throughout, I worked with the 4-H Management Board on adding a new Science & Technology Key Leader Position to the 4-H Program Development Board.

Results: As a consequence of my activities in this area:
- The 4-H Management Board has allocated $45,199 since July 1994 for support of science programs, with much for outreach to ethnic minority youth. This accounts for 13.5% of the total 4-H Management Board budget for the period.
- The Science and Technology Key Leader, along with the Sci/Tech Program Development Committee (PDC), are responsible for the development and delivery of educational programs in the Science and Technology area. The committee is constantly developing plans to reach and involve more youth, both in and out of the 4-H Program.
- Through the efforts of the Sci/Tech PDC, a special 4-H Presentation Day Science Award was developed & implemented in 1995. Any 4-H member participating in Presentation Day could be judged by a special team of judges (in addition to the regular judges) by checking the “Science Presentation” box on the entry form. This remains a very important & strong component of the 4-H YD Program in SLO Co., and is always a big part of the County Presentation Day.
- Ethnically diverse youth & adults participated in a 4-H Science Field Trip to the Monterey Bay Aquarium in the summer of 1996. Low-income minority youth, mostly residing in Housing Authority apartment complexes in SLO, were targeted for this trip.
- It is estimated that over 2500 youth since 1994 have been directly involved with 4-H science curriculum through various delivery methods. Many teens & adults, after receiving training, presented science curriculum to youth at 4-H meetings, after school settings, recreation centers, housing authority sites, the zoo in Atascadero, libraries, drop-in centers & schools.

Impacts: The focus on this curriculum area is allowing 4-H in SLO Co. to reach a wider audience & will definitely assist in preparing youth for a complex & changing world. Many teachers & organizations involved with science education know to contact the 4-H Office for assistance with science curricula, trainings, and ideas on hands-on science projects. This has helped to change and broaden 4-H’s image.
3. ISSUE: Nonformal Science Education and Literacy

3.4 4-H+MESA² Project — An Agricultural & Leadership Program Pilot 1994-1995

Collaborators: UC MESA Program, Cambria School District, and Augie Perez, 4-H YDA, LA County

Grant support: DANR Cooperative Extension Special Grants Program, 1994-1995, $13,482.

Background, rationale, and objectives: The need for scientific literacy in our society is growing as youth face more and more complex scientific and technological issues. The under education of youngsters in science has been well documented, particularly for ethnic minority students. Additionally, ethnic minority students are not preparing for entering careers in agricultural sciences. One objective of this project was to add an agricultural achievement focus to the UC Mathematics Engineering, Science Achievement (MESA) Program, hence the acronym MESA². By incorporating this science with the traditional MESA college prep offerings, MESA would become more relevant to rural youth and pave the way for greater participation of its target population (African, Native and Hispanic Americans) in 4-H and agricultural disciplines at the high school and university levels. Another objective was to have this project in Cambria in SLO County serve as a demonstration project.

Extension methods: In the late spring and early summer of 1994, I held meetings with Antonio Garcia, the regional contact of the MESA Program to discuss a possible collaborative project and to begin project planning. I prepared a grant proposal totaling $13,482 in response to the 1994-95 DANR Cooperative Extension Special Grants Program. Garcia, his local assistants, and I began to with the MESA teacher advisors in the Middle School and High School in the Cambria School District to engage their support and involvement in the project. The high school and middle school students, MESA teacher advisors and the Regional MESA Administrative Assistant were trained in the 4-H SERIES units dealing with agriculture and received numerous follow-up and refresher trainings through Dec. 1995.

My role: In addition to making the initial contact with MESA staff, developing the idea with Garcia, writing the grant proposal and making the contacts with the initial school district, I also organized all trainings and I taught the Sciencing With Snails and It Came From Planted Earth (Agriculture) units. I coordinated trainers for From Ridges to Rivers: Watershed Explorations and brought in colleague Augie Perez, 4-H YD Advisor, LA County, to work with the participants on leadership and team building.

Results: In terms of adding an agricultural achievement focus to MESA, the project with the 30 students in the Cambria School District worked extremely well. The students participated in many activities, including: 1) delivery of SERIES to elementary students in a special session at Oceano Elementary School, an school in a different school district than Cambria and also the school with the highest percentage of ethnic minority enrollment in the county. This came about because of a special invitation from the principal to the 4-H+MESA² students, and 2) delivery of SERIES to district administrators and elementary school teachers. Several hundred students were exposed to 4-H SERIES Curriculum.

Impacts: The impact of the proposed collaborative effort was expected to be far beyond this isolated project in SLO County. It directly addresses educational equity and diversity issues that have been of concern to California’s Colleges of Agriculture, 4-H and MESA. One important impact of the project was MESA exposure to the 4-H Program. As far as all parties were aware, 4-H & MESA had not collaborated before anywhere in the state. Another related impact was the building of trust between 4-H & MESA, and the desire for the MESA Regional Director to move forward with an expanded project (see 1.5). Also, many ethnic minority families were exposed to the 4-H Program for the first time, and had positive experiences. Four families allowed their children to attend the 1995 4-H State Leadership Conference at UCD and the majority of the middle school students attended the 1995 SMART Conference at Cal Poly.
3. ISSUE: Nonformal Science Education and Literacy

3.5 4-H + MESA² Project — An Agricultural & Leadership Program Statewide 1995-1996

Collaborators: UC MESA, Antonio Garcia, 4-H SERIES Office, seven school districts, & A. Perez

Grant support: There was support from the UC MESA Program for this Project and remaining funds from the DANR Cooperative Extension Special Grants Program, 1994-1995, utilized in the previous project.

Background, rationale, and objectives: This project is an expansion, modification, and replication of the pilot 4-H+MESA² Project. Based on the success of the first 4-H+MESA² Project, Antonio Garcia and I decided to replicate the project on a larger scale and in different geographic locations. The same background and rationale of the pilot project hold true for this expanded project. A. Garcia & I intended the pilot in Cambria to be replicated in numerous rural locations throughout the state. This, combined with a close collaborative relationship with 4-H would result in the rural replication of MESA’s nationally recognized academic pipeline, which has produced unprecedented numbers of graduating minority engineers from 24 colleges of engineering in California. It directly addressed educational equity and diversity issues that have been of concern to Colleges of Agriculture, 4-H and MESA.

Extension methods: Working with A. Garcia, I organized a seven-day Science and Leadership Camp in August 1996 for 30 MESA students from seven different school districts (two in SLO County and five outside of the county). A. Garcia and his assistant were responsible for the logistics of the 4-H+MESA Camp as well as working with MESA teacher advisors to recruit the students. I was responsible for the schedule of training and recruiting other individuals for the training. I presented 4-H It Came From Planted Earth and worked with former 4-H+MESA² participants from Cambria on Sciencing With Snails. I recruited a SERIES trainer to present Chemicals R Us, as well as colleague Augie Perez to work with all the students on team building and leadership through participation in a ropes course.

