Center for Research, Evaluation, and Assessment

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FIRST NEVADA

FIRST NEVADA SURVEY REPORT 2022-2023

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EXECUTIVE SUMMARY

FIRST Nevada is a non-profit organization promoting robotics programs and STEAM (Science, Technology, Engineering, Arts, Math) education initiatives in Nevada. The 2022-2023 programs—FIRST LEGO League Challenge, FIRST Tech Challenge, and FIRST Robotics Competition— supported STEM-based learning for Nevada's more than 2,600 participating K-12 students. In the Executive Summary, we first summarize the program evaluation, then highlight the main survey outcomes for both participants and adult volunteers (e.g., mentors/coaches). We close with recommendations for future improvements.

Program Evaluation

The overall objective of the evaluation was to capture information on participants' perceptions of the impact of three FIRST Nevada programs on a variety of STEM-related outcomes. Using a pre/post format, the survey was administered in early fall (September 29th through October 21st) and late spring (March 1st through March 27th). It was designed to assess the extent and impact of participating in FIRST Nevada activities, perceptions of the quality of their experience, as well as how their participation potentially affected STEM interest, involvement, identity, and understanding. Questions were framed according to key areas including 1) STEM Intent; 2) STEM Skills; 3) 21st Century Work-Life Skills; 4) Self-Efficacy and Prosocial Skills.

The overall objective of the adult volunteer survey was to capture perceptions of the program's mentorship/coaching training and workshops, support for mentors/coaches, and mentor/mentee relationships, as well as the quality of the FIRST Nevada programs. The adult volunteer survey was administered in late spring (March 1st through March 27th).

Survey Results

Participant scores were consistently positive from pre-test to post-test across key constructs, suggesting sustained interest in and commitment to FIRST Nevada programming, both overall and across individual programs. Results indicate interest in STEM-specific fields (especially technology, less so math), and related activities, as well as confidence in learning, sharing knowledge, and STEM awareness, though students were less sanguine about postsecondary education and career aspirations in Nevada. In particular, FIRST Tech participants reported the most consistently positive results in STEM-related areas, though findings reveal mostly positive outcomes across programs. Survey data also indicate mostly positive outcomes related to work-life skills such as teamwork, problem solving, leadership experiences. Further, results suggest adult mentors made key contributions to student learning and support, helping to usher a strong sense of camaraderie amongst teams across programs. Lastly, comments in an open-ended question inviting participant feedback are supportive of the programs and laudatory of robust student learning experiences. As one participant said, "FTC is the first activity I've put in a lot of participation and hours into in a few years. I joined knowing nothing, but everyone in the club is helping me learn how things work and where to start."

Across the data, adult volunteer surveys suggest high levels of satisfaction with FIRST Nevada programming and agreement that students profited from the program. Overall, volunteers indicated they were satisfied with the level of program support, both in terms of communication and equipment provisions. Trainings were practically useful and preparatory, especially Coaches Corners. Further, volunteers agreed they had impactful relationships with their students, who demonstrated invaluable STEM-related and soft skills, though they were more muted about formal educational impact and career aspirations. Consistent with the survey data, open-ended comments indicated the programs were well regarded. As one volunteer said, "We had an amazing experience, and will do it again next year. The lessons the kids learned were invaluable and we felt lucky to be a part of it all." However, data also invite consideration for providing more robust mentoring support, specifically for first-year volunteers. For example, survey data infer some ambivalence about volunteer

understanding of expectations prior to mentoring/coaching; nearly 10% of respondents indicated they had no prior STEM experiences. A deeper dive into the qualitative data adds further context. As one volunteer explained, "As a new coach, the amount of information was very overwhelming. It would be great to pair a new team with a mentor team or coach - at least someone I felt I could reach out to. Or, have a folder for new coaches that has the information pared down to just the basics. It was challenging to wade through the huge amount of information to find the information you are not quite sure what it is you need."

Recommendations

Results from the student surveys suggest staying the course, continuing to provide STEM-related learning via innovative, real-world experiences. FIRST Nevada continues to attract STEM-minded students motivated to learn and grow, then sustains their motivation and supports their growth across the year of programming. That being said, we suggest efforts to facilitate interest in STEM subjects and soft skills that students may feel ambivalent about, including math and formally presenting information, which are integral to educational and vocational success. Also, despite expressed interest in pursuing STEM educational opportunities and STEM scholarships, results indicate less attention to Nevada postsecondary opportunities and awareness of scholarships for FTC/RTC members. Given students' expressed interest, we suggest increasing awareness of in-state postsecondary options and FIRST scholarships, which remain integral to educational and career ambitions expressed in the data. Lastly, we recommend more consistent efforts to bolster student participation in data collection, namely completing both pre- and post-surveys. Consider incentivizing survey participation and completion to increase consistency with response rates. More robust data will support the capacity to evaluate program impact, supporting more nuanced approaches to program implementation.

Results from the volunteer survey invite consideration for how to better support first-year volunteer mentors/coaches and those without STEM backgrounds, both in terms of effectively messaging program expectations and bolstering support. Thus, as FIRST Nevada looks to build on its successes, we suggest reinvesting in formal mentoring and/or informal collaboration opportunities through which volunteers can exchange ideas, activities, strategies (e.g., how to address student-related issues) and successes. We believe such efforts—whether via formal trainings or informal channels through which members can exchange ideas and receive mentoring (e.g., online resource repositories or virtual meetups)—can close perceived gaps in communication and support continued high-quality implementation.

Introduction

Founded in 2005, FIRST Nevada is a 501(c)(3) non-profit organization promoting FIRST® robotics programs and STEAM education initiatives in Nevada. The mission of FIRST Nevada is to "inspire young people to become science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and foster well-rounded life capabilities including self-confidence, communication, and leadership" (FIRST Nevada, 2022a). FIRST Nevada operates a board of engineers, educators, and business leaders who live and work in Nevada and help guide the organization's direction and programming. They are supported by investments from organizations like Tesla, Nevada National Security Site, the Nevada Department of Education, Vegas PBS, Cox Charities, and Switch.

The organization operates three programs in the state of Nevada. The ***FIRST LEGO League Challenge*** introduces 9-to-14-year-old students in Nevada to "real world engineering challenges by building LEGO-based robots to complete a variety of tasks which simulate real-life technological challenges" (FIRST Nevada, 2022b). This year, the FIRST LEGO League Challenge had 201 teams in Nevada, comprised of more than 1,800 student participants and an estimated 400 mentors/coaches, that competed in several events during the academic year. The ***FIRST Tech Challenge*** is comprised of middle and high school students in grades 7-12 who "compete head-to-head…[by] designing, building, and programming their robots" (FIRST Nevada, 2022c). This year, the program had 52 teams with an estimated 520 student participants and 100 mentors/coaches across the state. Finally, during the ***FIRST Robotics Competition***, teams of high school students compete "under strict rules, limited resources, and time limits…to raise funds, design a team brand, hone teamwork skills, and build and program a robot to perform prescribed tasks against a field of competitors" (FIRST Nevada, 2022d). This year, the program had 26 teams with an estimated 300 students and 50 mentors/coaches competing.

The Center for Research, Evaluation, and Assessment at the University of Nevada, Las Vegas (UNLV CREA) partnered with FIRST Nevada to administer participant and volunteer surveys for the 2022-23 FIRST Nevada program year. The purpose of the participant survey was to understand FIRST Nevada program participant experiences and perceptions during the program year, including their interest, involvement, identity, and understanding of STEM. The purpose of the volunteer survey was to understand the program's mentorship/coaching training and workshops, support for mentors/coaches, and mentor/mentee relationships. In what follows, we describe the survey methodology before delving into findings from the survey results, beginning with the participant surveys then the volunteer survey.

Survey Methodology

UNLV CREA originally developed the FIRST Nevada participant survey during the 2021-22 program year by modeling it after surveys administered by the national FIRST organization in partnership with research organizations. This primarily includes the FIRST Longitudinal Study administered by the Center for Youth and Communities at Brandeis University that asked about STEM interest, STEM activity, STEM careers, STEM identity, STEM knowledge and understanding, academic self-concept, college support, self-efficacy, 21st Century Skills, STEM Course-Taking, Interest in STEM majors, STEM-related college course taking, involvement in college, and STEM-related College grants and Scholarships. Brandeis adapted some of the aforementioned survey questions from existing surveys, including the US Department of Education Educational Longitudinal Study, the US Department of Education High School Longitudinal Study, and existing research (Foutz & Luke 2010; Nugent et al., 2009). Brandeis also developed a few new survey scales. We adopted most of the items from prior surveys, in consultation with FIRST

Nevada. Where needed, UNLV CREA generated additional survey questions. During the 2021-22 program year, the survey was administered only to program participants at the end of the season.

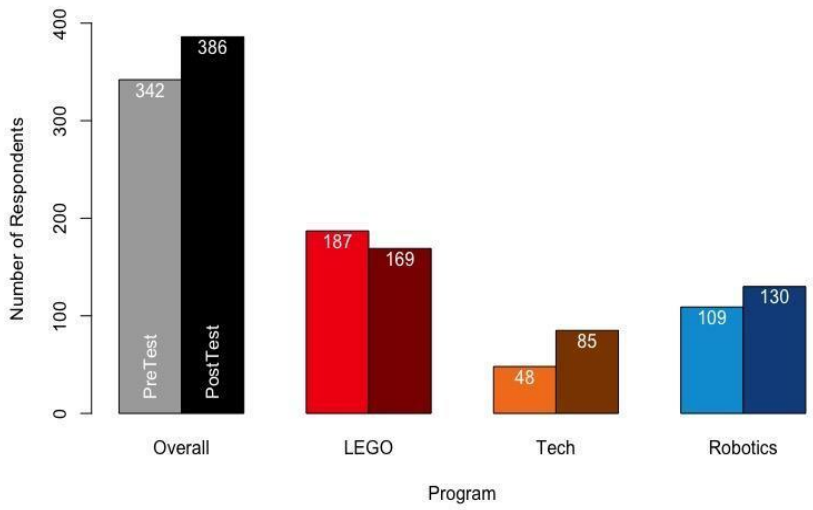
For the 2022-23 program year, FIRST Nevada and UNLV CREA shifted to a pre-/post-program format, allowing for revisions to truncate the instrument, bolstering completion rates, without sacrificing robustness. FIRST Nevada administered the pre-survey directly to program participants via a Qualtrics link beginning on September 29th, 2022, and closed on October 21st. The post-survey was opened on March 1st, 2023, and closed on March 27th. A total of 342 participants completed the pre-survey, and 386 completed the post-survey. However, it is important to note, while pre- and post-tests surveyed the same general population of FIRST Nevada participants, they mostly come from different schools/teams. This infers different individuals took the pre- and post-surveys. As such, differences between pre- and post-survey results should not be attributed solely to FIRST participation. Further complicating data analysis, the small sample size of FIRST Tech's pre-survey, in comparison to the post-survey, makes the calculated statistics more prone to error, often suggesting a larger difference for the FIRST Tech program than may be so. Going forward, adjustments to survey administration procedures that support respondents to participate in both pre- and post-surveys will allow for more rigorous conclusions. Results from the participant survey, including demographics and survey results, are presented below.

FIRST Nevada and UNLV CREA also collaborated to develop a volunteer survey. The survey was administered in late spring, from March 1st through March 27th with 183 completers. The survey measured a range of constructs pertinent to understanding adult volunteer perceptions of FIRST Nevada programming, including support, preparation/training efficacy, volunteer-student relationships, and the overall impact of FIRST Nevada programs on student STEM learning, work-life skills development, and educational/career interests. Results from the volunteer survey, including demographics and survey results follow our presentation of the participant results.

Participant Survey Demographics

As Figure P1 shows, FIRST LEGO League had 187 respondents on the pre-survey, and 169 on the post-survey. FIRST Tech Challenge had 48 and 85, respectively, while FIRST Robotics Competition had 109 and 156, respectively. Tables P1-P4 show participant demographic information, including gender, race/ethnicity, and primary language, both overall and across the three programs, as well as participant geography by school district. See the report's Appendix A Table 2 for the complete list of schools or team names.

Figure P1. FIRST Nevada Participants by Program



In the pre-survey, approximately 64% of respondents identified as male, while 32% identified as female and 4% prefer to self-describe. In the post-survey approximately 61% identified as male, while 36% identified as female and 3% prefer to self-describe.

Table P1. *FIRST Nevada Participants by Gender*

Pre-Survey	**Overall**	**FLL**	**FTC**	**FRC**
Male	215 (64.2%)	100 (55.2%)	27 (57.4%)	87 (79.8%)
Female	107 (31.9%)	76 (42.0%)	18 (38.2%)	17 (15.6%)
Prefer to Self-Describe	12 (3.9%)	5 (2.8%)	2 (4.3%)	5 (4.6%)
Post-Survey	**Overall**	**FLL**	**FTC**	**FRC**
Male	232 (60.6%)	91 (54.5%)	57 (67.1%)	89 (69.5%)
Female	138 (36.0%)	72 (43.1%)	24 (28.2%)	36 (28.1%)
Prefer to Self-Describe	13 (3.4%)	4 (2.4%)	4 (4.7%)	3 (2.3%)
Combined Total	**Overall**	**FLL**	**FTC**	**FRC**
Male	447 (64.2%)	191 (54.9%)	84 (63.6%)	176 (74.3%)
Female	245 (34.1%)	148 (42.5%)	42 (31.8%)	53 (22.4%)
Prefer to Self-Describe	25 (3.6%)	9 (2.6%)	6 (4.5%)	8 (3.4%)

In the pre-survey, approximately 33% of respondents identified as white, 29% identified as Latino/a/x, 12% as Asian, 12% as two or more race/ethnicities, 7% as Black, 6% as Other, 2% as Native America, and less than 1% as Middle Eastern or North African. In the post-survey, approximately 37% of respondents identified as white, 23% identified as Latino/a/x, 14% as two or more races/ethnicities, 13% as Asian, 7% as Black, 4% as Other, 1% as Middle Eastern or North African, and less than 1% as Native America.

Table P2. FIRST Nevada Participants by Race/Ethnicity

Pre-Survey	**Overall**	**FLL**	**FTC**	**FRC**
Asian	39 (11.8%)	15 (8.4%)	9 (19.1%)	13 (12.0%)
Black	20 (7.3%)	16 (9.0%)	2 (4.3%)	2 (1.9%)
Latino/a/x	95 (28.7%)	51 (28.7%)	14 (29.8%)	36 (33.3%)
White	110 (33.2%)	56 (31.5%)	18 (38.3%)	42 (38.9%)
Native American	5 (1.5%)	2 (1.1%)	0 (0.0%)	2 (1.9%)
Middle Eastern / North African	1 (0.3%)	1 (0.6%)	0 (0.0%)	0 (0.0%)
Two or More	38 (11.5%)	21 (11.8%)	4 (8.5%)	12 (11.1%)
Other	19 (5.7%)	16 (9.0%)	0 (0.0%)	1 (0.9%)
Post-Survey	**Overall**	**FLL**	**FTC**	**FRC**
Asian	51 (13.7%)	20 (12.0%)	8 (1.0%)	26 (20.0%)
Black	20 (5.3%)	17 (10.2%)	0 (0.0%)	3 (2.3%)
Latino/a/x	88 (23.6%)	41 (24.6%)	15 (17.9%)	37 (28.5%)
White	140 (37.5%)	49 (29.3%)	49 (58.3%)	39 (31.5%)
Native American	2 (0.5%)	1 (0.6%)	0 (0.0%)	0 (0.0%)
Middle Eastern/North African	3 (0.8%)	2 (1.2%)	0 (0.0%)	2 (1.5%)
Two or More	55 (14.7%)	29 (17.4%)	10 (11.9%)	18 (13.8%)
Other	14 (3.8%)	8 (4.8%)	2 (2.4%)	5 (3.8%)
Combined Total	**Overall**	**FLL**	**FTC**	**FRC**
Asian	90 (12.9%)	35 (10.1%)	17 (13%)	39 (16.5%)
Black	40 (5.7%)	33 (9.6%)	2 (1.5%)	5 (2.1%)
Latino/a/x	183 (26.1%)	92 (26.7%)	29 (22.1%)	73 (30.8%)

White	250 (35.7%)	105 (30.4%)	67 (51.1%)	81 (34.2%)
Native American	7 (1%)	3 (.8%)	0 (0%)	2 (.8%)
Middle Eastern/North African	4 (.6%)	3 (.8%)	0 (0%)	2 (.8%)
Two or More	93 (13.3%)	50 (14.5%)	14 (10.7%)	30 (12.7%)
Other	33 (4.7%)	24 (6.9%)	2 (1.5%)	5 (2.1%)

In both the pre-survey and post-survey, English was the most common first language, as indicated by approximately 83% and 85% of overall responses, respectively. Spanish was indicated by 11% and 9% of respondents, respectively. Other, which included 13 identified languages, was indicated by 5% and 7% of respondents, respectively. See Appendix A Table 1 in the report's Appendix A for the complete list of primary languages.

Table P3. FIRST Nevada Participants by Primary Language

Pre-Survey	**Overall**	**FLL**	**FTC**	**FRC**
English	281 (83.4%)	146 (80.2%)	42 (87.5%)	94 (86.2%)
Spanish	39 (11.5%)	25 (13.7%)	5 (20.8%)	9 (8.3%)
Other	17 (5.0%)	11 (6.0%)	1 (10.4%)	6 (5.5%)
Post-Survey	**Overall**	**FLL**	**FTC**	**FRC**
English	323 (84.3%)	138 (82.6%)	70 (83.3%)	109 (83.8%)
Spanish	35 (9.1%)	17 (10.2%)	7 (8.3%)	11 (8.5%)
Other	25 (6.5%)	12 (7.2%)	7 (8.3%)	10 (7.7%)
Combined Total	**Overall**	**FLL**	**FTC**	**FRC**
English	604 (83.9%)	284 (81.4%)	112 (84.8%)	203 (84.9%)
Spanish	74 (10.3%)	42 (12%)	12 (9.1%)	20 (8.4%)
Other	42 (5.8%)	23 (6.6%)	8 (6.1%)	16 (6.7%)

Across pre- and post-surveys, participants represented 114 unique schools from 10 school districts and the State Charter Authority, including both urban and rural counties in Nevada. There were 36 schools represented on the pre-survey, 61 on the post-survey, including 16 that were on both. In addition, participants represented 33 teams not affiliated with a district or school (e.g., None/Other). See the report's Appendix A Table 2 for the complete list of schools or team names.

Table P4. FIRST Nevada Participants by School District

District	# of Schools
Carson City	3
Churchill	1
Clark County	55
Elko	2
Eureka	1
Lincoln	1
Lyon	1
Nye	3
State Charter Authority	9
Washoe County	5
None/Other	33
Grand Total	114

Participant Survey Results

STEM Intent

Interest in STEM

Figure P2 shows pre-survey and post-survey average differences in interest in STEM-specific fields, both overall and by program. The response scale ranged from (1) I am not interested at all, (2) I am slightly interested, (3) I am moderately interested, (4) I am very interested, and (5) I am extremely interested. Survey data suggest respondents remained very interested in STEM-specific fields, especially technology and engineering. As Figure P2 demonstrates, interest increased slightly between pre- and post-surveys, both overall (grey, black), and by program—FIRST LEGO (red, dark red), FIRST Tech (orange, dark orange), and FIRST Robotics (blue, dark blue). Overall interest in Math had the largest pre-/post-survey increase from 3.51 to 3.70, while interest in Technology slightly increased from 4.15 to 4.22. Across individual programs, the largest increase was FIRST Robotics participants' interest in Engineering (from 3.98 to 4.32).

Figure P2. FIRST Nevada Participant Interest in STEM-Specific Fields

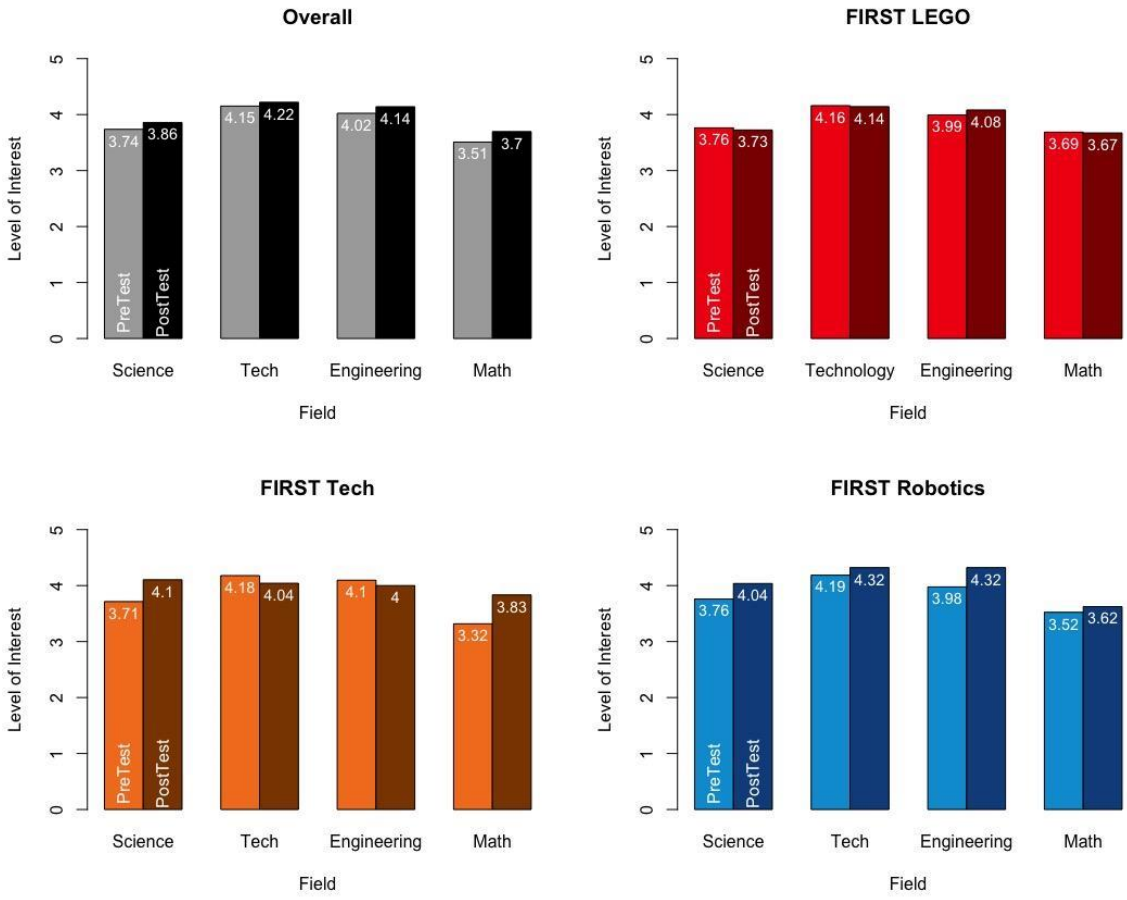
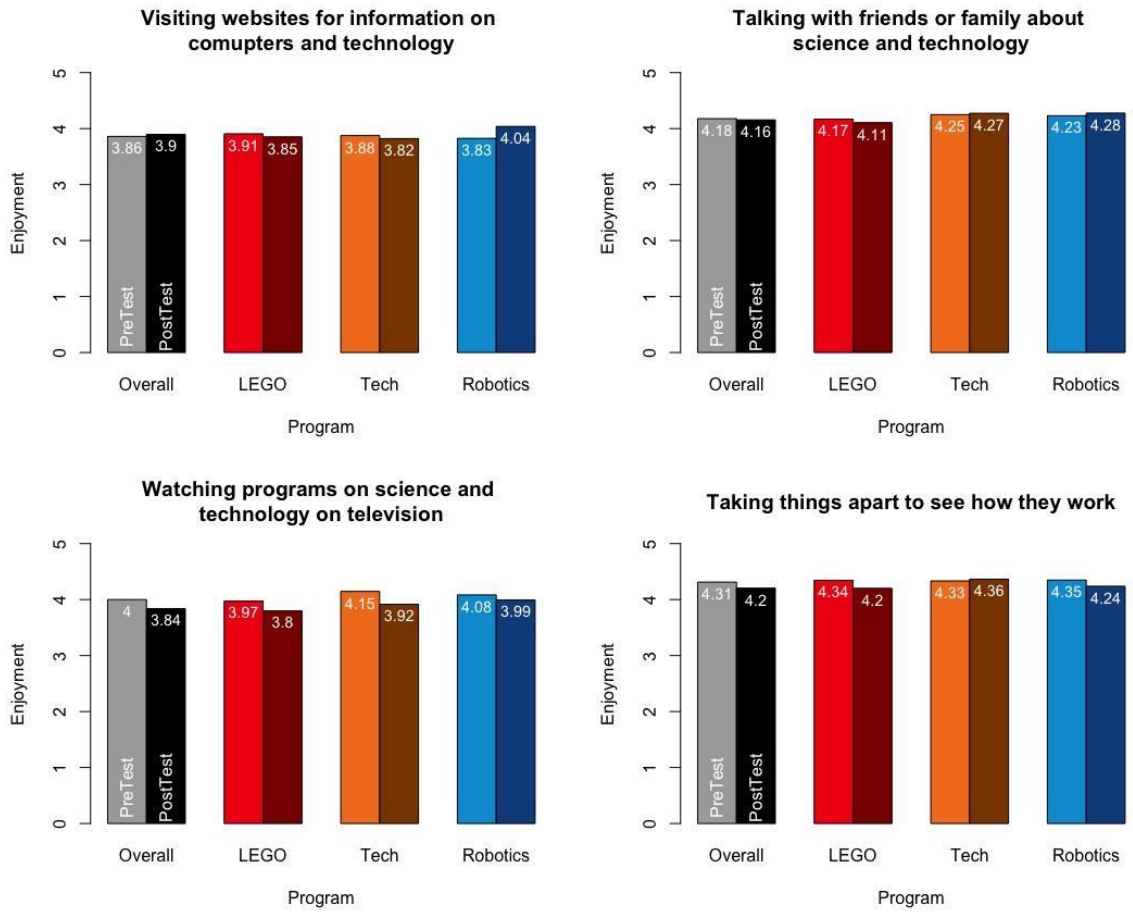


Figure P3 shows pre-survey and post-survey average differences in appreciation for other STEM-related activities, both overall and by program. The response scale ranged from (1) I dislike a lot, (2) I dislike, (3) I neither like nor dislike, (4) I somewhat like, and (5) I like a lot. Survey data indicate ongoing appreciation for STEM-related activities, especially "talking about science and technology" and "taking things apart to see how they work." Overall data indicate FIRST Nevada participants continued to enjoy activities such as talking STEM and taking things apart, even though both decreased slightly between pre- and post-surveys (4.18 to 4.16; 4.31 to 4.20). Across individual programs, the largest increase was FIRST Robotics participants' appreciation for visiting websites for information on computers and technology, which increased from 3.83 to 4.04.

Figure P3. FIRST Nevada Participant Interest in STEM-related Activities



STEM Education

Figures P4-P6 show pre- and post-survey average differences in interest in pursuing STEM education, both overall and by program. Questions included taking a high school STEM course, majoring in a STEM field in college, and applying for STEM scholarships. The response scale ranged from (1) very unlikely, (2) unlikely, (3) neutral, (4) likely, (5) very likely. Survey data suggests participants were likely to pursue STEM education opportunities in high school and college. For

example, as Figure P4 shows, overall likeliness of taking a high school STEM course remained consistently high. FIRST Robotics participants, in particular, reported continued interest, despite a slight decrease in the post-survey (4.61 to 4.24). As Figure P5 shows, overall interest in majoring in STEM remained solid, dipping slightly (3.81 to 3.71) between pre- and post-surveys. Similarly, as Figure P6 shows, overall interest in applying for STEM scholarships remained constantly high, increasing from 3.87 to 3.90.

