

### Purpose, participant information, and overall experience

This survey documents the participant experience during the RAOP 2026 on-site hardware week. Responses will be used to evaluate program quality, technical support, learning outcomes, classroom relevance, and priorities for program improvement and NSF reporting. Individual responses will be reviewed by the RAOP team and summarized in aggregate where appropriate.

4 = Agree / High | 5 = Strongly Agree / Very High | N/A = Not Applicable

[illegible]

# RAOP 2026 T4 - PARTICIPANT FEEDBACK SURVEY

NSF Robert Noyce Teacher Scholarship Program - RESS | Howard University AVRC Laboratory

Platform-specific feedback: Qube-Servo 3 and Aero 2

## B1. Qube-Servo 3 - Control Fundamentals

Select one response for each item: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree, N/A = Not Applicable.

| Feedback statement                                                                      | 1                        | 2                        | 3                        | 4                        | 5                        | N/A                      |
|-----------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The activity instructions and expected behavior were clear.                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I could identify the main components, sensors, actuators, inputs, and outputs.       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I understood how the Simulink model connected commands to the physical platform.     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The introductory and next-level activities improved my technical understanding.      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I feel more confident explaining this platform and activity to grades 6-12 students. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Platform comment: What was most useful, unclear, or challenging?

## B2. Aero 2 - Attitude Control and Dynamics

Select one response for each item: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree, N/A = Not Applicable.

| Feedback statement                                                                      | 1                        | 2                        | 3                        | 4                        | 5                        | N/A                      |
|-----------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The activity instructions and expected behavior were clear.                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I could identify the main components, sensors, actuators, inputs, and outputs.       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I understood how the Simulink model connected commands to the physical platform.     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The introductory and next-level activities improved my technical understanding.      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I feel more confident explaining this platform and activity to grades 6-12 students. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Platform comment: What was most useful, unclear, or challenging?

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Platform-specific feedback: QArm and QBot Platform

## B3. QArm - Manipulation and Sensing

Select one response for each item: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree, N/A = Not Applicable.

| Feedback statement                                                                      | 1                        | 2                        | 3                        | 4                        | 5                        | N/A                      |
|-----------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The activity instructions and expected behavior were clear.                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I could identify the main components, sensors, actuators, inputs, and outputs.       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I understood how the Simulink model connected commands to the physical platform.     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The introductory and next-level activities improved my technical understanding.      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I feel more confident explaining this platform and activity to grades 6-12 students. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Platform comment: What was most useful, unclear, or challenging?

## B4. QBot Platform - Ground Autonomy and Navigation

Select one response for each item: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree, N/A = Not Applicable.

| Feedback statement                                                                      | 1                        | 2                        | 3                        | 4                        | 5                        | N/A                      |
|-----------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. The activity instructions and expected behavior were clear.                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I could identify the main components, sensors, actuators, inputs, and outputs.       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I understood how the Simulink model connected commands to the physical platform.     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The introductory and next-level activities improved my technical understanding.      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I feel more confident explaining this platform and activity to grades 6-12 students. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Platform comment: What was most useful, unclear, or challenging?

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Retrospective confidence and skill development

## C. Retrospective Confidence and Skill Development

For each competency, enter one number from 1 to 5 for your confidence BEFORE and AFTER the on-site week.  
1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, 5 = Very High.

| Competency                                                                    | Before (1-5)         | After (1-5)          |
|-------------------------------------------------------------------------------|----------------------|----------------------|
| 1. Identify major platform components, sensors, actuators, and interfaces.    | <input type="text"/> | <input type="text"/> |
| 2. Verify safe power, USB, Ethernet, or network connectivity.                 | <input type="text"/> | <input type="text"/> |
| 3. Open and run an assigned Simulink hardware model.                          | <input type="text"/> | <input type="text"/> |
| 4. Identify a commanded input and a measured output.                          | <input type="text"/> | <input type="text"/> |
| 5. Relate sensor feedback and actuator response to physical system behavior.  | <input type="text"/> | <input type="text"/> |
| 6. Read and interpret Scope plots, figures, and output responses.             | <input type="text"/> | <input type="text"/> |
| 7. Predict and explain the effect of a parameter, command, or control change. | <input type="text"/> | <input type="text"/> |
| 8. Adapt a robotics or automation activity for grades 6-12 students.          | <input type="text"/> | <input type="text"/> |

## Optional Summary Calculations - RAOP Team Use

Average confidence before:  /5      Average confidence after:  /5      Average gain:

Which competency improved the most, and what evidence supports your rating?

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*Most valuable learning, challenges, and improvements*

## D. Most Valuable Learning, Challenges, and Program Improvement

1. What was the most valuable part of the on-site week, and why?

2. What was the most significant technical, instructional, logistical, or workload challenge?

3. What is one specific change that would improve the next RAOP cohort?

4. Describe one important lesson you learned about connecting inputs, outputs, sensors, actuators, and physical behavior.

# RAOP 2026 T4 - PARTICIPANT FEEDBACK SURVEY

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Classroom translation, continued use, support, and final ratings

## E. Classroom Translation and Continued Use

Describe one realistic way you may use, adapt, or demonstrate this experience with grades 6-12 students.

Include the platform or concept, grade band or course, a student task or question, and the evidence students could collect, graph, compare, or explain.

Expected implementation timeline:

Estimated number of students reached:

## F. Follow-Up Support and Final Ratings

Support requested (check all that apply):

- |                                                                            |                                                                   |
|----------------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> No additional support                             | <input type="checkbox"/> MATLAB / Simulink models                 |
| <input type="checkbox"/> Hardware connectivity                             | <input type="checkbox"/> Sensors, actuators, inputs, and outputs  |
| <input type="checkbox"/> Control concepts and response analysis            | <input type="checkbox"/> Classroom adaptation and lesson planning |
| <input type="checkbox"/> Access to QLABs, manuals, or curriculum resources | <input type="checkbox"/> Continued RAOP collaboration             |

Other support requested:

Overall satisfaction with the on-site week (0-10):

/10

Likelihood of recommending RAOP to another STEM educator (0-10):

/10

Additional comments:

☐ I reviewed my responses and saved the completed T4 form in my assigned folder.

Educator initials

Date

RAOP reviewer initials (optional)