My role: In addition to my roles above, based on the success of the initial demonstration project, I organized a meeting with Richard Ponzio, 4-H Science and Technology Specialist, two of his staff members, the statewide director and assistant director of MESA, Antonio Garcia and myself in August 1996 to explore possibilities of collaboration between MESA and the 4-H SERIES office on a statewide basis. I then organized and attended a follow-up meeting in September 1996 with MESA staff and 4-H SERIES office staff at MESA headquarters at Kaiser Center in Oakland. As a result of the two meetings between SERIES & MESA, the 4-H SERIES office prepared a proposal to expand the 4-H+MESA² Program. I reviewed the proposal, made suggestions and revisions, and MESA staff reviewed the proposal. The SERIES staff and I had decided that a qualitative case-study approach would be used in the applied research component of the extended project.

Results: The 4-H SERIES Program was introduced to 30 teens at the seven-day training camp. Students were trained in sciencing, leadership, and presenting skills, as well as in the subject matter of It Came From Planted Earth, Sciencing With Snails, & Chemicals R Us. Students presented numerous sessions with both younger students and classmates for their respective schools. In addition, I assisted in planning and setting-up an agricultural sciences field trip to the Salinas Valley – Santa Cruz area for MESA students to visit agricultural operations and the UCSC Agroecology Program, including a tour of the 20-acre research farm on campus, providing students exposure to a different types of agriculture.

Impacts: Unfortunately, funding for the proposal was not found, and an official statewide program between the two programs was never formed. However, I have kept in touch with the MESA Program and have continued to provide materials to the program and have welcomed MESA teens and advisors to SLO trainings over the years.
3. ISSUE: Nonformal Science Education and Literacy

3.6 4-H Watershed Environment Curriculum Project, January 1994-September 1996

Collaborators: Judy Neuhauser, 4-H Watershed Program Coordinator, 4-H SERIES Program

Grant support: USDA Water Quality National Initiative Program, approximately $65,000 from 1/94-9/96

Background, rationale, & objectives: The problem of nonpoint source water pollution was & is a significant problem & concern throughout the nation. The USDA addressed the problem by funding research & education projects to study the problem & educate the public & landowners. In 1991, when discussions began between CE, The Natural Resource Conservation Service (NRCS) & the Consolidated Farm Services Agency (CFSA) on a cooperative program proposal to address the issues of nonpoint source pollution & sedimentation, I proposed a component aimed toward youth. There were no watershed or water quality programs aimed at youth & funded by USDA with the potential for national dissemination. I wrote a strong youth component into the proposal. The four goals of the youth component of the project were to: 1) Increase the awareness, understanding, & appreciation among youth of the importance & value of watershed environments; 2) Develop a 4-H Watershed Environment Project suitable for delivery, via nonformal educational settings to youth in grades 4-12; 3) Provide research-based educational materials for youth that address a natural resource area of nationwide concern, & 4) Exemplify a model of program cooperation between CE, NRCS & the CFSA.

Extension methods: Working as part of the curriculum development team (described under My Role), hands-on, experiential curricula for three-age groups were developed during this time period, & the curriculum & activities were pilot-tested, revised, & in some cases, finalized. I, Neuhauser, or the two of us together, presented dozens of workshops, from 2-hours to 3-days, to introduce & teach the activities & nature of the curriculum to 4-H teens/adults, & other adults, such as teachers & other educators.

My role: At the beginning of the project, I hired a half-time coordinator & soon after, a curriculum writer. After I trained & oriented the coordinator & curriculum writer on the California Framework for Science Education, experiential & inquiry-based learning, & the 4-H SERIES curricula, I worked with the project coordinator on the development of curriculum & materials, pilot testing, trainings & other components of the project. I turned over the day-to-day operations on the project to the coordinator & I held the title of Project Director, 4-H Watershed Environment Project, with final decision authority on all aspects of the program, including curriculum, trainings, direction, & dissemination of information. Considerable planning, under my leadership & direction, took place to ensure that youth from all ethnic & income level groups would benefit from the curriculum. Delivery at Housing Authority complexes, recreation programs, 4-H project meetings, YMCA Centers, & school sites, were used to reach a diverse population.

Results: From Ridges To Rivers: Watershed Explorations Stage I (Bibliog. PR 3), for age’s 8 to 12, was finalized in early 1994, adopted by 4-H Series, & distributed to interested individuals throughout the country. Stages II & III were developed & pilot-tested during this period. The curriculum was delivered to over 2,000 ethnically diverse youth in all geographic areas of SLO County during this period.

Impacts: An example of the type of impact associated with the project involves a 4-H Project in SLO Co. The longest running watershed project involved youth in a 4-H Club. These youth began working with the project when they were in elementary school & were involved in water flow studies. As they matured, they moved onto monitoring of range & riparian recovery from a fire in the upper watershed & adopted a section of SLO Creek. They took-on responsibility for invasive plant removal, restoration plantings, & monthly water chemistry testing. They designed a booth for the 1996 Mid-State Fair on hazards of chemicals that can run off into the creeks & lakes. Thousands saw this display on 4-H & water quality.
3. ISSUE: Nonformal Science Education and Literacy

3.7 4-H Watershed Environment Curriculum Project, October 1996 – present

Collaborators: Judy Neuhauser, 4-H Watershed Program Coordinator (until June 1999), 4-H SERIES

Grant support: USDA Water Quality National Initiative Program, $48,000 for 10/96-9/99

Background, rationale, & objectives: The background, rationale, & objectives presented in project 3.6 4-H Watershed Environment Curriculum Project, 1/94-9/96, are the same as for this project. This project focused on the finalization of Stages II and III, as well as further national dissemination of the curricula.

Extension methods: As with the preceding Watershed Project, hands-on, experiential curricula for two-age groups were developed during this period, & the curriculum & activities were pilot-tested, revised, & finalized. I, Neuhauser, or the two of us together, presented dozens of workshops to introduce & teach the curriculum to 4-H teens/adults, & other adults, such as teachers & other educators. For example:
* In winter ’98, 17 high school students from throughout SLO County, were trained by Neuhauser & me to lead watershed activities for an environmental 4-H Youth Camp for 65 4-6 grade students.
* During the summer of ’98, several dozen middle school youth from the Morro Bay watershed participated in intensive two-week summer programs. This program, called the Junior High Watershed Explorers’ Summer Program, utilized the Stage II curriculum.

* From Ridges to Rivers: Water Explorations, Stage III: Guide To An Independent Science Project was made available to high school students in four districts through their science teachers.

