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# ARMY EDUCATIONAL OUTREACH PROGRAM

eCYBERMISSION

### 2020 Annual Program Evaluation Report Executive Summary

August 2021





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eCYBERMISSION (eCM) is sponsored by the U.S Army and managed by the National Science Teaching Association (NSTA). The program is a web-based science, technology, engineering, and mathematics (STEM) competition designed to engage sixth through ninth grade students in real-world problem solving Mission Challenges that address local community needs through scientific practices or the engineering design process. eCM teams work collaboratively to research and implement their projects, from inception to prototyping, which are documented and judged through the submission of *Mission Folders* to the eCM website. This report documents the evaluation of the FY20 eCM program. The evaluation addressed questions related to program strengths and challenges, benefits to participants, and overall effectiveness in meeting AEOP and program objectives. The assessment strategy for eCM included questionnaires for students and Team Advisors, phone interviews with eCM NJ&EE student participants and with Team Advisors, and program information provided by eCM program administrators. A total of 14,245 students entered state competitions in FY20. The top teams from each of the five regions advanced to regional competitions for regional judging done via video conference (facilitated by Zoom). The highest score in each region for each grade determined the national finalists. The STEM in Action Grant recipient teams are selected from the regional finalist teams that submit a proposal to implement their solution in their community. Ten STEM in Action grants were awarded in 2020 to teams selected from the regional finalist teams to implement their solution in their community. Twenty National Finalist Teams with a total of 73 students along with their Team Advisors competed at the virtual NJ&EE in FY20.

Note: The reported travel costs for FY20 programs are from pre-pandemic travel (October 2019-February 2020) and from non-refundable travel expenses that were booked prior to shifting to virtual programming.

2020 eCM Fast Facts	
	eCYBERMISSION is a web-based science, technology,
	engineering, and mathematics (STEM) competition for
Description	students in grades 6 through 9 that promotes self-



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	discovery and enables all students to recognize the
	real-life applications of STEM. Teams of 3 or 4
	students are instructed to ask questions or define
	problems, and then construct explanations or design
	solutions for their community.
Participant Population	eCYBERMISSION is open to students in grades 6–9
Number of Registered Applicants	16,053
Number of Registered Participants	14,245
Number/Percentage of underserved Participants	7,911 / 56%
Participation Rate	89%
Registered Teams (complete)	4,016
	87 total
	73 National Finalists
Students Attending National Event	14 STEM-in-Action
	24 total
Tooms Attending National Event	20 National Finalists
Submission Completion Pate	4 STEIM-III-ACTION
Submission Completion Rate	/3%
Volumber of Adults (Team Advisors and	2,174
Volunteers – Incl. S&Es and Teachers)	
(Predominantly math and science teachers)	578
	37 Amhassadors
Number Volunteers (Ambassadors, Cyber Guides	27 Cyber Guides
Virtual ludges)	843 Virtual ludges
	689 Student Virtual Judges
Number of Army S&Es	316
Number of Army/DoD Research Laboratories	24
Number of K-12 Teachers (including pre-service	
teachers)	576
Number of K-12 Schools	341
Number of K-12 Schools – Title I	146
Number of Colleges/Universities	95
Number of HBCU/MSIs	17
Number of DoDEA/DoDDS Students	403
Number of DoDEA/DoDDS Teachers	14
Number of DoDEA/DoDDS Schools	11
Number of Other Collaborating Organizations	30
Total Cost	\$2,533,753
Total Travel	\$151,420
Participant Travel	\$109,868



Total Awards	\$633,974	
Student Awards/Stipends	\$628,574	
Adult/Teacher/Mentor Awards	\$5,400	
Cost Per Student	\$178	

### **Summary of Findings**

The FY20 evaluation of eCYBERMISSION included the collection of data about participants, their perceptions of program processes, resources, and activities, and indicators of achievement related to AEOP's and eCM's objectives and intended outcomes. A summary of the findings is provided in the following table.

