

PROGRAM REVIEW DOSSIER NARRATIVE

Introduction

I share my efforts, accomplishments, and impacts in support of my promotion request from CE Advisor Associate Step 3 to Full Title, Step 1. In my role as 4-H Youth Development Advisor in Marin, Sonoma, and Napa counties, I have focused my efforts, through a needs assessment, on providing youth development and out-of-school time (informal) science education to young people, with an emphasis on reaching marginalized youth. Core to this effort have been preparing professionals and 4-H adult volunteer educators to improve program quality, and thus improve youth development outcomes.

Needs. In order to become healthy, happy, and thriving adults, youth need positive relationships with caring adults, opportunities to serve in leadership roles, and meaningful skill-building experiences (Lerner, 2004; Roth & Brooks-Gunn, 2016). Unfortunately, many youth experience “opportunity gaps” in participation in high quality youth development programs. For example, 4-H is underserving Latino youth, thus to better reach Latino youth, 4-H programs must adapt to the needs and experiences of these youth. Additionally, scientific literacy is a core competency for young people’s future career readiness and participation in public discourse (NAS, 2007); however, scientific literacy is low, with only 22% of U.S. high school seniors demonstrating proficient or advanced levels on science tests (NCES, 2016). Reflecting national trends, test scores indicated only 29% of Sonoma, 46% of Marin, and 26% of Napa 5th graders met or exceeded standards for science (CDE, 2019). Research has shown that out-of-school science learning improves scientific literacy (NRC, 2009). Furthermore, in 4-H, adults serve as volunteers who become the primary drivers of program quality (O’Brien, 2017). While the breadth of skills volunteers bring varies, most adults are not trained educators with competency in youth development principles. Thus, my program focuses on the core idea that improving volunteer competencies, the experience for 4-H members will be improved, thus leading to stronger youth development outcomes.

Condition changes. I am promoting **healthy people and communities** and **developing a qualified workforce for California** by adapting, piloting, and evaluating 4-H program models to be culturally relevant and reach marginalized youth with science education; and developing educational materials to allow 4-H adult volunteers to implement higher quality youth development and/or science education programs. I investigated promising practices of youth development programs that may be documented, peer reviewed, and distributed (as curricula, handbooks, and fact sheets) to other 4-H and youth development professionals. I continue to demonstrate professional competency by serving as a peer reviewer for scholarly journal articles (11 reviewed); Associate Editor for 4-H Science, Technology, Engineering and Math; and the 2019-2021 chair of the academic assembly personnel committee.

My academic program shows evidence of growth, balance, and accomplishments in all four advancement criteria and outreach/diversity commensurate with full title expectations. In my time as an Associate CE Advisor, I have begun to realize youth behavior change, particularly around strengthened indicators for **college readiness**, growing **civic awareness**, and improved **social-emotional health** (also referred to as positive youth development). I published 8 peer reviewed scholarly journal publications, 3 peer reviewed curricula, and 20 peer reviewed ANR 8000-series fact sheets. I was recognized for my leadership and expertise nationally, with a 2018 Meritorious Service Award from the National Association of Extension 4-H Youth Development Professionals. I served as PI or Co-PI on nine projects totaling \$811,813.

My narrative is divided into four themes, each aligning with a clientele and anticipated outcomes. For each theme, I describe my efforts and accomplishments in the four advancement criteria, and summarize the impact of my work.

Theme 1: Diversity, equity, and inclusion in youth development

Clientele: Educators (4-H volunteers and afterschool professionals).

Goal: Serve youth with culturally relevant programs; explore models of culturally relevant programming.

Summary. My work sought to improve the cultural relevancy of youth development programs, such that barriers to participation were mitigated, marginalized youth felt welcomed, youth were prepared to participate vigorously in civic discourse, and that my communities moved to more equity in offering youth development opportunities. I adapted, implemented, and evaluated program models that are now being shared through scholarly publications to 4-H and other youth development professionals. This work included developing partnerships with afterschool educators to implement programming with youth.

Funding. I served as PI/Co-PI on 4 grants with 9 UC academics. I highlight two here: (1) PI for a 2017 ANR Competitive Grant (\$194,768) exploring a civic science (youth participatory action research) approach to reaching marginalized youth with science education; and (2) PI for the *National 4-H Mentoring Program* (\$57,500 from Office of Juvenile Justice and Prevention), to implement college readiness programming for high school students.

Applied research and creative activity. My primary research activity was serving as the evaluation chair for the UC 4-H Latino Initiative (2016-2019), guiding 9 UC ANR academics in documenting efforts to establish relationships with Latino communities, exploring promising practices in delivering culturally relevant programs, and assessing program effectiveness. This work resulted in 2 peer reviewed scholarly journal publications for which I was the lead author. In the *Journal of Youth Development*, we published an interview study of new bilingual staff where we found they faced a steep learning curve, with competing demands to build relationships, engage youth, and show results. The paper has implications for future diversity efforts with new staff. This study prompted the development of a handbook for new staff (submitted for ANR series 8000 peer review; I am the lead author). The second study analyzed youth in new programs and found that adaptations to strengthen the cultural relevance of 4-H programs increased the number of Latino youth while realizing similar youth development outcomes to more traditional 4-H programs. This paper, published in *California Agriculture*, has implications nationally to develop a “universal definition of 4-H member” inclusive of new and adapted program models.

Extending knowledge and information. My extension efforts focused on developing and implementing culturally relevant programs to reach marginalized youth and youth of color, led by volunteers and UC staff. Programs included initiating a 4-H elementary-aged soccer league (n=132; soccer was a culturally valued activity we used for entry into communities to begin establishing relationships), offering short-term programs at library branches (n=248), delivering a college readiness program (n=25), running between 5 and 10 elementary 4-H afterschool clubs annually (n=234), and conducting a youth participatory action research project (n=20). Most youth were Latino, so many programs were offered in Spanish, with sessions led by teenage volunteers coached by an ANR 4-H staff. I aided in identifying content, including soccer/athletics, arts, science, and civic engagement that were of interest to youth. A successful program was a college readiness program called Juntos (meaning “together” in Spanish). For three years, 21 8th grade students and 34 high school students participated in family workshops, weekly club meetings, and success coaching. I also supported the Sonoma 4-H CES to pilot an innovative program combining athletics and community service – Clover Soccer League – with funding from Goodwin Memorial Trust (\$7,450). The program served 62 4-6th grade students with adults and 15 high schools students serving as coaches and referees. To extend promising practices with youth development professionals, I co-authored a toolkit for engaging Latino youth (ANR 8000-series publication), comprehensive three-year report on the 4-H Latino Initiative (white paper), and 3 scholarly conference presentations. Furthermore, I provided evaluation technical assistance to the San Rafael (Marin) Learning Enrichment in Afterschool Program, helping them demonstrate the value of their programs for underserved Latino youth partially from the educator training workshops I delivered. Figures 1 & 2

demonstrate developmental relationship and learning outcomes from the evaluation I conducted of their afterschool programs.

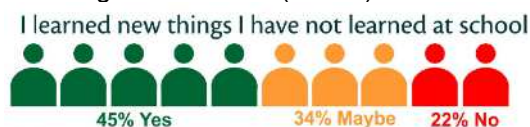
Figure 1

1-3rd grade students (n=104)



Figure 2

4th-8th grade students (n=211)



Impact- ANR Reach. My efforts realized positive results in growing program participation. For example, in a 2 year period¹ (2017 to 2019), Sonoma 4-H youth enrollment grew by 78% (1,160 to 2,070), Marin by 328% (1,395 to 5,970), and Napa by 408% (619 to 3,143). These numbers exceeded the UC ANR Goal 2 benchmark to serve 3% of California’s youth; in 2019, Sonoma served 3.7%, Marin served 12%, and Napa served 17%. Furthermore, growth in Latino youth participation over 2 years¹ (2017 to 2019) increased in Sonoma 154% (266 to 675), Marin 79% (1077 to 1927), and Napa 1546% (90 to 1481).

Impact- Behavior Change. Measuring long-term impacts resulting from youth development work often takes decades as youth need time to become adults. Previous research demonstrates positive impacts to youth who have participated in 4-H. For example, 4-H members are nearly four times more likely to make contributions to their communities, two times more likely to be civically active, and two times more likely to make healthier choices (Lerner, Lerner et al., 2013). More specifically within my program, 4-H Juntos was implemented at a high school that only has a 72% graduation rate (compared to 85% statewide) with English learners and recent immigrants. These students reported an improved sense of belonging at school, stronger academic focus, and improved engagement with school personnel, which indicates positive trajectories towards high school completion (Stout & Christenson, 2009). Additionally, 3 students have graduated thus far; while the others who were in 9 and 10th grade during the Juntos program are now in their senior year and on track to graduate. Students in the civic science project have shown a growing civic awareness (critical reflection on social issues) as well as improved science learning (from preliminary qualitative findings). These are strong indicators of growing political efficacy and critical action, qualities we strive for in effective public leaders. However, these benefits have not been available to all youth, so my efforts to adapt and expand 4-H to Latino youth will reduce disparities and make these powerful formative experiences available to more youth. These outcomes support increased civic engagement and increased effective public leaders and lay the groundwork for increased diversity and inclusiveness in California.

Professional competence and activity. During my time in Associate rank, I improved my competency and began to contribute to the scholarly literature, present at professional conferences, and serve as PI/co-PIs on several grants. I am a member of the American Educational Research Association (AERA) and the International Society for the Learning Sciences, professional societies for learning and education and committed to equity; I served as a peer reviewer for AERA annual meeting papers in 2019 and 2020.