My role: In addition to the roles described throughout this and the preceding project, I was responsible for having the curricula uploaded on to our county 4-H website to assist with worldwide diffusion.

Results: From Ridges To Rivers: Watershed Explorations Stage II (Bibliog. NPR 18) for ages 12 to 15, consisting of sessions that work with topography & map reading, erosion & creek dynamics, bio-surveys in creeks was revised & finalized during the review period. From Ridges to Rivers: Water Explorations, Stage III: Guide To An Independent Science Project (Bibliog. NPR 17) has been used by science teachers with high school students in Morro Bay, Atascadero, Paso Robles & Cambria to assist them with all types of science projects.

Impacts: Youth learned to use topographic maps; investigated erosion & groundwater movement & contamination through the use of hands-on models & they built a maquette of the Morro Bay watershed. From Ridges to Rivers: Watershed Explorations has been disseminated locally, nationally & internationally. Since 10/96, people in at least 32 states have requested the curricula. From Ridges to Rivers: Watershed Explorations are referred to in a number of publications such as Educating Young People About Water: A Guide to Unique Program Strategies published by the USDA Water Quality Initiative Team. It is impossible to keep track of who is actually using the curricula; however, I have discovered numerous examples of second & even third “generation” trainees using the activities.

A teen at the 1998 4-H State Leadership Conference said that her high school has a two-week unit on soil conservation that makes heavy use of the erosion table explorations from our 4-H Watershed Project; this is a direct offshoot from a training that took place about nine years ago in Lake Co. through the SERIES Project. The Tennessee Valley Authority (TVA) has been using activities as a result of a person who was trained in the Watershed Project at a SERIES workshop in California 10 years ago, and who subsequently trained other individuals involved in the TVA! A 4-H leader who had been trained years before at a SERIES workshop led a workshop at the SF Estuary Institute’s annual educators’ conference on wetlands. Periodically I receive articles about the use of the curricula. This widespread use is quite encouraging.
3. ISSUE: Nonformal Science Education and Literacy

3.8 4-H Watershed Environment Model Project, 1998-present

Collaborators: County Office of Ed., Monarch Grove Elementary School, Rancho El Chorro Environmental Camp, the Arroyo Grande Community School, J. Neuhauser & 4-H SLO Scientists

Background, rationale, and objectives: This project is aligned with the 2001 HR Program Priority on Science Literacy: Evaluating Evidence on Decision Making. Two major problems face the Morro Bay estuary in SLO Co.: soil erosion and the rapid in filling of the estuary, and pollution associated with urban runoff. To address this important issue, J. Neuhauser and I developed a plan for watershed action models. Each model is a permanent sculpture that people can walk on, that shows local geography, and that can be used to teach individuals how to keep creeks and other bodies of water clean. Changes in citizens’ behavior come about only after a thorough understanding of the direct consequences of one’s actions. The 4-H Watershed models were designed to demonstrate those consequences graphically in a way that both youth and adults can understand, and they were designed to be easily replicated in any watershed area.

Extension methods: My extension program has included facilitating the building of models in SLO Co., and providing statewide and national leadership for the project. In 1999, I worked with the SLO Co. 4-H Watershed Project Coordinator, J. Neuhauser, to produce a Watershed Model Construction Manual (Biblog. NPR 26) I then worked with the SLO Co. 4-H Webmaster, a 4-H teen, to upload the manual in PDF format to our website. All stages of the From Ridges to Rivers: Watershed Explorations curricula were also placed on the web in 1999. These are companion pieces to the construction manual. I have talked about the models to individuals who have then published articles or presented on the models, which then brings more attention to the project.

My role: I have spoken with dozens of individuals throughout the country about the watershed models, usually after they have either reviewed information on the website or read about the model in a journal.

Results: I wrote a report on the 4-H Watershed Environment Model Project, which was peer-reviewed, selected, and published in the 2000 4-H Youth Development Programs of Excellence (Biblog. PR 8). A second model of the Morro Bay Watershed, built in 1999 largely by students and 4-H SLO Scientists, is housed at an elementary school where it is used by teachers to teach watershed concepts and sources of water pollution, local history, map reading skills, and the water cycle. It is also available for community group use; youth trained in the use of the model present the demonstrations. In 1999, high school students built the third model in SLO Co., of a different watershed. Students demonstrate the effects of runoff pollution to middle school students and community groups to help them understand how to prevent pollution of the rivers and streams. The original 12X12 ft. model of the watershed, built by 4-H youth and adults, is permanently housed at the SLO County Schools’ Environmental Camp. In 1999, the EPA detailed the model for two weeks on the their national website as an “environmental highlight” project and the Nonpoint Source National Monitoring Program Successes and Recommendations report of 11/2000 highlighted the original model with a photograph and a caption about “4-H Modelers.” A local film company produced a videotape of the building of the model at the Community School, and I make this available to interested individuals at cost.

Impacts: Since 1998, numerous individuals in CA & 25 individuals from outside of CA (including Canada & Brazil) have contacted me to discuss plans for building large-scale models using the manual. Carol Martin, 4-H Program Rep in El Dorado Co., did an excellent job of replicating an even larger (24’ x 24’) model, which is housed at the El Dorado Co. Fairgrounds. In 2001, I received photos of a model built by a teacher and students in Alabama and of two models built in Washington through the efforts of water quality and 4-H Washington State CE personnel.
3. ISSUE: Nonformal Science Education and Literacy

3.9 SLO Scientists: Youth/Adult Science Clubs, 1995

Collaborators: Judy Neuhauser, 4-H Watershed Project Coordinator

Grant support: 4-H Management Board, $1,038

Background, rationale, and objectives: Research indicates that parents are critical influences on their children’s educational attainments & interests, & direct parental involvement is an important influence on student achievement. To address the desire & need to involve youth & adults together in hands-on science, & to reach out to & involve children & families never before involved in the 4-H YD Program, I developed a program in which families regularly engage in science activities, talk about science, & relate science to their home & community. The project’s goals were to: 1) teach the skills of scientific investigation, 2) provide a safe, fun environment for adults to learn from children & children from adults, 3) foster family dynamics of mutual respect, & 4) provide a fun experience with investigative science. SLO Scientists target children 9-12 years of age & their parents (or other significant adults).

Research methods: I developed a survey asking adult participants what elicited their initial interest or interests in the program, & sent it to the families involved in the clubs. After two weeks, I sent out a reminder postcard & I received over a 70% return rate.

Extension methods: After developing a plan & timeline for an initial SLO Scientists pilot program in a rather short period (probably during a three-month period but after at least two years of thought), I sent out flyers in English & Spanish to schools in the Los Osos community & prepared a news release announcing the new program & the first meeting date. J. Neuhauser, then 4-H Watershed Project Coordinator, & I conducted the one-hour orientation session for the people who attended the first meeting. Over the next month, Judy & I trained adults who had been recruited to serve as SLO Scientists Facilitators or co-facilitators of the clubs.