Figure P4. *FIRST Nevada Participant Interest in High School STEM Course*

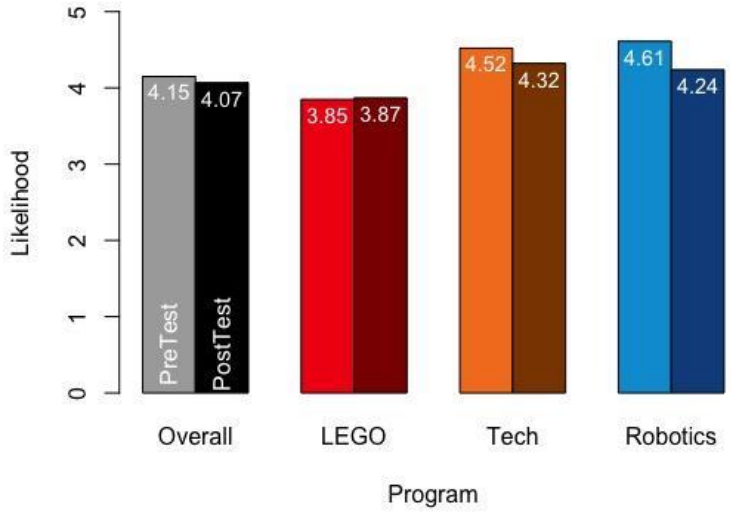


Figure P5. FIRST Nevada Participant Interest in Majoring in STEM

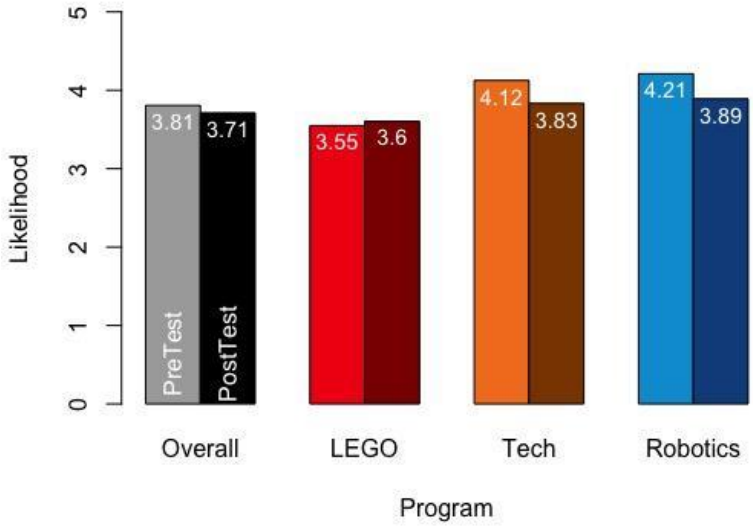


Figure P6. *FIRST Nevada Participant Interest in Applying for STEM Scholarships*

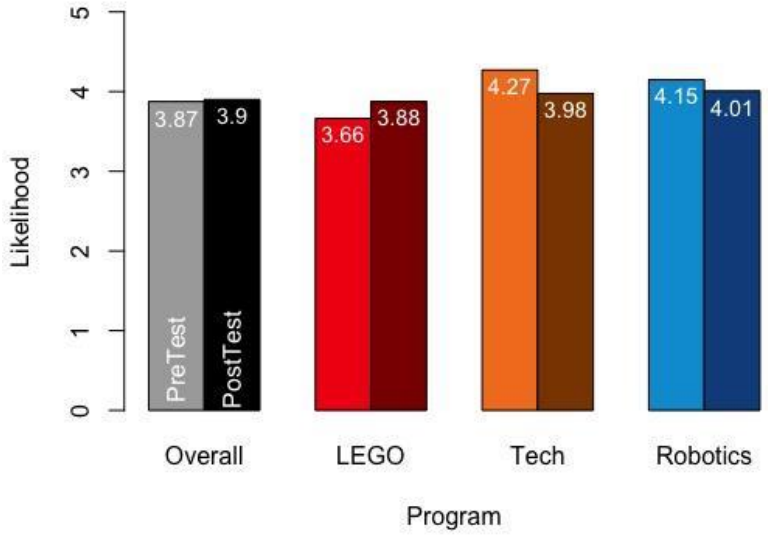


Figure P7 shows pre-survey and post-survey average differences in awareness of FIRST college scholarships for FTC/RTC members, both overall and by program. The response scale ranged from (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree. Overall, data suggest some, if limited, awareness of college scholarship opportunities for FTC/RTC members. In particular, FIRST Robotics participants—those most likely to be aware of scholarships—indicated only moderate awareness, which decreased slightly in the post-survey (3.41 to 3.12).

Figure P7. FIRST Nevada Participant Awareness of FIRST College Scholarships

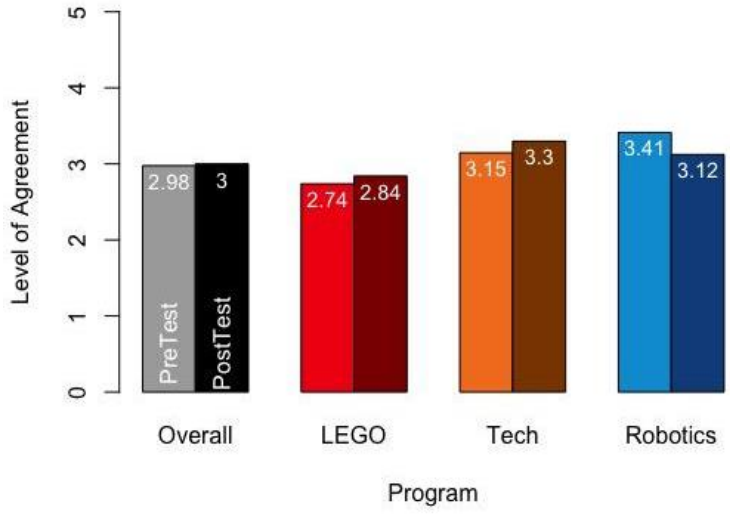


Figure P8 shows pre-survey and post-survey average likeliness of attending college in Nevada, both overall and by program. The response scale ranged from (1) very unlikely, (2) unlikely, (3) I don't know, (4) likely, (5) very likely. Survey data suggest students indicate consistent moderate likeliness to attend college in Nevada. As Figure P8 shows, overall scores remained consistent across pre- and post-surveys (3.45, 3.44). FIRST Tech, in particular, increased between survey administrations from 2.9 to 3.29, while also marking the highest post-survey score. FIRST Robotics indicated the highest pre-survey score (3.58).

Figure P8. *FIRST Nevada Participant Likelihood of Attending College in Nevada*

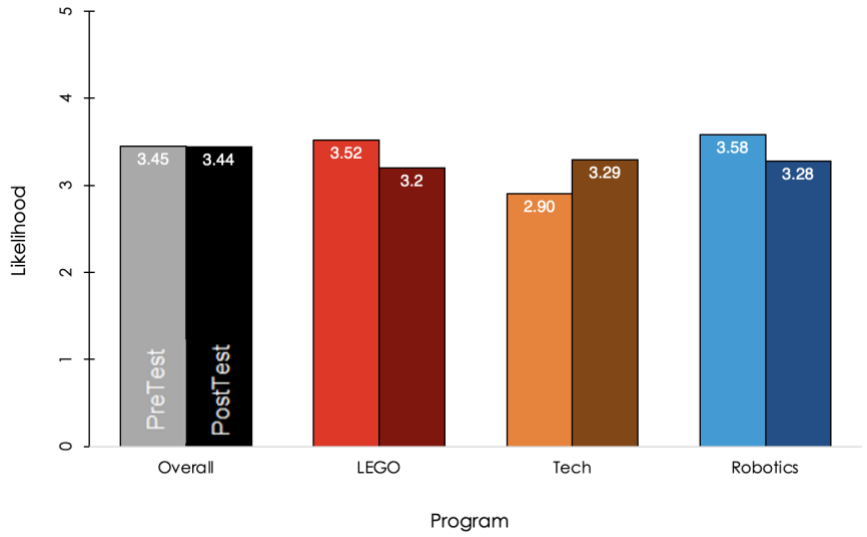
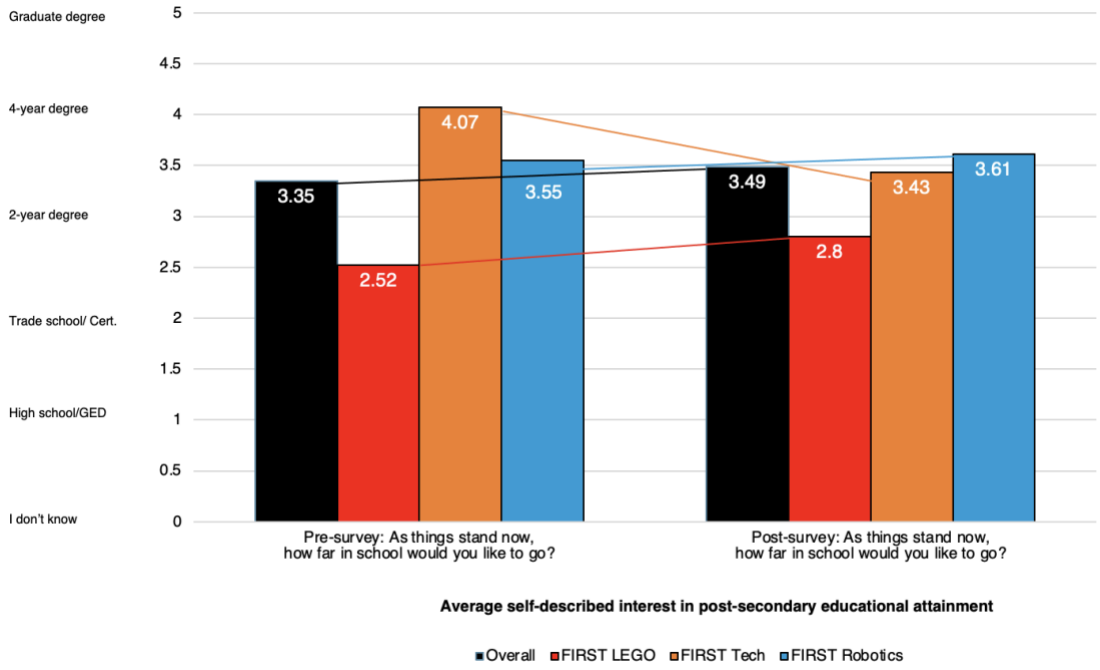


Figure P9 shows pre-survey and post-survey average interest in postsecondary degree attainment, both overall and by program. Responses were measured using a 6-point scale. A (0) response indicated I don't know, (1) indicated High school/GED, (2) Trade school or certification, (3) Two-year associate degree, (4) Four-year bachelor's degree, and (5) Graduate degree. Survey data suggest consistent overall interest in postsecondary two- and four-year degree seeking (3.35, 3.49), This was particularly evident among FIRST Tech and FIRST Robotics participants. As Figure P9 shows, pre-survey FIRST Tech participants expressed the highest average interest in degree attainment (4.07), though post-survey results tapered off (3.43). Conversely, FIRST Robotics participants expressed continued interest in two- and four-year degree seeking across both surveys (3.55, 3.61).

Figure P9. *FIRST Nevada Participant Interest in Post-Secondary Degree Attainment*



STEM Employment

Figure P10 shows pre-survey and post-survey average likelihood of working at a STEM company in Nevada, both overall and by program. The response scale ranged from (1) very unlikely, (2) unlikely, (3) neutral, (4) likely, (5) or very likely. Survey data suggest consistent moderate likelihood of STEM employment in Nevada. Overall, as Figure P10 shows, FIRST Tech (3.67, 3.18) and FIRST Robotics (3.73, 3.34) infer moderate interest, even as scores decreased between surveys.

Figure P10. FIRST Nevada Participant Likelihood of STEM Employment in Nevada

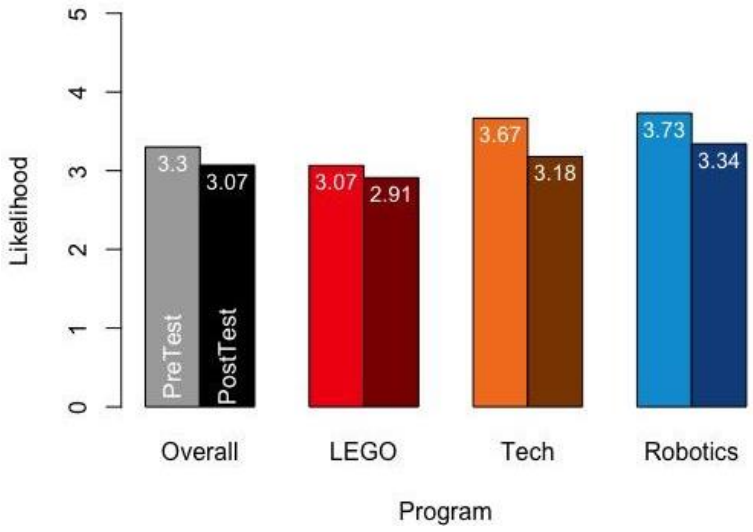


Figure P11 shows pre-survey and post-survey average participant agreement about sufficient job opportunities in Nevada based on skills and interests, both overall and by program. The response scale ranged from (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, or (5) strongly agree. Survey data suggest participants somewhat agree sufficient employment opportunities in Nevada are commensurate with their skills and interests, even as average responses decreased. In particular, FIRST Robotics participants—those most likely to be aware of, and interested in, those opportunities—indicated consistent, if moderate agreement (3.62, 3.5).

Figure P11. FIRST Nevada Participant Job Opportunities in Nevada

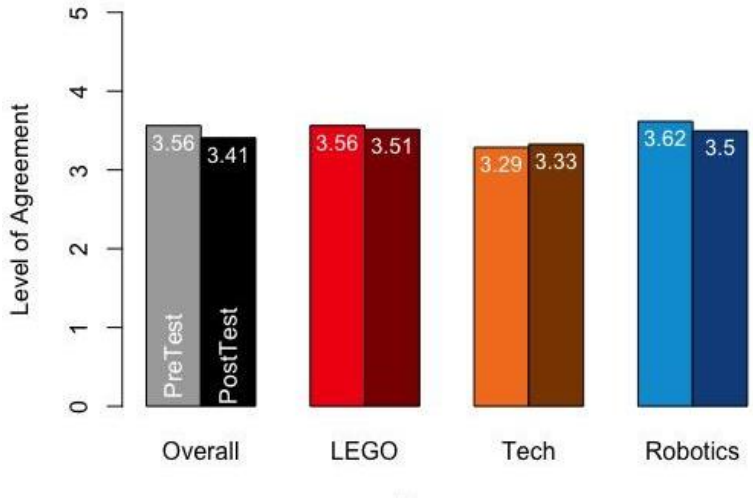


Figure P12 shows pre-survey and post-survey average interest in various STEM careers, both overall and by program. Questions addressed interest in being a Scientist, Engineer, Mathematician, Computer or Technology Specialist, STEM Educator, Inventor, and Skilled Technician. The response scale ranged from (1) I am not interested at all, (2) I am slightly interested, (3) I am moderately interested, (4) I am very interested, and (5) I am extremely interested. Survey data suggest pre- and post-survey groups held similar patterns of moderate to robust interest, with the most popular careers indicated as "Engineer" and "Inventor." In particular, FIRST Robotics participants indicated they were very interested in entering engineering, even as the average interest decreased from pre- to post-survey (4.12 to 3.78). Overall, the least interested career path was "STEM Educator," for which participants, on average, indicated slight to moderate interest.

Figure P12. FIRST Nevada Participant Interest in Job/Career in STEM

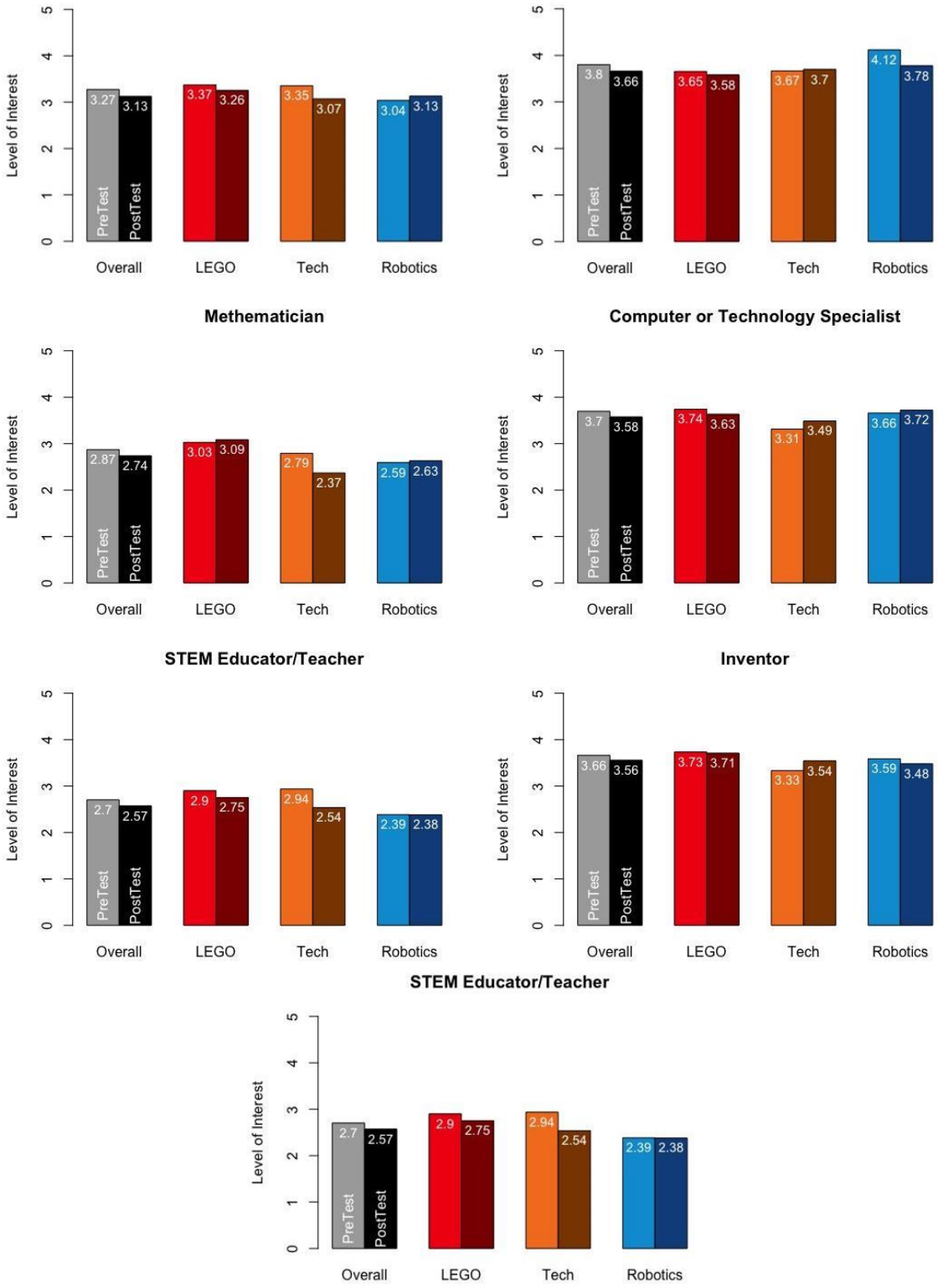
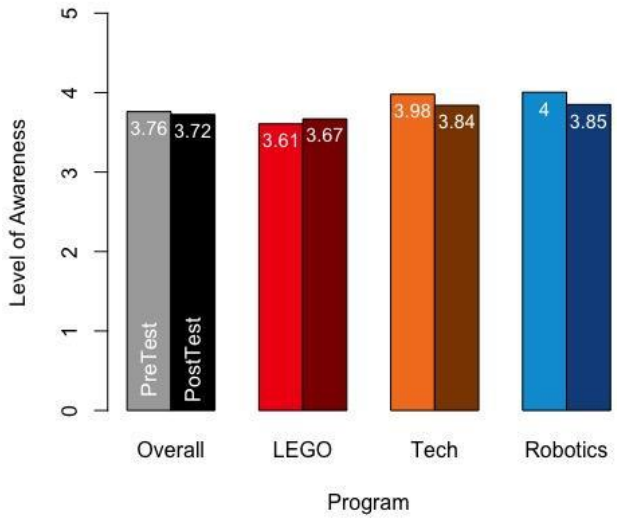


Figure P13 shows pre-survey and post-survey average awareness of STEM careers in general, both overall and by program. The response scale for those questions ranged from (1) very untrue of me, (2) somewhat untrue of me, (3) neutral, (4) somewhat true of me, or (5) very true of me. Survey data suggest consistent awareness of STEM careers. For example, as Figure 13 shows, FIRST Tech and FIRST Robotics respondents were reasonably aware, even as responses slightly decreased between pre- and post-surveys (3.98 to 3.84 and 4.0 to 3.85, respectively). FIRST LEGO respondents signaled growing awareness between pre- and post-surveys (from 3.61 to 3.67).

Figure P13. FIRST Nevada Participant STEM Career Learning in General

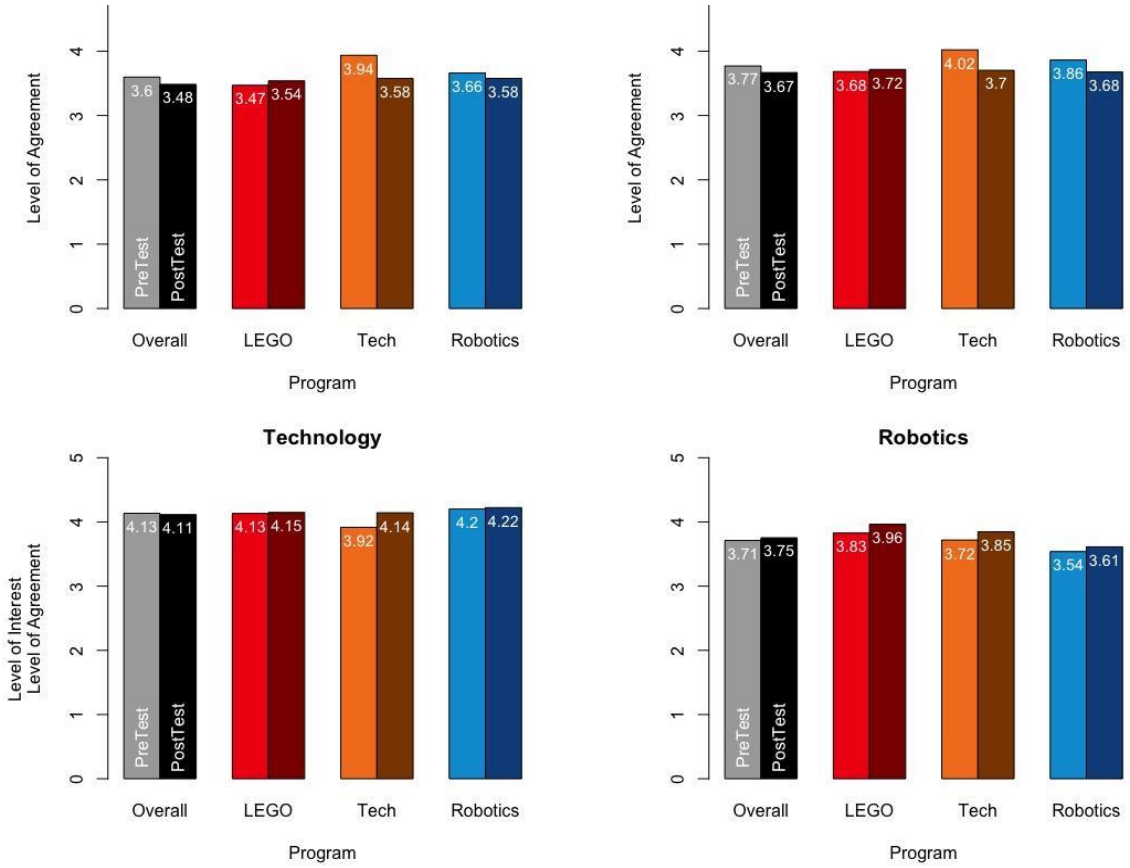


STEM Skills

Confidence in STEM Identity

Figure P14 shows pre-survey and post-survey average differences in STEM self-efficacy and identity related to math, science, technology, and robotics, both overall and by program. The response scale ranged from (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, or (5) strongly agree. Survey data suggest consistent confidence in STEM self-efficacy, particularly with technology. As Figure 14 shows, FIRST LEGO (4.13 to 4.15), FIRST Tech (3.92 to 4.14), and FIRST Robotics (4.20 to 4.22) participants all indicated consistently high confidence in technology.

Figure P14. FIRST Nevada Participant Math, Science, Technology, Robotics

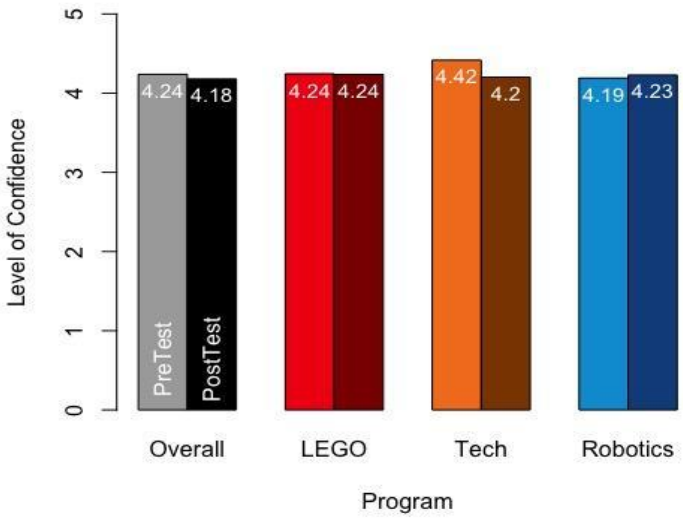


STEM Learning and Awareness

STEM Learning

Figure P15 shows pre-survey and post-survey average differences in perceived ability to learn something hard, both overall and by program. The response scale ranged from (1) very untrue, (2) somewhat untrue, (3) neutral, (4) somewhat true, or (5) very true. Survey data suggest strong confidence in learning difficult things across all programs. FIRST LEGO participants consistently averaged 4.24 to 4.24, scores across pre-/post-surveys. While the FIRST Tech pre-survey participants had the highest average (4.42), FIRST Robotics participants registered the biggest difference (4.19 to 4.23).

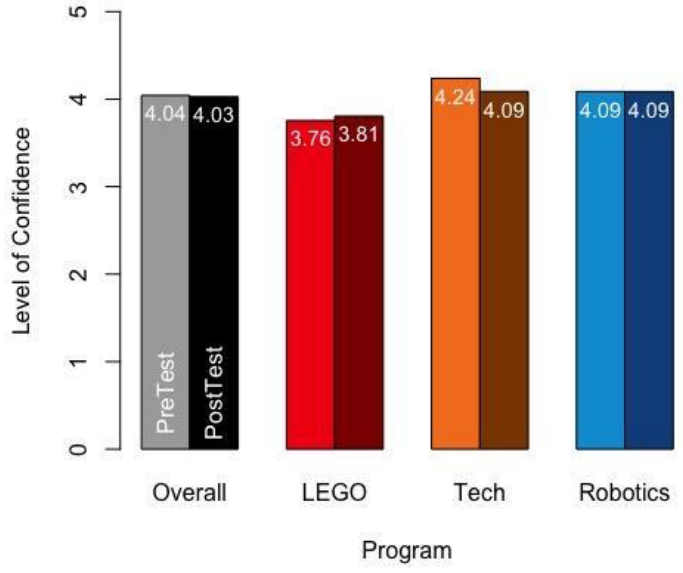
Figure P15. *FIRST Nevada Participant Confidence in Learning*



Sharing STEM Learning

Figure P16 shows pre-survey and post-survey average differences in confidence in sharing knowledge about science and technology to solve problems, both overall and by program. The response scale ranged from (1) very untrue, (2) somewhat untrue, (3) neutral, (4) somewhat true, or (5) very true. Survey data suggest consistent confidence in sharing STEM knowledge. As Figure P16 shows, overall pre- and post-survey responses decreased very slightly (4.04 to 4.03), inferring students remained confident in their knowledge sharing. While the FIRST Tech participants had the highest pre- and post-survey averages (4.24, 4.09), FIRST LEGO participants registered the largest difference (3.76 to 3.81).

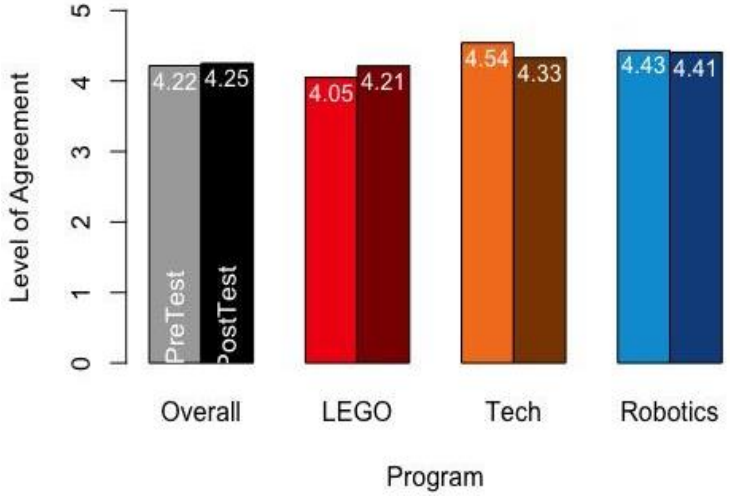
Figure P16. *FIRST Nevada Participant Confidence in Sharing STEM Knowledge*



STEM Awareness

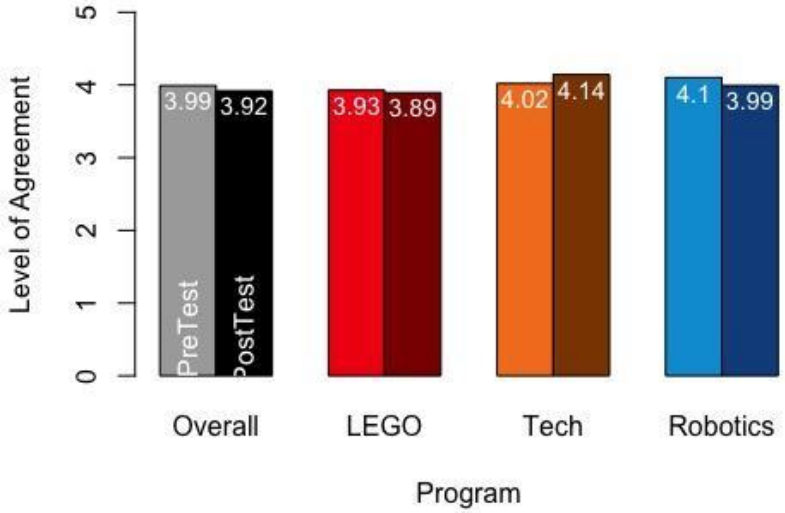
Figures P17-P19 shows pre-survey and post-survey average differences in awareness of STEM applications, including using STEM to solve real-world problems, understanding the engineering design process, and using STEM to make a difference in the world, both overall and by program. The response scale ranged from (1) very untrue of me, (2) somewhat untrue of me, (3) neutral, (4) somewhat true of me, or (5) very true of me. Survey data suggest strong STEM awareness across all three measures. As Figure P17 shows, overall awareness of using STEM to solve real-world problems increased slightly (4.22 to 4.25). While the FIRST Tech participants had the highest pre- and post-survey averages (4.54, 4.33) and FIRST Robotics was similarly high (4.43, 4.41), FIRST LEGO participants registered the biggest difference (4.05 to 4.21).

