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## Response to continuing 4-H youth development in SC during a pandemic: The SC 4-H@Home program

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### **Cover Page Footnote**

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## Response to Continuing 4-H Youth Development in SC During a Pandemic: The SC 4-H@Home Program

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**Abstract.** State mandates imposed by governors during COVID-19 affected extracurricular activities for children and youth. To continue providing 4-H programming during quarantine, Clemson Extension 4-H Youth Development Agents created the SC 4-H@Home program. Daily activities were developed that could be completed at-home using common household items and were delivered via email to registered participants. A survey was conducted at the conclusion of the program that included open- and closed-ended questions to gauge the effectiveness of the program. Results indicate that, overall, the SC 4-H@Home program was beneficial to youth and contributed to their education during the COVID-19 crisis.

### INTRODUCTION

The severity of the COVID-19 crisis was realized in early March 2020, and schools and non-essential businesses were closed to slow the spread. In response to closures, schools were forced to provide distance education for students. Parents scrambled to learn how to support their children's learning efforts online while teachers worked to provide developmentally appropriate virtual lessons for students (Eivers et al., 2020). State mandates imposed by governors also affected student participation in extracurricular activities, such as 4-H clubs. In response, Clemson Extension 4-H Youth Development agents (4-H agents) developed the SC 4-H@Home program to engage youth in experiential learning activities while quarantined at home.

### SC 4-H@HOME PROGRAM DEVELOPMENT AND DELIVERY

One of the primary frameworks for delivering 4-H programs is the Experiential Learning Method (ELM) outlined by Kolb (1984). Using experiential learning opportunities, 4-H programs seek to help youth gain life skills that will successfully transition to adulthood (Norman & Jordan, 2018). These models were the driving factors in the development of the SC 4-H@Home program, which aimed to provide opportunities for families during the 2020 COVID-19 related school closures to keep current 4-H'ers engaged with their county and state 4-H programs. Keeping in line with the ELM framework and grounded in the Targeting Life Skills Model (Hendricks, 1998), 4-H and other program area Extension agents developed at-home lessons that encompassed an array of hands-on, life skill-building activities.

A total of 53 lessons were developed and sent via email to parents/custodians during the COVID-19 related school closures. Lessons were applicable to a variety of ages (ages 5-19), covered an array of topics on the 4-H spectrum (see Table 1), and could be completed at home using common household items as lesson materials. Lessons used a template to organize content and focus the learning around the ELM. Each lesson had a title, subject area, objective, age range, educational introduction with vocabulary, materials list, activity instructions (Do), reflective

**Table 1.** Lesson Themes and Targeted Life Skills

4-H Themes	Life Skills Targeted (Hendricks, 1998)
Animals and Agriculture	Critical thinking, wise use of resources, keeping records
Civic Engagement and Leadership	Learning to learn and community service volunteering
Healthy Lifestyles	Stress management, managing feelings, decision making, self-esteem development, healthy-lifestyle choices
Natural Resources	Self-responsibility, wise use of resources, responsible citizenship, keeping records, decision making
Science and Technology	Problem solving, critical thinking, goal setting, decision making, resiliency

questions (Reflect), conclusion with application (Apply), references, and additional resources (see references for example lesson).

To promote the program, a social media toolkit was created and distributed to South Carolina 4-H Agents to use on county, state, and university social media pages and distribution lists. Registration information was captured using the online event-management platform, Eventbrite, and gathered information such as name of the youth participant, county, state, and country of residence, gender, race, and grade. Once participants were registered, lessons were distributed using Mailchimp, which allowed the team to track the percentage of participants that opened the daily email and, thus, opened the lesson links. In addition to providing lessons, SC 4-H@Home encouraged participants to post photos of daily SC 4-H@Home activities to social media using the tag #SC4H@Home. If social media was not an option for the participant, they could submit photos by email. One photo was chosen randomly each week for that participant to receive a 4-H prize pack in hopes of spreading the word about the SC 4-H@Home opportunity.