My role: I developed the concept/idea for the SLO Scientists Program, developed & conducted the research component. I also co-presented (with Neuhauser) the facilitator trainings.

Results: Seventy-four (37 youth & 37 adults) attended the first meeting & four SLO Scientists Clubs were organized that first night in Jan. 1995, serving a total of 35 youth & 35 adults. Of the 70 people in the program, only two had ever been involved in 4-H before SLO Scientists. The program’s popularity grew & 50 people were on a waiting list by April 1995. In response to the survey mentioned in the research methods section, the three most common responses were, respondents: 1) with daughters wanted them to have a fun experience with science so they would not be afraid of math & science, 2) were looking for quality & meaningful programs they could participate in WITH their children, & 3) were finding that the book-based science lessons their children were experiencing at school were alienating them to science, & they were excited about the hands-on investigative nature of the program. I used these very telling results to inform the next stages of the program (Project 3.10).

Impacts: The goals of the project, described above, were met in a very short period & participants were exposed to & participated in a 4-H program that was not “traditional.” Participants were able to spend quality time together either with an adult, or with a child, involved in a fun & meaningful project. Based on the huge success of the first phase of the SLO Scientists Program, I decided to explore a grant proposal to obtain funds to hire a coordinator, expand the number of clubs & participants, & conduct research on several aspects of the program.
3. ISSUE: **Nonformal Science Education and Literacy**

3.10 SLO Scientists: Youth/Adult Science Clubs, 1995-1997

**Collaborators:** Science & Society Program, UCD; 4-H CYD; J. Neuhauser

**Grant support:** $12,777 from the 4-H CYD 1995-1996 Collaborative Grant Program

**Background, rationale, & objectives:** This project is an expansion/modification of the preceding project. Based on its success, I decided to replicate the project on a larger scale & in different locations. The same background & rationale of the first project hold true for this project. Areas were targeted for ethnic minority outreach & an additional objective was expanded research, especially on “family dynamics.”

**Research methods:** Early in the project, I met with Anna Sherlock at the 4-H CYD to discuss research questions & methodology. The next stage was the development of the survey instruments. Survey instruments included pre/post questionnaires for both youth & adult participants. “The Projective Test of Attitudes (TPTA),” developed by Lowery at UCB in 1965, was modified so that it could be used with the case-study children. I completed drafts of the pre/post questionnaires & modified “TPTA,” which were then reviewed by M. Braverman. Pre-course questionnaires, letters describing the research component, & letters of consent were distributed to participants. Once a club completed its sessions, post-questionnaires were distributed to both youth & adults. Twelve dyads were randomly selected for case-study interviews & pre-case-study interviews were conducted between the initial sign-up & the first session. Post interviews & the post-test of “TPTA” were scheduled after the post-questionnaires were completed.

**Extension methods:** Promotional flyers & media press releases were distributed in each community advertising an orientation meeting & club meeting dates. Neuhauser & I trained adult facilitators.

**My role:** I prepared a 4-H CYD grant proposal in collaboration with the “Science & Society” Program at UCD after meeting with the Director, Dr. Schutz. I worked with Schutz on submitting the research instruments & research protocol for the Human Subject Review in 11/95. The “Science & Society” Program submitted the package on behalf of the project & final approval was received in January 1996. I was responsible for all research & I coordinated all efforts of a student research assistant recruited from Cal Poly to assist with all tasks related to the data collection & computer input. During my sabbatical, I analyzed the results of all the pre/post questionnaires, the taped interviews of the case study pairs (youth/adult), along with the pre/post results of “The Projective Test of Attitudes.”

**Results:** Twelve SLO Scientists clubs were started from 7/95 to 6/96. 4-H SERIES curricula were used in the various clubs. The number of people reached through the 12 clubs was 266, (133 youth & 133 adults). The vast number of members participated in at least eight club meetings of 90 minutes each, & many more participated in over 30 club meetings, field trips & community service activities. The percentage of ethnic minority members was 14.4%. Twenty adults were trained in 4-H SERIES & teaching methods.

**Impacts:** A random sampling of participants (N=34 children & 34 adults) indicated that:

* Just over 50% of the children and 33% of the adults reported that they spent more time on such things as observing & experimenting after becoming involved in SLO Scientists.
* 67% of the children and 95% of the adults reported that they “always or/most of the time” talked with other family members about the activities after each meeting.
* 50% of the children and 50% of the adults reported an increase in talking with her/his partner “about things other than science” since joining the program.
* 36% of the children & 25% of the adults reported an increase in “family meetings to talk things over & solve problems” since starting the program.
3. ISSUE: Nonformal Science Education and Literacy

3.11 SLO Scientists: Youth/Adult Science Clubs, 1998-present

Grant support: PG&E, $4,000 & $5000; SLO County 4-H Management Board, $2,202

Background, rationale, and objectives: This project is aligned with 1998 HR Program Priorities, Issue #4, Human-Environment Interactions, & the 2000 priority on Science Literacy: Evaluating Evidence & Decision Making. Parents are critical influences on their children’s educational attainments & interests & direct parental involvement is an important influence on student achievement. As described in the preceding project write-up, I developed a program in which families regularly engage in science activities, talk about science, & relate science to their home & community. The overall goal of this project was to continue the SLO Scientists Program once the initial grant funding from the 4-H CYD were expended. The project’s goals were/are the same as the original or pilot SLO Scientists Project.

Research methods: Some of the research instruments I developed, tested, & utilized during the initial research phase of the pilot project in 1995-96 were used during this project. They were used to: 1) contribute to the growing database on SLO Science participants, & 2) monitor success of the program. I randomly selected several participants from each SLO Scientist group before programming started, & had the youth complete a pre-questionnaire. After approximately 12 weeks in the program, they were asked to complete the post-questionnaire. I collected & analyzed data on 49 children since 1998.

Extension methods: Working with the part-time SLO Scientist Coordinator, I recruited adults to act as facilitators of the “SLO Scientist Clubs.” I trained the facilitators on the experiential learning cycle & the science processes. After the general training, I met with the facilitators individually or in teams to review the subject matter curriculum. The facilitators then held club meetings, usually twice a month for 90 minutes. A child & a “significant adult” worked together throughout the 8-12-week period. I scheduled trainings for new facilitators and refreshers for continuing facilitators two or three times a year. All recruitment flyers were in English & Spanish.

My role: I wrote the two grant proposals to PG&E for funds to continue the program after the initial research project (1995-96) proved that the model was very successful. I recruited & selected a part-time coordinator in 1999 & trained her in the concepts of the experiential learning cycle & science processes, & I supervised her activities as SLO Scientist Coordinator. I conducted all research.

