

Successes and Challenges of a Virtual STEM Program – Qua et al. Appendix A. Survey and Focus Group Materials.

Student Post-Program Survey

1. What effect did the SEO/YES Program have on your interest in Biomedical or Cancer Research?
Increased Decreased No effect
2. Please explain (the above response)
3. What were the top three program highlights for you?
Highlight 1
Highlight 2
Highlight 3
4. Did the program meet your expectations? Yes No Maybe (please explain)
5. What recommendation, if any, do you have to improve your experience during the program?
6. Are you interested in a career in Biomedical or Cancer Research or Health Care?
Yes No Other (please describe)
7. Rank the activities in the order of how much you liked it (i.e., what you liked the most should be 1)
 - a. Virtual Research Project
 - b. Student-mentor interaction
 - c. Lunch and learn seminars
 - d. Near Peer Mentor Meetings
 - e. Learn to Beat Cancer Tutorials
 - f. Current Events Discussions
 - g. Electronic Learning Modules and Teacher Discussions
 - h. Career Cafe Meetings
8. Rank the activities in order of how much you learned from it (i.e., the activity where you learned the most should be 1)
 - a. Virtual Research Project
 - b. Student-mentor interaction
 - c. Lunch and learn seminars
 - d. Near Peer Mentor Meetings
 - e. Learn to Beat Cancer Tutorials
 - f. Current Events Discussions
 - g. Electronic Learning Modules and Teacher Discussions
 - h. Career Cafe Meetings
9. Rank the activities in order of how much you learned about dealing with stress (i.e., the activity where you learned the most about dealing with stress should be 1)
 - a. Virtual Research Project
 - b. Student-mentor interaction
 - c. Lunch and learn seminars
 - d. Near Peer Mentor Meetings
 - e. Learn to Beat Cancer Tutorials
 - f. Current Events Discussions
 - g. Electronic Learning Modules and Teacher Discussions
 - h. Career Cafe Meetings

10. If your school was to go completely online, which activities would you recommend they incorporate into curriculum? (select all that apply)
- a. Virtual Research Project
 - b. Student-mentor interaction
 - c. Lunch and learn seminars
 - d. Near Peer Mentor Meetings
 - e. Learn to Beat Cancer Tutorials
 - f. Current Events Discussions
 - g. Electronic Learning Modules and Teacher Discussions
 - h. Career Cafe Meetings
11. Did you learn about a college that you would like to attend? Yes No
If yes, please list which college(s).
12. Did you learn about a career you are interested in?
If yes, please list which career(s).
13. Describe how you felt about your Wednesday small group (Near Peer Mentors).
14. Did the program increase your knowledge about the following topics?
- | | | |
|---------------------------|-----|----|
| Health and health science | Yes | No |
| Cancer | Yes | No |
| Cancer risk factors | Yes | No |
| Cancer disparities | Yes | No |
15. Did the program interest you in the following areas?
- | | | |
|--|-----|----|
| Pursuing a career in health science or health care | Yes | No |
| Pursuing a career in cancer research | Yes | No |
| Applying to college or professional schools | Yes | No |
16. I definitely plan to attend college. Yes No Maybe (if maybe, please explain)
If yes, what college do you plan to attend?
If yes, what major(s) are you interested in pursuing?
17. I plan to pursue a career in:
18. What factors do you expect will promote or interfere with your career choice?
19. I plan to pursue the following postgraduate degree: MD PhD Other Don't know
20. Do you think the online format was an effective experience for you? Yes No
21. What challenges did you face with the remote laboratory/learning experience?

Faculty Post-Program Survey

1. Was the student prepared for the experience? Yes No
2. Were you prepared for the student? Yes No
3. Was the student interested in the research? Yes No
4. Did the student interact well with lab personnel? Yes No
5. Please rate your opinion of the student's scientific knowledge at the beginning of the project.
Less than you expected
What you expected
More than you expected
6. Did the student's knowledge improve over the summer? Yes No
7. Were there any special problems with the student? Yes No
8. Should we accept the student back into the program next year? Yes No
9. Would you be will to accept the student back into your lab next year? Yes No
10. Do you think your student deserves to be recognized for scientific growth by the Mark Smith Outstanding Research Performance Prize? Yes No
If yes, provide an explanation of why.
11. Do you think your student deserves to be recognized for scientific merit by the Mark Smith Outstanding Research Achievement Prize? Yes No
If yes, provide an explanation of why.
12. Do you think the online format was an effective experience for the student? Yes No
13. Additional comments
14. What challenges did you face with the student working remotely?
15. Please provide any additional comments related to the remote nature and impacts of COVID-19 on this program.
16. Rate your student on the following variables from Poor (1) to Exceptional (5)
How well does your student understand their research topic?
How much has their level of understanding improved from the beginning of the program?
How enthusiastic is your student to learn about the topic and methods?
How much has their enthusiasm for the topic and methods improved from the beginning of the program?
How much initiative does the student show to learn?
How much initiative does the student show to get results?
How much initiative does the student show to determine what their results mean?
How much has the student's initiative improved from the beginning of the program?
How well has the student mastered the techniques taught?
How much improvement have you observed in the student's technical aptitude?
How well does the student use their time in the laboratory?
How much has the student's time management improved from the beginning of the program?
How well does your student critically evaluate their results?
How much has the student's critical evaluation of results improved from the beginning of the program?
How well does your student integrate their results into the "big picture"?
How much has the student's integration of their results into the "big picture" improved from the beginning of the program?

Focus Group Guiding Questions

1. Tell me about your experience in the summer program.
2. Tell me about the role of the program and how it has shaped your future plans.
3. Describe your experience with the Wednesday Near Peer Mentors.