University and public service. I was the co-leader of the ANR positive youth development program team where I led a multi-day meeting for 70 UC academics and staff around *multicultural youth development* (March 2019). Participants improved their awareness of strategies to implement programs to embrace diversity and foster inclusion. I am a member of the ANR diversity in youth development workgroup where I led the publications committee; I am the first author on a handbook to help new staff welcome marginalized youth into 4-H. Furthermore, I was a member of the State 4-H Multicultural and Community Advisory Committee where I helped a group of external stakeholders think through adaptations needed to the 4-H program to reduce barriers and ensure all youth felt welcome in 4-H.

¹ Following statewide trends, 4-H enrollment decreased in my counties during the pandemic.

Theme 2: Youth scientific literacy

Clientele: Educators (4-H volunteers and afterschool professionals) who work with youth.

Goal: Strengthen educator competence in facilitating science learning to improve youth scientific literacy.

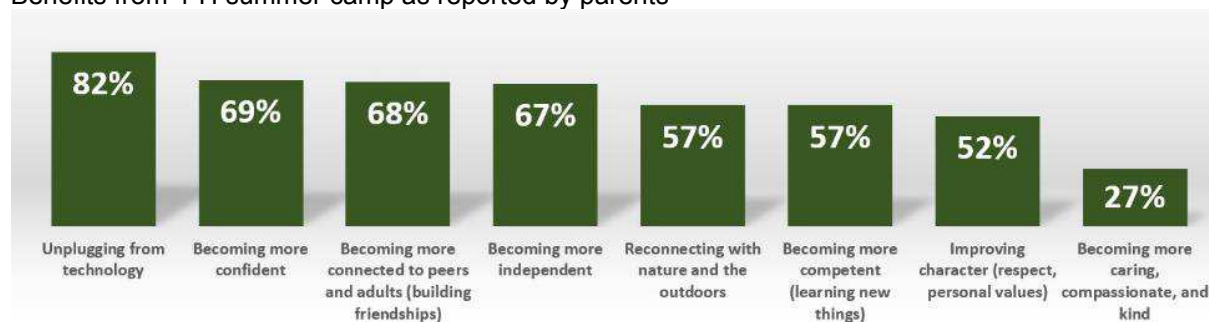
Summary. My work strengthens how educators, both volunteer and professional, facilitate experiential and inquiry-based science education, thus my efforts contributed to improved scientific literacy. My efforts focused on extension, because I had already conducted informing research as a 4-H Academic Coordinator (e.g., conducted and published a needs assessment, co-authored a definition of scientific literacy, exploration of volunteers' pedagogical practices). I deepened collaborations with afterschool organizations where I provided extension workshops, provided information to 4-H camp directors, and began leading the planning of a 10,000-person community science festival (scheduled for March 2022). These partnerships were essential in expanding CE's reach to improve science education.

Funding. I served as Co-PI on a grant with 6 UC academics (\$246,000; computer science funded by Google), UC lead for a local afterschool "Kids Code" project (\$5,000), and curriculum developer for a sustainable polymer curriculum (\$6,095).

Applied research and creative activity. I co-authored several curricula. First, an NSF-funded curriculum, *Sustainable polymers: Taking action to solve the challenge of plastics*, consisted of two grade strands (grades 3-5 and grades 6-8). Working with a UC Davis specialist, we incorporated a novel approach to support youth in engaging in meaningful, authentic application of their learning through self-determined projects in civic science, geo-inquiry, or youth participatory action research. The curriculum passed national 4-H peer review and will be available for sale nationally through shop4-h.org. I also worked with ANR colleagues to edit and publish a curriculum with an innovative approach integrating youth development concepts with science education concepts, *iThrive: Leadership, Science and Me!* which also passed national 4-H peer review and will be available through shop4-h.org.

Extending knowledge and information. I focused on extending knowledge to educators, both volunteer and professionals, to strengthen how they delivered science education to youth. I provided multi-hour sessions to afterschool professionals (9 sessions) in Marin and Napa counties around experiential learning, asking productive questions, computer science, and embedding science into curricula. Educators reported statistically significant improvement in knowing how to ask productive questions, how to select a teaching approach to fit learning objectives, and their confidence in leading science activities. Another successful activity was partnering with a local fair CEO to host a youth agriculture and animal science field day (n=350) to provide agricultural education. I recruited ANR specialists, advisors, and community partners to teach sessions; Dr. Temple Grandin, a renowned author on animal behavior, was the keynote. Nearly 100% of participants agreed that the event was an effective learning experience and that they improved their knowledge of an agricultural-related topic. I also led and/or organized several STEM events for youth. For example, I led an extension activity titled 4-H Environmental Science Institute (spring, n=28) to strengthen environmental education practices, targeting teenagers and adults who would be leading sessions at their summer camps. While participants agreed it was a valuable learning experience, my field observations of summer camps themselves revealed that the Institute was not successful in improving environmental education. Other forms of training are needed to fully realize high quality environmental education. Even with mixed results, my work to support summer camp programs in other ways has benefitted hundreds of youth. Three years of camp evaluations have shown that campers and teenagers rate an overall high level of affinity for nature, while parents consistently mark the main benefits camp provided their child was "unplugging from technology" (see Figure 3).

Figure 3
Benefits from 4-H summer camp as reported by parents



Finally, I began involvement – initially as public service – with the North Bay Science Discovery Day, an annual science festival designed to spark ~10,000 young peoples' curiosity for science, strengthen the North Bay's science learning ecosystem, and bridge across sectors to deepen and sustain youth science learning. Unfortunately, the October 2019 event was cancelled minutes before opening because the venue was utilized as an emergency evacuation center due to the Kinkaid wildfire. Starting in November 2019, I assumed the *chair* role and began a stakeholder change process that resulted in the event being moved to March 2021. Of course, now I am working with stakeholders to transition to a virtual event on March 13, 2021 (with the next in-person event scheduled for March 2022)! What began as my desire for public service became part of my extension program around scientific literacy. UC ANR became the official host of the event under my leadership, increasing ANRs visibility in the community.

Impact. There is evidence that my various extension projects were successful in meeting their objectives, based on evaluation specific to the project. Together, my work to strengthen youth scientific literacy – through extension with educators and delivering short-term science engagement – will likely benefit individuals (workforce readiness, competency to participate in civic discourse around issues of socioscientific value; AAAS, 1990) and benefit California's economic prosperity and national security (NAS, 2007). Looking ahead, I am leading a process based in the ANR science education and extension workgroup to begin to assess longer-term impacts of 4-H science education programs.

Professional competence and activity. My work in science education began as an ANR Academic Coordinator in 2009 and has been sustained in my new role by serving as a reviewer for the *Journal of Extension* (2 science education-oriented articles); presenting a conference presentation on the sustainable polymer project at the National Association of Extension 4-H Youth Development Professionals (NAE4-HYDP); guest lecture to the UC Davis Science Education and Outreach Program class; and presenting a webinar on the definition of scientific literacy to the NAE4-HYDP STEM Working Group. I am a member of the professional society, National Association for Research in Science Teaching and Learning.

University and public service. As the co-leader for the ANR science literacy program team, I co-hosted a meeting for 18 UC academics with a co-presented workshop on “curriculum development” and a program showcase for peer networking. As the chair for the ANR science education and extension workgroup, I led a project to curate our 10 years of science education efforts to a [youth science education resource hub](#). I also serve as the ANR Associate Editor (STEM) and facilitated the review of an animal behavior curriculum. Additionally, I chaired the 4-H STEM Education Advisory Committee.

Theme 3: Volunteer development

Clientele: 4-H adult volunteers.

Goal: Strengthen volunteers' competence to improve program quality and promote youth development.

Summary. My work improved volunteer competence and confidence to facilitate and deliver high quality youth development and informal science education programming, while also advancing the field of youth development volunteerism. Emerging research has shown that adult volunteers are one of the most important contributors to high program quality (Smith et al., 2010). Thus, training is needed to improve educator practice; however, traditional 4-H volunteer development (one-time expert-driven workshops) are ineffective in improving educator practices (Penuel et al., 2007; Smith, Worker et al., 2017). Thus, I engaged in efforts to explore volunteer experiences and test new models of volunteer development. These efforts were designed to improve volunteer competencies to contribute to improved program quality, and thus ultimately lead to better youth outcomes.

Applied research and creative activity. My work sought two research objectives. (1) Study to explore 4-H volunteer contributions and outcomes through a qualitative study (n=1,245). Findings will help 4-H professionals place volunteers into specific roles that improve retention and empower volunteers to make impacts on 4-H programs, thereby improving their satisfaction and feelings of accomplishment (see Figure 4). An unexpected result of the work was a recommendation to recognize that the beneficiaries of youth development work include *adults* who continue to learn and grow in their volunteer roles. (2) The second project was to pilot-test more effective approaches to volunteer development/training to replace (or improve) traditional episodic workshops. We tested *lesson study* model of professional development and found that it is a viable option for volunteer development to help improve the teaching practices of volunteer educators (paper published in *Journal of Youth Development*). Furthermore, while most research on volunteer development assumes (and hopes) that improving educators' practice will improve youth outcomes, there is a lack of research testing this empirically. In my local instance of the project, I explored the relationship and found that youth showed statistically significant improvement in five of six assessed learning objectives. These two studies resulted in three peer reviewed scholarly journal articles and two conference presentations at National Extension Conference on Volunteerism 2019 and the World Association of Lesson Study 2020.