Results: Since 1998, over 334 individuals (youth & adults) have participated in SLO Scientists Clubs & 20 adults were trained as new facilitators. The main goal of continuing the program after initial funding ran out was realized. A proceedings abstract was published in 1998 (Bibliog. PR 5). I wrote an impact report that was selected for inclusion in the 4-H YD Programs of Excellence – 1999 (Bibliog. PR 7). The chapter I wrote on the research/pilot program of SLO Scientists for the Advances in Youth Development Programming: Reviews & Case Studies from UCCE was published in 2000 (Bibliog. PR 9). I wrote a UC Delivers report on SLO Scientists (Bibliog. NPR 37), and it was posted on the web in March 2003.

Impacts: Youth reported a significant influence on “direct involvement in science” & on “family dynamics.” These results are in line with the earlier and more rigorous research conducted in the pilot phase. Also, the participants reacted very favorably to the program. I consulted with UCD Professor Holmen to discuss SLO Scientists as a model for a grant written to NSF’s Program for Gender Equity. “Project Astro,” which teams astronomers with classrooms, contacted me because they wanted to launch a new effort called “Family Astro.” In 2001, I was contacted by the Explorit Science Center in Davis because the center was considering expanding parent involvement in their program. More people realize that 4-H is more than “cows & cooking,” and that it is on the cutting-edge in science-literacy programs.
3. ISSUE: Nonformal Science Education and Literacy

3.12 Animal Ambassadors I — A Science Education Outreach Model, 1999-present

Collaborators: Martin Smith, Assistant CE Specialist

Grant support: American Honda Foundation, $49,921.

Background, rationale, and objectives: This project is aligned with the HR Program Priority (2001): Science Literacy: Evaluating Evidence & Decision Making. Animal Ambassadors is an innovative, new youth science program that uses the world of animals as a “bridge” to help youth develop an interest in science while emphasizing critical thinking & life skills. It uses a cross-age teaching method in which teens are trained to guide younger children (ages 5-8) through hands-on science activities. The main objectives are: 1) to engage children in the scientific thinking process & improve their critical thinking skills, 2) to enhance children’s views of their relationships with animals, & 3) to develop a progressive & sustained training model (i.e., step-up incremental training) for teen facilitators & adult trainers.

Research methods: I, & Smith, designed, implemented, & directed all research. We conducted all initial analysis of the data & have been coordinating the efforts of a PGR at UCD for further analysis. Research methodology included pre/post comparisons on: 1) direct participant observation on whether or not children were involved in the science processes, 2) object description assessment, 3) “draw yourself with an animal” assessment tool, 4) questionnaires to determine family involvement, & 5) surveys & post intervention focus group interviews with teen trainers. Three 4-H clubs & one Y after-school site served as the research sites. The research was conducted over a seven-month period with 17 teens & 41 children.

Extension methods: I, with Smith & a student assistant of Smith’s, conducted three “step-up” incremental trainings for teens & adult “coaches” in SLO Co. over several months. The team also conducted two training-of-trainers at UCD for 4-H Advisors/Program Reps & volunteers from several counties. Smith, E. Zilbert (formerly @ UCD) & I also wrote & produced a training video to be used as the second training-of-trainers instead of a face-to-face training. I presented the research design & program implementation at several meetings & trainings of DANR staff & 4-H volunteers, as listed in the appendix. All research forms were available in Spanish.

My role: I co-wrote the grant proposal with Smith, assisted in all efforts with human subjects protocol, designed & piloted survey instruments & scoring rubrics with Smith. I directed all efforts of the SLO Co. assistant on teen & member recruitment & program publicity (including development of brochures & flyers in Spanish). I also led the efforts for focus group question development & protocol.

Results: The results were extremely positive & significant. All objectives had some positive outcomes, & both children & teens showed increases in desired behaviors; results are detailed & explained in publication exp. 2 (Bibliog. PR 14). Also, Smith & I co-wrote an article for the 2001 4-H Programs of Excellence publication (Bibliog. PR 11); the peer-reviewers judged it the best write-up in science/tech. We also wrote an article for the Journal of Extension (JOE) (Bibliog. PR 12). New knowledge was created on using scoring rubrics to access & quantify drawings.

Impacts: The success of the project led to funding for a second project, involving three additional counties (see project 3.13). New curriculum for 5-8 year olds is now available; Indiana 4-H has adopted the curriculum as one of its projects. The “step-up” training model has important implications for 4-H, CE & science-teacher trainings. The teens reported the inquiry-based trainings have impacted their daily lives in school by having developed their questioning skills. The research methodology developed assists other Extension professionals, as evidenced by our work being cited in articles in JOE & other journals.
3. ISSUE: Nonformal Science Education and Literacy

3.13 Animal Ambassadors II, 2000-present

**Collaborators:** M. Smith; Jeannie George, Tehama/Glenn Counties; & Jane Chin Young, Marin County.

**Grant support:** American Honda Foundation, $75,000.

**Background, rationale, and objectives:** This project is an expansion, modification, & replication of Animal Ambassadors (AA) I; it is also aligned with the 2001 HR Program Priority on Science Literacy. Based on the success of the first project, Smith & I decided to replicate the project on a larger scale & in different geographic locations to test the positive outcomes in the development of hands-on, inquiry-based activities for the 9 to 11 age group. The four objectives of the project are: 1) to increase children’s use of the scientific thinking processes, 2) to increase the competence of teen leaders with respect to inquiry-based teaching methods, 3) to increase teen leaders’ workforce skills, & 4) to expand the program to three new counties. Recent studies in the field of teacher education point to the value & success of step-up incremental trainings in increasing teacher competency; Smith & I believe, especially in light of the results of AA I, that such a model has important implications for teens & adults in youth development programming.

**Research methods:** Similar methods to AA I were used. Also, a new measure was utilized & the object description instrument was modified. Based on an extensive literature review for the 9-11 year age group, the test of Basic Process Skills, a pre/post quantitative tool, was used to measure the scientific thinking processes (STP). Also, an additional tool to measure STP was the comparison between pre/post language the participants use to describe objects. Smith, a postgraduate researcher & I, decided on research methodology before Smith & I authored the second grant proposal. In SLO, I planned & coordinated all research with the AA Program coordinator, who then implemented the research instruments at the sessions with the participants. The research took place at 2 sites in SLO, reaching approximately 20 youth. All research forms were available in Spanish.

**Extension methods:** I worked with the collaborators to conduct the three training-of-trainers sessions for program reps/coordinators & adult volunteers at UCD. Among other roles, I specifically concentrated on “questioning strategies” & the use of the experiential learning cycle during the trainings. In SLO, I worked with the teens on the same topics & the adult volunteer & program coordinator worked with them on the subject matter & activities. Three SLO trainings took place under my guidance.