Once parents/custodians registered their children, a free lesson was delivered via email each weekday to the parents/custodians. Registration was open to anyone, regardless of age, location, previous 4-H experience, or current 4-H membership and remained open through the end of the school year. Daily SC 4-H@Home lessons were concluded at the end of May 2020. A link to an evaluation was included in three of the daily emails near the end of the program, including the final two. The purpose of the evaluation was to assess the value of the SC 4-H@Home program during the pandemic and to determine the desires of participants regarding the future of SC 4-H@Home.

## PROGRAM EVALUATION RESULTS, FINDINGS, AND DISCUSSION

A total of 2,497 children were registered to participate in SC 4-H@Home, representing 46 US states, one US territory, and eight countries. However, many of the registrants were teachers or group leaders who registered as individuals in order to forward the daily emails to classes or large groups.

Survey data were collected from parents/custodians of youth participants. There were 153 responses from 1,865 unique email addresses to which the survey was sent for a response rate of 8.2%. Data describing the survey participants are listed in Table 2.

A combination of open- and closed-ended questions were utilized for the program evaluation. Closed-ended questions used a mixture of Likert-type scale responses and responses to time-dependent questions. These questions were aimed at assessing the value of the program to participants, time commitments of the lessons, and future direction of the program. The closed-ended questions assessing program value (e.g., Participation in 4-H@Home was beneficial to my child) had a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5) and a neutral option of Neither Disagree nor Agree (3). All closed-ended questions were analyzed for differences in responses. All open-ended questions were coded and themed for a summary analysis.

The marginal means of all respondents, with no stratification, for each of the closed-ended questions indicated that parents/custodians agreed that the SC 4-H@Home program had value for their child during the COVID-19 pandemic (means were between Agree and Strongly Agree; Table 3). The one exception was when parents/custodians were asked: "Participation in 4-H@Home provided a way to feel connected to a larger audience." The mean of

## The SC 4-H@Home Program

**Table 2.** Demographic Information of Youth Represented by Survey Respondents

Demographic Variable	Frequency	Percent
<i>4-H Experience</i>		
No 4-H experience	56	36.7%
With 4-H experience	76	49.7%
No response	21	13.6%
<i>SC Residency</i>		
SC resident	98	64.0%
Non-SC resident	26	17.0%
No response	29	19.0%
<i>Age range</i>		
5–8	77	36.7%
9–11	54	25.7%
12–13	29	13.8%
14–19	20	9.5%
> 19	1	0.5%
No response	29	13.8%

*Note.* Represents total count as reported. Survey participants may have reported demographic variable of more than one child.

**Table 3.** Closed-Ended Evaluation Questions with Means and Standard Deviations, No Stratification

Question	Mean	SD
Participation in 4-H@Home was beneficial to my child. (Q25.1)	4.68	0.73
Participation in 4-H@Home was a good outlet for energy. (Q25.2)	4.43	0.83
Participation in 4-H@Home provided a way to feel connected to a larger audience. (Q25.3)	3.75	0.96
Participation in 4-H@Home provided a sense of normalcy in a daily routine. (Q25.4)	4.05	0.91
Participation in 4-H@Home contributed to my child's education during COVID-19 school closures. (Q25.5)	4.66	0.73
Participation in 4-H@Home motivated my child to spend more time outdoors. (Q25.6)	4.21	0.84
Participation in 4-H@Home provided lessons that I had the resources at home to complete. (Q25.7)	4.40	0.84
Participation in 4-H@Home provided activities that I plan to use again in the future. (Q25.8)	4.58	0.72
To what degrees did choosing the weekly winner of a 4-H prize pack and 2021-22 SC 4-H membership drawn from photo submissions motivate you to complete the activities? (Q26)	3.57	2.66
We estimated that each 4-H@Home lesson would take you approximately 30 minutes to complete, but more or less time could have been invested. Approximately how many TOTAL hours did your child(ren) spend learning from or engaged in 4-H@Home activities? (Q33)	1.84	1.08
Throughout the summer, how often would you like to see opportunities provided by 4-H@Home? (Q36)	2.04	0.64
After summer, how often would you like to see opportunities provided by 4-H@Home? (Q37)	3.33	0.99