#### 2020 eCM Evaluation Findings

#### Priority #1:

Broaden, deepen, and diversify the pool of STEM talent in support of our Defense Industry Base

Participation in eCM decreased in FY20 as compared to	The number of students participating in state competitions in FY20 (14,245) was 21% lower than in FY19, when 17,944 students participated, and was 29% lower than participation in FY18 when 20,004 students participated. Likely the decrease was due to COVID-19 impacts. There has been a multi-year downward trend in participation since FY17 when 21,277 students participated.
previous years. The demographics of students participating in FY20 are similar	Over half of students (56%) met the AEOP definition of underserved (underserved), compared to 59% in FY19 and 53% in FY18, maintaining a strong representation of students from those demographic groups.
to previous years, although the demographic make-up of NJ&EE students continues to be somewhat different than that of the overall population.	As in previous years, overall eCM participants were about half (49%) female and nearly half (48%) male (in FY19, 49% were female and 48% were male; in both FY18 and FY17, 51% were female and 49% were male).
	Less than half (40%) of overall eCM students identified themselves as White (40% in FY19; 45% in FY18; 48% in FY17) with another 24% identifying themselves as Hispanic or Latino/a (22% in FY19; 18% in FY18; 19% in FY17). Similar to previous years, 12% of participants identified themselves as Black or African American (13% in FY19; 13% in FY18; 10%



	in FY17) while 11% identified themselves as Asian (9% in FY19; 9% in FY18; 10% in FY17).
	As in FY19, NJ&EE participants included a smaller percentage (38%) of underserved students than at the state level (56%). Slightly more than a third (37%) of NJ&EE participants were White (40% in FY19; 30% in FY18; 47% in FY17), and 43% were Asian (38% in FY19; 52% in FY18; 30% in FY17). While White and Asian students composed the majority of the NJ&EE population, 8% were Hispanic or Latino/a (7% in FY19; 7% in FY18; 5% in FY17) as compared with 24% in the overall population, and 3% were Black or African American (3% in FY19; 3% in FY18; 4% in FY17) as compared with 12% in the overall population.
eCM student participants reported engaging in STEM practices more frequently in eCM than in their typical school experiences; females, and NJ&EE students reported greater engagement in STEM practices than their peers, and students from underrepresented racial/ethnic groups and low-SES students reported lower levels of engagement in STEM practices than their peers.	Three-quarters or more of NJ&EE and more than a third of overall eCM participants reported engaging in all STEM practices at least once during eCM. Both eCM and NJ&EE students noted engaging in the following four practices most frequently (50% or more reporting weekly or every day): Working collaboratively as part of a team (eCM - 76%; NJ&EE - 92%); Analyzing data or information and draw conclusions (eCM - 67%; NJ&EE - 85%); Designing and carrying out investigations (eCM - 56%; NJ&EE - 77%); and Solving real world problems (eCM - 58%; NJ&EE - 72%).
	Students reported significantly greater engagement with STEM in eCM than in school regardless of the competition level (NJ&EE - medium effect size; eCM overall - large effect size).
	No significant differences in engagement in STEM practices were found by overall underserved status, however there were differences by gender (females reporting higher; very small effect size), competition level (national reporting higher; small effect size), race/ethnicity (minority students reporting lower; very small effect size), FARMS (low- SES reporting lower; very small effect size).
Most eCM student participants reported gains in their STEM knowledge as a result of participating in eCM, although NJ&EE students were more likely to report large knowledge gains and reported significantly larger gains than their peers; underserved students generally, students from underserved racial/ethnic minority groups, and low SES students reported lower levels of gains in STEM knowledge than their peers.	More than 85% of overall eCM and all NJ&EE students indicated they experienced at least small gains in their STEM knowledge as a result of participating in eCM. More students in NJ&EE agreed the program had medium to large impacts across STEM knowledge and skills items compared to overall eCM students, approximately 60% of whom reported medium to large gains.
	Significant differences in STEM knowledge gains were found by overall underserved status (underserved reporting lower gains; very small effect size), race/ethnicity (underserved minority students reporting lower; very small effect size), FARMS (low-SES students reporting lower; very small effect size), and competition level (NJ&EE reporting higher; small effect size).