**My role:** In addition to my roles described throughout, I consulted frequently with Smith on all aspects of the project, especially the research components.

**Results:** The project was implemented in all 4 counties, with 3 trainings-of-trainers conducted at UCD; nine 4-H volunteers completed all trainings. Teen trainings were held in the counties & 17 teens leaders implemented curriculum activities with youth in 4-H clubs & after school programs. Evaluations of the trainings & focus groups conducted showed that both adults’ & teens’ understanding of inquiry-based teaching, effective teaching, effective questioning & scientific thinking processes (STP) improved over the course of the study. Children’s use of the STP increased, as shown by a repeated measures ANOVA used to analyze the object description data. An article detailing the results was published (Bibliog PR 15).

**Impacts:** As shown by program evaluations & focus groups, participants in the project are supportive of the notion of increasing the capacity of both adult & teen leaders through the use of step-up incremental trainings. Smith & I have been contacted by other Extension professionals throughout the US for further information & discussions. The results of this research has informed the work of the STEL Workgroup.
4. ISSUE: Building Capacity in the 4-H Program

4.1 Fine-Tuning, Tweaking and Program Development in San Luis Obispo County, 1994-present

Background, rationale, and objectives: This project is aligned with the 2000 HR PPAC Issue #4 on volunteerism. The empowerment of 4-H leaders to take more responsibility for segments of both the program development & management aspects of the standard 4-H club program is an ongoing goal of mine. Since the SLO Co. Program transitioned to a “middle management” approach in the 1980’s, the 4-H Management Board (MB) & the 4-H Program Development Board (PDB) have functioned smoothly & performed well, & have contributed greatly to a strong, dynamic youth development program which is issue-focused & research-based. However, since the operational structure is a dynamic one, it needs to be reviewed, fine-tuned, & tweaked occasionally, in order to make sure it’s effective in promoting positive youth development & meeting the needs of children & youth in the county. I believe that problems (of all sorts) can & will arise if I ignore the standard 4-H club program; leaders & others in SLO Co. know that I care about & support the program by paying attention to & working with the 4-H “middle managers” on substantive issues.

Extension methods: I worked closely with both the 4-H MB & the 4-H PDB, as entities, as well as working individually with MB Directors & PDB Key Leaders. I met four times a year with each board & discussed such areas as program planning & development, educational goals & objectives for projects & events/activities, affirmative action, evaluation of countywide events/activities, trainings for leaders & program goals. In between meetings of the boards, on an “as necessary” basis, I met individually with the “middle managers” to further discuss the subjects or concepts I raised during the board meetings.

My role: In addition to my roles already specified, I keep a finger on the pulse of the program in order to better understand the needs, either known or unknown, of the boards. For instance, at occasional meetings of the 4-H PDB during the past few years, I presented on simple evaluation techniques for events & activities because I know that some events have not been evaluated for several years. As a result of the presentations & discussion, the key leaders moved forward to evaluate countywide events & activities under their responsibility. I also have delivered in-service for the key leaders on different learning styles, & life skill development. I believe this reflects my role as a motivator & my role as an educator.

Results:
- The Key Leaders & MB Directors in the program are united in the focus on a dynamic, youth development program based on research-based principals.
- All 4-H program areas are focusing on life skill development as a result of my work with the PDB.
- 4-H Community Leaders & Project Leaders receive regular training.
- The “middle-management” approach allows me to perform my other academic work as a 4-H YDA while still maintaining my involvement with & educational influence on the standard club program.
- A Key Leader position for Comm. Service/Civic Engagement was created & filled in the 1999-2000 year.

Impacts: My efforts with Key Leaders & MB Directors have impacted the members & families in the program by providing a high quality & dynamic program, which focuses on life skill development in all program areas & levels. Over the last three years, the program experienced an average 74% retention rate of first year members & the standard club program grew by 149 members, to a total of 1505. These are indications of a high quality program which people want to be a part of. Also, my recruitment of a Community Service/Civic Engagement Key Leader has dramatically increased the emphasis on community service at the county, club & project levels. The 4-H program was often featured on local TV & in the print media for its community service efforts. This helps to change perceptions about 4-H in a very positive way, both with individuals in the program & the general public.
4. ISSUE: Building Capacity in the 4-H Program

4.2 Restructuring and Redeveloping the 4-H Program in California and the Nation, 1994-present.

Collaborators: A. Brosnahan, 4-H YDA, San Joaquin County, R. Carver, then 4-H YDA, Yolo County, Peggy Gregory, 4-H YDA, Kings County, & Lynn Schmitt-McQuitty, Santa Cruz and Monterey Counties

Background, rationale, and objectives: This project is aligned with the 2000 HR PPAC Issue #4 — Volunteerism: Effective Management Practices for Volunteer Systems. Numerous 4-H YDAs feel that they need to spend a large percentage of their time “managing” the 4-H club or standard program, which leaves little time for more fulfilling academic & applied research work. I conceived this project, an ongoing one of mine, as an important component in the transition of the 4-H YD Program to a dynamic program, which has its strengths in its issue-focused & applied research approach to youth & community development, as well as in its nonformal experiential club program.

Extension methods: For the Yolo Co. portion of the project, I worked very closely with R. Carver over a period of approximately 18 months, sharing information via phone & meetings with her on restructuring & redeveloping the 4-H Program. During this time, I also presented to a group of 4-H volunteers in Yolo Co. early in the process, & then to a larger group assembled by R. Carver, called the Yolo Co. 4-H Task Force. I then provided feedback & input to R. Carver & the task force over a period of approximately six months, either at task force meetings or phone consultations. For the San Joaquin Co. portion of the project, I supplied A. Brosnahan with a packet of information, discussed my ideas & the components of the package with her several times, & presented to the San Joaquin Co. 4-H Vision Committee. I supplied L. Schmitt-McQuitty & P. Gregory with materials from my county & other materials that I have used for the transition, then I met with Lynn to discuss the materials & provide advice, & I discussed the materials with Peggy on the phone. I also supplied information to two other advisors (P. Johns, S. Junge.).

On a national level, I wrote a circular on empowering 4-H Leaders (Bibliog. NPR 19), which was distributed by a SLO Co. leader at a workshop in Idaho in 1998. In 1999, a 4-H Agent in West Virginia contacted me, & I supplied him with a two-page fact sheet that I wrote (Bibliog. NPR 24) on restructuring & redeveloping 4-H through defining roles & leader empowerment. He presented the fact sheet as part of a poster session at 1999 NAE 4-HA conference in Pittsburgh, which generated three additional contacts (Washington [2] & Michigan). I supplied the three agents with information & had a follow-up phone conference with one of the agents. I presented to the CC & SR County Directors at a retreat in Jan. 2002.