Extending knowledge and information. My extension efforts focused on providing extension workshops to 4-H volunteers; for example, organizing and co-presenting club leader orientations to help orient them to their roles (over three years, n=168). In response to the pandemic, I contributed to the development of statewide resources for adapting 4-H activities to a virtual setting, including the [4-H Virtual Toolbox](#), *How To Guide for Virtual 4-H Presentation Events*, and 3 series 8000 ANR peer reviewed fact sheets on online learning. I also served as the technical editor and authored 4-H Project Sheets, peer reviewed and published as 8000-series ANR publications (I was first author on 14 project sheets). Project Sheets are designed to provide 4-H volunteer project leaders suggested topics around 4-H youth project areas.

Figure 4
Results from the volunteer impact study



Impact. Research strongly suggests that high quality youth development programs, facilitated by capable educators improve a host of important youth development outcomes, including academic performance, civic engagement, workforce preparation (Borden, Schlomer, & Wiggs, 2011; Lerner, 2007; NRCIM, 2002; Pozzoboni & Kirshner, 2016). My work over the past three years, in collaboration with in- and out-of-state colleagues, has seen the adoption of adapted forms of professional development by California and national 4-H professionals. 4-H is one of the few out-of-school time programs to assess and adopt lesson study, and thus has gained a positive reputation in the World Association of Lesson Study. Furthermore, the two volunteer experience studies have resulted in advancing our knowledge around (a) contributions 4-H volunteers make to 4-H (impacts) as well as personal development (outcomes); and (b) the skills and competencies volunteers self-identified as important for their roles. These findings will support future extension work, priority setting, and ultimate greater impacts over time.

Professional competence and activity. I have improved my own competency by reading relevant literature and being mentored by colleagues. In my time in Associate rank, I contributed to the scholarly literature (3 papers) and presentations at two professional conferences (2019 National Extension Conference on Volunteerism; & 2020 American Educational Research Association).

University and public service. I am an active member of the ANR developing volunteer capacities workgroup, contributing to group projects and serving as the lead for one of the research projects where we submitted an extension publication to ANR peer review.

Theme 4: Academic leadership for 4-H youth development

Clientele: 4-H youth and volunteers.

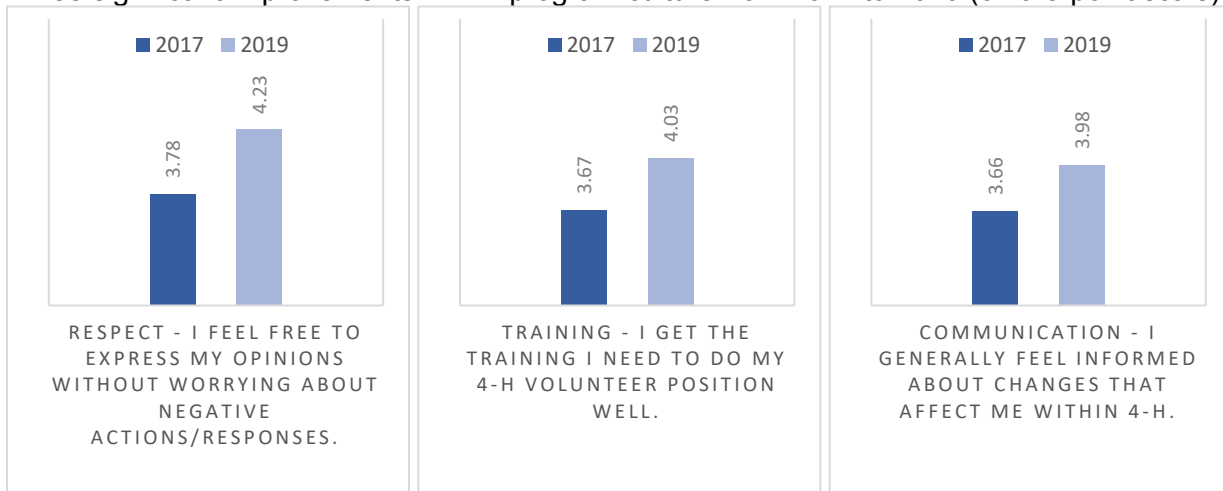
Goal: promote high quality youth development experiences leading to enhanced life skills and social-emotional health.

Summary. My work providing academic leadership across three county 4-H programs improved the cultural climate of the 4-H community club program, while also contributing to the scholarly literature around program quality and embedded evaluation. During this review period, 2 staff retired and 2 took promotional job opportunities requiring that I assume some program management and policy compliance tasks until these positions were filled.

Funding. I served as the academic lead for 4-H community club programs in Marin, Sonoma, and Napa counties where I helped modernize financial procedures; supported ongoing fundraising activities organized by 4-H volunteers that raised over \$700,000; and guided the establishment of a Napa 4-H Legacy endowment.

Applied research and creative activity. My work seeks to strengthen the program quality and welcoming environment of existing 4-H youth development programs, and thus, realize greater youth outcomes such as increased confidence and public speaking abilities. One study used statewide 4-H evaluation data (n=971) to reveal that youth reporting higher levels of program quality (most consistent predictors: emotional safety & relationship building) also reported higher levels of positive youth development outcomes. Another multi-year project was to assess the 4-H climate, environment, and culture in my three counties in 2017 and 2019 (n=196). There has been a positive trajectory over the two years: there is now a firmer belief that 4-H is a high quality youth program; stronger belief that 4-H is moving in a positive direction; respondents agree they are accepted, committed, supported; and fewer reports of experiencing exclusionary, intimidating, offensive and/or hostile behavior. See Figure 5. The results were shared with 4-H volunteer club leaders to help them identify areas in need of improvement. While there are multiple factors involved with the positive results; I believe I contributed by recruiting and supporting good staff, effectively responding to volunteer inquiries, streamlining administrative procedures, and enhancing communication methods.

Figure 5
Three significant improvements in 4-H program culture from 2017 to 2019 (on a 5-point scale)



Another strand of research explored new assessment methodologies as alternatives to traditional self-report, cross-sectional surveys. For example, I developed an evaluation framework to assess learning outcomes by using artifacts designed and built by young people in a 4-H STEM robotics program. Results were published in *Journal of Extension* and presented at the annual meeting of the National Association of Extension 4-H Youth Development Professionals. Efforts to develop, test, and refine new methods for evaluation has tremendous potential to improve ecological validity (i.e., improve the extent to which findings may be generalized to real world settings), decrease participant burden (e.g., reduce the number of surveys youth must complete), and be more sensitive in assessing outcomes.

Extending knowledge and information. I provided academic leadership to 4-H Community Education Specialists, 58 4-H Clubs, 5 weeklong residential camps, 3 County 4-H Councils, 1,663 individually enrolled youth, and 483 adult 4-H volunteers. My efforts included extending research-based information on the [4-H Youth Development in the San Francisco North Bay](#) website, developing resources, mediating complaints, and ensuring programs aligned with the 4-H Program Framework. I helped improve administrative efficiencies by assisting volunteers in moving registration online with credit card payments thus reducing administrative burden for collecting payments. Additionally, I secured resolutions from the Napa, Marin, and Sonoma County Board of Supervisors to celebrate 2018 & 2019 National 4-H Weeks.

In response to COVID-19, I led a team to transition the [State 4-H Field Day](#) (culminating educational event; n=500) to a virtual event in order to help youth maintain some normalcy and continue their learning experiences for as many youth as possible. Youth reported that primary benefits were improving competence (communication skills) and confidence (self-worth) and 95% reported that the event was valuable in improving their communication skills (see Figure 6). Lessons learned will help with other virtual events and improve efficiencies in resumption of an in-person event. I also embedded an applied research study into the evaluation which has provided promising findings on how youth develop their public speaking abilities; this is leading to a research study to be reported in future years.

Figure 6
Youth report from the 2020 Virtual State 4-H Field Day

How valuable is the State 4-H Field Day in improving your communication skills?

95% say very valuable or absolutely essential (n=380)



Impact. Assessing impact of academic leadership to 4-H clubs is challenging; however, several anticipated impacts are apparent. Growth on the 4-H environment and culture survey indicates my work is resulting in improved perceptions of the 4-H program across three counties. Building a more welcoming environment is a good step in making 4-H more accessible to all youth (Roth & Brooks-Gunn, 2016); thus, helping youth realize positive youth development outcomes (Lerner, Lerner et al., 2013). Furthermore, new assessment methodologies should improve our ability to rigorously assess youth outcomes and support greater organizational capacity to “move the needle” around program quality.

Professional competence and activity. My work has become more intentional and academic over time, moving from program management to conducting creative activities to help improve targeted areas. Additionally, I served as a reviewer for the *Journal of Extension* (5 youth development articles) and *Journal of Youth Development* (3 articles); and presented sessions at the state 4-H new staff orientation. I was nationally recognized with the National Association of Extension 4-H Youth Development Professionals’ Meritorious Service Award in 2018.

University and public service. I was invited to serve on several statewide 4-H groups to contribute and/or provide leadership; e.g., Chair for the 4-H Presentation Manual Task Force; member of the 4-H 2018-2028 Strategic Planning Core Team and 2020 Pandemic Together-Apart Task Force.

Additional University and Public Service (not related to a theme)

I am committed to giving back to ANR, my local community, and my profession. As my career has progressed, I have assumed increasingly complex leadership and service commitments within ANR. I served as the chair for the academic assembly personnel committee, facilitating a broad overhaul of the annual evaluation and program review dossier guidelines, ad hoc review committee instructions, revisions to the [ANR Policy and Procedure Manual Section 300: Academic Personnel](#). Additionally, I chaired four (and served on two) local staff search committees, I chaired a CE Advisor search committee in 2018, and served on an Academic Coordinator search committee in 2019. Furthermore, I was invited to present at the ANR Needs Assessment Trainings (2018 & 2019).