Figure P17. FIRST Nevada Participant Confidence in Using STEM to Solve Real World Problems



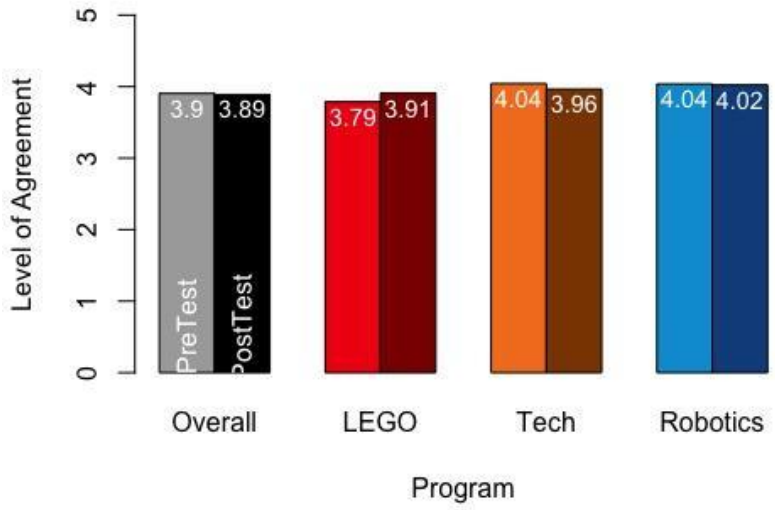
As Figure P18 shows, overall understanding of the engineering design process remained true, decreasing slightly from pre- to post-survey (3.99 to 3.92). FIRST Tech participants had the highest survey averages (4.02, 4.14), which also marked the largest pre-/post difference.

Figure P18. FIRST Nevada Participant Understanding of Engineering Design



As Figure P19 shows, overall understanding of using STEM to make a difference remained true, decreasing slightly from pre- to post-survey (3.90 to 3.89). FIRST LEGO participants scored the largest increase (3.79 to 3.91).

Figure P19. FIRST Nevada Participant Confidence in Using Math and Science Make a Difference

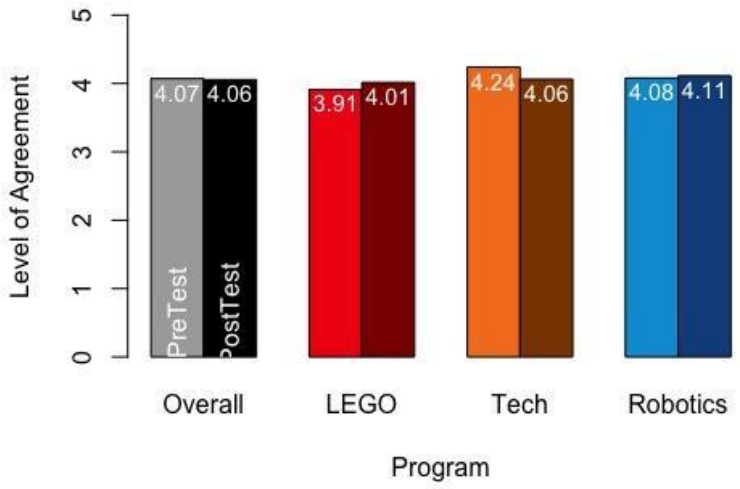


21st Century Work-Life Skills

Teamwork

Figure P20 shows pre-survey and post-survey average differences in attitude towards teamwork and leadership opportunities, both overall and by program. The response scale ranged from (1) very untrue of me, (2) somewhat untrue of me, (3) neutral, (4) somewhat true of me, or (5) very true of me. Survey data indicated consistently positive attitudes toward teamwork and leadership. For example, as Figure P20 shows, overall mean scores remained high across pre- and post-surveys (4.07, 4.06, respectively). FIRST Tech had the highest pre-survey score (4.24), remaining elevated despite returning to the overall post-survey average (4.06). Although FIRST LEGO had the lowest scores overall (3.91, 4.01), the program's post-survey increase marked the biggest difference amongst individual programs.

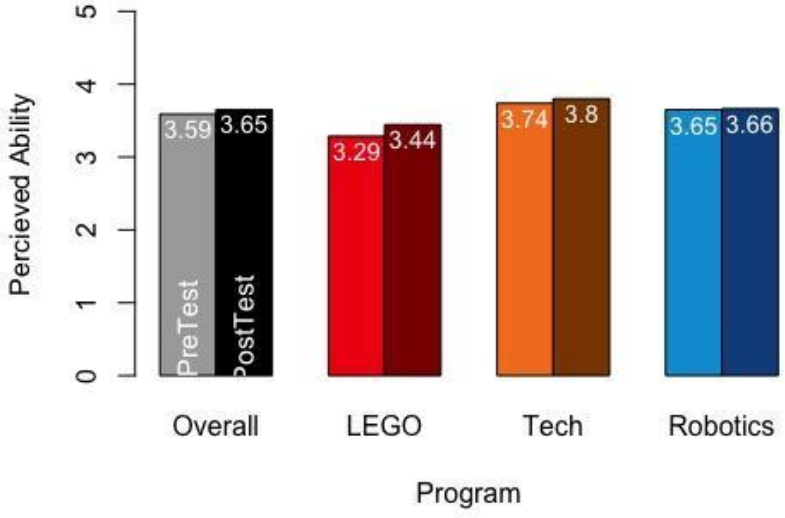
Figure P20. FIRST Nevada Participant Attitudes Toward Teamwork and Leadership



Solving Disagreements

Figure P21 shows pre-survey and post-survey average differences in ability to solve problems between team members, both overall and by program. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students were consistently able to mediate problems between team members, even as perceptions increased slightly between pre- and post-surveys. As Figure P21 shows, overall mean scores increased (from 3.59 to 3.65). FIRST LEGO increased the most between survey administrations (3.29 to 3.44), while FIRST Tech demonstrated the highest pre- and post-survey scores (3.74, 3.8).

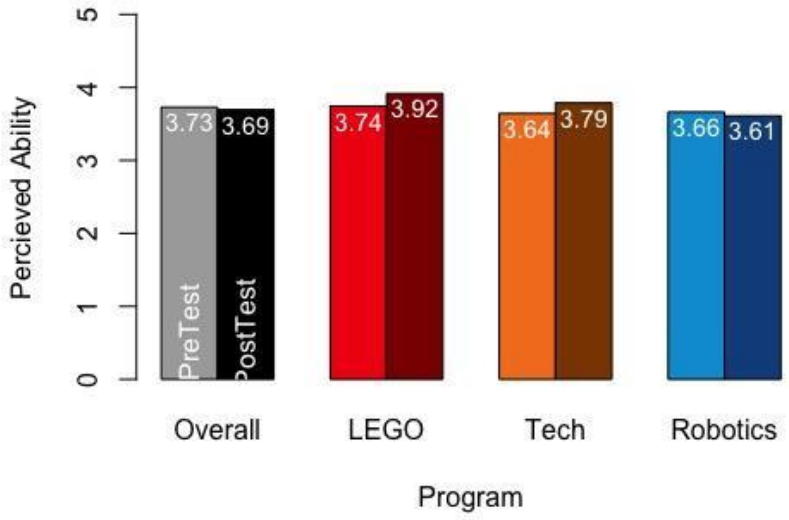
Figure P21. FIRST Nevada Participant Ability to Solve Disagreements



Problem Solving

Figure P22 shows pre-survey and post-survey average differences in ability to problem solve, both overall and by program. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students felt they could unexpected problems or find new or better ways to do things very well. As Figure P22 shows, overall mean scores remained high, increasing slightly (from 3.59 to 3.65). FIRST LEGO increased the most between survey administrations (3.84 to 3.96), while FIRST Tech demonstrated the highest pre- and post-survey scores (4.07, 4.12).

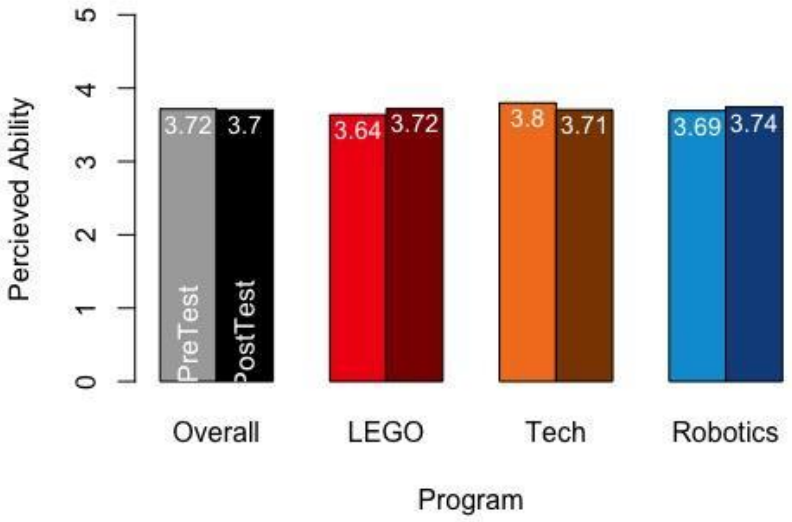
Figure P22. FIRST Nevada Participant Ability to Problem Solve



Time Management

Figure P23 shows pre-survey and post-survey average differences in time management skills, both overall and by program. Questions explored capacities to develop a plan that identifies appropriate steps and the ability to manage time to get all steps done. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students consistently felt they could organize and manage their time well. As Figure P23 shows, overall mean scores remained constant (3.72, 3.72). FIRST LEGO increased the most between survey administrations (3.64 to 3.72), while FIRST Tech demonstrated the highest pre-survey score (3.8), and FIRST Robotics had the highest post-survey score (3.74).

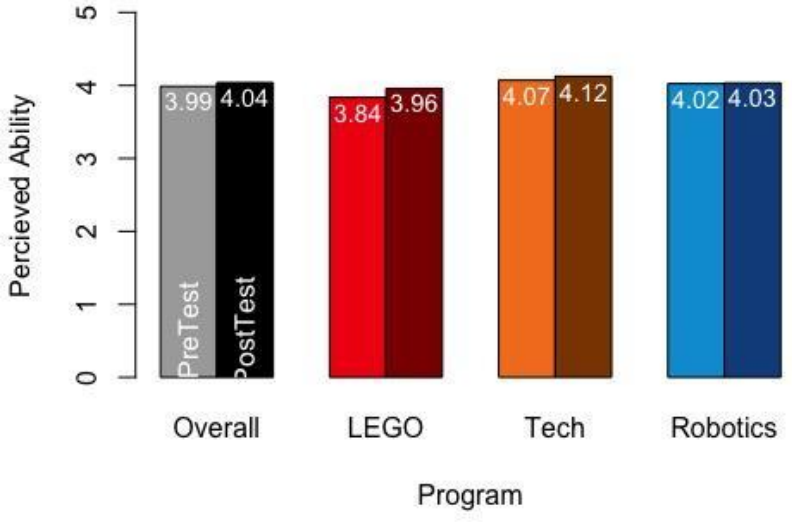
Figure P23. FIRST Nevada Participant Time Management Skills



Innovation

Figure P24 shows pre-survey and post-survey average differences in ability to create innovative solutions for the team's research project, both overall and by program. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students consistently felt confident in their ability to innovate. As Figure P24 shows, overall mean scores remained consistent across surveys (3.73, 3.69). FIRST LEGO increased the most between survey administrations (3.74 to 3.92), which also marked the highest pre- and post-survey scores (3.74, 3.92). FIRST Tech also increased slightly from 3.64 to 3.79.

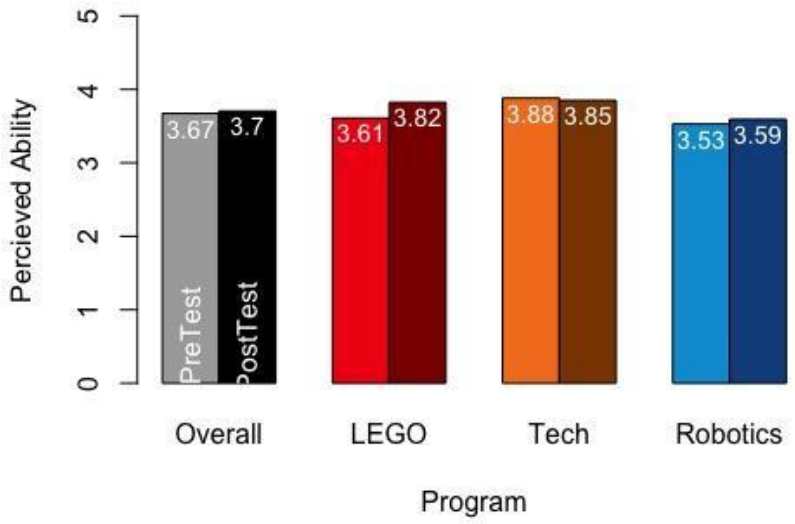
Figure P24. FIRST Nevada Participant Ability to Innovate



Presentation Skills

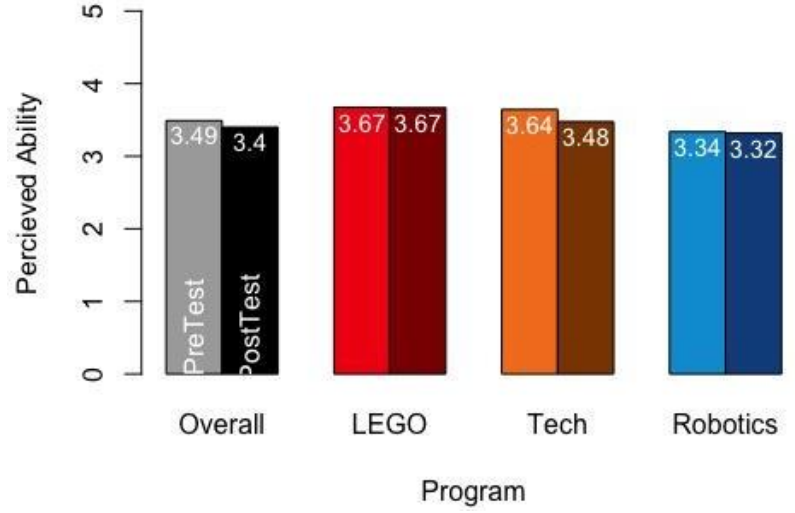
Figures P25-P26 show pre-survey and post-survey average differences in ability to formally present information, both via making a presentation and explanatory documents, overall and by program. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students felt reasonably well able to present information. As Figure P25 shows, overall ability to make a presentation remained positive across surveys (3.67, 3.70). FIRST LEGO increased the most between survey administrations (3.61 to 3.82), while FIRST Tech demonstrated the highest pre- and post-survey scores (3.88, 3.85).

Figure P25. FIRST Nevada Participant Ability Make a Presentation



As Figure P26 shows, overall ability to create explanatory documents remained moderately positive across surveys, if decreasing slightly in the post-survey (3.49, 3.40). FIRST LEGO Tech demonstrated the highest (and most consistent) pre- and post-survey scores (3.67, 3.67).

Figure P26. FIRST Nevada Participant Ability Make Explanatory Documents

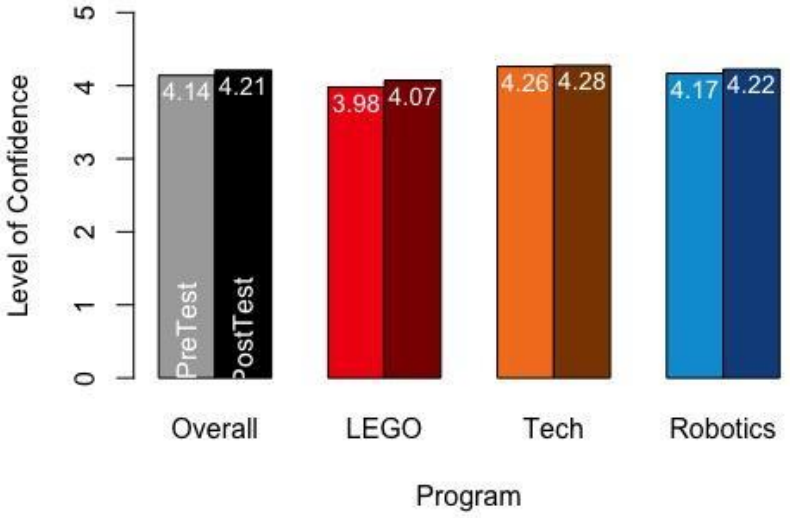


Pro-social Values

Future Outlook

Figure P27 shows pre-survey and post-survey average differences in outlook on the future, both overall and by program. The response scale ranged from (1) very untrue (2) somewhat untrue, (3) neutral, (4) somewhat true, or (5) very true. Survey data suggest students agree they have a positive outlook on the future. As Figure P27 shows, overall outlook on the future remained consistently positive across surveys, increasing slightly (from 4.14 to 4.21). FIRST LEGO increased the most between survey administrations (3.98 to 4.07), while FIRST Tech demonstrated the highest pre- and post-survey scores (4.26 to 4.28).

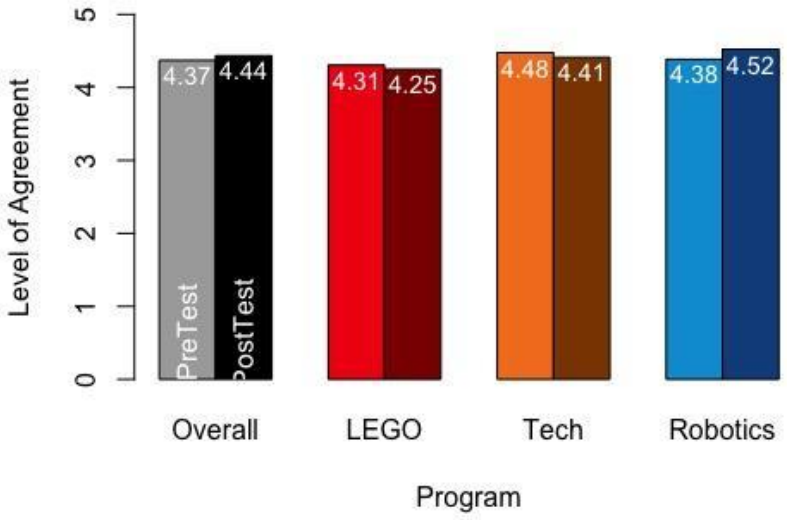
Figure P27. FIRST Nevada Participant Outlook on the Future



Adult Mentorship

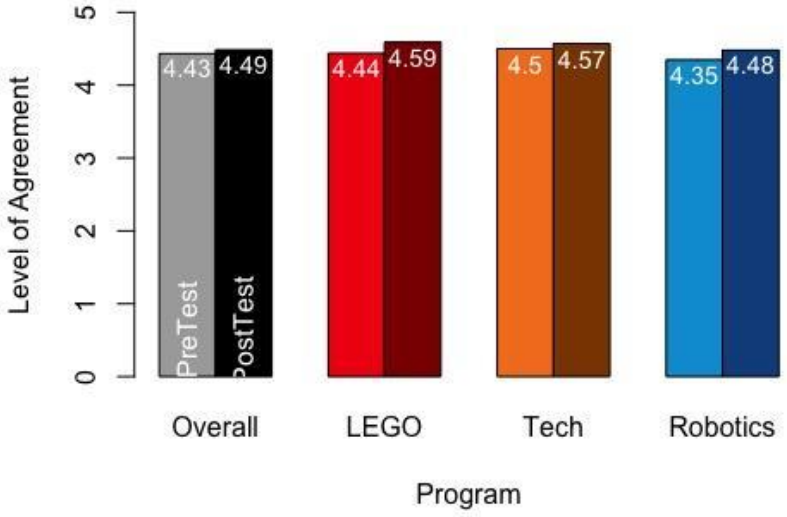
Figures P28-P29 show pre-survey and post-survey average differences in perceptions of adult mentorship inside and outside the program, both overall and by program. The response scale ranged from (1) very untrue (2) somewhat untrue, (3) neutral, (4) somewhat true, or (5) very true. Survey data suggest very positive perceptions of adult mentorship. Overall, as Figure P28 shows, students consistently agreed they learned a lot from adults on their team (4.37, 4.44). FIRST Robotics increased the most between survey administrations (4.38 to 4.52), while also registering the highest post-survey score.

Figure P28. FIRST Nevada Participant Learning from Adult Volunteers



Overall, as Figure P29 shows, students indicated strong support from an adult in their schools or communities across administrations (4.43, 4.49). FIRST LEGO increased most notably between survey administrations (4.44 to 4.59) while registering the highest post-survey score.

Figure P29. FIRST Nevada Participant Supportive Adults in School or Community

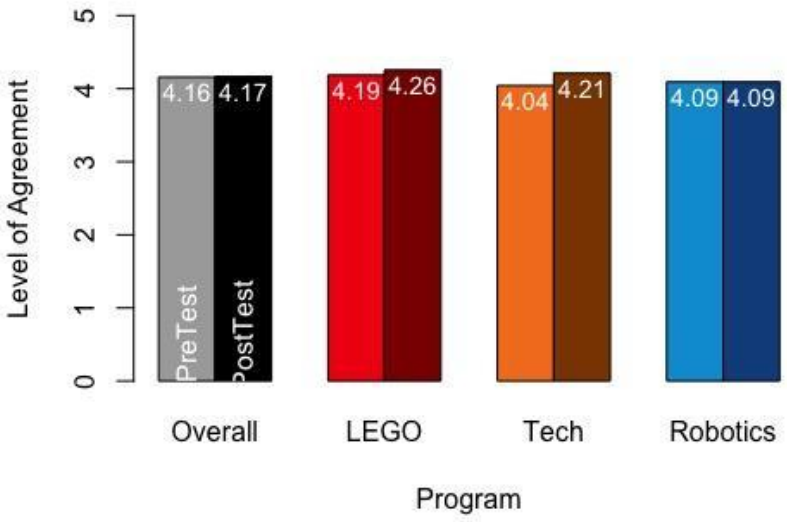


Leadership Experiences

Figures P30-P31 show pre-survey and post-survey average differences in perceptions of student leadership experience in FIRST programs, both overall and by program. The response scale ranged from (1) strongly disagree (2) disagree, (3) neither agree nor disagree, (4) agree, or (5) strongly agree. Survey data suggest ongoing robust experiences both in terms of shouldering important

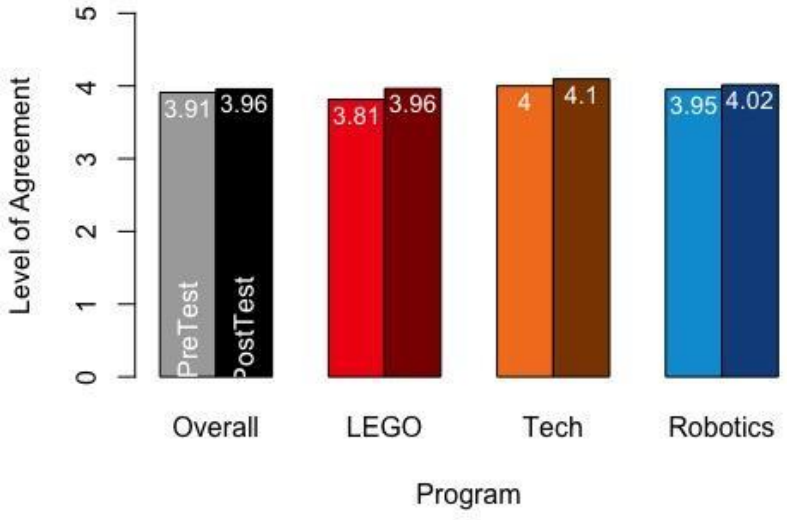
responsibilities and chances to lead their teams. Overall, as Figure 30 shows, students consistently agreed they had important responsibilities (4.16, 4.17). FIRST Tech demonstrated the biggest difference between survey administrations (4.04 to 4.21), while FIRST LEGO had the highest pre- and post-survey scores, (4.19, 4.26).

Figure P30. FIRST Nevada Participant Important Responsibilities



Overall, as Figure 31 shows, students consistently agreed they had opportunities to lead their teams (3.91, 3.96). FIRST LEGO showed the biggest difference between survey administrations (3.81 to 3.96), while FIRST Tech had the highest pre- and post-survey scores, (4.0, 4.1).

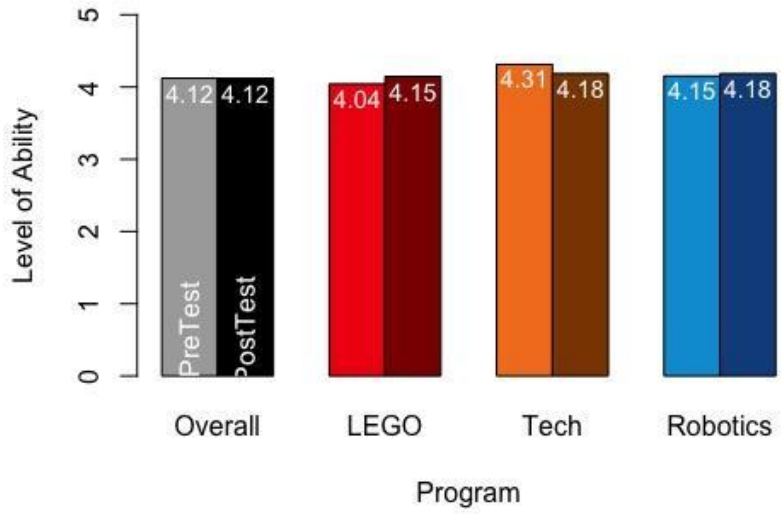
Figure P31. FIRST Nevada Participant Opportunities to Lead



Camaraderie

Figure P32 shows pre-survey and post-survey average differences in perceptions of camaraderie, both overall and by program. Questions included teams knowing how to work well together, listening to each other, having fun working together, and feelings of belonging. The response scale ranged from (1) not at all (2) slightly well, (3) moderately well, (4) very well, or (5) extremely well. Survey data suggest students felt a strong sense of camaraderie with their teammates. Across the data, as Figure 32 shows, students consistently agreed they had a strong sense of camaraderie and sense of belonging (4.12, 4.12). FIRST LEGO had the biggest difference between survey administrations (4.04 to 4.15), while FIRST Tech had the highest pre- and post-survey scores, (4.31, 4.18).

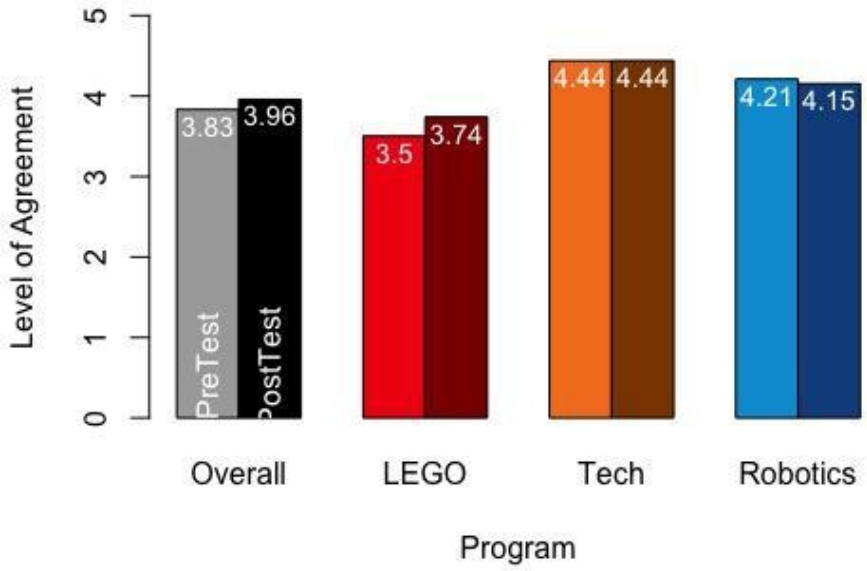
Figure P32. FIRST Nevada Participant Perceptions of Camaraderie



Gracious Professionalism

Figure P33 shows pre-survey and post-survey average differences in perceptions of the importance of Gracious Professionalism, both overall and by program. The response scale ranged from (1) strongly disagree (2) disagree, (3) neither agree nor disagree, (4) agree, or (5) strongly agree. Survey data suggest students were well aware of the importance of Gracious Professionalism. Overall, as Figure 33 shows, students consistently agreed they were aware, increasing slightly between administrations (3.83 to 3.96). FIRST LEGO had the most significant difference between survey administrations (3.50 to 3.74), while FIRST Tech had the highest pre- and post-survey scores, (4.44, 4.44).

Figure P33. FIRST Nevada Participant Perceptions of Gracious Professionalism



Survey Comments

And, finally, in addition to the closed-ended survey questions, participants were invited to write about their FIRST Nevada experience in an open-ended question about participation. Across programs, the overwhelming majority of comments were positive, lauding the program for being "fun" yet challenging and an opportunity to be a part of a team. For example, one respondent said, "I am happy that I joined and I have had many experiences throughout. And as I continue I would like to learn more." Another shared, "I absolutely LOVED working with my team this year. Ever since I was little I have been fascinated with robots and mechanics so being a part of this team was a dream come true. If I had another opportunity to be with this team I would take it ninety nine times out of one hundred." A third said, "I would like to add that i love working with my team mates they are the type of people you can count on. I love making robots with everybody. we always come to some suggestions on the design of robot and what we build." See the report's Appendix A for the complete results of open-ended comments from the participant survey.

