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Army Educational Outreach Program

High School Research Apprenticeship Program (HSAP)

2017 Annual Program Evaluation Report

PART 1: Executive Summary

February 2018

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ARMY EDUCATIONAL OUTREACH PROGRAM

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2 | Executive Summary

The Army Educational Outreach Program (AEOP) vision is to develop a diverse, agile, and highly competent STEM talent pool. AEOP seeks to fulfill this mission by providing students and teachers nationwide a collaborative and cohesive portfolio of Army-sponsored science, technology, engineering and mathematics (STEM) programs that effectively engage, inspire, and attract the next generation of STEM talent through K-college programs and expose participants to Department of Defense (DoD) STEM careers. AEOP provides this portfolio of programs via a consortium, formed by the Army Educational Outreach Program Cooperative Agreement (AEOP CA), that engages non-profit, industry, and academic partners with aligned interests. The consortium provides a management structure that collectively markets the portfolio among members, leverages available resources, and provides expertise to ensure the programs provide the greatest return on investment in achieving the Army's STEM goals and objectives.

The High School Apprenticeship Program (HSAP), managed by the U.S. Army Research Office (ARO), is an Army Educational Outreach Program (AEOP) commuter program for high school students who demonstrate an interest in science, technology, engineering, or mathematics (STEM) to work as an apprentice in an Army-funded university or college research laboratory. HSAP is designed so that students (herein called apprentices) can apprentice in fields of their choice with experienced scientists and engineers (S&Es, herein called mentors) full-time during the summer or part-time during the school year.

Apprentices are allowed to work up to 300 hours total, and receive an educational stipend equivalent to $10 per hour. The students contribute to the research of the laboratory while learning research techniques in the process. This "hands-on" experience gives students a broader view of their fields of interest and shows students what kind of work awaits them in their future careers. At the end of the program, the students prepare abstracts for submission to the ARO Youth Science programs office.

2017 HSAP Fast Facts	
Description	STEM Apprenticeship Program – Summer, in Army-funded laboratories at colleges/universities nationwide, with college/university mentors
Participant Group	11th-12th grade students
No. of Applicants	629
No. of Students (Apprentices)	54

Placement Rate	9%
No. of Adults (Mentors)	40
No. of K-12 Schools	53
No. of Army-Funded College/University Laboratories	36
No. of HBCU/MIs	20
Total Cost	$237,146
Total Stipends	$185,311
Administrative Costs	$49,512
Other Operational Costs	$2,323
Cost Per Student Participant	$4,392

Summary of Findings

The 2017 evaluation of HSAP collected data about participants; participants' perceptions of program processes, resources, and activities; and indicators of achievement in outcomes related to AEOP and program objectives. A summary of findings is provided in the following table.

2017 HSAP Evaluation Findings	
Participant Profiles	
HSAP continues to receive increasing numbers of applications, however enrollment in 2017 declined and failed to meet program objectives.	The increasing number of applications HSAP has received over the past 3 years (267 in FY15; 363 in FY16; and 629 in FY17) suggests that the program has been successful in its outreach to high schools.
	A total of 54 apprentices participated in 2017. This is a decrease of 20% compared to 2016 when 65 apprentices were enrolled. Enrollment failed to meet the program's 2017 goal of 70 apprentices.
HSAP continues to serve students from groups traditionally underrepresented and underserved in STEM.	Over half of apprentices (60%) were female, a group underrepresented in some STEM fields. This represents an increase in participation of females compared to 2016 when only 49% of participants were female.
	HSAP served students from a variety of races and ethnicities, although the most commonly reported races/ethnicities were White (42%) and Asian (25%) (not groups traditionally underrepresented and underserved), a slight increase compared to 2016 when 37% of apprentices were White and 20% were Asian.
	Twenty of the 36 HSAP sites were Historically Black Colleges and Universities or Minority Serving Institutions (HBCU/MIs). As in 2016, 15% of apprentices identified themselves as Black or African American, a group traditionally