Affirmative Action Activities

Interwoven with my academic efforts was a commitment to outreach, diversity, and equity for youth, regardless of race, ethnicity, gender (and other protected classes). My first theme (diversity, equity, and inclusion in youth development) provided strong evidence of program efforts to reach marginalized young people as well as advance the field of culturally relevant youth development through publications. Additionally, my efforts to enhance diversity in personnel areas is evidenced by supporting staff activities for 4-H outreach programming, ensuring digital accessibility of publications, and leading the authorship of a publication titled, *Welcoming Diverse Youth into 4-H: A Handbook for 4-H Professionals* (submitted to ANR peer review in June 2020).

Summary

My academic program has become increasingly integrated and balanced. My scholarship has deepened while simultaneously expanding into new and creative directions. My university and public service commitments have broadened in scope and reflect my abilities to lead interdisciplinary teams as well as be a productive contributor on teams. I have begun to see positive indicators of youth improving *college readiness*, growing *civic awareness*, and improved *social-emotional health*; efforts to *promote healthy people and communities* and *develop a qualified workforce for California*. In whole, my accomplishments reflect a trajectory that promises increasing success with time and scholarship worthy of the full title rank. I have based my academic program in locally-identified needs, realized local accomplishments, and have begun to be recognized statewide and nationally. I look forward to continued opportunity to make a difference for UC ANR, California, and beyond.

References

- American Association for the Advancement of Science. (1990). *Science: For all Americans*. Oxford University Press.
- Borden, L.M., Schlomer, G.L., & Wiggs, C.B. (2011). The evolving role of youth workers. *Journal of Youth Development*, 6(3).
- California Department of Education. (2019). *2018-2019 California Assessment of Student Performance and Progress: California Science Test*. Sacramento, CA. Retrieved from <https://caaspp-elpac.cde.ca.gov/caaspp/>
- Lerner, R. (2004). *Liberty: Thriving and civic engagement among America's youth*. Sage Publications, Inc.
- Lerner, R. (2007). *The Good Teen: Rescuing Adolescence from the Myths of the Storm and Stress Years*. New York, NY: Random House, Inc.
- Lerner, R. M., & Lerner, J. V. (2013). *The Positive Development of Youth: Comprehensive Findings from the 4-H Study of Positive Youth Development*. Retrieved from <http://www.4-h.org/About-4-H/Research/PYD-Wave-9-2013.dwn>
- National Research Council. (2009). *Learning Science in Informal Environments: People, Places, and Pursuits*. Washington D.C.: The National Academies Press.
- National Academy of Sciences [NAS], National Academy of Engineering, and Institute of Medicine. 2007. *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/11463>.
- National Center for Education Statistics [NCES] (2016). *The Nation's Report Card: Science 2015*. (NCES 2016-157). Washington, D.C.: Institute of Education Sciences, U.S. Department of Education.
- National Research Council and Institute of Medicine. (2002). *Community Programs to Promote Youth Development*. Washington, DC: National Academy Press.
- Penuel, W. R., Fishman, B. J., Yamaguchi, R., & Gallagher, L. P. (2007). What makes professional development effective? Strategies that foster curriculum implementation. *American Educational Research Journal*, 44(4), 921-958. doi:10.3102/0002831207308221
- Pozzoboni, K. M. & Kirshner, B. (eds.) (2016). *The Changing Landscape of Youth Work: Theory and Practice for an Evolving Field (Adolescence and Education)*. Charlotte, NC: Information Age Publishing.
- O'Brien, D. (2017). How adult volunteers contribute to positive youth development in the twenty-first century. *Queensland Review*, 24(1), 28-33.
- Roth, J. L. & Brooks-Gunn, J. (2016). Evaluating youth development programs: Progress and promise, *Applied Developmental Science*, 20(3), 188-202, DOI:10.1080/10888691.2015.1113879
- Smith, C. et al. (2010). Quality at the point of service: Profiles of practice in after-school settings. *American Journal of Community Psychology*, 45, 358-369.
- Smith, M. H., Worker, S. M., et al. (2017). Prevalent approaches to professional development in state 4-H programs. *Journal of Extension*, 55(4).
- Stout, K. E., & Christenson, S. L. (2009). Staying on track for high school graduation: Promoting student engagement. *The Prevention Researcher*, 16(3), 17-20.

PROGRAM REVIEW DOSSIER SUPPORTING DOCUMENTATION

Funded Projects Summary 2018-2020

Total \$811,813

Theme 1: Diversity, equity, and inclusion in youth development

Culturally Relevant Civic Science Approach to Improving Scientific Literacy for Latino Youth

\$194,768 | ANR Competitive Grant 2017 | April 2018 – June 2021

Principle Investigator | Multicounty project; Local: Sonoma County

Collaborators: Dorina Espinoza, Car Mun Kok, Martin Smith, Sally Neas

National Mentoring Program: California 4-H Youth Futures: College Within Reach

\$57,500 | National 4-H Council from Office of Juvenile Justice and Delinquency Prevention

March 2020 – May 2021

Principle Investigator | Sonoma County

Juntos 4-H: College Readiness

\$220,000 | National 4-H Council from New York Life Foundation | January 2018 – July 2020

Co-Principle Investigator | Local: Sonoma County (~\$20,000 local)

Collaborators: Lynn Schmitt-McQuitty (PI), Russell Hill, Claudia Diaz Carrasco, John Borba

Soccer for Success & 4-H Clover Soccer League (gift)

\$7,450 | Goodwin Memorial Trust | September 2019 – June 2020

Academic Lead | Local: Sonoma County

Equity and Youth Development, Marin County

\$70,000 | County of Marin | May 2016 – September 2018

Co-Principle Investigator | Local: Marin County

Collaborators: David Lewis (PI)

Theme 2: Youth scientific literacy

Growing a 4-H Computer Science Pathway for America's Youth

\$246,000 | National 4-H Council from Google | January 2019 – September 2021

Co-Principle Investigator | Statewide project; Marin & Sonoma Counties

Collaborators: Fe Moncloa (PI), Claudia Diaz Carrasco, Yu Meng, Car Mun Kok, Liliana Vega

Polymer Science Curriculum Development

\$6,095 | University of Minnesota from National Science Foundation | 2014 – July 2021

Curriculum Developer | Statewide project; Marin County

Collaborators: Martin Smith, Univ. of Minnesota Center for Sustainable Polymers (Jennifer Henderson), Minnesota 4-H (Anne Stevenson) & New York 4-H (Alexa Maille)

After School Education and Safety Program Kids Code Grant Pilot Program

\$5,000 | San Rafael City Elementary Schools | February 2019 – June 2021

Content Expert & Coach | Marin County

Lego EV3 educational robotics

\$5,000 | Parker Hannifin Foundation | May 2018 – June 2019

Academic Lead | Sonoma County

Theme 3: Volunteer development - None

Theme 4: Academic leadership for 4-H youth development

4-H community club program in Marin, Napa, Sonoma Counties

\$723,728 | Local fundraising | July 2019 – June 2020

Academic Lead

CES: Diego Mariscal (Sonoma), Suzanne Amaral (Napa), & Linnea van den Toorn (Marin)

Professional Competence and Professional Activity
Professional Development and Training

Theme 1: Diversity, equity, and inclusion in youth development

October 1, 2018 – September 30, 2020

- None

October 1, 2017 – September 30, 2018 (previously reported)

- From the Ground Up: What Works – Guiding Principles and Example Practices for Reaching and Engaging Latino Youth, February 7, 2018, Davis, CA.
- Positive development programs for at-risk native children, November 16, 2017, Santa Rosa.
- Marin Equity Summit, November 9, 2017, San Rafael, CA.
- Understanding Religious Differences in the Workplace (UC Davis), October 23, 2017, Davis.
- Webinar offered by County of Marin on *The Color of Law*, October 18, 2017, online.
- National 4-H E-Academy; sessions Diversity in Youth Development; Social Justice; Working with Homeless Youth, Race relations, LGBT youth, disabled youth, October 2, 3, 16, 17, 2017.
- American Educational Research Association Annual Conference April 13-16, 2018, New York

Theme 2: Youth scientific literacy

October 1, 2018 – September 30, 2020

- ArcGIS online map training, June 14, 2019, Santa Rosa, CA.

October 1, 2017 – September 30, 2018 (previously reported)

- 4-H Camping Institute, November 3-5, 2017, Yosemite
- STEM Hero (water conservation) workshop, October 2, 2017, San Rafael, CA.

Theme 3: Volunteer development

October 1, 2018 – September 30, 2020

- National Extension Conference on Volunteerism, May 13-16, 2019, Billings, MT.

October 1, 2017 – September 30, 2018 (previously reported)

- None

Theme 4: Academic leadership for 4-H youth development

October 1, 2018 – September 30, 2020

- Youth mental health first aid course certificate, May 2-3, 2019.
- National Association of Extension 4-H Agents Conference, November 4-6, 2019, White Sulphur Springs, WV.

October 1, 2017 – September 30, 2018 (previously reported)

- California 4-H Statewide Teens-as-Teachers Workshop, June 11, 2018, Davis

Other

October 1, 2018 – September 30, 2020

- ANR Grant Essentials Summit, September 27, 2018.
- ANR Conducting a Needs Assessment Training, Sept. 7, 2018 & Sept. 24, 2019.