Adult Volunteer Mentor/Coaches Survey

FIRST Nevada administered the adult volunteer survey direct to participants via a Qualtrics link beginning on March 1. The survey officially closed on March 27th. A total of 183 participants completed the survey for a response rate of approximately 33%. Tables V1-6 show years of experience as volunteer mentors/coaches, general demographic information, volunteer geo-location (by district in the report, by school/team in Appendix), and current/prior FIRST Nevada program affiliation, both overall and across the three programs. In terms of experience as a FIRST Nevada volunteer, as Table V1 shows, 37% of survey respondents indicated they had less than one year of experience, 30% had 1-2 years of experience, and 33% had three or more years of experience.

Table V1. FIRST Nevada Volunteers by Years of Experience

	Less than one year	1 Year	2 Years	3 or more years
Overall	68 (37%)	29 (16%)	25 (14%)	61 (33%)
FIRST LEGO League	45 (66%)	18 (62%)	14 (56%)	26 (43%)
FIRST Tech Challenge	10 (15%)	7 (24%)	6 (24%)	18 (30%)
FIRST Robotics Competition	13 (19%)	4 (14%)	5 (19%)	17 (27%)

As Table V2 indicates, 66% of all survey respondents identified as female, 30% identified as male, 3% preferred not to answer, and 1% preferred to self-describe.

Table V2. *FIRST Nevada Volunteers by Gender*

	Female	Male	Prefer not to answer	Prefer to self-describe
Overall	120 (66%)	55 (30%)	5 (3%)	1 (1%)
FIRST LEGO League	78 (65%)	16 (29%)	2 (40%)	1 (100%)
FIRST Tech Challenge	23 (19%)	18 (33%)	2 (40%)	0 (0%)
FIRST Robotics Competition	19 (16%)	21 (38%)	1 (20%)	0 (0%)

As Table V3 shows, overall, 68% of all survey respondents identified as white, 9% as Hispanic or Latino/a/x, 8% selected two or more races/ethnicities, 6% were Asian or Pacific

Islander, 5% were Black or African American, 1% was Middle Eastern or Northern African, 1% selected "Other."

Table V3. *FIRST Nevada Volunteers by Race/Ethnicity*

	White	Hispanic or Latino/a/x	Asian or Pacific Islander	Black or African American	Middle Eastern or Northern African	Two or more	Other
Overall	124 (69%)	17 (9%)	11 (6%)	9 (5%)	1 (1%)	15 (8%)	2 (1%)
FIRST LEGO League	74 (60%)	8 (47%)	4 (36%)	7 (78%)	1 (100%)	11 (74%)	0 (0%)
FIRST Tech Challenge	26 (21%)	1 (6%)	4 (36%)	0 (0%)	0 (0%)	2 (13%)	2 (100%)
FIRST Robotics Competition	24 (19%)	8 (47%)	3 (27%)	2 (22%)	0 (0%)	2 (13%)	0 (0%)

As Table V4 indicates, 98% of survey respondents reported their first language as English. None selected Spanish, while two reported their first language as Other, specifying "Burmese" and "Filipino.

Table V4. *FIRST Nevada Volunteers by Primary Language*

	English	Spanish	Other
Overall	179 (98%)	0 (0%)	2 (1%)
FIRST LEGO League	104 (58%)	0 (0%)	0 (0%)
FIRST Tech Challenge	35 (20%)	0 (0%)	2 (100%)
FIRST Robotics Competition	40 (22%)	0 (0%)	0 (0%)

Program volunteers indicated they were affiliated with teams from 10 school districts and the State Charter Authority, representing both urban and rural counties in Nevada. As Table V5 shows, 113 respondents (62%) indicated they were affiliated with teams in Clark County. See the report's Appendix B for the complete list of FIRST Nevada volunteer affiliations by school or team name.

Table V5. *FIRST Nevada Volunteers by School District*

District	# of Mentors/Coaches
Carson City	5 (3%)
Churchill	1 (1%)
Clark County	113 (62%)
Elko	9 (5%)
Humboldt	2 (1%)
Lincoln	4 (2%)
Lyon	2 (1%)
Nye	4 (2%)
State Charter Authority	16 (9%)
Storey	2 (1%)
Washoe	9 (5%)
None/Other	16 (9%)

As Table V6 shows, 56% of respondents indicated they served as FIRST LEGO League volunteers during the 2022-23 season, while 18% volunteered for the FIRST Tech Challenge and 18% for FIRST Robotics Competition. Of the 79 respondents who indicated they volunteered previously, 61% served as volunteers for FIRST LEGO League, while 19% said FIRST Tech Challenge and 20% for FIRST Robotics Competition; 102 (57.6%) reported they had coached or mentored with FIRST Nevada before, while 13 (7.3%) reported they coach or mentor more than one program.

Table V6. FIRST Nevada Volunteers by Program Mentored

Program	Which FIRST Nevada program did you Mentor/Coach for this season?
FIRST LEGO League	99 (55.9%)
FIRST Tech Challenge	32 (18.1%)
FIRST Robotics Competition	33 (18.6%)
More than one Program	13 (7.3%)

Volunteer Survey Results

First Nevada Volunteer Prior STEM Training or Experience

Table V7 shows volunteers STEM training and/or experiences prior to their involvement in FIRST Nevada, both overall and by program. Survey data indicate the majority of volunteers have prior STEM training or experience: 46% of survey respondents said they were current or former teachers in a STEM subject, while 22% indicated they had STEM workforce experience. However, a notable portion did not. Of the 31% (57 respondents) who selected "Other," 20 specified they had no prior STEM experience.

Table V7. *FIRST Nevada Volunteers Prior STEM Training or Experience*

	Current or former teacher in a STEM subject	Earned a degree in a STEM major	Currently or previously work in a STEM field	Previous FIRST Nevada student team member	Other (please specify)
Overall	84 (45.9%)	22 (12.0%)	40 (21.9%)	7 (3.8%)	57 (31.1%)
FIRST LEGO League	57 (51.8%)	13 (11.8%)	16 (14.5%)	3 (2.3%)	35 (31.8%)
FIRST Tech Challenge	14 (31.1%)	11 (24.4%)	11 (24.4%)	2 (4.4)	11 (24.4%)
FIRST Robotics Competition	16 (37.2%)	13 (30.2%)	14 (32.6%)	4 (9.3%)	9 (20.1%)

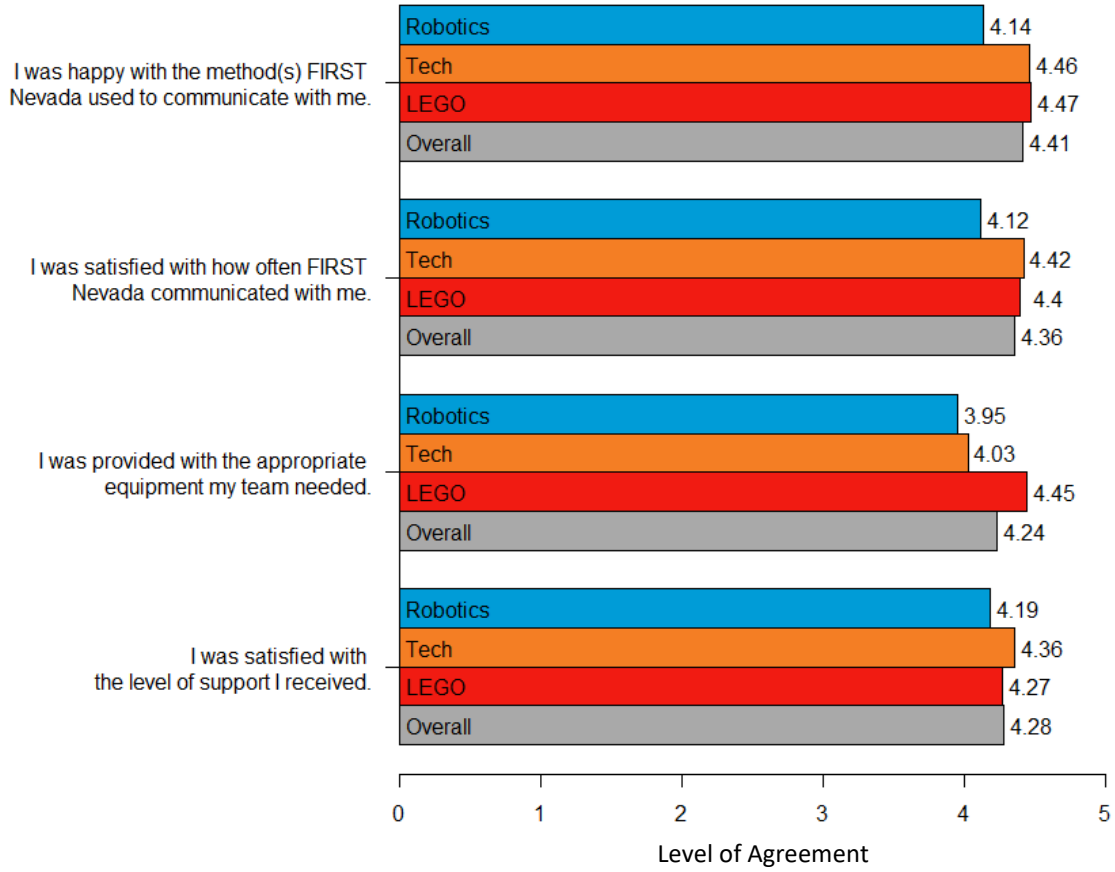
Motivation(s) to become a FIRST Nevada Volunteer

In an open-ended question, respondents were invited to share why they choose to volunteer for FIRST Nevada programs. Across the data, the most common responses suggest interest in contributing to programming that benefits students both intellectually and socially. They saw FIRST Nevada as an opportunity to help implement STEM programming, while providing a safe, engaging, productive environment for students. As one respondent said, "I loved how the program engaged and challenged kids." Another linked the program to personal STEM experiences, saying, "I love science and having hands-on projects. So, when the opportunity came, I jumped on it to be a coach and provide the students with the opportunity for STEM." See the report's Appendix B for the complete results of open-ended survey comments.

FIRST Nevada Support

Figure V1 shows volunteer perceptions of support received, including equipment and communications, during the 2022-23 season. The response scale ranged from 1 (Strongly disagree), 2 (Disagree), 3 (Neither agree nor disagree), 4 (Agree), or 5 (Strongly agree). Survey results suggest volunteers were satisfied with FIRST Nevada support, reporting consistent levels of satisfaction overall and across programs. In particular, overall data suggest strong agreement with communication methods (4.41) and frequency (4.36). Equipment needs were similarly well met, both overall (4.24) and across programs.

Figure V1. FIRST Nevada Volunteer Perceptions of Support



Additional Comments: Equipment Needs

Volunteers who strongly disagreed or disagreed when asked if they were provided with appropriate equipment for their team were given an additional opportunity to elaborate on the specific missing equipment. Of the 12 replies, most named specific technical equipment—parts, kits, laptops—they were not provided; however, several indicated the lack of equitable resources due to

being a "community team" and not a "school team" with access to "the funding and tools that the school teams get."

Additional Comments: Communication/Informational Needs

Volunteers also were given an opportunity to elaborate on preferred methods of communication. Of those who provided an open-ended response, 14 said they would prefer emails and one would prefer phone calls. See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

In a separate open-ended question, all respondents were invited to share additional communication or informational needs. The majority of comments about quantity and type of communication were positive. For example, one respondent said, "I felt we were given a lot of great information I loved the monthly meetings on zoom it was great help in navigating." However, a number of first-time volunteers noted the amount of information as overwhelming and asked for streamlined information or mentoring from program veterans. As one respondent explained, "As a new coach, the amount of information was very overwhelming. It would be great to pair a new team with a mentor team or coach - at least someone I felt I could reach out to. Or, have a folder for new coaches that has the information pared down to just the basics. It was challenging to wade through the huge amount of information to find the information you are not quite sure what it is you need." See the report's Appendix B for the complete results of open-ended comments from the FIRST Nevada volunteer survey.

FIRST Nevada Trainings

Volunteers were asked about FIRST Nevada trainings, including trainings attended, the quality of trainings, timing of trainings, as well as open-ended questions that solicited feedback on variety in training location options, variety of days/times offered, and playback options on trainings. It also should be noted that none of the respondents selected "None of the Above" as an option, indicating 100% of survey respondents attended at least one training. Tables V7-V9 detail trainings attendance disaggregated by program.

FIRST Nevada Trainings Attended

Tables V8-V10 shows volunteer trainings attended by program. Across the data, Coaches Corners were the most attended events, regardless of program affiliation. For example, as Table V7 shows, 35% of FIRST LEGO League volunteers indicated they attended Coaches Corners; 22% attended the Kickoff Celebration and/or Robot-in-a-Day; 21% attended Next-Level Programming.

Table V8. Trainings Attended by FIRST LEGO League Volunteers

Event	Number/% Attended
Various - Coaches Corners	56 (35%)
Aug 27 - Kickoff Celebration	35 (22%)
Sept 17 - Robot-in-a-Day	34 (22%)
Oct 8 - Next Level Programming	33 (21%)

As Table V9 shows, 36% of FIRST Tech Challenge volunteers indicated they attended Coaches Corners, while 30% attended the Kickoff Celebration, and 18% attended Robot-in-a-Day.

Table V9. Trainings Attended by FIRST Tech Challenge Volunteers

Event	Number/% Attended
Various - Coaches Corners	24 (36%)
Sep 10 - Kickoff Celebration	20 (30%)
Oct 1 - Robot-in-Day	12 (18%)
Nov 12 - Autonomous Programming	6 (9%)
Jan 14 – Driving Strategy	4 (6%)

As Table V10 shows, 28% of FIRST Robotics Competition volunteers said they attended Coaches Corners, while 22% attended the Electronics, Mechanics, Pneumatics, and Programming training and 13% attended the Chassis Build.

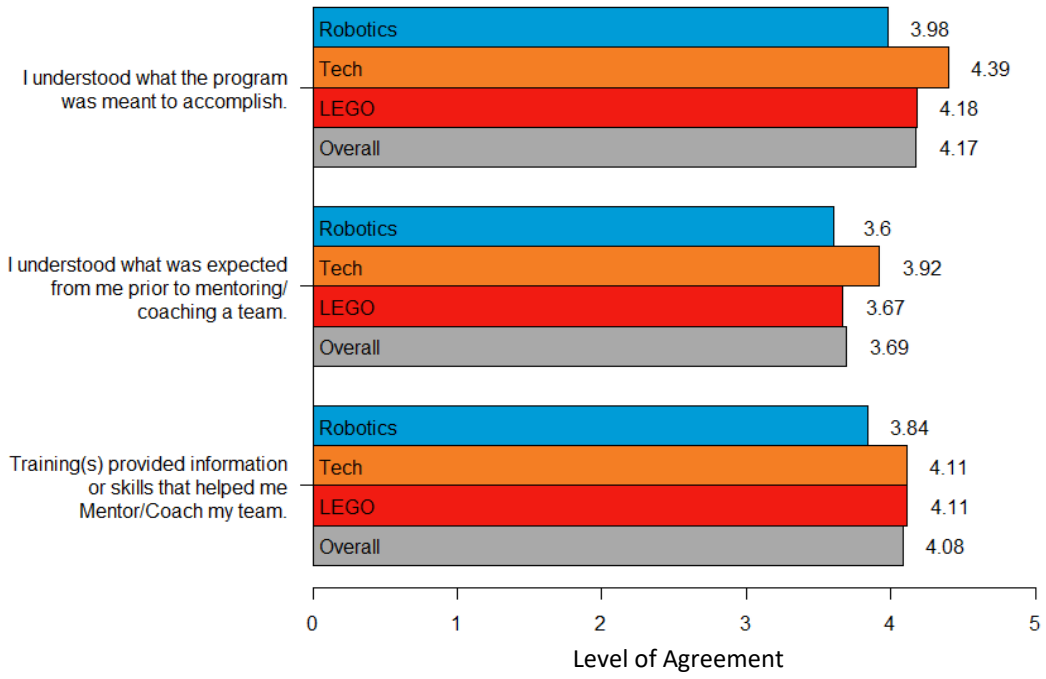
Table V10. Trainings Attended by FIRST Robotics Competition Volunteers

Event	Number/% Attended
Various - Coaches Corners	15 (28%)
Oct 15 - Electronics, Mechanics, Pneumatics, and Programming	10 (22%)
Nov 12 - Public Speaking, Judging, and FRC	3 (6%)
Nov 12 - Developing a Scouting App	2 (4%)
Nov 17 - Rookie Team Essentials	2 (4%)
Dec 7 - Things I Wished I Knew When My Team Was Building Their First Everybot	4 (7%)
Jan 7 - Chassis Build	7 (13%)
Jan 21 - Managing Motors, Materials, and Fasteners in FRC,	2 (4%)
Feb 9 - FRC Regional Event Participation	5 (9%)
Feb 11 - Bumpers Build	2 (4%)
Feb 25 - Autonomous Programing	2 (4%)

FIRST Nevada Training Preparation

Figure V2 shows volunteer perceptions of how well FIRST Nevada training prepared them to implement their respective programs, both overall and by program. The response scale for each question ranged from 1 (Strongly disagree), 2 (Disagree), 3 (Neither agree nor disagree), 4 (Agree), or 5 (Strongly agree). Overall, survey results indicated volunteers felt trainings prepared them for their roles as mentors/coaches. For example, as Figure V2 shows, volunteers agreed the trainings provided information or skills, both overall (4.08) and across programs (FIRST LEGO 4.11; FIRST Tech 4.11; FIRST Robotics 3.84). Trainings also helped volunteers understand program intentions, especially among FIRST Tech respondents (4.39). However, volunteers indicated somewhat less agreement about role expectations prior to mentoring/coaching, overall (3.69) and by program (FIRST LEGO 3.67; FIRST Tech 3.92; FIRST Robotics 3.60).

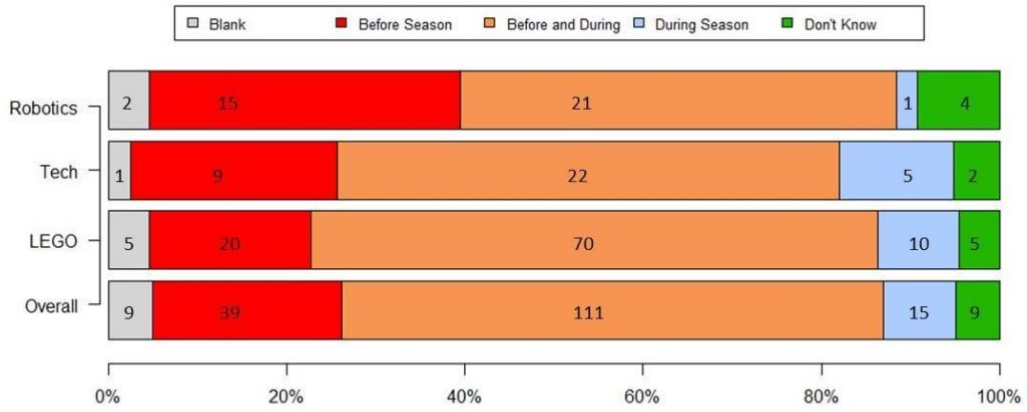
Figure V2. *FIRST Nevada Volunteer Perceptions of Training Preparation*



FIRST Nevada Trainings Timing

Figure V3 shows volunteer responses when asked about the preferred times to have FIRST Nevada trainings, both overall and by program. For example, 64% of all survey question respondents (111) indicated they prefer to attend trainings both before and during the season, while 22% (39) said they preferred preseason trainings.

Figure V3. *FIRST Nevada Volunteer Perceptions of Trainings Timing*



Additional Comments: Training Sessions

In an open-ended question, all respondents were invited to share if they had any additional feedback regarding the training sessions attended. Respondents largely provided positive feedback about the content of the training and Coaches Corner, finding them "engaging," "well planned and informative" and "relevant." For example, as one volunteer shared, "I loved the coaches corners. I though they were very helpful, especially in preparing myself (so I could prepare my team and co-coach) for competitions. The coaches corners were very useful in creating list of things we needed to do." Additional feedback pertaining to areas of improvement mostly related to access. Comments included requests for alternatives days/times, as well as recorded trainings for those unable to attend. One volunteer said, "I wasn't able to attend this year, but my partner did and they were helpful. Having a variety of times or playback options might make it easier for people to attend." A couple of volunteers noted the difficulty of making the in-person workshops. One volunteer said, "Time, distance and weather were all obstacles for in-person events." See the report's Appendix B for the complete results of open-ended comments from the FIRST Nevada volunteer survey.

Additional Comments: Other Potential Trainings

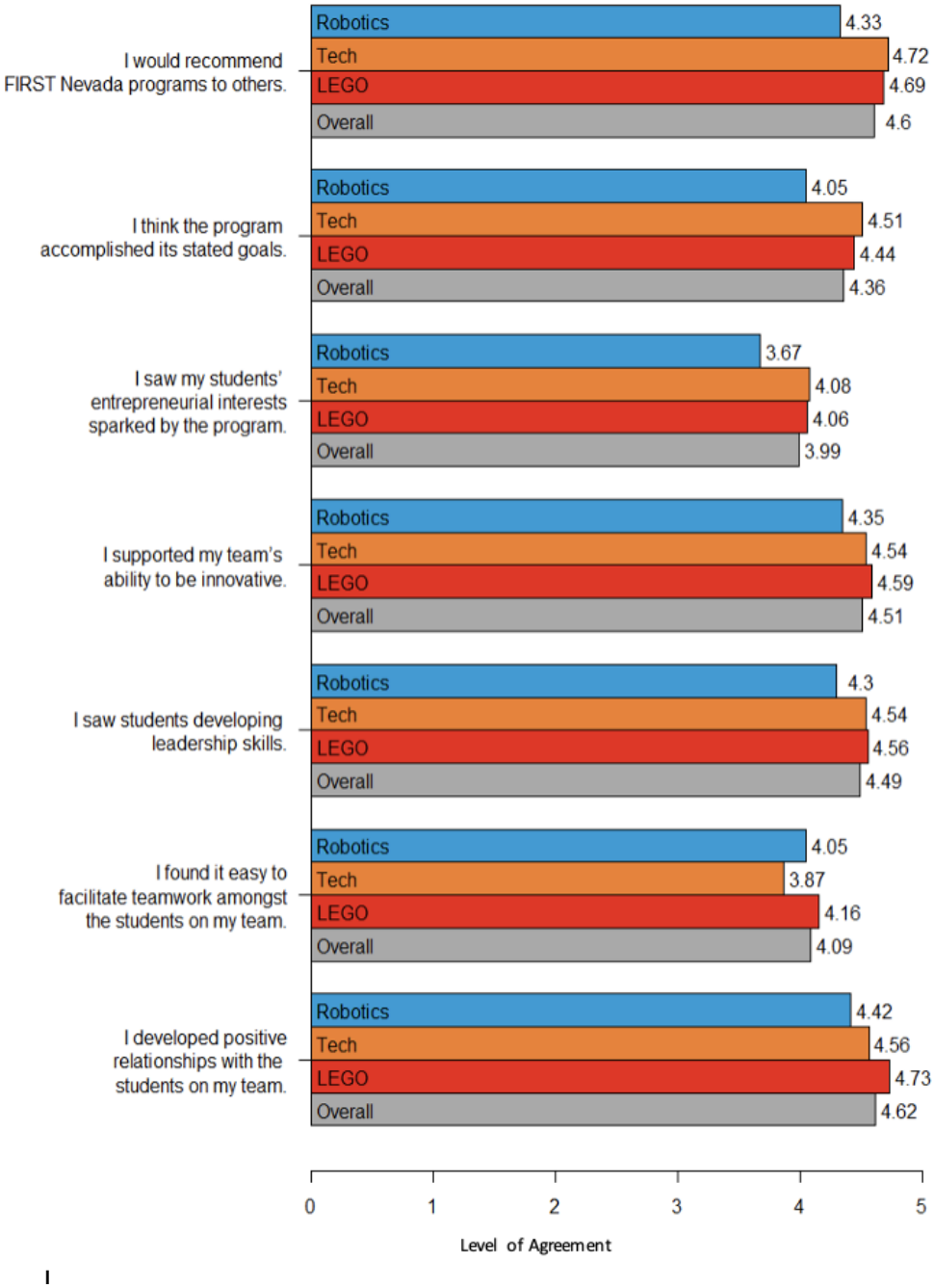
In an open-ended question, all respondents were invited to share about the potential benefits from other training. There were a few comments appearing multiple times, including requests for more training for CAD, fundraising, grant writing, programming such as competition rubrics and award qualifications, and new volunteers' specific trainings. One volunteer said, "I think one area to really help people is around the Innovation Project and what can be built, brought, and how to best present their information during the judging session. This was definitely the area that I struggled in as a first-year coach." See the report's Appendix B for the complete results of open-ended comments from the FIRST Nevada volunteer survey.

FIRST Nevada Relationships

Figure V4 shows volunteer responses to questions about volunteer-student relationships and overall climate, both overall and by program. The response scale ranged from 1 (Strongly disagree), 2 (Disagree), 3 (Neither agree nor disagree), 4 (Agree), or 5 (Strongly agree). Overall, survey results indicated volunteers had very positive mentoring relationships within largely productive climates. As Figure V4 shows, volunteers strongly agreed they developed positive relationships with their

students (4.62) and saw their students develop as leaders (4.49), while supporting team innovation (4.51). They also agreed they found it easy to facilitate teamwork (4.09) and saw students' entrepreneurial interests sparked (3.99), especially amongst FIRST LEGO (4.06) and FIRST Tech (4.08) programs. Perhaps, most indicative of positive relationships and climates, volunteered strongly agreed they would recommend FIRST Nevada programs to others.

Figure V4. *FIRST Nevada Volunteer Perceptions of Relationships with Students*



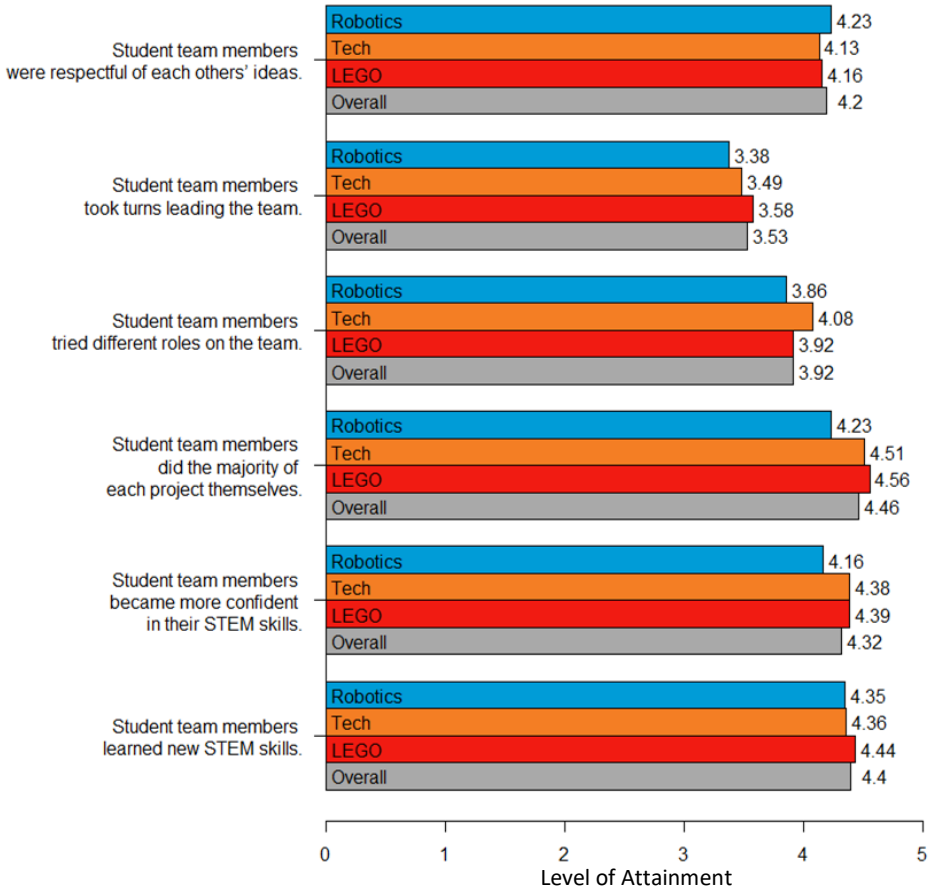
Additional Comments: Volunteer-Student Relationships

In an open-ended question, respondents were invited to share additional comments about their experiences with students as a FIRST Nevada volunteer. Across the data, feedback about the program was positive, often lauding the program for the impact on students. One volunteer said, "I am looking forward to bringing the experience to another school that I am transferring to in the fall." Interestingly, first-year volunteers again indicated the need for more guidance. One volunteer said, "It is a metric ton of work for the mentors...especially new mentors on new teams. FIRST NV is doing so very well at supporting the teams and the stipend helps entice new mentors to help out and get hooked. I just wish there was a class for new mentors that went over all of the expectations (both obvious and not-so-obvious) and best practices for how to deal with them. We talk about "reaching out" to other teams for support but it's really not that easy when you are new and not very social...at least it was for me in 2010." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

FIRST Nevada Student STEM Learning and Teamwork

Figure V5 shows volunteer perceptions of student STEM learning and teamwork, both overall and by program. The response scale ranged from 1 (None at all), 2 (A little), 3 (A moderate amount), 4 (A lot), or 5 (A great deal). Overall, survey results indicated volunteers had strong positive perceptions of student STEM learning, and positive, if more muted, perceptions of teamwork. As Figure V5 shows, volunteer responses to questions about STEM learning indicate they saw students learning new STEM skills (4.4), became more confident in their STEM skills (4.32) enough to do the majority of projects themselves (4.46). They also agreed students demonstrated respect towards teammates' ideas (4.2) and tried different roles (3.92), though took turns leading to a moderate extent (3.53).