Results: A number of people heard & participated in presentations on restructuring & redeveloping the 4-H program through volunteer leader empowerment & defining roles & responsibilities.

Impacts: I understand that San Joaquin County transitioned to a ‘middle management’ approach with the standard 4-H club program. SJ Co., according to A. Brosnahan, officially made the transition in 2001 & is refining & strengthening the structure. Yolo County incorporated numerous aspects of a “middle-management” structure into its 4-H program allowing for improved program development & management, when R. Carver left, various members from the original Yolo Co. Task Force were continuing to work on further changes & redefinition of both staff & volunteer roles. The impacts are more effective program development, enlisting the support & services of more adult & teen volunteers, having the 4-H volunteer experience be a more rewarding one, & very importantly, having a program which can more effectively meet the changing needs of youth, families, & communities.
4. ISSUE: Building Capacity in the 4-H Program

4.3 Affirmative Action and Outreach Education in the SLO County 4-H Program, 1994-present

Collaborators: Norma Wightman, 4-H YDA until 1998

Background, rationale, and objectives: Affirmative Action is a very important part of the 4-H Program in SLO Co., and in order for progress to be made in outreach to under-represented groups in communities, the 4-H Community Club Leaders of the various clubs need to understand the importance of AA, what is involved in AA and outreach, and the way or method that is used by the 4-H Office and the University of California to measure performance in this area. I believe that without this knowledge, it is difficult or impossible for 4-H Community Club Leaders to both perform adequately in this area as well as to inform and assist the participants in their 4-H Clubs about Affirmative Action and outreach. In other words, in order to help the leaders achieve success in this critical area, I needed to educate them as much as I possibly could

Extension methods: I met with 4-H Community Club Leaders (CCLs) or Co-Leaders on a one-on-one basis to educate them about AA policies and goals and to discuss with them AA outreach goals for 4-H units. Along with the one-on-one meetings with the club leaders, I presented at general 4-H leader trainings numerous times during the review period on AA and outreach, and specifically on compliance and parity. The last general presentation was at a Community Club Leader Roundtable in May 2004, where I zeroed in on compliance and how to reach compliance through parity or all reasonable efforts.

Creative activity: In addition to the meetings, every year, each 4-H CCL receives a personalized packet from me, with the statistics for their club, including a paragraph on exactly what the club needs to do in terms of recruitment and enrollment in order to be in compliance through parity. This takes a fair amount of time for me to prepare each year, but it is very helpful to the CCLs. In addition to this information, every club receives an All Reasonable Efforts Packet to assist them in their ongoing AA/Outreach efforts.

My role: I have worked tirelessly throughout the entire period of review extolling the importance of AA and being a champion of outreach in the county. I feel that my enthusiasm and unwavering support for AA and my multi-pronged educational plan described in this project has had a tremendous impact on our forward momentum.

Results: I met with 93 community Club Leaders or Co-leaders during this project period. An individual cannot become a 4-H Community Club Leader in SLO County without meeting with me to discuss AA. From hundreds of discussions with leaders, I know that people in the program understand the reasons for, and meaning of, Affirmative Action and outreach in the 4-H YD Program much more than use to be the norm. I wrote a well-received article for the Affirmative Action/Staff Personal Services Newsletter in 2002, entitled Affirmative Action in the San Luis Obispo County 4-H Program (Bibliog. NPR 36).

Impacts: The percentage of ethnic minority youth enrolled in the county 4-H YD Club Program finished the past program year at 17.4%, against a minority youth population of approximately 30%. This relatively high percentage is in-line with our aggressive program to reach and involve ethnic minority youth in the ongoing programs as opposed to one-time or short-term projects. The countywide 4-H club enrollment is very close to being in parity, with one category in parity, another category being four-tenths of a percentage point from parity and a third category being seven-tenths of a percentage point from parity. I believe our success in reaching ethnic minority youth is a result of a multifaceted outreach and education approach with dedicated and informed staff, leaders and 4-H members. Also, people outside of the program are aware that considerable resources are focused on AA efforts in the SLO Co. 4-H YDP, & that the program is committed to reaching and working with traditionally under-represented audiences.
4. ISSUE: Building Capacity in the 4-H Program

4.4 Life Skill Development Education in SLO and California 4-H, 2001-present

Collaborators: SLO Co. 4-H Program Development Board, 4-H Management Board, and especially the Adult Leadership Key Leader. P. Gregory supplied digital graphics for the PowerPoint that I developed.

Background, rationale, and objectives: Life skills are important abilities that young people can learn and experience that will help them lead productive and satisfying lives. The 4-H YD Program can contribute to the development of many of the identified life skills in the Targeting Life Skills (TLS) Model developed by P. Hendricks at Iowa State University. In order for 4-H youth participants to develop life skills and be on their way to reach their full potential, 4-H Leaders need to be aware of life skills, the importance of life skills, and how they can assist in the development of life skills. The main objectives of this project were to make 4-H Leaders in SLO Co. aware of the life skills, become familiar with the TLS model, learn how they can impact life skill development in the youth they work with, AND once they know all of this, CHANGE their behavior to actually incorporate life skill development into their practices.

Research methods or creative activity: I conducted evaluation research on a sampling of the life skills trainings over the past few years since 2001, which included immediate post-training surveys, as well as 4-6 month follow-up surveys.

Extension methods: I used various methods to extend information in this area. First, and very central to the success of this project, I developed short (20-30 min) in-service workshops that I presented to the 4-H Management & Program Development Board members. I then developed an hour-long hands-on workshop that I presented at leader trainings organized by the Adult Leadership Key Leader & her Program Development Committee. I also developed a PowerPoint Presentation on Life Skills (Bibliog. NPR 41) that I used at different leader trainings in SLO Co. I also presented a 10-minute workshop of “Judging 4-H Record Books using the Life Skill Wheel” at the last three years of trainings for adult record book judges. I composed a letter on life skill development in 4-H that was sent, along with a color copy of the Life Skill Wheel, to every 4-H leader in SLO Co. Since this initial mailing, the letter and wheel has been sent to every new leader over the past two years. I have also discussed life skills, their importance, and how to work with project leaders with every 4-H Community Club Leader since this project started.

My role: In addition to my presentations and involvement above, I GENTLY PUSHED the Directors of the 4-H Management Board, and the Key Leaders on the 4-H Program Development Board to adopt Life Skill Development as a focus area and to move it forward in SLO Co. whenever and wherever possible.

Results: Hundreds of leaders have learned about life skills since the project began. Of 100 immediate post-training surveys returned, 98 individuals (98%) indicated that they “learned useful information” as a result of their participation in the LS workshop. One individual indicated that they did not “learn useful information” & one individual was “not sure if they had learned useful information.”