October 1, 2017 – September 30, 2018 (previously reported)

- None

Professional Competence and Professional Activity Professional Societies¹

Theme 1: Diversity, equity, and inclusion in youth development

1. American Educational Research Association (since 2012)

- Member of the division of learning and instruction; special interest groups (SIG) adolescence and youth development, informal learning; learning sciences; and out-of-school time.
- Served as a paper peer reviewer for the out-of-school time SIG in 2017, 2019, and 2020.
- Submitted paper for peer review, accepted for digital poster at the 2020 virtual conference.

2. International Society of the Learning Sciences (since 2014)

- Submitted research papers to 2018 (unsuccessful) annual conference.

3. ESP: Epsilon Sigma Phi: Latino Advisory Group (Extension Professionals) (2016-2018)

- Helped prepare presentations for the 2017 and 2018 conferences.

Theme 2: Youth scientific literacy

4. National Association for Research in Science Teaching (since 2012)

- Submitted a research paper (unsuccessful) for their annual conference 2018.

5. California Association of Science Educators (since 2014)

Themes 3 & 4: Volunteer development & Academic leadership for 4-H youth development

6. National Association of Extension 4-H Youth Development Professionals (since 2002)

- *Meritorious Service Award* recipient, October 2018.
- Member STEM Working Group; participate in monthly meetings.
- Attended and presented at 2019 conference.

¹ I did not serve in a leadership role in a professional society during the review period. I made this decision after prioritizing time availability and grant project needs. I plan to seek deeper involvement in several committees in the coming years. I continue to submit proposals, when appropriate, for professional society annual meetings.

UC ANR Program Teams and Workgroups

Theme 1: Diversity, equity, and inclusion in youth development

- Positive Youth Development program team (chair 2017-2019, member 2012-ongoing). 2019: Facilitated team meeting - *Multicultural Youth Development: Embracing Diversity – Fostering Inclusion* – March 18-20, 2019, Davis. 2018: Co-facilitated April 11, 2018 meeting.
- Diversity in Youth Development workgroup (member 2017-ongoing). Coordinated development and first author on *Welcoming Diverse Youth into 4-H: A Handbook for 4-H Professionals*, under ANR peer review 8000 publication.

Theme 2: Youth scientific literacy

- Scientific Literacy program team (chair 2018-ongoing). 2019: Planned and facilitated team meeting Oct. 7, 8, 9, 2019, Santa Rosa, CA. Co-presented a “4-H Curriculum Development 101” workshop for 4-H professionals.
- Science Education and Extension workgroup (chair, 2017-ongoing). Established resource website hub, recruited new academic members, developed plan of work.

Theme 3: Volunteer development

- Developing Volunteer Capacities workgroup (member, 2014-ongoing). Active contributor to the 4-H volunteer experience survey, resulting in several publications and conference presentations. Contributing to revision of the 4-H Project Leaders Digest guide.

Serving as a Peer Reviewer

- Peer reviewed 3 manuscripts for *Journal of Youth Development* (Sept. 2018 – Sept. 2019).
- Peer reviewed 8 manuscripts for *Journal of Extension* (May 2019 – September 2020).
- Peer reviewed conference papers (in 2019 and 2020) submitted to the out-of-school time special interest group for the American Educational Research Association 2018, 2020, and 2021 annual conferences.
- Reviewed 15 workshop proposals to the Western Regional 4-H Leaders Forum, October 2017.

Presentations at UC and Professional Society Meetings and Seminars

Theme 1: Diversity, equity, and inclusion in youth development

October 1, 2018 – September 30, 2020

- Helped prepare presentation for the Nineteenth International Conference on Diversity in Organizations, Communities, & Nations, June 5-7, 2019, Greece. Type: Talk. Title: *Diversifying the University of California 4-H Youth Development Program: Evaluation and Impacts of a Seven-County Latino Initiative*. Authors: L. Schmitt-McQuitty, S. Worker, J. Borba, L. Fabregas, R. Hill, M. Bonaparte Saller, C. Diaz Carrasco.
- Helped prepare presentation for the Epsilon Sigma Phi Conference, October 2, 2018, Manhattan, KS. Type: Talk. Title: *University of California 4-H Latino Initiative: Lessons Learned from New Bilingual Staff*. Authors: M.G. Fabregas Janeiro, S. Worker, C. Diaz Carrasco, K. Soule.
- eXtension Diversity, Equity, and Inclusion Community of Practice, October 23, 2018. Type: Webinar. Title: *California 4-H Embracing Diversity and Fostering Inclusion ... Not an easy Task!* Authors: L. Fabregas & S. Worker

October 1, 2017 – September 30, 2018 (previously reported)

- Presented talk at American Educational Research Association, April 16, 2018: “Exploring What Teens Describe as their Contributions in Teenagers-as-Teachers Programs”.
- Posters at the UC ANR Statewide Conference, April 2018, Ontario
 - Authors: Bonaparte-Saller, M., Borba, J., Diaz, C., de la Fuente, M., Fabregas, L., Hill, R., Schmitt-McQuitty, L., Soule, K. E., & Worker, S.
Title: UC 4-H Latino initiative: Kern, Merced, Monterey, Orange, Riverside, Santa Barbara, Sonoma.
 - Authors: Keaney, A., & Worker, S.
Title: Marin county 4-H equity in youth development.
 - Authors: Kok, C. M., Worker, S., Espinoza, D., Miller, J., & Go, C.
Title: Exploring the 4-H adult volunteer experience.
- Helped prepare presentation for the Epsilon Sigma Phi Conference, October 11, 2017, Wilmington, NC. Type: Talk. Title: *Evaluating Diversity and Inclusion programs in Cooperative Extension*. Authors: M.G. Fabregas Janeiro, S. Worker, L. Schmitt-McQuitty, C. Diaz Carrasco.

Theme 2: Youth scientific literacy

October 1, 2018 – September 30, 2020

- National Association of Extension 4-H Agents STEM Working Group, April 9, 2019. Type: Webinar. Title: *Focusing 4-H STEM Programs on the Four Anchor Points of Scientific Literacy: Examples from Animal Science, Natural Resources, and Engineering*. Authors: M. Smith, S. Worker, & L. Schmitt-McQuitty.
- National Association of Extension 4-H Agents Conference, November 4-6, 2019, White Sulphur Springs, WV. Type: Talk. Title: *New Physical Science Curriculum for Youth in Grades K – 2, 3-5, and 6-8*. Authors: M. Smith, S. Worker, A. Stevenson, J. Henderson, C. Malone, S. Derue.
- ANR Learning and Development, February 25, 2020. Type: Webinar. Title: *Cultivating Youth Scientists with Youth Participatory Action Research (YPAR)*. Authors: S. Worker, D. Espinoza, C. M. Kok, M. Smith, D. Mariscal, A. Torres, & S. Neas.

October 1, 2017 – September 30, 2018 (previously reported)

- UC Davis Science Education and Outreach Seminar, January 27, 2017 (20), April 20, 2018 (20), and April 17, 2020 (5). Type: Webinar. Title: *Science Learning: Science Education, Next Generation Science Standards, & Curriculum Development Using Backwards Design*. Author: S. Worker.
- Posters and talk at the UC ANR Statewide Conference, April 2018, Ontario
 - Talk: Cultivating youth scientists with youth participatory action research.
 - Poster: Volunteer educators’ pedagogical practices in 4-H STEM projects.

Theme 3: Volunteer development

October 1, 2018 – September 30, 2020

- American Educational Research Association 2020 Annual Meeting, Virtual Poster, 2020. Title: *Volunteer Outcomes: The Consequences of Volunteering in a Youth Development Program*. Authors: S. Worker, C.M. Kok, D. Espinoza, C. Go, & J. Miller.
- California 4-H Association & ANR Learning & Development Webinars.
 - Title: *Volunteer Professional Development and Skills: What do CA 4-H Volunteers Want?* Authors: C. M. Kok, S. Worker, D. Espinoza, C. Go, & J. Miller. September 16, 2020.
 - Title: *Volunteer Outcomes and Impact: The Contributions and Consequences of Volunteering in 4-H*. Authors: S. Worker, C.M. Kok, D. Espinoza, C. Go, & J. Miller. September 30, 2020.

- World Association of Lesson Studies, September 2019, Amsterdam. Type: Paper & Talk. Title: *The Use of Lesson Study in a Nonformal Youth Education Program: A Case Study in 4-H*. Authors: M. Smith, L. Schmitt-McQuitty, S. Worker.
- National Extension Conference on Volunteerism, May 2019, Billings, MT. Type: Talk.
 - Title: *Volunteer Professional Development and Skills: What do CA 4-H Volunteers Want?* Authors: C. M. Kok, S. Worker, D. Espinoza, C. Go, & J. Miller.
 - Title: *The Contributions and Consequences of Volunteering in the 4-H Youth Development Program*. Authors: S. Worker, C.M. Kok, D. Espinoza, C. Go, & J. Miller.

October 1, 2017 – September 30, 2018 (previously reported)

- Poster at the UC ANR Statewide Conference, April 2018, Ontario
 - Authors: Kok, C. M., Worker, S., Espinoza, D., Miller, J., & Go, C.
 - Title: Exploring the 4-H adult volunteer experience.