Figure V5. *FIRST Nevada Volunteer Perceptions of Student STEM Learning and Skill Development*

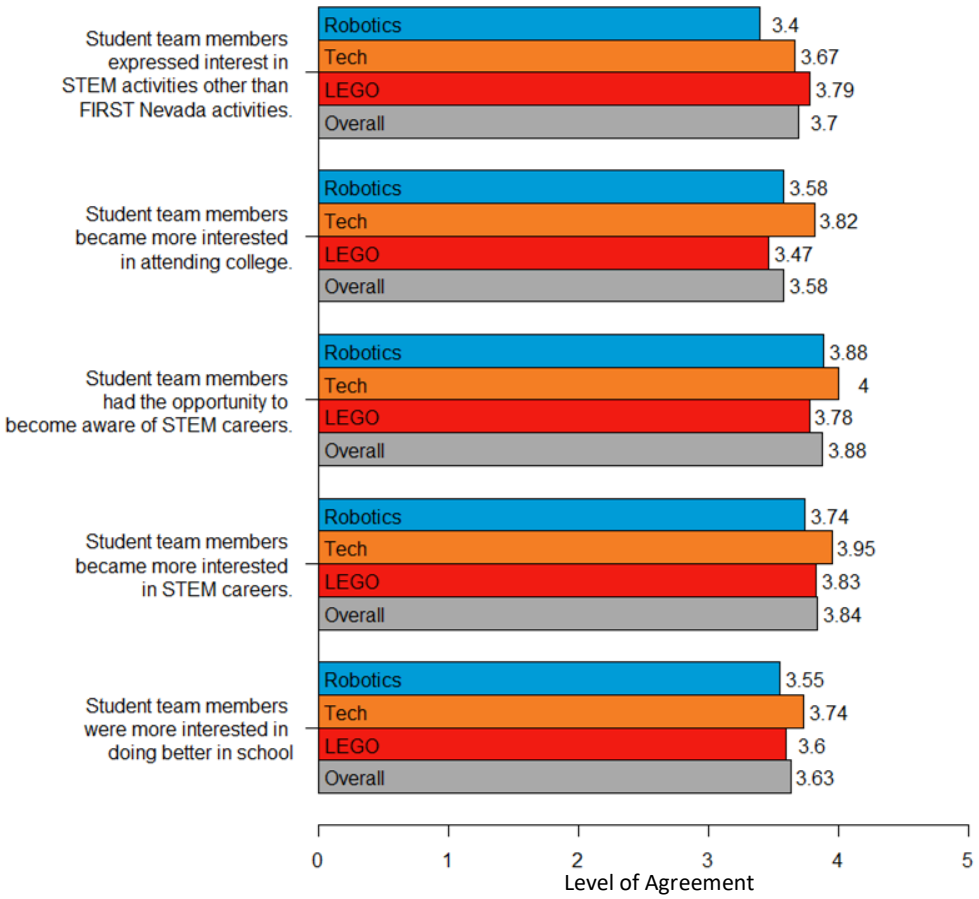


FIRST Nevada Student Interest in STEM Careers and Activities, Educational Achievement

Figure V6 shows show volunteer perceptions of student interest in STEM activities and careers, and educational achievement, both overall and by program. The response scale ranged from 1 (None at all), 2 (A little), 3 (A moderate amount), 4 (A lot), or 5 (A great deal). Survey data indicate a lot of interest in and awareness of STEM careers and activities, and, to a more modest, though still positive extent, education achievement. Overall, as Figure V6 shows, volunteers agreed students has the opportunity to become more aware of STEM Careers (3.88) and more interested in STEM careers (3.84) with FIRST Tech volunteers indicating the most opportunities (4.0) and most interest (3.95). Volunteers also noted a lot of interest in STEM activities beyond FIRST Nevada (3.7), particularly among FIRST LEGO respondents (3.79). Findings indicate positive, if more muted, results for educational achievement. Overall, volunteers thought students were more interested in

doing better in school (3.63) and in attending college (3.58), as FIRST Tech volunteers indicating the most interest in doing better in school (3.74) and attending college (3.82).

Figure V6. FIRST Nevada Volunteer Perceptions of Interest in STEM Activities and Careers, Educational Achievement



Additional Comments: Student Success Stories

In an open-ended question, respondents were invited to share success stories about their students. Respondents mostly illustrated the positive influence the program had on student social-emotional maturation, both in terms of improved behavior and increased self-confidence and willingness to lead. For example, they shared stories of decreasing disciplinary issues, such as one volunteer, who wrote, "A couple of our mentees started out the school year really having a hard time in the classroom, emotionally, and in the social aspect. Since starting this program, those students have become more positive, more engaged in daily tasks, kinder to their fellow peers, and are just truly interested in learning and striving to do better." Another added, "A student who had disciplinary issues joined the team and he now is performing better in his classes." Beyond stories of positive behavior, volunteers shared about witnessing students maturing into leaders and watching their grow both in size and self-confidence. As one volunteer said, "The team doubled in members.

We have gained many girls and several are leaders on the team. Students are eager to try new things and learn new skills." Another described their team's resilience, writing "My students adapted to the new experience exceptionally well. Being my first year, I was not able to fully prepare them for the challenge experience. But they were successful despite the setback." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

Additional Comments: Volunteering Challenges

In an open-ended question, respondents were invited to share challenges encountered during the season. Most often, they discussed the difficulty of getting the students started on a project. As one volunteer said, "Struggle with the innovation project, reaching out to outside sources. Getting the kids started is the hardest part." Another shared, "My 6th grade team had a really hard time coming up with a project. I had trouble getting this team interested in the topic and we were last minute with our final idea. We even went on energy related field trips. Maybe FIRST could send out a list of last minute project ideas after we're half way through the season (or even later) or at least some hints for struggling teams."

The other main challenge was absenteeism. Volunteers found it difficult to keep teams growing competitively when faced with significant absences. One volunteer wrote, "Getting my team to go to the competitions. Parents weren't willing to let their child attend weekend activities." Another answered, "Lack of consistent time commitment from some students." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

Additional Comments: Program Successes

In an open-ended question, respondents were invited to share program successes. Overall, comments were very positive. Many volunteers applauded program communication, especially as it encouraged student-centered action. As one volunteer said, "Communication and resource allocation." Another answered, "It allowed students to lead the conversations and be able to come up with their own ideas." Others shared about program's professionalism and facility to problem solve. A volunteer said, "The program stresses the importance of sportsmanship and character as much as building and coding skills. I think it's great to see the students need to focus on that and demonstrate those skills in different ways." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

Additional Suggestions for Improving FIRST Nevada Programming

In an open-ended question, respondents were invited to share suggestions for improving FIRST Nevada programming. Several requested more advanced notice for competitions to support logistics. As one volunteer said, "My district requires a long lead time to approve field trips. It would help to know the schedule for meets sooner. Next year I will probably have to prepare field trip requests for all the events at the beginning of the year and cancel the ones we don't go to." Another said, "As I previously stated, I think it would be great to have the information at the last session a little earlier in the season." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

Additional General Suggestions

In an open-ended question, respondents were invited to share any other general feedback about their experience with the program. As with the preponderance of comments, final thoughts were laudatory (e.g., "wonderful," "fun," "amazing"). Many expressed the desire to return, even

efforting to bring the program to their next school. One volunteer said, "We had an amazing experience, and will do it again next year. The lessons the kids learned were invaluable and we felt lucky to be a part of it all." Another said, "I love this program! I am so proud to be a part of it, and I see how it helps students learn decision making, problem solving, leadership skills, patience, persistence, etc. It is one of the best authentic learning programs I have been a part of." See the report's Appendix B for the complete results of open-ended comments from the volunteer survey.

Conclusion

In summary, 2022-23 FIRST Nevada participants reported they were engaged and well-served by participating in FIRST Nevada programs. The main finding from our evaluation reveals consistently positive perceptions, indicating sustained interest in and commitment to FIRST Nevada programming, both overall and across FIRST LEGO League Challenge; FIRST Tech Challenge; and FIRST Robotics Competition. Further, FIRST Nevada volunteers reported positive perceptions of FIRST Nevada programming, including trainings and support, and agreement that students profited from the program. Overall, volunteers indicated they were satisfied with the level of program support, both in terms of communication and equipment provisions. Trainings were described as practically useful and preparatory, especially Coaches Corners.

As FIRST Nevada enters another year of implementing programs that build science, engineering, and technology skills, inspire innovation, and foster life skills, we offer the following data-based recommendations:

Based on FIRST Nevada participant survey data, we recommend continuing efforts to facilitate interest in STEM subjects and soft skills that students may feel ambivalent about, including math and formally presenting information, which are integral to educational and vocational success. Also, we again suggest more attention to promoting FIRST scholarships and affordable educational opportunities in Nevada, which remain integral to educational and career ambitions expressed in the data and serves the interests of students and the state. Finally, we recommend more consistent efforts to bolster student participation in data collection, namely completing both pre- and post-surveys. Consider incentivizing survey participation and completion to increase consistency with response rates. More robust data will support the capacity to evaluate program impact, supporting more nuanced approaches to program implementation.

Based on FIRST Nevada volunteer survey data, we recommend considering how to better support first-year volunteer mentors/coaches and those without STEM backgrounds, both in terms of effectively messaging program expectations and bolstering support. As FIRST Nevada looks to build on its successes, we suggest reinvesting in formal mentoring and/or informal collaboration opportunities through which volunteers can exchange ideas, activities, strategies (e.g., how to address student behavior issues) and successes. We believe such efforts—whether via formal trainings or informal channels through which members can exchange ideas and receive mentoring (e.g., online resource repositories or virtual meetups)—can close perceived gaps in communication and support continued high-quality implementation.

Appendix A

Appendix A Table 1. *FIRST Nevada Participants "Other" First Languages*

Other First Languages
Thai
Cantonese
Filipino / Tagalog
Korean
Chinese
Pashto
Basya
Dari
Kapampangan
Kikuyu
Oromo
Punjabi
Vietnamese

Appendix A Table 2. *FIRST Nevada Participants by School or Team Name*

District	School/Team Name	Participants		Program(s)
		Pre	**Post**	
Carson City	Borderwich Bray ES	1		
Carson City	Carson Adult Ed	1		

Carson City	French ES		1	LEGO
Churchill	Best ES		1	Technology
Clark County	Abston ES		3	LEGO
Clark County	Adv Tech Acad HS	2		Robotics
Clark County	Alamo ES		7	LEGO
Clark County	Allen ES	8	7	LEGO
Clark County	Bonanza HS		6	Robotics
Clark County	Boulder City HS	4		Robotics, Technology
Clark County	Bowler Grant ES		9	LEGO
Clark County	Bridger MS	10		LEGO, Technology
Clark County	Burkholder MS		5	LEGO, Technology, Robotics
Clark County	Cannon JHS		2	LEGO, Technology
Clark County	Cheyenne HS		2	Robotics
Clark County	Cimarron Mem HS	34	20	LEGO, Technology, Robotics
Clark County	Clark HS		2	Robotics
Clark County	Cozine ES		1	LEGO
Clark County	Decker ES	8		LEGO, Robotics
Clark County	Derfelt ES		11	LEGO, Robotics
Clark County	Desert Oasis HS	7	19	Robotics
Clark County	Dickens ES	3	4	LEGO, Technology, Robotics
Clark County	Eldorado HS	11	4	Robotics
Clark County	Ferron ES	9		LEGO, Technology, Robotics

Clark County	Fertitta MS		1	LEGO
Clark County	Foothill HS	2	3	Robotics, Technology
Clark County	Freemont ES	11	3	LEGO, Technology, Robotics
Clark County	Gehring ACAD ES		12	LEGO
Clark County	Goynes ES		6	LEGO, Robotics
Clark County	Heard ES		7	LEGO
Clark County	Hickey ES		1	LEGO, Robotics
Clark County	Hoggard ES		2	LEGO, Robotics
Clark County	Innovations ES		1	LEGO, Technology
Clark County	Iverson ES	10		LEGO
Clark County	Kelly ES		5	LEGO, Robotics
Clark County	Las Vegas ACAD HS		4	Robotics
Clark County	Las Vegas HS		1	Robotics
Clark County	Legacy HS	2	3	Robotics, Technology
Clark County	McMillan ES		3	LEGO, Robotics
Clark County	Mojave HS	1		Technology
Clark County	Neal ES		8	LEGO
Clark County	NWCTA HS	27	12	LEGO, Technology, Robotics
Clark County	Robison MS	3	4	LEGO
Clark County	Schofield MS		1	LEGO
Clark County	Smith MS		2	LEGO
Clark County	Swainston MS	23		LEGO

Clark County	SWCTA HS	24	9	Robotics
Clark County	Tarr ES		3	LEGO
Clark County	Thomas ES	2		LEGO
Clark County	Thompson ES	16		LEGO
Clark County	Tomiyasu ES		14	LEGO, Technology, Robotics
Clark County	Ullom ES	12	5	LEGO
Clark County	Vegas Verdes ES	15		LEGO
Clark County	Virgin Valley HS		1	Technology
Clark County	Von Tobel MS		2	Technology
Clark County	Walker ES	7		LEGO
Clark County	Wallin ES		4	LEGO, Robotics
Clark County	Wasden ES	3	31	LEGO, Technology, Robotics
Clark County	Watson ES		1	LEGO
Elko	Spring Creek ES	9	1	LEGO
Elko	W Wendover HS	1	3	Technology
Eureka	Eureka ES	13		LEGO
Lincoln	Meadow Valley MS		10	Robotics, Technology
Lyon	Yerington Intermediate		7	Robotics, Technology
Nye	Pahrump Valley HS		1	Technology
Nye	Pershing MS	1	1	LEGO
Nye	Rosemary Clarke MS		4	LEGO, Technology
State Charter Authority	Alpine Acad HS	1		Technology

State Charter Authority	Amplus Durango		5	Robotics, Technology
State Charter Authority	CASLV Eastgate		1	LEGO
State Charter Authority	Doral Northern NV		1	LEGO
State Charter Authority	Mater Bonanza	1		Robotics, Technology
State Charter Authority	Mater East		1	Technology
State Charter Authority	Mater Mtn Vista		14	LEGO, Robotics
State Charter Authority	Pinecrest Sloan		1	Technology
State Charter Authority	Somerset Skye Canyon		4	LEGO
Washoe County	Bennett ES	6		LEGO, Technology
Washoe County	Mount Rose K8	4		LEGO, Technology, Robotics
Washoe County	North Valleys HS		4	Robotics, Technology
Washoe County	Smith Kate ES	5		LEGO
Washoe County	Smithridge ES		7	LEGO, Technology, Robotics
None/Other				
	21217 The Phoenixes	10		
	anabelle	1		
	CASLV Cadence	7		
	ccsd	1		
	Incognito 11574	6		
	Knowledge Hunters	4		
	lego league\\	1		
	legosauruses	6		
	Mindstorm Masters	1		

	MinerBots	2		
	Pinecrest Academy St. Rose	1		
	r/legos	1		
	Virginia City Silver Circuits 16158	3		
	achiever bots		1	
	amplus academy		1	
	ARC – Blue 18858		10	
	ARC White 21787		6	
	Archer Bots		1	
	Awkward Silence		4	
	Battle Mountain Bots		1	
	Cyber Eagles		3	
	Energizers		1	
	GigaBite		5	
	High Maintenance		5	
	Mega Meadowbots		3	
	Might Meadow Bots Silver		5	
	Mighty Meadow Bots		2	
	Minerbots		2	
	Perpetual Motion		2	
	Robo Ravens		7	
	Sloan Canyon Robotics		1	
	South Tahoe		1	

	The Jose best team		1	
	The Meadows Bots		1	
	The Meadows School		1	

Appendix A Table 3. *All open-ended comments from participant pre-survey (organized by question)*

Is there anything else you would like to add about your participation in FIRST Nevada activities this year?
I like the expireance that you get. I think the teachers are nice.
fun building Lego
I liked the first lego robotis lige and I like to play with lego and being on this team I reay love it.
I really like participating in Nevada activites.
I think that robotics is super fun, and I am already learning so many things.I hope the next team has an amazing time, and also learns a bunch of stuff!
(: qowpowq :)
Activities
coder
every one should be able to build.
From top annual events like Burning Man to Cowboy Poetry and the Great Basin Astronomy Festival to the Off Beat Music Festival Nevada's top annual events.
FTC is the first activity I've put in a lot of participation and hours into in a few years. I joined knowing nothing, but everyone in the club is helping me learn how things work and where to start.
Fun Lego building
GP
I am excited for this season.
I am making good progress in Solid works

I am really excited to participate this year thanks for this opportunity and I am willing to learn more about robots, coding, and building we have great couches that are always helping us and teaching us.
I am really happy I am on this team because I love building and I love math I was also really happy I had a chance to join, and I am willing to learn more, and I love building robot. We love our coaches they are willing to make us learn they are great coaches!
I am very excited about going on Lego robotics team. I am very very confident i can start programming a robot and building it in times work.
I don't have anything I need to add about FIRST Lego Nevada
I feel like I am apart of it
I feel like my team cares about each other a lot.I also feel like all the people who were on the team last year are really open to the new kids and are helping all the new kids.
i feel very good being the leader of the team, so i can help them learn about the robot
I have never competed in a FRC competition
I hope that we can learn great coding skills this year in my First Lego League.
I hope to have fun and that I wont be dissapointed with the way that things happen.
I like my job
i like robotics and other science things but i mostly like robotics because it helps me learn more about our enviorment and it helps me learn about the world.
I love first Nevada!
I love it.
I might not be there i have medical problems
i really like being on a team with my freinds cuz we can really work well when we are together and that's all.
I really like working on my team
I think it is nice and realy fun I like the play with lego a lot and bing on this team makes me happy.
I think the team progresses every time we come, and I feel even more and more senses of acomplishment every day we come. The joy of coding and building with your team can make those feel excited and feel more comfortable every time.
I think this will be a great year full of learning.

I want to be a creative desiner
i want to have fun
i wasent here
I wish they were more builds and different robots
I would like to add that i love working with my team mates they are the type of people you can count on. I love making robots with everybody. we always come to some suggestions on the design of robot and what we build.
I would like to be a team captain of a coder but I also love to be a builder.
I would like to be dealing with technology and engineering.
I would like to bulid a metal robot. And to win a compation.
I would like to help build the robot and make some parts to it.
I would like to make my team feel like they are apart of something instead of making my team feel like they are worthless.I feel like my team has potential and doing the best they can.I would like to add that my team likes to work things out with agreeing and disagreeing.
I would like to talk about the human organs so that i can be a Specialist on bran surgery (Tumors,mental problems etc.)
I would want build a bigger robot but not one taller than me or the size of my hand, I want a robot to build, not to sit on, but half of my size.
i'm exited for the first Nevada Lego league. And so my team can work together to code and make robots.
It is really really really fun. Thank you first! My favorites were (so far) making ideas, coding missions and planning with my team with color coded psoudocodes. yay!
It is very fun and I want to stay in it until 7th grade
It was very fun, I learned a lot, and had a good time. If I could add something it would be for the coding section, and it would teach you how to do more harder moves and what some of the stuff meant.
It's my first time :)
It's really fun and I like it because I can do things and learn about new things and I get to build new things.
its cool and fun
Its really changed my life for the better. Ive truly found a place where i belong. Its my family and home. A place where i can really feel safe.

l picked to be on the robotic team because I need to challenge myself. also l feel that this will help me get into collage
Love working with an amazing team. They are super supportive and super sharp.
May the odds be ever in our favor.
mostley nothing i really like robotics
My team was so welcoming, but as I am new to the team and still learning, I have not expressed my ideas as of yet, but my team seems very supportive and full of smart people who recognize the potential benefits of having me on the team. I'm very happy that I found incognito and that they wanted me on the team :)
N/a
nioooo
No
no
No
No it's just really fun
no not anything I can think of right now.
no thank you
No thank you
No thanks.
No ther is not
no, i really said it. you u survey garbage thingy wingy
No, that is all.
NO!
No.
No.
none
nope

Nope
Nope.
Not at the moment
Not really
Not really im ok with doing FLL
Not really.
not that I know of
Nothing else
so far I've liked expression and sharing my ideas so far.
Thanks for making it possible!!
That i love coding but dislike going to an meting at a diffrent school but i dont care
That working hard as a team can make a difference, even in defeat or win my team we always know how to have fun;).
The idea I got the idea since I was very good at building Lego's then I notice that I should be an engineer.
There can be no one sadðŸ˜ Just be happyðŸ˜Š
There is nothing else I want to add about my participation in FIRST Nevada activities this year.
This year so far has been a journey already. Even though it has only been a few short weeks, it has been an amazing adventure.
to get pro
Very excited
vwrjnosfjdvno
well at the end in 5th grade we need to build a robot, so I think this will help me know how to program and build it.
What if you could build your own robot because I sort of like following instructions but I like creating my own things because that is being creative.
Yes I would like to be a robotics thecher

Yes, I think being in this helps increase my knowledge about technology and STEM. Being on the robotics team has helped me learn a lot of things. For example I learned that you can always use a second person to help you, or just another perspective of the situation. Iâ€™m very glad my school has opportunities like this so I can learn more.
Yesn't

Appendix A Table 4. *All open-ended comments from participant post-survey (organized by question)*

Is there anything else you would like to add about your participation in FIRST Nevada activities this year?
I like it because it is fun and exciting.
I am happy that I joined and I have had many experiences throughout. And as I continue I would like to learn more.
Maybe add a second chance after you qualify for the second competition.
:)
a docter
being more involved
Being part of First Nevada has made me really interested in this field and although i dont know as much as i would like too. I am up to learning and working more into the field.
Brrrrrrrrr
chicken tenders are green
Choir
Eh, Not really. Never really done anything yet.
Even though I talk very much i still listen to my team I will be glad to participate In First Nevada activities this year.
FIRST Nevada is the best opportunity for smaller communities to join together over something people love. This program is also a great way to open doors into a community full of later job opportunities.
Great Southern Tournament experience, slightly less fun during state, the game itself is kinda boring

I absolutely LOVED working with my team this year. Ever since I was little I have been fascinated with robots and mechanics so being being a part of this team was a dream come true. If I had another opportunity to be with this team I would take it ninety nine times out of one hundred.
I don't know but when I was in the activities I worked in my team, learn about energy, and made a presentation but we failed, but we still do activities at the school I am in.
I enjoyed working as a team and getting in alliances with other teams. I would be more interested in learning about scholarship opportunities though.
I fell like I am left out and I want to do more
I felt I helped a lot with my ability. And that my team appreciates that.
I had a good second year participating in robotics ever thought we did not make it all the way it was fun to work on the whole thing together for toughes meetings.
I had a lot of fun and I want to do it again next year.
I had a lot of fun doing these competitions even though we didn't win, it is okay because this is our first year at Robotics and i was surprised that we even qualified for The Championships.
I had a lot of fun with my team. I might see you guys next year!
I had fun but I did go home early because I became very sick but I liked it.
i had lots of fun participating ,and it also taught me how to code.Also i liked working with my team.
I have had a great time participating in my fobotics competition team. I have learned a lot and am greatful for the opportunities that I have been given. I cant wait to go to comepetition and come back next year!
I have had so much fun and learned so much participating in FIRST this year.
I like Ohio
i like robots :D
i like running and also talking alot and being the boss
i like tech so i would like to do tech
I liked it :)
I liked my first FIRST Tech Challenge. I learned many new things and methods while having fun and making friends.
I liked the idea of the challenge this year, the year we did the space theme seemed unrealistic for me.
I love being on the lego robotics team this year
I loved it

I loved the FLL program this year, it was amazing. I loved my team and especilly my couches. I had so much fun.
I really enjoyed being apart of this level of FLL. I can't wait to advance and participate in the next level of FLL.
I really enjoyed how friendly and kind everyone was during the season was. I liked meeting new people and working with them.
I really like robotics.
I think about leaving the team because of the stress
I think I have provided enough information about me about my participation in FIRST Nevada.
I think that I have learned a lot from everyone in robotics.
I think this was a fun chance and experience with the First Lego League Competitions and going to them was so fun and i enjoyed the experience a lot. I mainly enjoyed working with my teamates and supporting each and every one of them while in competition and in the robotics club times.
I want to be able to make a robot from scratch and be able to code everything to how it moves to how it does specific task.
I want to learn more about biography,writing reading and more math
I worked very hard, but I got tired from building everything.
I would just like to say thank you to all the volenteers for making this posible.
I would like to add that I had lots of fun of programming a lot in the FIRST activities this year
I would like to add that I have a lot of fun at my club because the things we do make me cheer up when I am sad and I love to code robots and one day I would like to invent robots.
I would like to add that I very much enjoyed this years FIRST tech challenge and the competition.
I would like to build a robot with any instructions because a can't do anything with out any pictures or how to do it so I can inspire kids to things they love like building robots and building with legos.
I would like to go to another competition in the future
i would like to know how to make a full robot to help around the schcool and at home
I would really like for us beginners robotics team to have us learn some simple steps of coding. I hope I can improve this year on some coding as a first time Robo cat.Oh and one more thing is that I can learn how to do preferential coding some day!ðŸŒ¸
I'm not a student I'm one of the mentors so this didn't really apply

I'm not too interested in other participation things, especially without good teammates or people I don't know, but if there was another chance before college, I will consider.
Idk
If I could add anything is that my team could get into the finals because the competition was super fun.
if I have a chance to do something, especially in technology or science I would do it
isThere anything else FIRST Nevada.activies
it fun
It has opened my eyes to a whole world of opportunities in stem and I've had a lot of fun this year so far.
It is fun!
It is my first and last year doing or even hearing about first robotics, i am excited to see where it's going to go and what team 9287 is going to accomplish.
It was a great different but fun experience that I had this year. :)
It was a very fun experience.
it was a very nice expirences
It was an experience
it was fun :)
It was fun and i learned a lot
It was fun and I love Nevada.
It was fun I loved it the competitions were super fun
It was fun!! !!!!!!!!!!!!!!!!!!!!!!!!
It was great, I want to do it again next yer.
it was probally the best thing i have ever done!
It was really fun and I learned more about coding and making sure that I write down what I or my team creates and where to put it or how to use it and how important gracious professionalism is.
It was so fun.
IT WAS SUPER FUN

It was the funniest.
It's fun. :D
It's pretty fun and you learn a lot of new things.
It's an amazing opportunity that I've been given and I hope one day to give back
its coolio
its really fun with my teammates coding the robot and naming it.
kindness
maybe i don't know what else there is.
more builders
My best year out of the 2 seasons I have been too. Won Engineering Excilence Award
My favorite thing was the team building projects. I like that it is not all work, and there are some fun things. I wish there was more time to finish our work together as a team.
My Teachers were very helpful also i liked competing and i liked my team members.
My team cheered me up if I was ever sad or upset and I wish I could stay on my team.
N
N/A
no
no
No
No I think I'm done.
No i'm good thanks though
No I'm fine.
No not really
No nothing
No nothing much.

No thank you. I am all good
No, but thank you for the fun year.
No, I think I'm okay with what there is now.
No, i'm good for now.
No, there is nothing else.
No,but thx
No,there is not.
No.
no.....
No.`
none
nope
Nope not really.
Nope nothing.
Nope:)
Nope.
Not at the moment.
Not really
Not that comes to mind
Nothing much just that having a chance to actually be in a competition was amazing and I really liked my first lego team.
Nothing really.
One thing I would like to add is I really enjoyed this year with my team and my coaches. I hope we have an even better time next year.
Thank you so much for putting this together, I really had a lot of fun. I learned to much!!
that i could not work without my team helping me with the coding and presentation.

The one thing is we all had fun and tried to include everyone and made sure everyone did somthing
there wannest anything boring it was a little difficult to get the work done but we worked together and maked it happen.
There wasn't anything boring and everything was super fun.
This experience has been very good for me. I have been introduced to engineering and solid works. While a part of this team, I have discovered what I want to do in the future.
this was our fist year and we did well and i had fun with my team and as we progress, i learn more thing's with my team
Volunteers
We need mentors that understand robotics.
When I turn 16 I'm going to work at a job
yes every thing I did was to be a good friend, and help my team win something this year
yes, i love this team because they make it fun
yes, i really like how my teachers are nice and they help us learn.
Yes, one thing is even though we lost my team cheered me up also I had soooooooooooooooooooooooooooooooooooooooooooooooooooo much fun this year with my team and coaches. IT WAS AMAZING!
Yes,I am happy that they chose me and i thank them a lot
Yes. I found some parts no one was Building with. The parts looked like the robot i was drawing in my sketch book at home. (NOT in my SCHOOL notebooks.)

Appendix B

Appendix Table 1 shows the schools or team names that FIRST Nevada volunteers were affiliated with, indicating program locations across the state. In sum, volunteers were affiliated with 168 different FIRST Nevada program locations this season.