eCM student participants reported gains in their STEM competencies, although students competing at the NJ&EE were more likely to report large STEM competency gains; female students and NJ&EE students reported larger gains than their peers while students from underserved racial or ethnic minority groups and low SES students reported smaller gains than their peers.	More than half of the survey participants reported medium or large gains across STEM competency items. Participants in NJ&EE (72%-91%) reported greater gains in STEM competencies compared to their state- level competition peers (58%-75%) across all items. Items with the largest group differences in reported medium or large gains (20% points or more) were: Identifying the limitations of the methods and tools used for collecting data (eCM - 62%; NJ&EE - 91%); Defining a problem than can be solved by developing a new or improved product or process (eCM - 66%; NJ&EE - 89%); Considering multiple interpretations of data to decide if something works as intended (eCM – 58%; NJ&EE - 79%); and Supporting an explanation with my STEM knowledge or data from experiments (eCM - 62%; NJ&EE - 83%).
	No differences in STEM competency gains were found by overall underserved status, however differences in gains were found by gender (females reporting higher; small effect size), competition level (national reporting higher; small effect size), race/ethnicity (minority students from underrepresented groups reporting lower; very small effect size), FARMS (low-SES students reporting lower; very small effect size).
	Overall eCM participants reported lower gains (39% to 79% medium/large gains) compared to NJ&EE participants (45% to 87% medium/large gains).
at the NJ&EE were more likely to report large gains; females and NJ&EE students reported larger gains than their peers.	No significant differences in 21 <sup>st</sup> Century skills gains were found by underserved status, however, significant differences in gains were found by gender (females reporting higher; very small effect size) and competition level (national reporting higher; very small effect size).
Students reported gains in their STEM identities as a result of participating in eCM, although students competing at the NJE&E were more likely to report large gains; NJ&EE students reported larger gains	The impact of eCM on participants' STEM identities was greater for NJ&EE participants (64%-85% medium/large impact) compared to overall eCM participants (39%-65% medium/large impact). Items with the greatest eCM impact (medium/large) for both competition levels were: Sense of accomplishment from their work in the program (eCM - 65%; NJ&EE - 85%); Better prepared for more challenging STEM activities (eCM - 59%; NJ&EE - 77%); and Confidence to try out new ideas or procedures on their own in a STEM project (eCM - 55%; NJ&EE - 81%).
than their peers and students from underserved racial/ethnic groups reported lower gains than their peers.	No significant differences in STEM identity gains were found by underserved status, however differences were found by competition level (national reporting higher; small effect size) and race/ethnicity (students from underserved racial/ethnic minority groups reporting lower; very small effect size).

### Priority #2:

Support and empower educators with unique Army research and technology resources



Team Advisors used a range of mentoring strategies with students.	A majority of mentors reported using strategies to establish the relevance of learning activities (62%-95%), support the diverse needs of students as learners (57%-94%), support students' development of collaboration and interpersonal skills (68%-95%), and support students' engagement in authentic STEM activities (77%-98%). Most mentors also used several strategies to support students' STEM educational and career pathways (34%-73%), although less than half of mentors discussed STEM career opportunities within the DoD or other government agencies with students (36%) and recommending other AEOP that align with student goal (34%).
Very few eCM Team Advisors discussed any AEOP other than eCM with students.	Very few Team Advisors (2%-12%) reported discussing specific AEOP other than eCM (90%) with students during the program. Nearly a third (31%) of Team Advisors indicated they discussed AEOP in general with their students, but without specific references to any programs.
eCM students reported being satisfied with program features that they had experienced, although students competing at the NJE&E were more likely to report high levels of satisfaction. Students offered various suggestions for program improvement.	Few NJ&EE participants (2%-8%) reported being dissatisfied with any feature of eCM about which they were asked, and most had experienced each of the features, with the exception of Mission Control response time, and were at least somewhat satisfied (40%-96%) with each feature they had experienced. eCM overall students reported somewhat lower rates of satisfaction with program features (27%-84%) than NJ&EE participants. eCM overall participants were also more likely not to have experienced various program features (6%-62%) and were more likely (9%-12%) to express being "not at all" satisfied with features such as the submission process (13%) and Mission Control response times (10%-12%). Features that at least 75% of both national and eCM overall participants reported being somewhat or very much satisfied with included submission process (eCM - 80%; NJ&EE - 96%); applying or registering for the program (eCM - 79%; NJ&EE - 94%); eCM website (eCM - 84%; NJ&EE - 89%); and educational materials (eCM - 77%; NJ&EE - 87%).
	<ul> <li>eCM overall students' most frequently mentioned suggestions for improvement included:</li> <li>improving the website by improving the save function or autosaving work, making the submission process more user-friendly, improving the organization of the website, or making printing from the site easier</li> <li>providing better or clearer instructions</li> <li>shortening the process, making it simpler, including fewer questions, or less writing</li> <li>providing more or different topics or challenges</li> </ul>
	<ul> <li>NJ&amp;EE students' suggestions for improvement were primarily focused on elements of the NJ&amp;EE, and included the following:</li> <li>more time and/or opportunities to connect with mentors</li> <li>improving communication</li> </ul>