Theme 4: Academic leadership for 4-H youth development

October 1, 2018 – September 30, 2020

- 4-H New Staff Orientation, January 23, 2020, Davis, CA. Type: Title: *Educational practices: Curriculum, learning theories, pedagogical practices*. Authors: M. Smith & S. Worker.
- National Association of Extension 4-H Agents Conference, November 4-6, 2019, White Sulphur Springs, WV. Type: Talk. Title: *Development of an Evaluation Framework to Assess Learner Outcomes in 4-H Junk Drawer Robotics*. Author: S. Worker.
- ANR Science Literacy Program Team, October 8, 2019, Santa Rosa. Type: 3-hour talk. Title: *Curriculum Development 101 Basics*. Authors: M. Smith, S. Worker, L. Schmitt-McQuitty.
- Prepared three posters for the Society for Research in Child Development, October 2018.
 - Poster Title: *Learning and Personal Development in Youth Development Programs*. Authors: K. Lewis & S. Worker
 - Poster Title: *Volunteer's perceptions of character development in 4-H Youth Development*. Authors: K. Lewis, J. Borba, E. Schoenfelder, J. Miller, R. Hill, D. Espinoza, S. Worker, K. Trzesniewski.
 - Poster Title: *Embedded Evaluation to Assess Youth Development Outcomes*. Authors: K. Lewis, S. Worker, D. Espinoza, C. Diaz-Carrasco.
- Prepared presentation for the National Association of Extension 4-H Agents, October 2018. *4-H Learning and Outcomes Through the Stories of Youth*. Authors: D. Espinoza, K. Lewis, S. Worker, & C. Diaz-Carrasco.

October 1, 2017 – September 30, 2018 (previously reported)

- None

University Service

Theme 1: Diversity, equity, and inclusion in youth development

- Member of the State *4-H Multicultural and Community Engagement Advisory Committee*, October 2016-June 2019.
- Evaluation Co-Chair for the *UC 4-H Latino Initiative* (7-county pilot), April 2016 to June 2019. Published two annual reports and a final report; coordinating process to analyze and publish additional data collected during the initiative.

Theme 2: Youth scientific literacy

October 1, 2018 – September 30, 2020

- ANR *Associate Editor* for 4-H Science, Technology, Engineering and Math (STEM), August 2019-June 2022; coordinated one review (83-page facilitator guide, 152-page curriculum).
- Chair for the State *4-H STEM Education Advisory Committee*, July 2020-June 2021. Revitalized the dormant committee, established plan-of-work, and hosting webinars for 4-H and external clientele.
- UC ANR liaison to the *Los Posadas 4-H Camp, Inc.* nonprofit responsible for maintenance of the summer camp facilities in the Los Posadas State Demonstration Forest, used for seven weeks of 4-H summer camp.

October 1, 2017 – September 30, 2018 (previously reported)

- Supervised UC Davis student intern practicum, September-December 2017

Theme 3: Volunteer development - None

Theme 4: Academic leadership for 4-H youth development

October 1, 2018 – September 30, 2020

- Member of the *State 4-H Together Apart Project* to develop resources for conducting positive youth development programs with limited or no in-person programming; resulting materials available at <https://ucanr.edu/sites/UC4-HResources/>
- Co-Chaired *State 4-H Public Speaking and Communication Advisory Committee*, August 2020-June 2021.
- Chaired *2020 Virtual State 4-H Field Day*; led efforts to transition a 1,500+ person annual event to a virtual setting; led evaluation efforts.
- Chaired *2020 State 4-H Presentation Manual Revision Task Force* charged with revising the manual based on best practices in public speaking, January-November 2020.

October 1, 2017 – September 30, 2018 (previously reported)

- Member on the *4-H Strategic Planning Core Team*, February 2017 to September 2018.

Additional University service not related to a theme

October 1, 2018 – September 30, 2020

- Presented at the ANR Conducting a Needs Assessment Trainings: September 7, 2018 & September 24, 2019 at Davis.
- ***ANR Academic Assembly Personnel Committee***. Member, July 2018-June 2019; Chair, July 2019 to June 2021. Accomplishments:
 - overhaul to the annual evaluation process to better support the annual academic-supervisor appraisal process;
 - significant revisions to the program review dossier resulting in more flexibility, reduced time to prepare, and guideline clarity;
 - definitions developed for balance, trajectory, indefinite status, and accelerations;
 - revisions to ANR program and procedure manual section 300; and

University Service

- Participated in the 2020 Promotion & Tenure Innovation & Entrepreneurship (PTIE) Virtual Summit, September 16-18 to learn more about best practices for the inclusive recognition of innovation & entrepreneurship impact within advancement guidelines.

October 1, 2017 – September 30, 2018 (previously reported)

- Hopland REC Research Advisory Committee, May 2018.
- Presented on the WebANR Café Thursdays, “Planning Makes Perfect: Best Practices for Engaging Webinars”, May 17, 2018.

Academic Recruitments 2017-2020

- 4-H Computer Science Academic Coordinator Member, March-May 2019.
- State 4-H Evaluation Academic Coordinator Member, July-October 2019.
- 4-H Advisor, San Mateo-San Francisco Chair, December 2017-April 2018.

Staff Recruitments 2017-2020

- Napa County Staff Services Analyst Member, March-April 2020.
- Sonoma County 4-H Administrative Aid Chair, December 2019-March 2020.
- Marin County Office Assistant Member, December 2019.
- Napa 4-H Volunteer Program Coordinator Chair, May-August 2019.
- Marin County 4-H Community Education Specialist Chair, April-July 2019.
- 4-H Computer Science Community Education Specialist Chair, June 2019.
- Sonoma County 4-H Community Education Specialist Chair, March-November 2018.
- Marin County 4-H Community Education Specialist Chair, March-August 2018.

Public Service

Theme 1: Diversity, equity, and inclusion in youth development

- Marin Promise, partnership for educational equity; 3rd grade reading action team, December 2016 to August 2018.

Theme 2: Youth scientific literacy

- Served as a judge for the Sonoma County STEAM Showcase “Synopsys”, March 1, 2019.
- North Bay Science Discovery Day, a festival to spark young people’s curiosity for STEM; public service through October 2019, and since transitioned into my Extension program.
- Board Member for The Nature Lodge (non-profit), March 2017-ongoing. Mission to educate about wildlife and ecological conservation and their impact on the world.

Extension Activities

Theme 1: Diversity, equity, and inclusion in youth development

Clientele: youth development volunteers & professionals

- Hosted “California 4-H” exhibition at the Department of Education #**TogetherWeRise Expanded Learning Summit 2020**, open to all 4,500 California expanded learning programs.
- Led **professional development workshops** to afterschool educators on *Educational Practices for Out-of-School Time: Teaching Models & Reflection Strategies*:
 - Marin County Learning Enrichment in Afterschool Program: June 26, 2019 (45).
 - Canal Kids Club, San Rafael: June 17, 2019 (8).
- Presented at the **National 4-H E-Academy** (4-H professionals) on “California 4-H UC Latino Initiative: Fostering Inclusion & Belonging”, October 17, 2017 (518 people).
- Created a [4-H Youth Development in the San Francisco North Bay resource website](#), November 2017-current. Highlight how Cooperative Extension can provide support to out-of-school time organizations.

Theme 2: Youth scientific literacy

Clientele: Educators; 4-H volunteers

- Organized the **Youth Agriculture and Animal Science Field Day**, February 8, 2020, Petaluma, CA to provide agricultural education to 350 youth leaders & adults on agriculture and animal science topics to improve their abilities to raise, care, breed, show, and market animals; raise, grow, or farm plants or fibers. Keynote by Dr. Temple Grandin.
- Organized the **Las Posadas 4-H Camp Environmental Science Institute**, April 13, 2019. Focused on improving the competence and confidence of youth to facilitate environmental education (28 youth and adults).
- Co-hosted **North Bay 4-H Camp Forum** to engage volunteers in evaluation data, March 17, 2018 (12 people).

Clientele: Educators, afterschool professionals

- Led **computer science education training** for Bay Area Community Resources 2 afterschool staff, April 30, 2019, San Rafael, CA (as part of the Kids Code grant).
- Led **professional development workshops** to afterschool educators to improve their confidence and confidence to facilitate STEM education.
 - Marin County Learning Enrichment in Afterschool Program: July 6, 2018 (8).
 - Boys and Girls Clubs of Napa: January 4, 2018 (15), March 23, 2018 (12), September 21, 2018 (22), February 15, 2019 (10), March 22, 2019 (8), and October 18, 2019 (12).
 - Canal Kids Club, San Rafael: June 29, 2018 (12)
- Led workshops on environmental science education at the **California 4-H Camping Conference**; April 7, 2018 (25 people).
- Co-created [Youth Science Education Resource Hub](#), July 2018 – current. Provides professionals a curated collection of informal science education resources.

Clientele: 4-H youth members and marginalized youth

- Co-presented virtual robotics 6-hour track at the California **4-H Computer Science Code Camp**, July 27-31, 2020 (12 youth), Online.
- Hosted **hands-on STEM design festivals** reaching nearly 800 youth:
 - Boys and Girls Clubs of Napa: October 20 and 27, 2017; July 10, 2018; April 17, 2019; October 23, 2019.
 - Sonoma 4-H members, May 19, 2019, Rohnert Park (15).
 - Sonoma-Marin Fair, June 19-23, 2019, Petaluma (100).

Themes 3 & 4: Volunteer development & Academic leadership for 4-H youth development

Clientele: 4-H youth members and 4-H adult volunteers

- Organized “**Clover Day**”, a volunteer development 6-hour event on March 17, 2018 (12).
- Co-organized **4-H club leader orientations** to prepare volunteers for administrative roles.
 - Marin: August 23, 2018 (12 people); August 22, 2019 (15) & August 26, 2020 (15).
 - Sonoma: August 25, 2018 (45 people); August 17, 2019 (30) & August 28, 2020 (22).
 - Napa: August 27, 2019 (13 people) & September 19, 2020 (16).
- Co-developed educational resources for guidance and tips on for 4-H clubs, activities and projects both in-person and virtually during the COVID-19 pandemic – [4-H Virtual Toolbox](#).