Appendix B Table 1. *FIRST Nevada Volunteers by School or Team Name*

School/Team Name	Mentors	School/Team Name	Mentors
Abston ES	1	Lied STEM ACAD MS	1
Adv Tech ACAD HS	1	Lincoln ES	1
Alamo ES	1	Lincoln HS	2
Allen ES	2	Mackey MS	1
Amplus Durango	1	Mark Twain ES	1
Boulder City HS	1	Mater East	1
Bowler Grant ES	1	Mater Mtn Vista	1
Bracken ES	3	McMillan ES	1
Burkholder MS	2	Meadow Valley MS	2
Cahlan ES	1	Mojave HS	2
Cannon JHS	5	Neal ES	4
Carlin ES	1	Northside ES	2
Carson MS	1	NWCTA HS	2
CASLV Eastgate	2	Oasis ACAD	1
Cheyenne HS	2	OBrien MS	2
Churchill HS	1	Ortwein ES	1
Cimarron Mem HS	5	Piggott ACAD ES	1
Clark HS	1	Pinecrest Inspirada	1
Cozine ES	1	Pinecrest Sloan	1
Derfelt ES	1	Pinecrest St Rose	1

Desert Oasis HS	5	Red Rock ES	1
Desert Skies MS	1	Ries ES	1
Dickens ES	1	Risley ES	2
Doral Northern NV	2	Robison MS	1
Doral Saddle	1	Rosemary Clarke MS	2
Eldorado HS	3	Sandy Valley ES	2
Elko HS	1	Schofield MS	1
Empire ES	2	Scott ES	1
Ferron ES	2	Sedway MS	1
Fremont ES	1	Sierra Vista HS	2
French ES	1	Silver Sands	1
Garrett	1	Silverado HS	1
Gehring ACAD ES	2	Sky Ranch MS	1
Gilbert ES	1	Smith Kate ES	1
Goldfarb ES	2	Smith MS	1
Goolsby ES	1	Somerset Skye Canyon	1
Goynes ES	2	Southside ES	1
Green Valley HS	1	Spring Creek ES	1
Hayes ES	2	Stanford ES	1
Heard ES	1	Staton ES	1
Hoggard ES	2	Sunrise Mountain HS	1
Honors ACAD	2	Tarr ES	1
Innovations ES	1	Tomiyasu ES	1
JG Johnson ES	1	Ullom ES	1
Kelly ES	2	Vegas Verdes ES	1
Las Vegas ACAD HS	2	Virgin Valley HS	2

Las Vegas HS	2	Virginia City MS	1
Lied STEM ACAD MS	1	Von Tobel MS	1
Lincoln ES	1	W Wendover HS	2
Lincoln HS	2	Walker ES	1
Mackey MS	1	Wallin ES	2
Mark Twain ES	1	Wasden ES	1
Mater East	1	Watson ES	1
Mater Mtn Vista	1	Wengert ES	2
McMillan ES	1	Williams W ES	1
Meadow Valley MS	2	Winnemucca GS	2
Mojave HS	2	Wolfe ES	1
Neal ES	4	Yerington Intermediate	2
Northside ES	2	None - Community Team	1
NWCTA HS	2	Other - Southern Highlands Prep	2
Oasis ACAD	1	Other - Central Cyborgs	1
OBrien MS	2	Other - Micro Meadowbots	4
Ortwein ES	1	Other - Mighty Meadowbots	3
Piggott ACAD ES	1	Other - Mega Meadowbots	2
Pinecrest Inspirada	1	Other - Eastgate Engineers	1
Pinecrest Sloan	1	None - Wolf Pack Bots AKA Lobos Roboticos	1
Pinecrest St Rose	1	Other - Bighorns	1
Red Rock ES	1	Other - Legosauruses	1
Ries ES	1	Other - Knowledge Hunters	1
Risley ES	2	None - Cyber Eagles	1
Robison MS	1	Other - Air Raid	1

Rosemary Clarke MS	2	Other - FTC Boulder City SuperBots	1
Sandy Valley ES	2	Other - FLLC Boulder City PowerBots	1
Schofield MS	1	None - Awkward Silence 4H Robotics	2
Scott ES	1	None - Virginia City Silver Circuits	4
Sedway MS	1	Other - CIVICA Academy-Bionic Wolves	1
Heard ES	1	None - Perpetual Motion	1
Hoggard ES	2	Other - Robo Ravens	1
Honors ACAD	2	Other - Potential Powerhouse	1
Innovations ES	1	Other - One Star Victory	1
JG Johnson ES	1	None - MCII	1
Kelly ES	2	None - Tule Duck Decoys	1
Las Vegas ACAD HS	2	Other - GigaBite	1
Las Vegas HS	2	Other - May the Brick Be with You	1

Appendix B Table 2. *Open-ended comments from volunteer surveys (organized by question)*

Why did you choose to be a Mentor/Coach for FIRST Nevada?
A fellow teacher asked me to co-coach with them.
A parent came and asked me to bring this to our school.
Always had an interest in robotics, wanted to start a robotics course at the high school as an elective. Went to the FIRST Nevada sponsored training over the summer and discovered the FIRST sponsored opportunities.
As a Career Specialist I was concerned with the lack of technological opportunities and training in our rural communities across the state of Nevada. When I learned of the grant opportunities to start a robotics program in our school I tried to get other teachers to pick it up but no one felt they had the time or energy to take it on so I applied for the grant myself and decided to dig in and learn as much as I could so I could help my team.
asked by admin

At first it was out of curiosity. I just ballooned from that point on. I know head 3 different divisions of robotics and I also Teach PLTW Automation & Robotics.
Because I love FIRST and I know the ins and outs of a team, especially leaning towards demonstration, team spirit, and engineering notebook/FLLC project. FIRST helped me grow into the person I am today and I want to help have that impact on others!
Because it is incline to my experience and expertise.
Coolest thing I can do at school
Earn more experience in mentoring
Ever since i was in the Philippines, I really want to be a Robotics Coach. Unfortunately, due to lack of funding opportunities there is no training for teachers in my previous school since we dont have any STEM class or robots in our school. SO when i get the chance to join and learn it here in the US, i grab the opportunity.
Excited about robotics and helping kids learn.
For my children
For my kids.
Former teacher at the school. Mentoring leadership.
Great opportunity to learn more about robotics and help my students that are in the program.
Great program
Had a great experience being a student team member and wanted to continue supporting the team that I am an alumnus of and spread FIRST values.
Had students that were interested in robotics and coding.
I always liked computer science and wanted to gain more experience with programming
I am interested in robotics/coding and how that can improve critical thinking in my GATE students
I am really only a coach in name, Crystal does all the work
I choose to be a coach because a colleague was looking for help, and I enjoy the subject matter. I was willing to learn and join her in this endeavor.
I choose to be a coach for FIRST Nevada because I want to provide opportunities that I didn't have to my students.
I choose to be a mentor to give back to the team that helped me become who i am

I chose to be a Coach for FIRST Nevada because it sounded like an awesome experience to do with the students.
I chose to be a mentor/coach for FIRST Nevada to help encourage STEM instruction/practice at my school. I wanted to help provide greater opportunities for my school's students.
I enjoy a challenge and my co-worker is a Lego First Coach.
I enjoy seeing the kids minds at work to solve problems.
I enjoy STEM activities and my daughter was interested in the program. We were able to learn about coding, building, designing, and our innovative project together with our team.
I enjoy STEM activities.
I enjoy working with robotics and learning new robotics technologies. I enjoy mentoring students with design competition projects. And I have been able to work this activity into part of my work assignments.
I enjoyed my high school robotics team and wanted to make one available for my students.
I had experience with the VEX IQ platform through REC and my principal brought the FIRST FTC Tesla Grant to my attention.
I had originally written a grant through Lego for K-2 and thought that was the grant we had received. When my principal asked who got a Lego Grant I raised my hand. I was surprised to find out this was a different grant but jumped all in to support a team here at Ries.
I had previously used Vex for robotics, but another teacher wanted to do First and I needed the help.
I have a passion for Legos, Robots, & Coding. It seems like it all fits. I also love being able to enable critical thinking skills as well.
I have a passion for robotics and coding. I wanted to share that passion with my students.
I have been a STEM educator for about 6-7 years now and I absolutely fell in love with robotics and with teaching robotics. The excitement that I get to see when students work in my robotics clubs or classroom with robots is incredible. I have seen students grow in the first program so much. FIRST is an incredible program. My students feel welcome and included. This is why I choose to do it.
I have converted my classroom into a Lego class, and the first Lego league challenge seemed a fun extension.
I heard about it when I worked at Mountain View and knew how amazing the program was. I feel kids need to find a passion so when asked, I jumped at the chance.
I just wanted to provide a safe place for the kids to have fun and expand their knowledge. They're incredibly smart and I love watching them problem solve and create fun builds.
I like sharing my knowledge with students and seeing the amazement when they are able to make a robot do what they want
I like to support our students who want to join clubs, plus I love Legos

I liked the opportunity that FLL brings to our school for all scholars interested in robotics, coding, etc. The exposure to different fields and problem solving skills is first-rate.
I love LEGO!
I love science and having hands on projects. So when the opportunity came I jumped on it to be a coach and provide the students with the opportunity for STEM.
I love STEM education, I think coding is interesting, and it was a way for me to connect with students.
I love teaching robotics and wanted my students to have that experience of teamwork and competition.
I love technology and STEAM.
I love the program and what it teaches students. I was a fan when I first saw a competition many years ago.
I love watching students take initiatives to learn new skills.
I love what FIRST teaches kids! I wanted to be apart of that growth process in STEM fields!
I loved how the program engaged and challenged kids.
I previously taught Entertainment Technology at a school in Alabama where I taught coding. I completed a Donors Choose project and got some Dash and Dot robots. I was new at my district this year and they had an opening for FLL coach. I decided I would try to coach it.
I received a grant
I saw an opportunity for our school to be apart of something special and rewarding.
I saw FIRST die out at another school. I knew a student very involved with the program and after it was gone he wanted to drop out of school. When I moved to Nevada I saw the exact same program was about to die out at another school and I stepped in to make sure that didn't happen.
I saw this unique opportunity to connect with students outside of the classroom in a fun and challenging program. Who doesn't like to build, break and fix things while part of a competition?
I teach Computer Science and I like the cross-curricular connections
I thought I would get involved with my fellow coaches whom I enjoy working with in our school. I wanted to also experience this as a parent who wishes I knew about this league when my child was at this age range. I am able to share what I learned in his years of coding with the team members.
I thought it was an amazing opportunity for students in our school. With Tesla sponsoring us, we didn't need to come up with the funding, which is very difficult in our Tier I Title I school. A few teachers expressed interest (and had experience); but when it came time to step up, no one could help. I agreed since FIRST said that there would be training and support :)
I thought it would be a good opportunity for our students.

I thought it would be a wonderful experience for our students at our school.
I thought it would be both good and fun for the kids.
I thought that it would be a wonderful opportunity to get my English Language Learners creating, collaborating, and using discourse.
I used to compete, so now it is my turn to teach what I have learned.
I used to work at Stead Elementary and they already had a coach. I saw the major benefits that the students got from being in the team. When I switched schools, the mentor at Stead convinced me to create my own team at my new school.
I want to see this available to all students in Nevada. It's an important part of the future, encouraging both STEM engagement and cooperative competition.
I wanted an opportunity to support students in a competition.
I wanted my students to have an opportunity to learn about robotics and teamwork
I wanted to bring a robotics program to my school.
I wanted to bring something new to our community. We are such a small area and our students do not have access to many opportunities within the scope of STEM.
I wanted to ensure my students had exposure to this exciting program and provide opportunities for them to collaborate with other students throughout the area.
I wanted to give the challenge to my students.
I wanted to give the students in my school the chance to engage in STEM activities. I wanted to open up more possibilities to grow and learn with technology..
I wanted to help future generations at our school get more investing in STEM. I also wanted to learn more about robotics myself.
I wanted to help out our school and students start it.
I wanted to learn about robotics and bring it to my students as a STEAM teacher. Great skill to know for 21st century learning.
I wanted to learn more about robotics and coach students who were also interested in robotics.
I wanted to learn robotics and engineering! The former coach was leaving and asked me to take over and I immediately said yes.
I wanted to provide our students the opportunity to engage in this type of activity.
I wanted to support the existing team. I am interested in robotics and have been teaching simpler robbotics platforms in my classes.

I wanted to try something new, and we were at risk of not having a team if I didn't co-coach. I chose to continue to do it because I became more interested in it and saw the need for this program for the kids. The kids really craved the learning and experiences.
I was a FIRST coach in Arizona and decided to continue when we moved to Nevada
I was a mentor before FIRST Nevada was in existence. I enjoy working with the students and I enjoy the competition.
I was approached about the opportunity through our twenty-first century site administrator.
I was asked by the 4-H Coordinator if I would coach a team.
I was asked to assist the STEM teacher and I wanted experience in robotics as well.
I was asked to by my principal. I had no idea what it entailed, but fell in love with it.
I was asked to do it.
I was interested in it
I was interested in pursuing more STEM and coding projects with the my students.
I went to a Lego STEAM training and found out about the program. I was so inspired that this could be a way to actively engage my EL students while improving their abilities in speaking, listening, reading, and writing. They improved AND learned coding which they LOVE!
I'm the banker, I signed up so that I could purchase supplies for our coach
I've always bad an interest in robotics and computer sciences so when I saw this, I wanted to give it a shot!
It fun and our kids need this type of program for so many reasons.
It has been a dream of mine since being introduced to FIRST over 15 years ago.
It seemed really cool and my school received a grant.
It sounded fun and it was!
It sounded like a great opportunity to offer to students.
It was needed at my school so am just trying my best to help out
Kids are excited and engaged with coding
Love robotics and working with the kids
Mentoring does wonders for the development of students.

My administration thought it would be a good idea as a new teacher to teach STEM Robotics, and be apart of FIRST NV competition to help the school and students learn discipline through this program.
My boss presented me with the grant opportunity.
My child was on the team the first year it was started and the coach wanted to start an all girls team.
My children were interested in robotics and this was something I could provide to them
My daughter is a computer scientist and I wanted to expose my title 1 students to the opportunities and love of STEM learning she was given.
My daughter was on the team and at the competition, I saw a need I could fill on the team with their project.
My kids had such a desire to be involved with First Tech Challenge that we decided to be coaches. It helped that there was so much training and coaches corners to help be successful.
My kids needed a coach as the school did not offer robotics.
My own children were on teams that needed extra coaching help and now I am coaching a new team at the school I am currently working in.
My principal asked me if i wanted to coach so I volunteered to do it
My school was looking for a volunteer to take over when previous coaches left the school.
My son is on the team and my husband is the coach! I get excited when I can help them and the team succeed.
My son was interested
My son was interested in First and I volunteered to be a coach to ensure he had the opportunity to participate.
My students love STEM and do not have many opportunities for exploring STEM careers and topics.
Originally, I became a coach so my daughter could participate. I kept coaching because I love how the Core Values help the kids grow in many ways.
Our school had receive the grant a few years before and I was taking it over when I starting teaching a robotics class at the school.
Request from Administrator.
Robotics if fun and interesting to me. I went to an online training during COVID and then our school needed a push to get started so I took on the challenge.
Robotics was my favorite High School club, and it feels as though it has no equivalent in the college environment.

Saw a demo at the LV Science & Tech Expo and wanted to bring this authentic learning opportunity to my students
Seemed like a good, fun way for my son to get some needed exposure and hands on experience with mechanical and electrical systems.Encouraged by others involved in FRC, we started a team 14 years ago. Discovered this was more important and more needed than I ever imagined, and effective.
Student success with an area that is growing
The first time I did it was at the request of my students at Clark High School. I was a first-year teacher and they needed a new mentor. I had no idea what it was about or how much work it would be but I liked the idea of playing with robots so I said sure. I've been hooked ever since. Even after I retire I will try and find a club near wherever I live to volunteer with.
The folks from FIRST Nevada reached out to us and got us excited then they helped us apply for a grant.
The head coach needed help.
The previous coach left and no one at my school wanted to do it.
The previous coach told me about a teaching job and asked if I'd be willing to take over as the robotics coach.
The program looked fun and the Core Values connect to our school IB program.
The school team needed a coach
The support to get the team started financially from TESLA and Lego and the ease of implementing Lego into the classroom for students at the elementary level.
There was an opportunity to facilitate robotics and I wanted to help out.
This was a great program for our students, I am currently the school's social worker and many of our students struggle with regulating their social emotional behaviors. I felt this program was a good outlet for those who participated.
To assist with adding a robotics club to our school for our interested students.
To challenge my gifted students.
To expose kids to coding and robotics
To gain a new insight into something I can assist students to achieve success in
To give our students the opportunity to compete in a STEM league that would help them gain invaluable knowledge for their future.
To give our students the opportunity to learn coding, teamwork, and help them get excited about the STEM field.

To give students an opportunity to try something new
To give students the opportunity to design, test and evaluate the effectiveness of robots tasked with completing a mission. Offer something to younger students who do not have as many STEM opportunities as older students. TO encourage girls to grow passionate about STEM.
To have a program at my school that would allow students to engage in robotics beyond the school day.
To help a student who was bullied at school and struggling with reading.
To help keep my son's team going when they lost their original coaches
To help promote STEM and improve Nevada's national ranking by working with kids interested in these fields and looking to improve their skills.
To help provide a fun environment for kids that are not really interested or involved in physical sports. To help provide them with an avenue to channel their creativity and desire to learn more.
To help students learn, be creative, and have fun with Robotics, in addition to developing teamwork, coding, building, researching, and so many more skills! I love seeing the excitement that ensues and the challenges that students learn to overcome!
To help today's youth get excited about Stem.
to learn and help out a friend
To motivate the kids and myself to get out of our comfort zones.
To open opportunities for our students.
To support another Coach at my school.
We had a previous LEGO club at school and the opportunity came to start a FLL team.
What specific equipment was your team missing?
Because we are not a "school" team, we do not receive the funding and tools that the school teams get. We are grateful to be a [Corporate Sponsored] team, but those funds go to the registration. We are also waiting to receive the [Grant], which we are extremely grateful for, but during the season we have to fund our team on our own. We are not complaining about this, but just want to be clear that we are not "supplied" with the needed equipment.
Control Hub Did not get the same grants due to being a community team
Devices to connect to the Spike Prime. I was eventually able to get a device that would work.
Lego parts from multiple missions

Limelight, RoboRio, Robot intake kit, milling machine, 3D milling lathe
Table, mat, laptops
The table, one extension kit, storage bins, laptops. All arrived very late.
There are schools that have equipment that we can use, but my students have no way of getting to those schools. Most of my team does not live local to the school as we have 3 magnet programs so most days just getting to our school and home is all the parents are willing to do. [School District] busses are difficult to get and will cost the team $1,000 for just 1 time. So my team only has access to the tools at the school. The club is not in a workshop space further limiting what tools they can use as they only have regular outlets to plug into.
tournament table, and laptops which we did receive after the new year.
We were not able to get the REV control hub until the qualifiers had ended.
Is there anything you would like to add about mentoring/coaching needs?
As a community team I think some suggestions on fundraising. So may of the grants that were sent to apply for we could not since we are not non profit or a school team.
As a first year Lego League coach, the amount of information in various places felt a little overwhelming. I wish there was a simpler step by step, streamlined information to follow for a first year coach. Or maybe there already is and I just couldn't find it. :)
As a new coach, the amount of information was very overwhelming. It would be great to pair a new team with a mentor team or coach - at least someone I felt I could reach out to. Or, have a folder for new coaches that has the information pared down to just the basics. It was challenging to wade through the huge amount of information to find the information you are not quite sure what it is you need.
Being new in the field I was overwhelmed with trying to figure out how organize and help my team but I received help and information all along the way. It would be helpful for non STEM coaches, though, to have instructions of some sort to help us understand how to with our robot! It was a huge box of random parts with no idea what they were, what they did, or how to connect them!
Coach Corner Google Meets were extremely helpful with my pacing and getting needed support.
Coaching was definetly easier the second year after getting my feet wet. My partner was able to attend more coaching meetings which defintely helped. Maybe an online forum of FAQ?
Everyone was very helpful.
First Nevada has been a stellar organization to work with and provide resources and information in a timely fashion. In fact, there were probably too many resources and ideas available to try and implement them all.
First NV provides exceptional support for coaches and teams

first time teams need more guidance. It was very hard to understand the site and follow instructions.
FRC and FTC were great, I felt left out for parts of what was going on with FLL this year though.
Funds for homeschool children/teams
How to get more parents/adult mentors involved?
I am very happy with the communication and willingness of the FIRST Nevada to work with us in regards to any difficulties we have encountered. I have nothing negative to say about FIRST or FIRST Nevada.
I appreciate the FIRST program and the value it provide to kids, there are few programs like this provide a head start to those that have the drive and passion to pursue it. The volunteers are great people who are dedicated to the program and students.
I appreciated the Saturday events.
I feel we needed more training then a 3 day workshop
I felt so supported and appreciated. I at times felt lost and confused but someone always responded to my emails and answered my questions. This is a great community and I am so happy that everyone appreciates each other and wants each other to do well.
I felt we were given alot of great information I loved the monthly meetings on zoom it was great help in navigating.
I had a hard time, in the beginning, trying to find all the information needed as the information seems to all be housed on different sites and this created some confusion. I need to provide myself with some notes so I knew where to find things such as the calendar of events, materials needed, and so on.
I had issues with my school blocking emails, so I really appreciated any time I received a phone call
I had to search some team websites that went through the process. It was helpful to learn how others did things since I was new. Maybe a section on the main website for newbies like me with info, tips, and links to websites (like themomentmakers.org).
I moved to [New School] this past summer and wanted to start a team here after leaving my old team at [Original School] in good hands. The school year started ok, we received our mat and obstacles but had to work on cardboard and it was very difficult. 2 weeks before the skrimmage, 3 of my 5 students quit. The last two did not want to do it all by themselves and then they quit. I went over to [Original School] the last 2 weeks and helped them compete. I tried school-wide recruitment using the first video, and mine taken from previous seasons.
I really get confused on where to find instructions for different missions. Also, we tried to build the wind turbine several times, but the parts didn't seem to be in any of the materials that was sent this year. I just have zero confidence in my skills with assisting the kids, but I guess it'll get better each year!
I think having a mentor coach, someone with many more years of experience who I can meet with or who can come to my school and see how I am teaching and working with my team would be very helpful!
I think there should be a special liaison for new coaches to really help explain the process to them.

I want to learn basic and advanced programming skills especially on the autonomous class. Hoping that they would have a programming class this summer
I was not receiving emails for my team, but I did receive emails for the Jr. Team that another coach at my school had, and she was not receiveing her emails but got mine.
I wish there were more volunteers or members to come and do some one-on-one team training/help. The big events are fun but I'd like some one on one for my group to help with the project.
I would like to have some after the qualifier competitions available the timeline is hurried for some schools.
I would like to have some training on programming so that I could better help my students.
I would love an advanced programming professional development to help me better mentor the students with their programming.
If there were scheduling methods for smaller teams to help enable meetings for team leads that have a difficult time organizing, that might help more teams achieve what they hope.
IMO FIRST Nevada should offer dedicated training for mentors on fundraising as well as targeted marketing for the counselors and administrators of the schools with a team. Fundraising is, BY FAR, the most challenging part of this. FRC is very expensive from a school administrator's point of view and generally has lower membership than other clubs with similar expenses like football or cheer. To help teachers convince their admin and counseling staff that the educational benefits, future STEM career benefits, etc are worth it would go a long way. Especially since "winning" is harder to do and most admin use that as their metric of success for a program.
Is there any opportunities to compete before the official competitions?
It was a great experience. I hope that we are able to get funding to cover registration so we can participate in the future.
It was hard to get parts this year because of Covid.
It would be great if we could have more opportunities for our coaches to engage with other teams/coaches in person and talk about challenges we are facing, share resources, and be able to help one another troubleshoot throughout the season.
It would be nice to have two scrimmage events prior to competition.
It would have been nice to get a control hub but, that is on REV not FIRST.
love the Coaches Corners
Maybe a little manual on how to start... for us newbies.
Maybe just a way that local coaches can chat or ask questions, especially for first year teams.
More clarity on competition day. We heard different things from different people. We have 3 coaches, and it was disappointing to only have 2 be allowed into judging.

More mentors would be fantastic!
More time is needed before the first competition. Hard to compete in December with everything else that is going on in schools (testing, and holiday breaks).
My submission does not reflect a lack of wanting to participate with FIRST. We were not introduced to the program, we were classroom volunteers that the teachers roped in to help, I didn't know when I volunteered to help that there was a business behind it that would help the students. I think more mentors are needed as a lot of schools didn't seem to have much help.
Needs were met per the head coach.
None so far. I have a great and fantastic year with FTC.
OnShape or Inventor CAD workshops would be very valuable.
Please add more in person support for teachers to get credit for coming to classes. Divide the support for learning about sensors, running robot, etc. Stipend also would help teachers that are taking their time to teach this.
So much of it is just learning as you go, however the support system in place is wonderful. If I had a question or concern, I knew who to reach out to. Any questions/concerns I ever had were addressed immediately. In a monthly survey I indicated that I was really feeling stressed out over a competition because I didn't know if we were ready, etc, and one of the First Nevada people reached out to me immediately to offer support. That was wonderful.
The coaches corner meetings are helpful, but an earlier meeting time might be beneficial.
The resources provided for programming were lacking. My students have minimal programming experience, and the resources provided were more helpful if you had foundational knowledge already. It wasn't until we went to our first competition that my students were able to learn valuable information from other teams. As a Coach, I was told I didn't need to be knowledgeable about robotics; however, I do not agree with that statement. The only resource I felt gave adequate help was the Robot in a day. The resources on the site took time to dig for, and if I didn't print or save them right away, it was difficult to track them down again. The trainings, such as Coaches Corner, were not during times that I could attend, so I was not able to learn from that.
The season always feels so rushed. It would be nice if competitions didn't happen until spring.
The support and mentorship was outstanding. I have been coaching for about 5 years in another state and it did not provide the same level of mentorship and support.
The support provided by leaders, coaches and other teams is what sets First apart from other robotics programs.
The support was there, I just didn't know what I was missing in order to ask the right questions. Next year would be much easier and the support is there for our team to flourish.
The website can be challenging to navigate.

The website could be more user friendly.
The website is not user friendly
The website was not user friendly for parents or students
There is no training for first time coaches - it is a throw in the deep end approach and hope you learn to swim. As a coach you learn by doing - for example we had no idea that you needed a presentation for the innovation project until we showed up at our first competition. There was no reason for this - how everything works with an example can easily be told to new coaches through a one hour orientation.
This is not a First Nevada frustration, but a FIRST frustration. The idea that you can build a competitive robot with what's in the kit is delusional. The best teams consistently have the money, resources, and dedicated space to build robots. The older teams have many years of parts and equipment to build off of. It's inequitable.
This program is very well coordinated.
This season was amazing! All of the trainings were wonderful. I really wish we would have had these opportunities when I began 5 years ago.
Too many emails.
We live in a small town that doesn't have manufacturing or technology companies. Fund raising is difficult here.
We need a larger workspace to have a safe effective work enviornment, and allow us to be better organized. Having classes at the school that would have connectin to the program would also be helpful.
We need to be connected to other local coaches. We need to be able to network with them so we can collaborate, set up local scrimmages or other events, and to support each other. I'm not sure if there's a place in this survey for other additional comments, so I'm writing it here. I was extremely disappointed in how the Elko area Lego League Qualifier was run. I understand it's hard to find judges, but there should be an experienced judge in each judging room. 3 rookie judges should not be allowed, especially with no previous knowledge or experience in robotics or FIRST. I also believe some judges should not be local, or at least they should be better trained not to be biased against certain teams from certain places. I also don't see a reason for the Innovation Judging scores and comments to be held for days after the meet. Those scores should be released to help determine who goes to state. Not seeing where scores measure up to each other only allows the judges to cherry-pick who they want to go to state instead of being fair and going by scores.
Do you have any additional feedback regarding the training sessions you attended?
A reminder email prior to a coaches corner would have been great. I know personally, I forgot to attend several of them.
All of the sessions seem to be well planned and informative.
All the sessions were great.

As a rural team we were only able to attend a couple of workshops. It owuld be very helpful if more were offered with a **zoom option**.
Coaches corners are mostly **aimed at new coaches,** which makes sense but I would sometimes like to chat with other coaches about their season and such.
Definitely would like students more engaged with more chances for hands on and purpose.
Didn't **know there was training**.
examples of prior projects
For the coaches corner have them available on other nights, not just Tuesdays. I would have liked to attend more of them, but could not since I have other commitments on Tuesday nights.
For veteran teams with **veteran coaches most of the training was unnecessary** since we do all of that ourselves starting in August. It's invaluable for Rookie teams or Rookie coaches and I wish I had access to this year's training schedule my first two years as a coach. My team and I did attend the Scrimmage and Limelight training at Cimarron Memorial HS on Feb 18th but I didn't see that on the list. The scrimmage is the absolute best test of an operational robot and since we were new to the Limelight system that training was also invaluable.
good job!
Have a mock competition during an early training session. That way, we can see what it is we need to do. Or, show a video of a previous competition. Show short segments and critique it. Let us know what types of things the referees and judges are looking for. I really didn't have a clue.
Having access to the slides from the trainings was nice since I could not attend the trainings live.
I didn't attend all coaches corners. I think that more training on competition rubrics and award qualifications would be helpful.
I enjoyed the Ran conference.
I enjoyed them and they helped me with my 1st year coaching/mentoring.
I find the Coaches Corners helpful.
I learned so much at all of them. So happy they were provided otherwise I would have been lost.
I like how there are FTC volunteers to help.
I love the training sessions, i just feel so unsatisfied with my self on the last CAD workshop which was done virtually. Since English is not my first language, I had a hard time following the step by step instructions plus the speaker was speaking fast during that time. But i am glad i was able to attend it and i am very thankful for the organizer because of that
I loved how they were hands on. We actually got to work on our robots.