Impacts: The PowerPoint presentation that I prepared & used at 4-H Leader Training Days was posted on the State 4-H Office Website for others to use for trainings in their counties. A 4 to 6 month follow-up survey was sent to 40 workshop participants as of this writing, and 100% of participants responded. A number of questions were asked, including whether or not the participant had changed any of her/his practices when working with young people as a result of attending the workshop. Of 40 surveys returned, 95% (38 individuals) said they had changed their practices when working with children by using ideas presented in the workshop. Life skill development is an important & recognized part of 4-H in SLO Co.
4. ISSUE: Building Capacity in the 4-H Program

4.5 4-H Mission and Direction & Positive Youth Development Education in SLO Co. 4-H, 2002-present

**Research methods or creative activity:** I conducted evaluation research on a sampling of the Mission and Direction and Positive Youth Development Education trainings since 2002, which included immediate post-training surveys, as well as 4-6 month follow-up surveys.

**Background, rationale, and objectives:** I take my role seriously as a conduit for information flow between the State 4-H Office/4-H CYD and the 4-H Leaders in SLO County. For years, I have believed that a well-informed leader is the best type of leader, and I have always attempted to keep abreast of critical information from the state level in order to pass it on to leaders in the county. It is important that leaders have the latest information on the direction of the CA 4-H Program in order for individuals at the county level to make intelligent, informed decisions regarding the direction of the program. I also take my role as an educator quite seriously and I saw an excellent opportunity to educate and influence behavior by tackling the new Mission and Direction along with the complimentary piece on PYD.

The main objectives of this project were to have 4-H Leaders in SLO Co. become aware of the new 4-H Mission and Direction in CA, become familiar with the different Positive Youth (PYD) models, and learn how they, as leaders, could impact positive youth development in the youth they work with. Once they became aware of all of this, another goal was for them to CHANGE their behavior to incorporate components of PYD into their practices.

**Extension methods:** I conducted several trainings throughout 2003 and 2004. After attending training on the new *4-H Mission and Direction* in August 2002, presented by C. MacNeil, and two trainings by staff at the 4-H CYD on *Youth Development: Theory and Strategies*, I developed a PowerPoint presentation and workshop for leaders at the local level. I conducted the workshop four times, once with 4-H Management Board Directors, once with Key Leaders on the 4-H Program Development Board, once at a training for Community Club Leaders, and another at a larger leader-training event.

**My role:** I decided on this project concentration after being introduced to the new 4-H Mission and Direction and seeing the importance of the mission for the future of the 4-H Program. I developed the PowerPoint (Bibliog. NPR 39), designed the workshop, and conducted the evaluation research.

**Results:** Two hundred and seventy leaders learned about the new CA 4-H Mission and Direction and Positive Youth Development since the project began. Of 243 immediate post-training surveys returned, 228 individuals (94%) indicated that they “learned useful information” as a result of their participation in the workshop.

**Impacts:** A 4 to 6 month follow-up survey was sent to 49 workshop participants as of this writing, and 100% of participants responded. A number of questions were asked, including whether or not the participant had changed any of her/his practices when working with young people as a result of attending the workshop(s). Of 44 surveys returned, 90% (40 individuals) said they had changed their practices when working with children by using ideas presented in the workshop. In addition to the leaders who attended one of the workshops, other leaders have heard about the information presented in the workshops as a result of word-of-mouth by co-project leaders and community club leaders. Concentration on positive youth development is an important & recognized part of 4-H in SLO Co. This focus on PYD will continue to improve the quality of the 4-H experience for youth involved in the program, and will continue to strengthen, improve, and expand the image of the 4-H YDP as a premier and leading youth organization committed to positive youth development.
4. ISSUE: Building Capacity in the 4-H Program

4.6 Animal Welfare and Ethics Project, 2003-present

Collaborators: Lindsay Taylor, Cal Poly student & 4-H Program Volunteer Intern

Grant Support: SLO County Community Foundation, $1000, & 4-H Management Board, $1500

Background, rationale, & objectives: The purpose of this research project is to determine the effectiveness of the “Line in the Sand” videotape by Jeff Goodwin for use in 4-H Club settings. Ethics in junior livestock shows have become an issue & quite likely, will continue to grow as an issue. I wanted to determine if showing this tape would increase the awareness of ethical livestock practices in 4-H members, their parents/guardians & 4-H project leaders in SLO County.

Research methods: The 12 4-H clubs that were part of the research study were randomly selected from the 34 4-H clubs in the county. There were four groups of participants, based on random selection of the 12 clubs into the four groups. Participants in group 1 received the pretest, viewed the tape, & then were given the posttest two months later. Group 2 was shown the tape & then given a posttest two months later. Group 3 was given the pretest & then the posttest two months later. Group 4 was only given the posttest. Control groups 3 & 4 did not view the tape.

Extension methods: Ms. Taylor attended 4-H club meetings to explain the research study and review & explain the necessary forms for participation. If they agreed to participate in the study after receiving & reviewing the necessary Human Subjects Committee letters & forms & signing the appropriate assent/consent forms, all 4-H members (ages nine to 19) present at the 4-H Club meetings, as well as their parents/guardians & adult project leaders, received either an educational program or were part of the control group as described below. The 16 minute “Line in the Sand” videotape was shown to groups 1 & 2. It deals specifically with the issue of unethical activity associated with youth livestock shows. The video assists individuals in answering the questions of ethics that arise related to various livestock showing practices.

My role: I developed the idea, obtained funds, designed the research protocol, & obtained Human Subjects approval at IRB at UCD for the research project. I recruited Ms. Taylor from Cal Poly and I directed all research & extension efforts that she conducted as part of the project. I taught Ms. Taylor how to conduct statistical analysis of the data. I served as her Cal Poly Senior Project Consultant.

Results: The number of participants in the research project who completed all phases was 209 adults & 352 youth. Initial findings indicate that that the Ethics in Livestock Showmanship tape did increase the knowledge of ethical livestock showing practices in adults (4-H Leaders/parents of 4-H members), & though not statistically significant at the 0.05 level, did have a statistically significant positive impact on 4-H members at the 0.10 level. This study showed that there was no statistical difference between responses from participants who received a pre-test when compared to those who did not, meaning that the pre-test does not influence post-test results & is not a necessary part of this or similar studies.

Impacts: I have presented results of this study to the 4-H Program Development Board to inform them of the results, and in this instance, the importance of concentrating on adults on the issue of animal welfare & ethics. Efforts will now be streamlined to reach adults on this important issue, not forgetting the youth. A future journal article, co-authored with Ms. Taylor, will contribute to the body of knowledge on this issue, as well as to the growing body of knowledge on research methodology that only uses posttests. This study also serves as an excellent model for other studies in the 4-H YDP. All 4-H Clubs, including the clubs previously in the no-treatment control group, will receive the educational program during 2005-06.