PUBLICATIONS (BIBLIOGRAPHY)

(B) Peer Reviewed Scholarly Journal Publications [8 publications]

October 1, 2018 – September 30, 2020

- Worker, S. M.**, Espinoza, D. M., Kok, C. M., Go, C., Miller, J. C. (2020). Volunteer outcomes and impact: The contributions and consequences of volunteering in 4-H. *Journal of Youth Development*, 15(4), 6-31. [doi:10.5195/jyd.2020.847](https://doi.org/10.5195/jyd.2020.847)
[Role: Equal member of the lengthy qualitative analysis process, authored majority of paper; corresponding author.]
- Kok, C. M., Espinoza, D. M., **Worker, S. M.**, Go, C., & Miller, J. C. (2020). Identification of priority skill areas for volunteer professional development. *Journal of Youth Development*, 15(4), 51-67. [doi:10.5195/jyd.2020.876](https://doi.org/10.5195/jyd.2020.876)
[Role: Equal member of the lengthy qualitative analysis process.]
- Worker, S. M.**, Janeiro, M. F., Lewis, K. (2020). Youth in 4-H Latino Initiative programs achieve similar outcomes to youth in 4-H community clubs. *California Agriculture*, 74(1), 148-150. [doi:10.3733/ca.2019a0027](https://doi.org/10.3733/ca.2019a0027)
[Role: Led the study design and write sections of the paper; corresponding author]
- Schmitt-McQuitty, L., **Worker, S. M.**, & Smith, M. H. (2019). Lesson study model of 4-H professional development: Data-Driven improvements to educator practice. *Journal of Youth Development*, 14(1), 131-154. [doi:10.5195/jyd.2019.693](https://doi.org/10.5195/jyd.2019.693)
[Role: Helped with study design, data collection and analysis, and authoring the paper.]
- Worker, S.M.**, Fabregas Janeiro, M. G., Diaz Carrasco, C. P., & Soule, K. E. (2019). University of California 4-H Latino Initiative: Experiences of bicultural and bilingual staff. *Journal of Youth Development*, 14(3), 31-44. [doi:10.5195/jyd.2019.667](https://doi.org/10.5195/jyd.2019.667)
[Role: Led the study design, data analysis, and writing process; integrated co-authored sections; corresponding author.]

October 1, 2017 – September 30, 2018 (previously reported publications)

- Worker, S. M.** (2019). Development of an artifact-based evaluation framework for assessing 4-H learner outcomes. *Journal of Extension*, 57(1).
- Worker, S. M.**, Iaccopucci, A. M., Bird, M., & Horowitz, M. (2019). Promoting positive youth development through teenagers-as-teachers programs. *Journal of Adolescent Research*, 34(1), 30-54. doi.org/10.1177/0743558418764089.
[Role: I coordinated the project. The four authors equally completed data collection and analysis, interpretation, and writing.]
- Worker, S. M.** (2017). Volunteer educators bring their own ideas about effective teaching to a 4-H curriculum. *California Agriculture*, 71(4), 208-213.

October 1, 2018 – September 30, 2020

4-H Fact Sheet Series (8000-series)

- Worker, S. (2021, January). *Online learning fact sheet for the 4-H youth development program: Supporting productive educator practices for out-of-school time* [8697].
- Worker, S. (2021, January). *Online learning fact sheet for the 4-H youth development program: Promoting positive youth development*. [8698].
- Worker, S. (2021, January). *Online learning fact sheet for the 4-H youth development program: Integrating experiential education into the digital realm*. [8699].

iThrive Curriculum

- Worker, S. M.**, Miner, G. M. & Horrillo, S. J. (in press) *iThrive: Leadership, science, and me*. National 4-H Council. [passed national 4-H peer review].
- Worker, S. M.**, Miner, G. M. & Horrillo, S. J. (in press). *iChampion: Leadership, science, and me: Adult volunteer leader guide*. National 4-H Council. [passed national 4-H peer review].

4-H Polymer Science Curriculum

- McCambridge, J., & **Worker, S.** (2020). Front Matter. In Stevenson, A., McCambridge, J., & Mondl, A. (Eds.) (2020). *Sustainable polymers: Plastics of the future for a green, clean world. A 4-H STEM curriculum for Grades 3-5*. NSF Center for Sustainable Polymers.
- Bautista, J., **Worker, S.**, Simpson, E., Panero, A., Breneisen, A., Bain, V., & Smith, M. (2020). Plastics in Your World. In Stevenson, A., McCambridge, J., & Mondl, A. (Eds.) (2020). *Sustainable polymers: Plastics of the future for a green, clean world. A 4-H STEM curriculum for Grades 3-5*. NSF Center for Sustainable Polymers.
- Gullikson, T., Simpson, E., Panero, A., Bautista, J., **Worker, S.**, & Smith, M. (2020). Plastics in Our World. In Stevenson, A., McCambridge, J., & Mondl, A. (Eds.) (2020). *Sustainable polymers: Plastics of the future for a green, clean world. A 4-H STEM curriculum for Grades 3-5*. NSF Center for Sustainable Polymers.
- Keaney, A., & **Worker, S.** (2020). Service Learning. In Stevenson, A., Henderson, J., & Mondl, A. (Eds.) (2020). *Sustainable polymers: Plastics of the Future for a Green, Clean World - A 4-H STEM Curriculum for Grades 3-5*. NSF Center for Sustainable Polymers.
- Henderson, J., Mondl, A., & Stevenson, A., **Worker, S.** (Eds.) (2020). *Sustainable polymers: Taking action to solve the challenge of plastics*. NSF Center for Sustainable Polymers.
- Henderson, J., & **Worker, S.** (2020). Front Matter. In Henderson, J., Mondl, A., & Stevenson, A., Worker, S. (Eds.) (2020). *Sustainable polymers: Taking action to solve the challenge of plastics*. NSF Center for Sustainable Polymers.
- Worker, S.**, Panero, A., Cappa, A. Meehan, C., & Smith, M. (2020). The Plastic Past: Rise of the World's Most Popular Material. In Henderson, J., Mondl, A., & Stevenson, A., Worker, S. (Eds.) (2020). *Sustainable polymers: Taking action to solve the challenge of plastics*. NSF Center for Sustainable Polymers.

- Janeiro, M. G., **Worker, S. M.**, Soule, K., & Mariscal, D. (2019). Toolkits for engaging Latino youth in 4-H programs. [ANR Publication 8640](#).
[Role: Co-authored one of three sections; authored the evaluation section.]

California 4-H Project Sheet Series (8000-series)

- Worker, S. (2019). 4-H economics and business project. [8649].
- Worker, S. (2019). 4-H electricity and electronics project. [8650].
- Worker, S. (2019). 4-H geospatial project. [8651].
- Worker, S. (2019). 4-H making and tinkering project. [8653].
- Worker, S. (2019). 4-H social science project. [8656].

October 1, 2017 – September 30, 2018 (previously reported publications)

Horrillo, S. J., Bird, M., & **Worker, S.** (Eds.). (2019). *Camp activities with a science twist: Enhancing your camp program with fun STEM experiences* [ANR Publication 3554]. Healthy Learning. <https://anrcatalog.ucanr.edu/Details.aspx?itemNo=3554>.

[Role: writing the Introduction and Unit 1, editing the full manuscript based on reviewer feedback, and reviewing draft modules from the publisher.]

California 4-H Project Sheet Series

Worker, S. (2018). 4-H computer & internet project. [8604].

Worker, S. (2018). 4-H energy project. [8606].

Worker, S. (2018). 4-H engineering project. [8607].

Worker, S. (2018). 4-H tabletop gaming (hobbies) project. [8612].

Worker, S. (2018). 4-H horse and pony project. [8613].

Worker, S. (2018). 4-H robotics project. [8622].

Worker, S. (2018). 4-H scientific literacy project. [8623].

Worker, S. (2018). 4-H self- or group-determined project. [8624].

Worker, S. (2018). 4-H video production project. [9625].

Worker, S. (2018). 4-H water conservation project. [8626].

Worker, S. (2018). 4-H public speaking project. [8618].

(A) Popular Press [4 publications]

October 1, 2018 – September 30, 2020

Worker, S. (2019). How 4-H contributes to the development of thriving young people. *Sonoma-Marin Farm News*.

October 1, 2017 – September 30, 2018 (previously reported publications) [9 publications]

Keaney, A., & **Worker, S.** (2018, August). *Marin county equity in youth development: June 2016 to June 2018*. Final 2-year report to the Marin County Board of Supervisors.

Worker, S., & Mariscal, D. (2018, June). 4-H is helping prepare youth for college and career. *Sonoma-Marin Farm News*.

Worker, S. (2018, July). Cooperative extension & 4-H youth development: Programmatic and applied research efforts in the north bay. Report shared with external stakeholders.

(D) Technical Reports [11 publications]

October 1, 2018 – September 30, 2020

Worker, S. M. (2020). Complexity in 4-H youth enrollment: A response to Davy et al. (2020). *California Agriculture*, 74(3), 127-128.

University of California 4-H Youth Development Program. (2020). *University of California 4-H Presentation Manual*. Davis, CA: UC Agriculture and Natural Resources.
<http://4h.ucanr.edu/files/2193.pdf>.

[Role: Chaired the revision task force, contributed content for several areas, and completed the graphic revisions].