I loved the coaches corners. I though they were very helpful, especially in preparing myself (so I could prepare my team and co-coach) for competitions. The coaches corners were very useful in creating list of things we needed to do. The format of coaches corners was pretty nice, I like the online meetings, they were very well prepared and organized, and I felt welcome and open time for questions was very helpful. However, our community has so many teams, I wonder if we could do meetings like this in person.
I started late in the season so I did not get to attend any
I think it should be divided into the level of "competency" each coach feels like they're in. A lot of times, discussions would come up and I would be completely lost as a new coach.
I thought sessions were well run. I wish I had realized the importance of them earlier as I was a new coach.
I was able to attend a training over the summer that was very helpful. I think I needed that same course again right before the start of the season (or right after it started) to refresh my memory.
I was not ready with a team when I attended the first training, I would have liked the students to participate.
I was put into this at the last min, and did not receive guidance that would have been helpful
I wasn't able to attend this year but my partner did and they were helpful. Having a variety of times or playback options might make it easier for people to attend.
I would like the coaches corners to be offered on different days and times. I have a class at 7 on Tuesdays so it was hard to make when that was the only offering.
I would like to do the robot in a day class, just it came too early for me in the school year.
It may be helpful to split the trainings between the coaches that have had a first year and those who hadn't.
Limited ability to attend due to distance (300 miles from Reno, even further from Vegas).
Make the sessions more extensive and rigor.
more to prepare for recruitment and to get students excited about participation, this was my most difficult school to try to get students envolved
My session was extremely helpful.
My team and I were unable to attend ALL of the training sessions. Coaches corner is on a day/time that is impossible for me to make. My students have a difficult time being able to travel for workshops. Even though FIRST states they do not need to have an adult at the workshop this is directly against district policy and would jeopardize the program at my school especially. If people putting on the workshops and supervising are not badged through CCSD again this jeopardizes the program at my school. Some of the workshops (most) are posted too late to put in the appropriate paperwork for the students to attend. This is online and in person. The people involved do not all have to be badged if field trip paperwork is completed and approved. This paperwork needs to be submitted 3 months prior to the workshop. My team would have been able to benefit from a recorded training, but to my knowledge there were none recorded that were available.

My team liked the kickoff.
Need more trainings for beginner level coaches and students. The programming one was way over my students' heads.
No, they were helpful.
Our team had a very late start so I was not able to attend any trainings
The in-person workshops should be held on weekends. I live in [outside of Las Vegas area] which is a distance away from Las Vegas. I would like to attend the in-person workshops, if there was a more flexible time.
The information from the trainers sending out what was needed for construction of the robots were valuable
The information was clear and there is a ton of documentation you can refer back to. The organization of the resources is excellent.
The last session that explained how the tournament and judging would work, I wish we had seen earlier in the season. I don't think I really understood what it was all about until that session. It was really valuable information that would have been good to understand earlier.
The sessions attended in person I really enjoy. Virtual meetings were also good if you could not attend.
The training sessions I attended were very informative and helpful!
The training was great.
The trainings over the summer were helpful to get an intro to the program.
They are so high level that they are a waste of time
They were always excellent!
They were fabulous. I love that they incorporated the students as well.var
they were good
Time, distance and weather were all obstacles for in-person events.
Traings are best just prior to and early in the season.
Training sessions were all amazing. Our team attended every one of them and we always gained something out of them.
Very well organized. Sometimes there is so much downtime or repeat of information that was at a prior training. For example, we attended the robot build in a day which had programming, then in a training that was supposed to be the next level, a significant amount of time was spent on the same programming.

Maybe offer two sessions at the same time for beginning programming then some advanced or something else for those who attended before.
We are so new and so remote that it is difficult to attend in person things. My teacher is the primary person involved
We needed more training being a new team

What other training do you think would be beneficial for Mentors/Coaches?
3D Printing! We got 3D printers but were never given any guidance on how to use them.
A mock judging session. Let us critique a competition and then have the judges or refs explain to us what the real score would have been and why.
A training on awards and portfolios. I don't think I understood how important it was to try to have the kids focus and make there portfolio pertain to winning an award.
A workshop on the innovation project, my student (I had one member for a while) good idea but was shot down at the competition because it wasn't a team agreed idea. Well, for weeks this student was the team. So how to network and find community collaborations for innovation project would be helpful.
Actually have the judges run through the full robot challenge with a robot before the season starts so that coaches know what the challenges are supposed to look like - for example with supercharged the booklet and even video did not show that you were supposed to pick up energy tokens from the field to use for the challenges (we found that out at the competition).
Actually telling the teachers that there is training and mentors?
Advanced Advanced Programming and Troubleshooting
Autonomous Programming and CAD
CAD
CAD and Simulation (to help teams save money on wasted materials for poor design choices), drivetrain analysis and PID Tuning, demystifying sensors and how to best gather and use data from your robot/environment
Coding with blocks and Java training would be a great training for mentors as well as training in CAD.
First time coaches would benefit from a challenge day walk-through.
For FRC, I would like more opportunities to get together and practice driving and programming. For FLL, I would like more training on how the scores are found. Since 3/4 of the final score for FLL is done behind closed doors with the judges, I would like to know what a 4 looks like using the rubric. I think it would be great to share the winning ideas with everyone so we can see what they did and inspire our students.

For the future coaches/mentors, it would have been better to observe/volunteer at an FTC event in current season and in-person training for coding & building before actually taking the role of a coach in the next season.
Funding
Fundraising
Fundraising workshop, grant writing, source of materials
Fundraising, grant writing
Fundraising/Business Planning
How to better make a portfolio and what is needed to actually eill Inspire
How to run a club, how to manage students who are not as motivated, how to prepare students to interview, a few examples of innovation projects that won the award.
How to set up your meetings and practices.
How to use the coding.
I don't know about training, but just having collaboration and planning time with local coaches would be great!
I enjoyed the training over the summer for rookie coaches. I wished it was longer, like a whole week so I could have learned the sensors and programming a bit more in depth, but I suppose there were those little workshops that supplemented that throughout the school year.
I need help with the meeting booklet. It plans for 2 hour meetings when we meet for 1 hour. Next year we plan to meet twice a week to help with that, but some of the sessions don't seems to have a "natural" break point.
I never had the initial training the other coaches at my school recieved, so I was very unclear about what was expected as a coach. I was looking at the RAN training option, and so that would be the other training I think that would be beneficial. The robot-in-a-day workshops were VERY helpful, as were the coding workshops. We got a lot out of both of those, and they really helped us prepare for the competitions. I would like to have more scrimmages set up to help us prepare for judging sessions, and the robot game.
I personally would have liked more training on the innovation project. We didn't really know what to do even after we researched on the FLL websites. More examples would have been nice.
I think a meeting for new coaches at the beginning would be helpful. We started late and I feel like I missed a lot of important information.
I think one area to really help people is around the Innovation Project and what can be built, brought and how to best present their information during the judging session. This was definitely the area that I struggled in as a first year coach.

I think the trainings offered are wonderful. I would just like them to be more accessible.
I think we are doing a good job of offering a variety of trainings.
I think we should cover different ways to handle difficult students/parents.
I would like more guidance in the Presentation portion. I really didn't know what the expectation was for my students.
I would like to collaborate more with other coaches to learn more about things such as how the organize their practice, divide teams, and prepare for the innovation project.
I would like to see more support for working on innovation projects and notebooking.
I'm not sure.
innovation project training
It would be great if more information/guidance could be given for helping the team prepare for the judging sessions, if there could be a practice judging session with detailed feedback, not just boxes checked.
Just continue to have these trainings, they are so helpful!
Just continued training in yearly updates are helpful enough.
Leadership trainings l.
Maybe pacing, ways to to organize the meetings with the kids.
Maybe some training videos.
Mechanical training such as, chassis, CAD, electrical, and programming training.
Meeting structure
More information on fundraising would be helpful, this is the most difficult part of the season in my opinion.
More project focus training, not just the coding part.
More step-by-step directions.
More team-building activities and experiences
New coaches could use a 'crash course'
Presentation expectations or examples

Programming
programming!
recrutment
Resources for materials like aluminum rod and sheet.
Setting up a Business Plan and how deep should we go into it, especially working with the students on how to set one up.
Some general training prior to the start of the season would be helpful.
Some type of first time coach management schedule training
Summer camp for teachers. Week long course paid attendance or credit for renewal for licensing
The coaches corner did a great job cover any areas of training needed.
There should be coding sessions but also Innovation Project decisions.
Training for the current year's challenge
Training in innovation project skills and how to teach my students to put this together. How to engage with community members to bring in ideas for the innovation project.
Training specific to Innovation Project and judging.
Understanding how to design a robot, code, and what the competition judging presentations would entail
unsure at this time.
We got a late start so I don't even remember if I had a training. I read the materials, but because everything was so new to me, it took a long time to feel like I understood what was going on
Is there anything else you would like to add about your experience as a FIRST Nevada Mentor/Coach?
Developing teamwork is the hardest part of coaching the team. Perhaps we need to do just "team building" work before we start building our robot.
Everyone was very knowledgable and helpful
Great Program!!! We enjoyed our first year.
Honored to be part of the FRC program.

I already typed some of this in a previous question section, but I wanted to add something else. Last season, we earned a spot for the championship. We chose to attend the virtual championship, but when that was canceled so close to the in person championship, we were not able to attend. This year, we were feeling tings out to see if we want to stay in FIRST, and it was going great until the unfairness happened at the qualifier. I was extremely disappointed in how the Elko area Lego League Qualifier was run. I understand it's hard to find judges, but there should be an experienced judge in each judging room. 3 rookie judges should not be allowed, especially with no previous knowledge or experience in robotics or FIRST. I also believe some judges should not be local, or at least they should be better trained not to be biased against certain teams from certain places. I also don't see a reason for the Innovation Judging scores and comments to be held for days after the meet. Those scores should be released to help determine who goes to state. Not seeing where scores measure up to each other only allows the judges to cherry-pick who they want to go to state instead of being fair and going by scores. That's 2 years in a row that my students have come away feeling they were treated unfairly. I know life is unfair, but what point is it to stay in this league if we keep getting treated this way?
I appreciate the positive approach the leaders at First Nevada had with all of us.
I can't wait to take what was learned from the first year of coaching and grow even more this upcoming year.
I definitely appreciate the financial support which has always been a problem for me. It was fantastic not having to go to administration and hoping for approval. I hope more schools take advantage.
I have one student who is excercising strong leadership skills, and another who is very excited about career possiblities in robotics, coding, and engineering. These developents are very exciting.
I learned so much my first year and feel much better prepared going into next season.
I literally saw my students intellectual curiosity grow in front of me. They developed problem solving skills, confidence and perseverance. All of our team grew significantly on standard measures of learning- the MAPS test- above and beyond the non participants.
I love coaching FIRST FTC and I look forward to continuing to do so.
I love seeing the kids so excited about learning. My team has grown so close, and they are having so much fun while learning. They will be able to take the skills they are learning with them for the rest of their lives.
I love the core values and innovation portion of the program. My daughter competed in VEX, and I wish they had similar components.
I love the FRC program. I'd love to see every school in the valley have a team and have multiple events prior to the Las Vegas Regional. A full-field event like the week 0 event in New Hampshire that is free/reduced in price to Las Vegas teams would be great. Advertise on local radio and charge admission for adults to help cover costs. There is a reason why most successful teams go to multiple events. When I mentored at Clark, our Las Vegas Regional win-loss-tie rate doubled the win category once we figured out how to earn enough money to afford two events per season.
I loved it! I've been a mentor in the past, but this is my first time coaching. It was a bit tricky, but I had help along the way. It was truly a rewarding experience.
I really don't know much about robotics or engineering, but anyone who cares about the kids can be an asset to the team!

I really enjoyed witnessing the growth of my scholars. I also got to see them in a different light and environment than just the classroom or school.
I really like the program. I do wish the season were longer so that we didn't have to cram everything into just 3 months. The time required to build and coach a successful team was challenging with other committments of my time this year. A longer season would mean I don't have to have as many team meetings and practices each week, or I could schedule shorter practices and meetings. A longer season would also allow us to make real progress on our innovative project.
I work in innovation - I have no idea what the point of the innovation project is, especially with no information for the coaches on what the judges want. My team is highly innovative but wanted robotics to be robotics and learning to program, and found the project to just be a waste of time used to keep bigger teams busy. That said they won an award for their innovation, I only say this to put these comments in context - my kids did not see the point of this part.
I would definitely recommend the FLL Challenge but might hesitate on FTC due to lack of teams in the area (Elko).
I would strongly recommend participating to other teachers
I'm happy this program exists to allow students to get excited about STEM and have lots of fun in the process of learning.
It has been a positive experience that I plan to continue for the foreseeable future.
It was a wonderful experience and I cannot wait for next season!
It's always fun to coach the kids.
Loved coaching the team and working with other teams for such a successful season. The kids really learned so much about5 themselves, robotics, coding, 3-D printing, strategy, teamwork, goals, and time management.
Mentoring an FRC team has been a life changing experience, for me and for the students!
My students are so proud of what they accomplished and we continue to meet weekly to work on their building and programming skills. They LOVE Lego League!
N/A
no
No, thank you.
None at this time.
None so far. I am very thankful to be part of the program.
Nope, everyone does a great job.

Nope.
Northern Nevada coordinators are very supportive. Thank you!
Not at this time.
Overall it's been a great experience. We currently have two coaches and two mentors on out team.
So grateful for all the support available for teams and coaches.
Student benefit so much from the experience! I wish there was more that I could do/could have done to get more students to participate.
The competition aspect saved us. My students learned a lot from the support of other teams.
The entrepreneurial approach is what my team struggled with. They operated with a non-profit mentality and were completely raked over the coals for it. It should be more clear that the innovation project is expected to make money. Innovation does not equal money. At least, that is the takeaway the team members got. They wanted to do a nice thing for the community, but was taken aback with all the profit details they were supposed to supply.
The experience is really one of a kind
The failures listed above we're purely due to communication and time issues within my team and do not reflect the support provided by others.
The kids became comfortable about their mistakes. The hard part was not taking over and telling them what to do. I mostly worked on guiding them and supplying them with the materials that they asked.
There is nothing like experiencing our first year, it's tough and exciting and exhausting, and we couldn't be happier.
This is a great program that provides real world skills to the students, not only will they be better prepared for college, but also for their careers in STEM.
This is a very rewarding so far. I am learning so much from the team and I am excited for how we do at the competition :)
This was a great experience. Highly recommend. It was very rewarding for me as an educator as well as my students.
This year was a difficult one due to some personalities in our team, but overall, I strongly support the First Lego League mission and programming.
We attached important character expectations to team membership too - good attendance, no demerits - so that students had an actual stake in maintaining their membership. My students also realized that the 1 day a week we were meeting was not going to be enough to be properly prepared, so THEY decided to meet twice a week in order to make up the lost time. Allowing them to make the vast majority of choices was also important for driving independence and responsibility.
We did realize all the time I took.

We had a lot of fun this year and we are ready to come back next year as real competition!
We had interest from the students, but lack of interest to be a coach or mentor from families and staff. My recommendation is to allow students under 18 with program experience to be coaches and mentors. I found amazing student mentors and a student coach at a high school who were part of their high school robotics team, and were on their middle school teams, too- so they were very familiar with FIRST Robotics. And we have had positive feedback from the students and their families with these volunteers.
We loved this experience and hope we can do this for many years.
When a FIRST financial partner loses sight of the program goals and talks about students being "losers" it is a major turn-off.
While we were very short on the time our students had to prepare, less than a month. I was pleased with what they accomplished and cannot wait to do this next year, not that I understand more and can start sooner.
Can you share any success stories about your mentees from this season?
"I finally feel like there is a group of people I relate to and belong with."
A couple of our mentees started out the school year really having a hard time in the classroom, emotionally, and in the social aspect. Since starting this program, those students have become more positive, more engaged in daily tasks, kinder to their fellow peers, and are just truly interested in learning and striving to do better.
A few students have quickly become proficient at and continue to develop CAD skills with Onshape and 3D printing. A handful of components on the robot are designed and printed in house by the team's own students.
A good mentor is a great starting.
A huge success is that many of our students improved in their reading and math MAP scores. 2 of our students receive SPED services and have made many amazing leaps in meeting their academic goals. I think they just have learned to believe in themselves.
A prime example is from students that were accepted on to the team that teachers had worries about them being fully invested in school with absences, focus, etc. One girl on the team had about 40 absences the prior school year and after joining the team this year, she has had only 8 absences on the year. Her grades have really improved in math and science and is way more confident in the classroom to share her ideas and thinking.
A student was able to develop an app-based scouting method by themselves using online resources, making it unique to the team.
A student who had disciplinary issues joined the team and he now is performing better in his classes.
A student who has trouble in some classes was excelling here.

All of our teams won an award at qualifiers.
All the students were coachable and excited and willing to do their best for the project. They worked hard individually at home and at school as a team to accomplish their goal.
Almost all of the kids on the team have at least basic CAD skills after this season and several have exceptional ability to do 3D modeling without any assistance.
Although we were put out during our first competition, my students continue to work on completing the missions.
At our first meeting I met a freshman who was interested in Robotics and he was really shy. As the team progressed he became more confident and is doing really well in the team. He's definitely more confident in speaking and skill.
At the beginning of the season my FLLC team was struggling. Their energy was low, they fought almost constantly and the team role were not evenly distributed. Myself along with another mentor worked with them and helped them understand FIRST's Core Values. Shortly after, they started working as a team, hugging, and sharing. They ended up winning 3rd Place Champions at the Qualifier.
At the beginning of the season, some of the kids were painfully shy. They would avoid eye contact and conversation. Through this season, they have completely changed and are having fun with their teammates and are able to successfully present their presentation in front of the judges.
Collaborative discourse and hearing other's ideas. The ability of our team to hear ideas, try them, then collaboratively work together to problem solve or try something different was astonishing to me.
Controller Award and Judge's Choice Award.
Encouraged innovative ideas for the project, and see people become alive with offers to assist.
I also had the opportunity to see my old stunts be very successful in the high school that they went to.
I can say over 2 years we have seen the confidence levels in our team members increase a great deal. They stand a lot more firm in the things they try and suggest for the teams efforts towards doing their very best in robot coding and design. We saw some leaders step up that started off more reserved last year. It's been so nice seeing them blossom the way they have.
I had a returning member who really grew in both ability and leadership this year. He is still not able to attend a lot but he is autistic and watching him grow is definitely a huge joy this season. We also saw a grown in female membership this year which is another large success.
I had one student fall in love with coding and programming. He became a leader through robotics. He was quiet and shy in the classroom and a leader at robotics.
I helped parents arrange a santa gift of Spike Prime to their student.
I just recruited a very talented new programmer and engineer. RoboRattlers won two awards this season. I am so proud of them.
I liked watching them give themselves smiles and a thumbs up when their robot successfully read the randomized signal sleeve during the autonomous part of the match!

I saw a lot of the kids grow and learn this year. Their leadership and presentation skills improved. And their ability to communicate and work with other teams improved. After seeing other robots compete, they found some motivation to learn CAD and Coding programs to improve for next year.
I saw one of my students who has a speech problem step up and speak in front of the group and the judges. His confidence really grew.
I saw students step up as leaders and show strengths I wouldn't have seen if it weren't for the various expectations and opportunities provided by FIRST Lego League (i.e. coding, building/design, innovation project).
I saw students try to help push the team forward with a goal of winning.
I was proud that our team represented our students population at our school. We did not exclude students from participating and had several special education students as part of our team. We saw them shine in ways that may not always in the classroom and I this helped build their self-confidence.
In general they have developed more confidence, both in their abilities and in their ability to communicate.
It was a very poor season for us.
It wasn't until our first competition when our team was mentored by a middle school team that you could see the pieces click for the students on our team. It really got them charged and excited for the next competition.
Just overall developmental improvement in taking an idea and following through implementing a solution
Loved watching kids who didn't know each other come together as a team. They shared how much they enjoyed making new friends and spending time together.
Many are considering careers in STEM fields and have applied around for opportunities.
Many of our students picked for this team were not top of their class, straight A students. They were all students who just have an interest in robotics. It was amazing to watch each of them come out of their shell and get to know one another. Some of our students really struggled with communication and were able to learn how to do it respectfully and clearly through this program. Our students learned a lot about STEM and a lot about themselves.
My favorite comment this season.
My mentees learned how to use many new tools this season! They also learned how to program and are excited for STEM careers in the future.
My students adapted to the new experience exceptionally well. Being my first year, I was not able to fully prepare them for the challenge experience. But they were successful despite the setback.
My students are part of the GATE program at my school. Some are in sports and other after-school programs, but they still find the time to complete their tasks.
My students did not do well at the competition because we did not know what to expect. After, I heard my 6th and 7th graders discussing what they will do next year to improve and make the robot and their

innovation projects better. It made me so happy to see that even though the competition was rough, they were excited to come back next year and do even better.
Not at this time.
One girl with extreme social and anxiety issues did a great job as a driver! One boy has developed a strong interest in coding and STEM careers.
One of my 4th grade girls was a lead coach, she surpassed the 5th grade boys. Other groups looked up to her and that made her feel & confident in her skills!
One of my students showed a great deal of responsibility in keeping everyone focused and on-task. He was not like that in the classroom setting, so it was exciting to see this side of him.
One student in particular became really motivated and showed improvement in school.
Our current team member that is doing the engineering, started half way through the season and had to pick up the slack after the old engineer quit the team.
Our mentees placed 22nd overall in their very first competition.
Our team won a prize even though we were a first year entry. The team was recognized for its enthusiasm and team work.
Saw great teamwork and shy students become leaders.
Seeing the kids not only create friendships within their own team, but also to create friendships with members of other teams is amazing. You do not see this kind of interaction in other organized team events.
Seeing the students lear the cnc router table and becoming more confident in making quality parts
SInce this is our first year, it was really a great success to us especially when we qualify to NV state championship.
since we got started late I thought my students did great getting 3 missions done. they are excited for next years competition
Some of our students would barely speak in English. We saw so many of them come "out of their shell" and shine when presenting to the judges. Our students were so proud of their accomplishments especially on the day of competition, even though we struggled with programming, we were happy with what we did accomplishments.
Student relationships grew exponentially along with their confidence. We talked about the meaning of YET.
Students enjoyed building with legos and became bonded with one another. The qualifier made them nervous but gave them a sense of accomplishment.
Students have join on a whim but have really enjoyed it from day one and has stayed with it. More gir

Students that had behavior issues were in the "club" and this helped them maintain in order to stay in school
Students who were fascinated by robots but did not have any experience with writing code or building them made HUGE leaps in ability from one meeting to the next. Taking time to build our perseverance and gracious professionalism turned a rowdy, crazy, out of control group of children in to strong, patient, hard working and respectful teams.
The kids had to overcome a lot this season with key members quitting mid season before their contributions were done.
The majority of the 8th grade team are moving up to FTC in high school. Yay!
The quieter students were able to shine with their ideas.
The rising 9th grader in the program is headed to an FTC team. He wants to continue robotics throughout High School.
The RoboRavens won the northern championship and are headed to the Arkansas Razorback Invitational in May!
The students all worked together as a team and "wanted" everyone on the team to have "chances" in all areas of the projects
The students learned how to persevere and work as a team this season.
The team doubled in members. We have gained many girls and several are leaders on the team. Students are eager to try new things and learn new skills.
The team worked so well together and really supported each other's strengths. It was so fun to watch them take initiative and work toward a common goal.
The way they figured out how to work together as a team was inspiring
There was a week before a competition and they had been practicing for it. They were putting all of the codes in order, and when they did they realized that none of the programs were working like they did the week prior. They spent hours working on it and eventually recoded everything the night before competition. I was really proud of their resilience despite the stress of the situation.
There were initial issues with students erasing others' code. They had to work through this problem and became better teammates because of it.
They developed new relationship and learned to work together as a team.
They grew so much as a team. They are so young and developed skills beyond their 3rd and 4th grade peers.
They pulled together as a team and put together a great original project! Everyone was involved the entire time. All team members got to help strategize and code the robot, even though only 4 ran the codes at the qualifier. They worked very well together!

they rose from the ashes - they lost all their programs the night before the Northern nv championship - they built back what they could and managed to keep their spirits up
They told me that through FTC program they experienced robotics and learnt so many things like building, coding, problem solving and team building.
They tried things they thought were difficult
They were very excited to be here and doing Lego LEague
This came from a student having a panic attack when we first arrived at our competition. By the end, he felt like he belonged there.
This was our first year and our team took 1st place in Core Values at the December 10 Qualifiers
this year they improved significantly on the robot games, completed more missions
This year's team was smaller than any years prior, and partly because I retired from the school district. I wasn't as available to see them doing school time as before.
Three of our graduating students changed their minds and decided to attend UNLV for engineering, instead of going to an out of state university :)
Two classroom moms and a teacher was able to coach 5th grader and they won the award for best coding. Not to shabby with no training.
Two of my mentees are extremely shy. They struggle to make peer friendships. Hearing them share their ideas and viewpoint was especially rewarding, as well as seeing them create friendships with individuals they might not have every spoken with (4th to 5th grade, etc).
We all learned a lot about energy and teamwork, and we had a ton of fun!
We are a middle school team so we always are losing team members after getting up to speed on the program. We also had a very late start this season due to coaching issues. With this said we went from having a 0 point robot on our 1st meet to being invited to an alliance and getting 2nd place.
We are a school of mostly English as a second language students. This causes them to be very shy to speak out loud. It was very inspiring to see them develop their speaking and communication skills during the Innovation Project presentation.
We basically had no programmer this build season because our programmer moved away at Christmas. That meant that someone had to step up and fill that role. My team is mostly seniors and none of them wanted to learn programming so my only freshman stepped up and took on the challenge. He started with no knowledge of programming and learned rapidly to research code from other teams, copy/paste their code, and edit it to fit our program. He single-handedly got our Limelight's auto-aim and acquire program working before the training at Cimarron. I've had to step in and help with syntactical challenges and help him with the implementation of our drive-tuning but he's been a rock star.
We had a brand new student to our school join our club/team, and it gave him an opportunity to connect and get to know not only a few students from his classrooms, but from other classrooms and grade levels!

We had a couple students who really struggled with coding at the beginning of the season. By the end they were some of our most critical thinkers.
We had a large team this year, and although they did not agree on much of anything, they were able to stick to it long enough to agree on the best course for the team and finish the season as a group intact. We received special recognition in both the qualifier and the championship, and that is the first time that has happened for our team.
We had a quiet IEP student who expressed interest and with a little encouragement ended up blossoming with coding and encouraging his teammates. It's like a new kid everyday at school, he's more confident and so proud of himself now.
We had a student who gets overwhelmed talking in front of people and the team was so supportive to her.
We had one student who wasn't participating because of poor grades in class. She worked to get her grades up so that she could be part of the team again.
We had several students that just "stepped up" when work needed to be done
We partnered with Foothill HS FTC team to help mentor us. We built great connections between two schools in the same zone.
We qualified and we came in first place at the state event in Southern Nevada and now we are headed to Massachusetts for the international event.
We showed up to all events! We witnessed some extraordinary things. We persevered with grit.
We tend to attract seniors that just want to try something new and one of my mentees this year has grown from a quiet, meek follower to a student confident in her skills, the tools, and leading the team. She finished the elevator kit for our new robot and it was amazing to watch her grow.
We were able to have some successful collaborations. We are starting a group to bring teams together to promote success for next year.
Yes, I was happy to see full involvement in helping to prepare the students for reginionals and state. Additionally, both mentor coaches helped this years team to make it to state. It was good first year for our school.
What, if any, mentoring/coaching challenges did you encounter this season?
3D Printing and Programming were challenges. We also could not afford to purchase the expansion packs, which were out of order anyway. It prevented us from being able to do many of the ideas my students come up with.
Again, I just don't feel that as a first year coach I was fully prepared for the challenge.
Also, of the members that remained they also participate with other clubs and this has influenced the robotics team performance.
Also, students moved and we have a high transient population.

Availability on my end due to college, working, and volunteering inside of FIRST Nevada
Balancing time to set them up for success and the arrival of materials
Because our team started so late, I wasn't able to attend any of the trainings prior to the season and we really had no idea what the expectations were.
Because we went far into the season, I feel that there was a fair amount of burn-out happening
Being new mentors, my coworker and I struggled to find a rhythm to keep the kids productive and on task during our meetings. Now that we are more familiar with the ultimate goal and expectations, I would expect next season to go much more smoothly.
Biggest challenge was time. Also felt like the innovation project felt separated and disconnected from the project (programming/robot building)
Competition came too soon. We didn't have a team until the end of August, then had to be ready to compete at the beginning of December.
Developing teamwork has been a real problem. I don't really know the technical aspects of the robot, and I've been relying on our first coach to handle it.
Difficult to motivate the students to stay after school. After the pandemic, there seems to be a lethargy amongst the students. Across the board (sports, robotics, etc) we are having trouble motivating kids to want to spend time to do these extra curricular activities.
Due to my students being part of other programs and clubs, our roster was constantly changing and having to get team members caught up was a challenge for all of us.
Few
find a coach/mentor. People are way to afraid to step up and give it a try.
Finding time to contact and meet with professionals in the field.
Getting my team togo to the competitions. Parents weren't willing to let their child attend weekend activities
Getting the kids motivated on the innovation project, and working as a team. Challenges with other after school activities.
Getting the new 4 team members to do work. The past members did all of the work.
Getting the students to determine a project and get started!
Had two teams and then illness spread between the two teams leaving only one member who could attend.
Having different personalities jive.
Having the students lead it all. I would give them feedback and they did with it what they wanted. They didn't want to take my feedback and advice and did their own thing. I knew that their codes were not going

to work to complete the missions. It wasn't until competition day that they finally listened to the feedback and changed all of their codes for the last round.
I don't like having 4th and 5th graders. I think next year I will limit my team to middle school. I felt like I was babysitting the younger kids.
I had a parent volunteer as a mentor - before I knew him or that he would be challenging to say the least. He continued to make this about winning rather than letting the students build teamwork, coding, and robotics skills. It was nearly unbearable at times.
I had no clue what I was doing. The kids had bo coding experience and either did the coaches.
I have 2 students who continually wanted to play "air hockey" on the competition board when other members of the team were trying to program. It was frustrating for the programmers. and one of the players was eventually asked to leave the team due to his poor school attendance.
I have one student who has difficulty allowing others to help her. She can't really express her vision for the robot and thus ends up working almost exclusively on her own.
I learned that we need to take a break in the middle for the kids to get outside for a few minutes. We start each meeting with a whole group lesson then the teams touch base with their captains to set goals and assignments. Then they are turned loose to work. We learned it is best to touch base again after the break.
I was challenged to keep all students focused and on task. I need to put more work into providing opportunities for my team to meet with experts and prepare for the innovation project. We experienced coding struggles where code was missing when we came to our event.
I was unaware of some of the expectations prior to starting the season.
I would say time and space are big challenges for our team. We are grateful for the space we have, but it can be cramped at times with so many kids and such a big field. Because my schedule is so tight, I feel like I am not available to the team like I would like to be sometimes, and visa-versa with my family and job.
It was a struggle for me in the sense that I was learning as I was going. There are ways that I learned to improve as I was going.
It was difficult to get the ball rolling, but once it was, it was unstoppable!
It was more personal challenges. I started off attending meetings very frequently, as time went on I had more car and scheduling issues
It was very hard to get students to take the lead on anything.
Just getting the mentor coaches up to speed on how to work with young children and how to tamper expectations as many of our students are first year robotic students.
Just managing our time and the kiddos.
keeping the kids motivated and on task. Some kids were not always respectful and had to often remind them it is a team.
Lack of consistent time commitment from some students.