	<ul> <li>problems with technology and/or suggestions for less time on Zoom</li> <li>providing more opportunities for students to connect with students from other teams</li> <li>providing more interactive and/or hands-on activities</li> <li>considering western time zones in planning the virtual event</li> <li>improvements to the website, including allowing interfaces with Google Slides and Google Docs</li> <li>improvements to judging, including providing feedback from judges, standardizing scoring at the state level, and having the judges ask better questions</li> <li>providing clearer instructions</li> <li>improving program organization and/or planning</li> </ul>
	Very few Team Advisors (1%-4%) expressed dissatisfaction with any program features. More than half of Team Advisors reported not experiencing Cyber Guide live chats, Cyber Guides Team Talk feedback, and Cyber Guide discussion forums. Most Team Advisors were at least somewhat satisfied with all program features that they had experienced. More than 90% of eCM Team Advisors reported being somewhat or very much satisfied with: Submission process (92%); eCM website (92%); and Application/registration process (90%). Team Advisors cited a number of strengths of eCM for students, including eCM's focus on solving real-world problems, the research and STEM skille students gain the teamwork students experience the online
eCM Team Advisors reported being satisfied with the program features that they had experienced. Team Advisors cited the strengths of the	format of eCM, the program resources and support provided, and the student-led nature of eCM projects. Team advisors also noted that they experienced benefits for themselves including the professional growth they experienced as a result of participating in eCM, the framework the program provided for teaching
cited the strengths of the program and also offered various suggestions for program improvements.	scientific inquiry and engineering design, the opportunity to learn about and give back to their communities, the satisfaction of acting as a mentor and coach to students, the support the program provided to them, the fact that the program addressed many learning standards, and the opportunity to network with others and collaborate with other Team Advisors.
	<ul> <li>Team Advisors suggested various program improvements including:</li> <li>improving to the website, including incorporating an autosave feature, allowing an interface with Google Docs, allowing larger file uploads, simplifying the submission process, and including the flexibility to show models.</li> <li>Improving program resources, including suggestions to provide examples of previous projects, update videos, consolidate educational resources into fewer documents to allow for easier downloads, streamlining resources, recording webinars and</li> </ul>



	<ul> <li>making them available for asynchronous viewing, and providing document templates</li> <li>providing more or clearer guidance</li> <li>streamlining registration</li> <li>reducing the amount of work for Team Advisors</li> <li>improvements to virtual events and programming, including providing ways for students to connect with each other in virtual settings, finding ways to showcase and celebrate NJ&amp;EE students in virtual settings (e.g., send students science kits), breaking up presentations on Zoom into shorter segments, and providing online platforms to engage students when schools are in distance or hybrid learning situations.</li> </ul>	
<b>Priority #3:</b> Develop and implement a cohesive, coordinated and sustainable STEM education outreach infrastructure across the Army		
Most eCM students learned about eCM from their teachers or through their schools.	Few students (<1%-16%) learned about eCM from any source other than their teachers (90%) or their schools (42%).	
Students were primarily externally motivated to participate in eCM by teacher encouragement and academic requirements.	A third or more of students indicated that they were motivated to participate in eCM by the following external factors: Teacher encouragement to participate (71%) and Academic requirement or school grade (35%). Twenty percent or more of students also cited the following two internal motivators: Interest in STEM (23%) and the desire to learn something new or interesting (20%).	
	Nearly a quarter (24%) of students had participated previously in eCM, however very few had participated in any other AEOP (CI – 3%; GEMS – 2%).	
Most eCM participants had never participated in AEOP other than eCM, and eCM participants were likely to	A large majority of students (91%) competing at the NJ&EE were at least somewhat interested in competing in eCM again, and 70% of students at the regional level were at least somewhat interested in participating in eCM again in the future.	
express interest in participating in eCM again, however the majority of students at the eCM overall level had not heard of other AEOP.	Findings suggest that students are exposed to other AEOP at NJ&EE to a greater extent than at the state competition level, although this effect was less pronounced for FY20 than for previous years. NJ&EE students were less likely reported to report that they had not heard of other AEOP (40%-57%) than overall eCM students (53%-67%). Unlike previous years, most eCM-N students participating in interviews indicated that they had not learned about AEOP during eCM, although some indicated they had learned about them in previous years' NJ&EE participation, from their own research, or from their team advisors.	