*Note.* Represents \* Response categories for each question. Q25.1–Q25.8: 5-point Likert scale from Strongly Disagree (1) to Strongly Agree (5) and Neither Disagree nor Agree (3). Q26: 10-point sliding scale with 0 = Least motivation and 10 = Most Motivation. Q33: <6 hours (1); 6–12 hours (2); 13–18 hours (3); 19–24 hours (4); >24 hours (5). Q36–Q37: Daily (1); Weekly (2); Every other week (3); Monthly (4); Never (5).

**Table 4.** Comment Examples for Open-Ended Questions

Benefit	Comments in open-ended question
Connection	<ul style="list-style-type: none"><li>• “Allows [sic] my kids to feel connected.”</li><li>• “As active 4-Hr’s, this program helped us still feel connected to something larger – rather than completely cut off from everything we love doing. It also allowed us to share 4-H with lots of people, from lots of places. Then we felt connected to them and what they were doing.”</li><li>• “It has helped my girls stay connected to friends and gave them a challenge to look for.”</li></ul>
Education	<ul style="list-style-type: none"><li>• “Provided opportunities to learn in a fun, active way, without pressure.”</li><li>• “The activities were a fun way to promote learning.”</li><li>• “It gave us fun and educational activities to do together.”</li></ul>
Program Improvements	<ul style="list-style-type: none"><li>• “Split activities up by age-group in the future – there were some activities that were geared toward older kids. It would be nice to have an option each day for various age/grade levels.”</li><li>• “It would be great to have a weekly materials list or something that would tell us what we need ahead of each day. For those of us that are in rural areas, and not running to the store as frequently [sic] knowing what we may need so we can pick it up during our regular store visits would be helpful.”</li></ul>

this question ( $\bar{x} = 3.75$ ;  $SD = 0.96$ ; between Neither Agree nor Disagree and Somewhat Agree) showed this was not a strongly perceived benefit, although there is support in the open-ended responses that some parents/custodians felt it was important for their child (Table 4–Connection).

Furthermore, we compared survey responses from parents/custodians based on demographic indicators (Table 2). The only significant difference based on demographic indicators was between individuals with 4-H experience and individuals without 4-H experience in response to the question “Participation in 4-H@Home contributed to my child’s education during COVID-19 school closures” (t-test, p-value < 0.001; Wilcoxon Rank-Sum,  $p = 0.03$ ; Q25.5).

This result implies that individuals with previous 4-H experience are less agreeable to this statement than individuals with no previous 4-H experience. This result may indicate that individuals without 4-H experience found the lessons more novel in nature. However, the mean response for the question ( $\bar{x} = 4.66$ ;  $SD = 0.73$ ; between Somewhat Agree and Strongly Agree) showed that all participants found the program beneficial, and comments in response to the open-ended questions provided further evidence (Table 4–Education).

## RECOMMENDATIONS FOR PROGRAM IMPROVEMENT

An open-ended question was posed asking for suggestions on program improvement. Specific recommendations included:

- either narrow the age range of the targeted audience or include developmentally appropriate adaptations for each lesson
- provide a weekly materials list so parents/custodians can gather materials ahead of time
- send weekly emails with all lessons included instead of daily emails
- social media photo challenge did not impact program participation and could be omitted
- provide a correlation to state educational teaching standards

## CONCLUSION

The SC 4-H@Home program appears to have positively contributed to the education of 4-H-aged youth, both those that are members of 4-H and those that were not members. The open-ended and closed-ended question findings and results both indicate that the SC 4-H@Home program provided value for at-home education. The program appears to have educational benefits to program participants.

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