Lack of membership and drive due to the team's lackluster performance in years past as well as the reduced involvement of their much loved mentor from last year. He retired but still comes around to help the team now and then. Having mostly seniors given the demographic of our school means that they all have jobs that cut into their ability to commit to the team. That lack of attendance impacts how the other members feel about what it means to be committed to the club. I'm not much of a recruiter and the students at this school really need a more charismatic person to convince them of the greatness of the club.
Lack of motivation on some days depending on workload and available help.
Lack of support as a non-public rural school. We do not qualify for any type of support in this area because we are a private Christian school; neither Tesla nor NGM will help in any way shape or form, though they are the two main supporters for public school teams here. Also, an individual was specifically told by FIRST that the individual could not donate to us through FIRST Nevada (equipment or finances) because we are not a public school.
Learning right along with the kids was my challenge.
Making time in my daily schedule that aligned with the teams schedule.
Many students showed up to work but over time they become discouraged and quit.
Motivating team members has been a little more challenging in this post covid season...much more so than during pre covid years.
Motivating the students to commit the time required to prototype, build the mechanisms, conduct research, connect with other teams to learn more about how robot work.
motivation of older team members
My 6th grade team had a really hard time coming up with a project. I had trouble getting this team interested in the topic and we were last minute with our final idea. We even went on energy related field trips. Maybe First could send out a list of last minute project ideas after we're half way through the season (or even later) or at least some hints for struggling teams.
My biggest challenge was figuring out what each of our kids needed mentally and emotionally as individuals in order to succeed in this program. Now, nearing the end of the season, I've become close with those kids and they have even opened up about their life and different experiences.
My biggest challenge was not understanding the process.
My biggest challenge was time.
My team did not win but we tried. We showed up. We had low participation.
New to the program...a little overwhelming at first
Not all coaches/mentors are available each day/week.
Not enough participation from students.

Not knowing the coding well enough ourselves to facilitate.
Nothing that was not manageable. I was a rookie coach for FLL and felt very supported.
One of the biggest challenges is helping the team to focus on the tasks that are critical to complete by a deadline, they get very excited about all the things they can potentially do on the robot and sometimes loose sight that they can only accomplish so much before the next competition. It is a great thing for them to be exposed to in preparation for the next levels of education and their careers but definitely requires good lessons and conversations from the coaches and mentors.
One of the challenges for this season are coding and CAD 3D printing. Our team struggled with these areas.
One of the challenges was that we had a student who lost interest and didn't want to participate anymore. We debated whether or not we should replace the student, but we ended up just keeping the team the same.
One or two members had focus and behavior issues and needed constant redirection.
Our spike didn't always do what was programmed.
Our students really struggled with the innovation project. Most of our students are not proficient in research and writing skills. Mostly, they struggle with being curious and staying curious as they work through the issues they come across and different projects they wanted to innovate for.
Our teams were too big and the students did not support each other as a team
schedules, behavior of students, funding
Since we started late I felt a little behind the whole way through the season, but I felt my students did great for our first time
Since, I wasn't teaching at the school and only volunteering it was hard to keep the team together with a new teacher, and I had to have 1 on 1 talks to ensure I wasn't leaving for good but making sure I was continuing to work with the team in 2022-23 season
Struggle to get started on Innovation Project
Struggle with the innovation project, reaching out to outside sources. Getting the kids started is the hardest part.
Student attendance was a grave concern this year.
Student motivation and commitment to the team.
Students have not strong interested in this game.
Team Building was a challenge. Some of kiddos did not get along.
Team remaining organized throughout the build.

That was hard because I didn't want them to fail, but I wanted them to learn from the process. So I let them run with their idea. I was so proud of them for finally listening to feedback and being quick on their feet to change their codes.
The biggest challenge is refocusing the kiddos when fun is their only focus and they strayed away from working toward meeting their goals for the session.
The biggest challenge was finding shop time and coaches willing to put in the time. Our mentors from UNLV have been amazing! We couldn't have done it without them!
The biggest challenge was getting students to really think for themselves with the innovation project. Most of the time at school is spent doing what a teacher asks them to do and this challenged my team to really work without direct instruction on the task.
The challenge that students had was working as a team, which was a leaning process for them. Most students who joined the FTC team were quiet and reserved ones and they had a hard time working together.
The challenges that coaches had was the time because we started started the season very late (registered at the end of Nov and started the program in Jan). We run the FTC team as a club at our school. Clubs meet only once a week which was not enough time for FTC team to set up and build the robot.
The innovation project was a challenge. As a coach, not knowing how to really guide them and support them was frustrating.
The innovation project was very difficult for us we did not understand what they were asking for.
The kids have different levels of maturity. Some kids take more coaching when it comes to showing initiative.
The kids like EV3 more than Spike and my EV3s are getting old.
The only problem I had was updating the hub to the correct update.
The timing was the big issue. Also, only 4 students remained consistent with their participation.
There were more challenges this year than in any other previous year. Most coming from UNLV and FIRST not complying with CCSD safety and security policies. Since violence among students has risen, the teacher at Eldorado attacked and more school shootings CCSD has increased measures to ensure that the students and staff are safe and safety is the number 1 concern for CCSD and my school which made a lot of things offered not available to my team. My team also encountered a lot of mental health issues this year that made this year very challenging.
There were some things that I wasn't about to troubleshoot, but the other teams (Awkward Silence) did help us during the league meets. This included the servo going out (due to possible shorting/grounding issues), and cable management issues.
Time - time was truly our enemy. We adjusted our school schedule so we are a later start. This means we can only meet in the morning to avoid conflict with other curricular activities and due to late hour. In addition, we started in September and we truly needed more time to be ready for our First Lego League event.

Time constraints due to work schedules
Time management. The kids have such great ideas that you want to encourage but have to balance with the amount of time in the season or before a meet.
Time was a factor and trying to motivate students since this was their first year and they were not familiar with the program. Also helping them to work as team was a challenge. The goal is to do more team building activities.
Time- as a first year coach, and someone new to programming, I did not realize how much time this would entail.
time... I don't have a schedule that allows us to meet more than once a week.
Timing and transportation. Funding.
Too much to absorb without a step by step guide- my teacher said they would have been nice to have materials before the season and maybe organized better.
Transportation to events was a regular issue.
We encountered difficulty with the Innovative Project. The students picked a project that seemed impossible, and facilitating the advancement of the project without directly leading them to answers proved difficult.
We felt lost in a sea of information. But after surviving our first season we feel so much more prepared for next year.
We had a couple coding challenges but my partner did manage to fix the issues.
We had so many challenges this year that had little to do with the programming. We had a hard time getting team members to step up and take on leadership roles. We had a hard time getting all 10 to agree on an innovation project. We had a hard time getting them to dig deeper into the project and programming. We had a team member with behavioral challenges that brought in several challenges. We had problems getting team members to commit to the two practices a week. From the coaching perspective, this was a difficult bunch to work with!
We had to rebuild a few of the game models as the directions weren't followed correctly. The coding with Spike prime was new to us this year.
We keep losing high school age team members to other school activities.
We started very late and did not really know what to expect and were new to this, so there were challenges both with getting our student prepared in the limited amount of time with all aspects of the competition.
We were new and had a late start. It was challenging to learn all that the program entailed on a short timeline.
With a larger team, it took more time to make sure everyone got to take part in every step, but it was worth it. The only other challenge was having all 3 of our innovation project judges rookies who had no previous FIRST Lego League experience or knowledge before the qualifier.

With half of the team bring home schooled, we found it challenging to keep their sence of urgency up. They tend to do things at their own pace.
What did the program do well?
Brought training to Elko this year, very much appreciated by those of us who live in this corner of Nevada. Love that FLL Challenge held a competition in Elko County this year. Thanks for reaching out to our area.
Build team and community among all of the members.
Cad and 3-d printing
Celebrating the students
Coding and robot game
Collaboration activities with the build
Collaboration, programming and engineering, promoting STEM in the school community.
Communication
Communication and resource allocation
Consistently engaging team members to be part of the team, contribute, and learn
Creating a platform for the kids to be part of a team and help them figure out what they want to do in college and/or as a career.
Early in the year we prepared the kids well for build season. For whatever reason, starting around mid December, our attendance dropped off. This carried over into the build season, and we had a small crew most days.
Encouraged teamwork.
Even though they were a little late, the program gave us all the materials we needed to be successful. The legos and robot brains, the tables, and computers, it was awesome.
Everyone was very supportive, from the organizers to the judges to the other coaches and teams.
Everything
EVERYTHING!!!!!!!!!!
Gave students exciting challenges to work on and achieve.
Get the kids together to do something positive

Give students opportunities to use a multitude of tools and skills to grow in STEM confidence.
Got kids interested in robotics and building.
Gracious professionalism, having a support net from all the schools in the program is great.
Great project ideas and the robot game challenges were made well!
Having some virtual and in-person workshops and allowing for both formats when needed has helped.
Having the season dates out with plenty of time to plan for coaches and parents.
Helped students grow in confidence.
I appreciate the degree to which coaches and teams are supported. Just in the 6 or 7 years I've been coaching, I see a dramatic increase in the support provided. With that being said, the team still has to solve its own problems, and I really appreciate that!
I appreciate the different elements of the program such as the social-emotional aspect, design element, real-world connections. This program does a great job of incorporating many things to support student learning. Although our students did not do very well in the competition part, we encourage them to think about their growth and they were excited to get a participation medal for making it to the competition.
I appreciated the resources, support, and the events.
I love the program for the Core Values the most. The program does a great job of making FLL more than just a robotics team. We work the most on Core Values, and then the other components come in within the framework of our Core Values.
I really liked how Lego First is not all about robotics. It has the innovation project and core values part that stresses teamwork and other aspects that are crucial to any profession.
I think the competitions were run very well. The kids had a blast and it was a very positive atmosphere.
I thought the program was fantastic.
Information sharing
Inspired kids!
It allowed students to lead the conversations and be able to come up with their own ideas.
It built their confidence to try and make so many mistakes. It also gave my students the vulnerability to ask for help from other teams. Some teams helped out and other did not, nonetheless the kids got that valuable life skill.
It got the students excited for programing and design
It helped the kids become friends with possible life long friendships

It helped to prepare both my self and the mentor coaches for this years season. Additionally, our students had a great season and got the chance to meet teams from across the valley.
It lets the kids build and play and work together.
It promoted group work.
It provided students with an experience they may have never had and to learn about different science/stem principles that they may not have known.
let the kids accomplish things they didn't think they could
Many aspects of the team work well when coordinated and planned out.
Materials (legos, booklets, game table, laptops), offers to assist
Motivate the kids!
My favorite element amongst all the learning and discovery is "Gracious Professionalism." That although it is a competition to remember to always be polite and respectful to other teams, referees, and others. I think society would be much better to remember this idea.
New challenges every year
Our students collaborated to code and help each other code phenomenally.
Overall I feel like things are moving in a very good direction and I can see how this will benefit a lot of people.
Presented a challenge that could be handled with a basic simple configuration, or handled with very complex, sofisticated solutions. The open ended build season is a great help to small teams like ourselves, allowing us to follow through on ideas that we would have other wise run out of time to complete. And it allows us to have some practice time, which we almost never had in previous box or bag seasons.
Project idea
Provided a fun way to get kids excited about STEM.
Provided equipment.
Provided training for both students (scrimmage) and teachers (coach's corners)
Provision of resources, timely announcements
Really took it well the struggle with learning how to work with a new technology.
Research and meet with and interviewed experts in the field.
robot in a day was great! Team support and mentoring was great.

Shared volumes of information. I liked the Coach's Corner meetings. They were informative. I like that they were monthly and only lasted one hour. It was just a little bit without being too much.
Software was easy to use and the robots were great. T
Taught perseverance and encouraged gracious professionalism.
Teach students independence and higher order thinking skills.
The best part that I like about the program is working with alliances and teaming up with strategies to reach a goal.
The engineering notebooks, supplies, support and workshops were all fantastic and helpful.
The events went very well.
The kickoff was great at stimulating interest and excitement in the students.
The locations for trainings and competitions were great.
The mentees really learned a lot this year about building something great out of the resources you have...even when those are limited. The Gene Haas money was invaluable for getting things we needed but the limited nature of those funds helped create constraints that the team had to manage. Those constraints fostered creativity. The inclusion of the Limelight system allowed our new programmer to shine because he was able to create solutions for some of our limitations through programming.
The new teacher that came in to teach Robotics is just awesome, and he has experience in engineering is a plus especially with the small group of students. Therefore, with this program he was able to work intensively with the students helping them to understand how their math skills plays an effective role in STEM Robotics, and with that knowledge we were able to get their grades in math up.
The opportunity to reach out for help and attend training events was fantastic!
The problem we great this year, and meeting with other schools to discuss our outreach project was very motivating for my group.
The program did a great job at supporting teachers/coaches and putting on great events for us all to learn and have fun while doing so.
The program did very well to explain the robot games, robot design, and the lessons were well organized.
The program did well in getting the kids engaged and wanting to learn.
The program does a great job of communicating and responding to messages.
The program fosters the love of STEM in kids and provides a hands on tool for them to explore the STEM fields!
The program has motivated these kids in a way I have never seen kids so interested in something that is not only challenging but also takes up a lot of time and energy.

The program is doing well in connecting teams with each other by having a mentor from UNLV act as a liaison of sorts for each team.
The program made the students challenge themselves in areas of robotics they were not originally comfortable with creating well rounded students
The program provided a lot of support! I knew who to go to for help about materials, coaching, questions, and missing pieces. I always felt I had a means of getting answers.
The program really built my team into well-rounded problem solvers as I never assigned people specific roles as I wanted them to all experience all parts of the program.
The program stresses the importance of sportsmanship and character as much as building and coding skills. I think it's great to see the students need to focus on that and demonstrate those skills in different ways.
The students did a great job collaborating and building.
The support I received from everyone
The volunteers are amazing, the Poston and Duncan families do an incredible job of coordinating the events and are an inspiration for us all. The framework FIRST provides to get people like this sharing their skills and knowledge with the next generation are wonderful, and the promotion of gracious professionalism at all levels shows how great works can be done in a positive environment.
The whole experience was amazing- setting up teams to help other teams- the meets- I loved every second.
We demonstrated flexibility by altering our design to a simpler one to accommodate our reduced student participation.
We did well in robot construction, design and innovation.
We did well with time management and making sure we are not only completing our tasks but doing them well.
We finished our robot in time.
We love robotics, we love to compete, we love to know and interact with more teams
We received information in timely fashion. I way the program is designed allowed the students to embrace and practice all of the core values of the program.
We survived! WE also have a group of students who want to return next year to coach new students joining the club
We went to state as a first year team.
When I feel supported, I do a better job supporting the kids - so thank you!

Do you have any suggestions or ideas to improve the program or events/competitions?

Again, I'd like the season to be longer. We have to work so fast to get everything done from September to November, and more time would actually allow us to do a better job. We could make really progress on our innovative project, we could gradually develop our coding skills, we could arrange and make use of local resources and professionals that would help us achieve more, and we could spread out the work so students and coaches don't get overwhelmed. There were times this season where I thought to myself, "I really don't have the time or energy for this much work right now."
As a rookie team this year we spent a lot of our time building our shop and had less time for actual design and robot build. Next year we will have more time to focus on building.
As I previously stated, I think it would be great to have the information at the last session a little earlier in the season.
At the competition site, there needs to be more room in the pits for teams to store their belongings and have a space for parents, coaches and members.
Be aware of the difference of 3rd vs 7th grader.
FLL winning teams should present their ideas.
For FTC solidify how teams will be picked for which league tournaments asap.
Greater room for creativity would be nice--the "innovation" piece is not a powered robot.
have a bus that would go to several schools to pick up teams to to bring them, like a route for school with needs for families that don't have transportation
I also love that family and friends can watch the events live from there homes. Since my family does live very close it was great that they could participate. Thank you for providing this at events!!
I am very pleased with program.
I just remember how warm the Thomas and Mack was last year, especially in the pits. Some air conditioning would be welcome.
I love the events and competitions.
I was thinking that it might be easier to have all of the materials a coach might need in a Google drive. You could easily share it with the coaches. We just get so many emails, and most emails don't really use the subject line to tell us what's in the email so we miss important things (or it just takes too long to go back and read through them all to find something that we know we read about but can't find it).
I wish the competition days could be shorter. The kids and myself were exhausted.
I wish the kids could have attended all of the meet plays I think getting to see and work with other teams is important. We are a rural community and not affiliated with the school so it is hard to keep them motivated to stay on task when all the meet plays are at the end of the season, if you choose the meet plays at the beginning of the season you are behind in design and innovation because you don't get the chance to grow as the season evolves.

I would just like accessibility to be cared about more. If we are not given 3.5 months notice then we can't do paperwork to attend. If things like zoom or ring central are being used then we can't attend. If mentors being provided from UNLV are not badged prior to the season then it takes most of the season to obtain the badge that allows them to work with the students on campus. I know I would greatly appreciate it if the coaches corner were recorded so I could watch them. Even though I can't attend because of the day/time if they were recorded and made available then I could at least have access to the information that was shared.
Improve the line/color sensor, include more robot builds in the application.
In the furure, allowing a bit more time between matches. That way if something breaks on the robot, the team has a but more time to try to fix it.
Is there a better way to set up mentoring between teams before meeting at events?
It would be great if FIRST could find a way to get some of the competitions on ESPN or something similar. If more people saw what was being accomplished I think it would help get more kids into the programs.
It's a lot to do by December. Maybe extend the time before qualifying. We were so busy trying to do missions and build legos we never got to fundraising.
Just give more time. Wait until after the new year for the first competition.
Looking forward to the new championship bracketing, will see if that helps the smaller teams be part of more matches.
Mainly, it's hard to hear with the current sound system during events. It's a struggle to hear when teams are announced for their next round or during the opening and closing ceremonies. If some events can be on the north/west side of town, that would be nice at times also.
Make sure there is enough medals for all students and coaches
Make the events efficient - lack of motivation from the kids was they couldn't stand being at the competitions all day long. Make the competition be in time sets - Team 1-4 shows up from 8-10 to do the judging room and the three runs. Then there is a ceremony at 4pm people can come back to.
Maybe have a board to show what teams are queuing. It was hard to hear the announcers in the loud cafeteria
Maybe having the schools meet up to discuss projects or issues before competations.
Maybe some tools or curriculum that could assist the kids with teaching them about effective public speaking.
More coaching and suggestions for how to facilitate the innovation project.
More events where the teams could maybe meet up.
More financial supports

More practice competitions.
More programming support for rookie teams. Access to more than just Rev! They were out of order for so many things that it made going through with our ideas very difficult.
More space for large teams at competition and access to food and water throughout the competition. It was very crowded and was very challenging to navigate the pit area.
More standardized rules. North league has different interpretations of game rules which can be an issue during competition.
My district requires a long lead time to approve field trips. It would help to know the schedule for meets sooner. Next year I will probably have to prepare field trip requests for all the events at the beginning of the year, and cancel the ones we don't go to
My only complaint would be that our venues (especially our qualifier) were over-crowded. I am so excited to see such an increase in the number of teams competing, but we are quickly outgrowing our venues. Following the qualifier, every one of my team members ended up sick, and many of them were out of school for 3 or more days. Following the championship, we also ended up with a few sick team members, but nothing like the qualifier.
n/a
NA
No
No suggestions we love the program.
No, but more information about how to get sponsors and grants would be great as we are losing out on Tesla funding.
No. This is a very well thoguth out program
None
None at this time.
Not at this time.
Not so much down time. Maybe offer break out sessions so teams can have a more of a choice of workshops: ie: robot build, programming tasks, innovation project....then rotate through them....
Our teams just need to start sooner next year
Please create events/activities/stations that students can engage in during the down time during meets. Consider staggering the meet so students are not there for such long periods of time (most children do not have that level of endurance and melted down and left prior to the awards. Have some areas where students can have "Tanagram" puzzle competitions, Lego building challenges, paper engineering design tasks, robot coloring pages etc. The kids just disappear into tablets if they are done with their rounds and can no longer make improvements/adjustments to their robots/programs.

Please improve the sound system at competitions. It is very hard to hear when the speakers are so low to the ground, especially during the awards ceremony when all the judges and volunteers are standing in front of the speakers. I heard several complaints from parents about not being able to hear anything from the bleachers. Also the kids would get out and dance more if the music was louder - let's party!!
Please meet with the FCCLA, FBLA and other academic organizations to have a unified and more workable schedule. This is a great help for smaller school like us with limited number of talents.
Schedules in advance. Many of our students attend sport competitions/recitals on Saturdays and do not know whether they can attend Judging sessions until the day of the competition. Students had to readjust presentations because a student was competing in a volleyball competition (they only missed 1.5 hours of the day) the same day as finals and had to miss the judging. If we had known in advance the students could have prepared differently.
See my previous comment about more events in the Valley for FRC. Most teams spend thousands of dollars and hundreds of hours on a robot that they only get to really play with once because most teams don't have practice fields. That is the appeal of the smaller robots in FTC but I'm biased toward the big robots and want more opportunities for kids to play with those :)
Showcase video clips from prior years competition noting their strengths and weaknesses. It would help those of us who had no idea of what any of this would look like.
smaller events spread out over time for competitions.
smaller, beginner competitions.
so far, the program is really good
Somehow try to cut down the time for the competitions.
Thank you for keeping to the schedule this year, but please do not move ahead of schedule. It interfered with judging sessions and families missed their kids' performance at the robot table, even though they were there on time.
The competition was a very long day. I am not sure if there is a way to shorten it but a lot of my students left before awards because it was so long.
The events are well run! Parents complimented the competition, especially compared to sports tournaments in their experience.
The events were very helpful
The FRC game design committee needs to simplify and reduce the cost of building full practice fields.
The students were extremely tired by the end of the competitions, especially for us because we had to travel over an hour to compete. After the final rounds, it felt like it took a very long time to get to the awards. I also felt like the people who were recognized during the opening ceremonies were mentioned or thanked again at the end which seemed to take more time. I was wondering if 1. The competitions could take place on three different week-ends instead of two, thus shortening the event. And 2. We were very crowded in the pit area, as we had 10 team members and 2 coaches. That area was hard to move around and be comfortable.

There should be at least 1 experienced judge in each judging room. There should also be no discussion of where we come from. As much as we enjoy sharing how we come from a small town, some judges, if local, will hold that against teams (talking from personal experiences in other instances, not just with robotics leagues) because they have personal biases. Another solution could be to make sure a non-local was at least one of the judges. Finally, the scores from the judging sessions should be shown the same way the robot game scores are posted. If you want it to be fair, it should all be transparent. Teams shouldn't be wondering for a week what they did wrong in the judging session, when they did so well in the robot game. One more thing, maybe the qualifiers need to be specific to areas, such as the Reno area teams must attend Reno area qualifiers.
This is a minor thing, but figuring out how to do the medal part of closing ceremonies, because the amount of kids is so large that it becomes chaotic.
This season was the best yet!
Train coaches before the season starts - be realistic about the time and that how sessions are run depends on the kids (the session booklet for suggested lesson plans was thrown out after the first session - it was built for little little kids)
We hit a snag when we wanted to make our robots compete and other schools could afford more hubs, better materials that gave them advantages we could not have.
What are the next steps once the grant funding concludes.
Wish Regionals was at a different venue than Thomas and Mack. Especially since each year they add more restrictions for the teams and the pits.
Is there anything else you would like to add about your experience with this program?
Absolutely LOVED this experience!
All the support from FLL was needed and appreciated. I'd love to continue to participate because I had a good experience. I do have a little one at home and did not like taking time away from him. Being that we volunteer to be a coach I felt anxious about my time spent away from my family. And I did not want to feel like my time and our team's efforts were done in vain due to us not winning or doing well in the competition.
Also this survey indicates part of the problem - it is slanted to assume that this helps kids be introduced to STEM - but there is nothing in the programming that does that. We also had a team that worked really well together, that didn't use antiquated ideas of corporate structure to pigeon hole people into set roles (our kids ALL programmed, ALL designed, and ALL worked on the innovation project - the new economy approach to corporate structure). They also were all interested in STEM careers when they joined, so this program didn't enhance that at all.
Despite the above, it is a good program if it would try not to be too much. Stick to the robots only, actually train coaches on each challenge year, and respect the time of the kids - have more competitions that run more efficiently - there should be at least two each year for all teams. Have a training on judging - that is a black box with no transparency - we have had our kids leaving mad several times due to the lack of transparency.

FIRST creates fantastic opportunities for students to get involved in STEM.
Great program, but as a title 1 school, after ne t year our grant runs out, so I am not sure if we will have funding to continue.
Great program, with great people running it, terrific sponsors, wonderful volunteers, engaged students, always a learning experience out of hard work, and a really good time.
Hopefully we can have a coaches and mentors party. LOL
I am looking forward to bringing the experience to another school that I am transferring to in the fall.
I enjoyed the experience and would love to be invited back to coach again.
I have enjoyed my experience with FRC during my time as a mentor because of the support I have received from FIRST Nevada.
I learned a lot about coding.
I love coaching the team.
I love FIRST Nevada!
I love the FIRST community :D
I love the program, especially the core values. It is more than just robotics, it's about teamwork, fun, innovation, discover, impact, and inclusion. The core values are my favorite part of the program. I also love the energy and excitement of all of our local FLL leaders (Scott, Nanami, Leilani, Patti, and Louis).
I love this program! I am so proud to be a part of it, and I see how it helps students learn decision making, problem solving, leadership skills, patience, persistence, etc. It is one of the best authentic learning programs I have been a part of.
I loved having a co-coach. It really helped us both out to have each other to lean on. I liked that I was able to reach out to anyone at First Nevada and would get prompt replies with the necessary information. I always felt "heard". Thanks!
I loved it and the kids are so excited to start again. We have our materials for the new season and they are itching to start.
I loved it! I am so glad I got this opportunity!
I really did enjoy it.
I really enjoyed my first year. I learned so much and still know so little.
I wish there was a way for someone (the banker) to sign up just to purchase supplies without having to be a coach. If there already is please let me know how. The only reason I signed up as a coach was to purchase supplies for our coach. My email address is charlotte.blake@doralnnv.org

I would be interested in having someone from FIRST come to a session (or 2) to work with my kiddos, but I really don't know who to ask...or is there a Google form to request this, and I just don't recall seeing it. Also, we meet at 7:30AM, so would someone come that early? I just don't want to impose, but I think their experience would be really helpful.
I've learned so much from this program.
It has been a very positive experience to be part of something that is doing so much good for the youth in our communities.
It is a fantastic program.
It is a metric ton of work for the mentors...especially new mentors on new teams. FIRST NV is doing so very well at supporting the teams and the stipend helps entice new mentors to help out and get hooked. I just wish there was a class for new mentors that went over all of the expectations (both obvious and not-so-obvious) and best practices for how to deal with them. We talk about "reaching out" to other teams for support but it's really not that easy when you are new and not very social...at least it was for me in 2010.
It was fun+
It was wonderful!
It was wonderful.
It would have been helpful to get all the information earlier.
It's been a great experience and I'm excited to come back next year!
Its a highly popular program at my school.
Keep up the great work! Things are definitely moving in a positive direction.
Learning more each year.
Like I mentioned before it has been a great program so far.
My co-coach and I are actively looking at other leagues right now. After these past 2 years, we are not sure FIRST is going to provide the best experience for our students. We may try one final year, but we're not sure. It makes me sad, but if my kids keep getting treated like this, I refuse to subject them to it over and over. Being a teacher, I appreciate the experience of working through tough situations, but if their hard work is unfairly shot down, we'll go somewhere else that allows that work to shine.
n/a
NA
no
none as of now

Nope.
Not at this time.
Not at this time.
Sorry I did not get to participate in the program fully but it was so much fun teaching the kids those fun lessons!
Thank you for doing all of this work as it truly is an amazing program!
The First Nevada team has done a great job this year!
The individuals I have worked with from FIRST Nevada have been very supportive, sharing tips and ideas to make our robot work better or fix coding problems. I appreciate their help for getting our stuff to work.
The Northern Nevada team is so helpful and friendly. I really appreciate there workshops and help.
The past 21 years as a mentor has been more rewarding than I ever thought possible. I think I will shoot for at least another 10 years!
This is an amazing program!!
This program has been a fabulous addition to our school and I am so grateful for everything First has done for STEM education. Thank you to Scott, Aki, Patti and Caroline for their support over the last 5 years!
We had a great Lego League experience. Every representative we spoke with was extremely helpful, patient and knowledgeable!
We had an amazing experience, and will do it again next year. The lessons the kids learned were invaluable and we felt lucky to be a part of it all.
We had an excellent experience.