	More than two-thirds of students across program levels indicated they were somewhat or very much interested in participating in eCM again (eCM – 70%, NJ&EE – 91%). Smaller proportions of students reported future participation interest in other AEOP, although more NJ&EE participants expressed interest than overall eCM participants (eCM: 19%-33%; NJ&EE: 38%-53%).
	Team advisors identified the following two resources as most likely to be somewhat useful or very useful: Participation in eCM (85%) and the AEOP website (48%). Approximately half to three-quarters of Team Advisors (49%-72%) reported not experiencing the other resources.
	All NJ&EE students (100%) and two-thirds (67%) of overall eCM participants indicated they had heard about at least one STEM job/career through eCM. Much larger proportions of NJ&EE participants (70%) indicated they had learned about 5 or more STEM jobs/careers compared to overall eCM participants (13%). Regarding DoD jobs/careers, all NJ&EE (100%) and just under a third of overall eCM students (31%) reported hearing about one or more DoD STEM job/career. Approximately two-thirds (68%) of NJ&EE students indicated learning about 5 or more DoD STEM Jobs/Careers as compared to only 4% of overall eCM students.
eCM students at all competition levels learned about STEM careers generally, however students competing at the NJ&EE level were much more likely to be familiar with DoD STEM jobs or careers; adults made several suggestions for increasing students' exposure to DoD STEM jobs or careers.	Adults were most likely to rate participation in eCM (81%) and the eCM website (47%) as somewhat/very useful for exposing students to DoD STEM careers. More than half of adults (55%-73%) reported having not experienced the remaining AEOP resources.
	NJ&EE students reported learning about STEM careers in the Army/DOD at the national event, citing interacting with judges and presentations as sources of information. Some students also reported learning about Army/DoD STEM careers as part of their project research.
	Most Team Advisors participating in interviews concurred that Army/DoD STEM career information is not widely available at the overall eCM level (state competition). Team Advisors suggested the following to disseminate Army/DoD STEM career information to students more effectively:
	<ul> <li>field trips to military facilities or online sessions with DoD representatives to talk about careers</li> <li>additional mentoring sessions throughout the year</li> <li>holding career sessions for all eCM participants rather than just for finalists</li> <li>posting career videos on the eCM website</li> <li>creating more interactive and personal ways to engage students with Army/DoD representatives.</li> </ul>



eCM students expressed positive opinions about DoD research and researchers.	Nearly all NJ&EE students (96%-98%) expressed agreement with various statements about DoD research and researchers, and more than three- quarters of overall eCM students (84%-88%) reported agreement.
Most eCM students competing at the NJ&EE level reported that they were more likely to engage in various STEM activities in the future after participating in eCM; overall eCM students reported substantially less increase in the likelihood of future STEM	NJ&EE respondents (79%-91%) expressed a stronger likelihood of participating in future STEM activities compared to overall eCM students (48%-70%). Approximately two-thirds or more of students from each group indicated they were more likely to participate in the following activities due to program participation: Tinker with a mechanical/electrical device (eCM - 70%, NJ&EE - 89%); Use a computer to design or program something (eCM - 67%, NJ&EE - 85%); Help with a community service project related to STEM (eCM - 62%, NJ&EE - 91%); and Work on solving a mathematical or scientific puzzle (eCM - 62%, NJ&EE - 81%).
engagement, and there were significant differences in future likelihood of engaging by competition level, race/ethnicity, first generation college status.	No significant differences in the likelihood of future STEM engagement were found by underserved status, however differences were found by competition level (NJ&EE reporting higher; small effect size), race/ethnicity (students from underserved racial/ethnic minority groups reporting lower; very small effect size), and first-generation college status (students whose parents had not attended college reporting lower; very small effect size).
Most eCM students planned to at least complete a bachelor's degree; NJ&EE students had somewhat higher educational aspirations than overall eCM students.	A large proportion of overall eCM students (88%) and all NJ&EE students (100%) reported intending to at a minimum finish college (get a bachelor's degree). More NJ&EE students (57%) reported a desire to continue their education after college than overall eCM students (39%).
eCM had positive impacts for students at all levels of competition, however NJ&EE students were more likely to report impacts; low SES students reported greater gains than their peers. Students identified a number of program	Half of more of both competition groups agreed that eCM impacted them in the following areas: Confidence in STEM knowledge, skills, and abilities (eCM - 74%, NJ&EE - 96%); Interest in participating in STEM activities (eCM - 52%, NJ&EE - 85%); and interest in taking STEM classes in school (eCM - 50%, NJ&EE - 76%). As in FY19, items with the greatest difference in eCM impact by competition level (approximately 40%) were related to the AEOP/DoD: Having a greater appreciation of Army/DoD STEM research (eCM - 41%, NJ&EE - 91%) and Being more interested in pursuing a STEM career with the Army or DoD (eCM - 39%, NJ&EE - 72%).
strengtns.	No significant differences in eCM impacts were found by underserved status, however low SES students reported greater gains than their peers (very small effect size).