Worker, S. (2020). *How To Guide for Virtual 4-H Presentation Events*. Davis, CA: UC Agriculture and Natural Resources.

Worker, S. M., Meng, Y., & Marshall-Wheeler, N. (2020). *2020 Virtual State 4-H Field Day Evaluation Report* [white paper]. University of California, Agriculture and Natural Resources.
<https://ucanr.edu/sites/sfd/files/333685.pdf>

Bell, W., Iaccopucci, A. M., Miner, G. M., Morikawa, S., Kok, C. M., Nathaniel, K. Nayak, R. Schmitt-McQuitty, L., Trzesniewski, K., & **Worker, S.** (2020). *4-H Virtual Toolbox: Guidance and Tips during the COVID-19 pandemic for current 4-H members, volunteers and families*.
<https://ucanr.edu/sites/UC4-HResources/>
[Role: co-authored sections on virtual projects and in-person meeting planning.]

Worker, S. M. (2019, August). *Evaluation Report for Bay Area Community Resources 2019 LEAP Summer Program*. <https://ucanr.edu/sites/YDResources/files/334558.pdf>

Worker, S. M. (2019, July). *Evaluation Report for Bay Area Community Resources Kids Code Summer 2019*. <https://ucanr.edu/sites/YDResources/files/334559.pdf>

October 1, 2017 – September 30, 2018 (previously reported publications)

University of California 4-H Youth Development Program. (2018, September). *UC 4-H strategic plan 2018-2028*. Davis, CA: University of California, Agriculture and Natural Resources.
[Role: Active member of the strategic plan core team.]

Fabregas Janeiro, M. G., & **Worker, S.** (2018, August). *UC ANR 4-H Latino initiative year 2 annual report: July 2017 to June 2018*. University of California, Agriculture and Natural Resources.
[Role: Primary editor, coordinating process, and graphic design.]

Go, C., Miner, G., Miller, J., **Worker, S.**, Kok, C. M., Espinoza, D., & Marshall-Wheeler, N. (2018, September). *California 4-H adult volunteer experience study: Who, what roles, and training needs*. University of California, Agriculture and Natural Resources.
[Role: Contributed to study design and data analysis.]

Worker, S. (2018). *Hamilton LEAP 4-H STEM series*. [adapted curriculum for middle school program].
<https://ucanr.edu/sites/YDResources/Curriculum/>

(E) Published Abstracts [4 publications]

October 1, 2018 – September 30, 2020

None

October 1, 2017 – September 30, 2018 (previously reported publications) [4 publications]

Fabregas Janeiro, M. G., **Worker, S.**, & Soule, K. (2018). Designing 4-H toolkits for increasing engagement with diverse youth audiences. In L. M. Dornier, S. Jeanetta, & C. Valdivia (eds.), *Cambio de Colores: Todos Juntos: Collaboration and Unity in Uncertain Times*. Proceedings of the 16th Annual Conference: June 14-16, 2017, St. Louis, Missouri (pp. 47-51). St. Louis, MO: Cambio Center, University of Missouri.
<http://www.cambio.missouri.edu/Library/2018/2018book.pdf>.
[Role: Contributed to the development, review/editing.]

Worker, S. M., Fabregas Janeiro, M. G., Schmitt-McQuitty, L., Borba, J., & Diaz Carrasco, C. P. (2018). Evaluation youth Latino programs? Here are some ideas. Abstract in the *Cambio de Colores Conference Abstracts* at <http://cambiodecolores.org/2018/2018abstracts.pdf>

Iaccopucci, A. M., **Worker, S. M.**, Bird, M., & Horowitz, M. (2018). Exploring what teens describe as their contributions in teenagers-as-teachers programs. Paper presented at the American Educational Research Association, April 16, 2018, New York, NY. Available in the *AERA Online Paper Repository* at <http://www.aera.net/repository>. doi:10.302/1300764.

Fabregas Janeiro, M. G., **Worker, S.** & Soule, K. (2018). 4-H Toolkit. *2017 Cambio de Colores Proceedings Conference Todos Juntos: Collaboration and Unity in Uncertain Times*. June 14-16, 2017. University of Missouri – St. Louis. MO. Journal No. 19.

From:
Sent: Friday, October 2, 2020 2:01 PM
To:
Subject: FW: Curriculum submission iThrive Leadership Development Series has passed review.

Woo Hoo! So exciting!

I'm working with National on the contract and pre-press info.

I think it would be great if we met and talked about how we want it all bundled.

Will this notice suffice for PR documentation or do we need a letter from National stating we're "in-press".

Warmly,

*As you know, the State of California has issued a shelter-at-home order to reduce the spread of COVID-19 and the state 4-H office people are now working remotely. **We are still here to answer your questions and address needs during this unprecedented situation.***

The information transmitted, including attachments, is intended only for the person(s) or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and destroy any copies of this information.

--

From: "curriculum@4-H.org" <curriculum@4-H.org>
Reply-To: "curriculum@4-H.org" <curriculum@4-H.org>
Date: Tuesday, September 29, 2020 at 10:36 AM
To:
Subject: Update: Curriculum submission iThrive Leadership Development Series has passed review.

Congratulations. The iThrive Leadership Development Series curriculum you submitted has passed review. Below are the comments from the reviewers. No other action is necessary at this time.

REQUEST SUMMARY

Request #: 2133

Title: iThrive Leadership Development Series iThrive Leadership Development Series

Requested by: Gemma Miner

Current Status: Passed Review

Implementation Guidance

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Target Audience

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Quality Content

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Learning Method

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Learnign Style

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Positive Youth Development

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

References Documented

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

4-H Name & Emblem

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Presentation of Information

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Learning Strategies (Professional Development Content only)

Reviewer 1:

Reviewer 2:

Reviewer 3:

Learning Application (Professional Development Content only)

Reviewer 1:

Reviewer 2:

Reviewer 3:

Resource Format (For Resource Content only)

Reviewer 1:

Reviewer 2:

Reviewer 3:

Overall Rating

Reviewer 1: Pass

Reviewer 2: Pass

Reviewer 3: Pass

Comments

Reviewer 1: Thank you for this very comprehensive and important body of work!

Reviewer 2: Very well done set of curriculum.

Reviewer 3: Great resources that help start the process of integrating the THRIVE model. Well laid out and would be easy to use in a variety of programming efforts.

Summary of Publication Examples

These publications demonstrate my expanding professional competence, aligned with my position description, in advancing and extending knowledge. The examples include two peer-reviewed scholarly journal publications and a technical evaluation report.

Peer reviewed scholarly journal publication (category B)

Worker, S. M. (2019). Development of an artifact-based evaluation framework for assessing 4-H learner outcomes. *Journal of Extension*, 57(1). www.joe.org/joe/2019february/rb2.php

Effective evaluation requires the selection of appropriate methods to balance rigor and feasibility. Evaluation methods involving surveys and interviews are familiar; lesser known are methods involving the use of participant-generated artifacts. In this article, I shared my process for developing an evaluation framework to assess learning outcomes by using artifacts designed and built by young people in 4-H Junk Drawer Robotics. Findings demonstrated the potential value of using participant-generated artifacts for outcome evaluation. The process might be replicated in other Extension programs. The manuscript demonstrates my abilities to investigate and share innovative evaluation methods as well as a replicable process.

Peer reviewed scholarly journal publication (category B)

Worker, S. M., Espinoza, D. M., Kok, C. M., Go, C., Miller, J. C. (2020). Volunteer outcomes and impact: The contributions and consequences of volunteering in 4-H. *Journal of Youth Development*, 15(4), 6-31. [doi:10.5195/jyd.2020.847](https://doi.org/10.5195/jyd.2020.847)

The 4-H program relies heavily on volunteers to deliver educational programming, and consequently, fulfill the 4-H mission of helping youth reach their full potential. The manuscript reports on part of the larger 4-H volunteer experience survey data to explore volunteer outcomes (consequences of volunteering on the volunteer) and volunteer impacts (volunteers' contributions to the organization). We collected 1,245 open-ended responses to 2 questions from 4-H volunteers. We applied iterative inductive thematic analysis without a pre-existing coding scheme to each question independently. Volunteers described their impacts on 4-H as expanding and maintaining programs for children, providing support to and teaching youth, and helping to realize youth outcomes. By volunteering, adults reported outcomes including developing skills, improving well-being, and deepening connections with others. The first three authors conducted the analysis, interpretation, and writing; I facilitated the process and led the writing and submission process. The manuscript demonstrates my abilities to lead a research team, explore an important area for volunteer development with implications for practice and research.

Technical report (category D)

Worker, S. M., Meng, Y., & Marshall-Wheeler, N. (2020). 2020 Virtual State 4-H Field Day Evaluation Report [white paper]. University of California, Agriculture and Natural Resources. <https://ucanr.edu/sites/sfd/files/333685.pdf>

Public speaking continues to be a cornerstone of the 4-H program providing informal and formal opportunities for youth to improve their speaking abilities (including a series of county, regional, and state presentation events). However, the program has not been evaluated for effectiveness and questions remain about how to best support youth in developing their public speaking confidence and competence. I led an evaluation effort, surveying youth and comparing with evaluator scores on their presentations, presented with infographics in the six-page report. We found that “mastery experiences” contributes the most to the development of communications confidence. We used the results to improve the [2020 UC 4-H Presentation Manual](#); and plan to expand evaluation efforts in 2021. This publication demonstrates my abilities to conduct rigorous evaluation to improve Extension programs, work positively with colleagues, and communicate data to a lay audience.