<ul> <li>Both students at the state and national competition levels cited the benefits of participating in eCM. Overall eCM students were most likely to identify the following benefits: <ul> <li>teamwork</li> <li>STEM learning</li> <li>research or STEM skills</li> <li>the opportunity to solve real-word problems</li> </ul> </li> </ul>
National Finalists were most likely to identify the following benefits: • teamwork
career information
research or STEM skills
<ul> <li>increased motivation for or interest in STEM</li> </ul>
<ul> <li>presentation and communication skills</li> </ul>
STEM learning
<ul> <li>the opportunity to solve real-world problems</li> </ul>
<ul> <li>the opportunity to meet peers from across the country</li> </ul>
<ul> <li>the opportunity to network with STEM experts</li> </ul>
<ul> <li>the student-led nature of the project,</li> </ul>
• the judging, and the feedback they received on their projects.

### **Recommendations for FY21 Program Improvement/Growth**

Evaluation findings indicate that FY20 was another successful year for the eCM program, as there were 56% underserved participants in the overall eCM this year and nearly 15,000 overall participants in the competition. eCM students reported gains in STEM knowledge, STEM competencies, and STEM identity.

While these successes are commendable, there are some areas that remain with the potential for growth and/or improvement. The evaluation team therefore offers the following recommendations for FY21 and beyond:

# AEOP Priority: Broaden, deepen, and diversify the pool of STEM talent in support of our Defense Industry Base

FY20 was met with COVID-19 challenges that resulted in some expected impact on participation in eCM. There were 21% less participants overall in eCM at the state (overall eCM) level (14,245 in FY20 compared to 17,944 in FY19). Therefore, the three-year downward trend has continued. It is recommended again for FY21 that eCM employ strategies to reach new participants as well as supports for previous participants to engage again, as 70% of FY20 overall eCM students indicated interest in participating again.



## AEOP Priority: Support and empower educators with unique Army research and technology resources

As shared in FY19, eCM is a key program in the AEOP consortium portfolio which enrolls by far the most students of any single program or other programs combined. Therefore, there is great opportunity to use eCM as a vehicle for exposing students to the many other opportunities that exist in AEOP and across DoD STEM. However, as in FY19, very few regional Team Advisors reported discussing specific AEOP with students (less than 15% compared to less than 10% in FY19). Further, only 36% (less than 2019) of Team Advisors discussed DoD or other government agencies with students. It is recommended that eCM adjust programming regarding DoD and promoting other AEOP mandatory for Team Advisors to include in their work with students beginning FY21.

Educators and students shared similar suggestions for improving eCM. First, both overall and NJ&EE students and Team Advisors shared that there should be some improvements made to the website organization and functionality. Additionally, better instructions and clearer guidance was requested from all groups as well. NSTA should review this feedback carefully and use it to guide program adjustments to better meet the needs of students and Team Advisors.

## AEOP Priority: Develop and implement a cohesive, coordinated, and sustainable STEM education outreach infrastructure across the Army

As in FY17, FY18, and FY19 eCM students overall continue to report having little knowledge of other programs in the AEOP besides eCM (more than 50%). Additionally, in FY20 a large percentage of NJ&EE students reported not hearing about any other AEOP (40-57%). In FY21 it is recommended that NSTA develop a coordinated strategy to address this across eCM, and it is also recommended that NSTA work with the consortium to utilize current and develop other additional resources that teachers/Team Advisors can use as tools to communicate with students about future AEOP opportunities and DoD STEM careers overall.