	underserved and underrepresented in STEM. A slightly smaller percentage of apprentices (14%) identified as Hispanic or Latino (also a group traditionally underserved and underrepresented in STEM) than in 2016 (18%).
	A small percentage (17%) of apprentices reported that they receive free or reduced-price school lunches, a commonly used indicator of low-income status. Three-quarters (75%) reported that they do not receive free or reduced-price school lunches.
Actionable Program Evaluation	
HSAP apprentices learned about AEOP most frequently through their schools and through personal contacts, and were motivated to participate by the learning opportunities	The most common sources of information about AEOP were related to apprentices' schools and personal contacts. School sources of information included school or university newsletters, emails, or websites (38%) and someone who works at the school or university apprentices attend (34%). Nearly half of participants (48%) reported learning about AEOP through personal contacts (past participant – 17%; friend – 17%; or family member – 14%).
	The most frequently reported motivators for apprentices to participate in HSAP were related to learning opportunities, including the desire to learn something new or interesting (100%), interest in STEM (100%), and desire to expand laboratory skills (93%). Likewise, 86% of students reported that they were motivated by the opportunity to learn in ways not possible in school and 86% by the opportunity to use advanced laboratory technology.
HSAP apprentices learned about STEM careers both in general and to a lesser extent within the DoD, during their apprenticeships.	More than half (61%) of apprentices reported learning about three or more STEM jobs and careers in general and almost all (91%) reported learning about at least one. Fewer apprentices reported learning about STEM jobs and careers within the DoD, with 42% of responding apprentices reporting learning about three or more and 71% reporting learning about at least one. Over a quarter (29%) of apprentices had not learned about any DoD STEM jobs and careers.
	Apprentices identified a variety of resources that impacted their learning about DoD STEM careers. Most (81%) reported that simply participating in HSAP was at least somewhat impactful. Over two-thirds (65%) of apprentices indicated their mentors and the AEOP website were at least somewhat useful for impacting their awareness of DoD STEM careers. Most (71%) had not experienced AEOP on social media and over a quarter (26%) had not experienced the AEOP brochure.
	All mentors reported that participation in HSAP was either somewhat or very much useful for apprentices' awareness of DoD STEM careers. Similarly, the HSAP site coordinator (83%) and AEOP website (79%) were reported to be at least somewhat useful for exposing apprentices to DoD STEM careers. Many mentors had not experienced resources such as AEOP on social media (63%) and invited speakers (49%).

	All but 1 apprentice (97%) reported that HSAP positively impacted their awareness of DoD STEM research and careers.
HSAP apprentices engaged in a variety of STEM practices on a regular basis during their apprenticeships and reported significantly higher levels of engagement in these practices in HSAP as compared to their typical school experiences.	Approximately half or more of apprentices reported engaging in all STEM practices about which they were asked either weekly or daily while in HSAP. For example, 97% reported interacting with STEM researchers weekly or daily, 90% reported working with a STEM researcher on a real-world STEM problem weekly or daily, and 90% reported working collaboratively as part of a team weekly or daily.
	In order to understand how the HSAP experience compared with apprentices' typical school experiences, apprentices were asked how frequently they engaged in the same activities in school. Apprentices reported significantly higher STEM engagement in HSAP as compared to in school (effect size is large with d = 2.07).
HSAP mentors were accessible to students and used strategies associated with all areas of effective mentoring	HSAP apprentices reported high levels of mentor availability with approximately three-quarters indicating their mentor was either available all or more than half of the time. No apprentices reported not having access to their mentor.
	Large majorities of mentors (79% - 96%) reported using each strategy associated with establishing the relevance of learning activities. For example, nearly all (96%) reported becoming familiar with student backgrounds and interests, giving student real-life problems to investigate, and encouraging students to suggest new readings, activities, or projects.
	Most mentors (67% - 100%) reported using each strategy associated with supporting the diverse needs of students as learners. For example, all mentors reported using a variety of teaching and/or mentoring activities to meet the needs of students, and nearly all (96%) reported identifying students' learning styles at the start of HSAP.
	Large majorities of mentors (88% - 100%) reported using each strategy associated with supporting student development of collaboration and interpersonal skills. For example, all mentors reported listening to students with an open mind, having students exchange ideas with others whose backgrounds or viewpoints are different from their own, and having students work on collaborative activities as a member of a team.
	Large majorities of mentors (83%-100%) reported using each strategy associated with supporting student engagement in authentic STEM activities. For example, all mentors reported supervising their students while they practiced STEM research skills. Nearly all (96%) encouraged students to work collaboratively and demonstrated laboratory/field techniques, procedures, and tools for students.
	Most mentors (67% - 92%) reported using each strategy associated with supporting students' STEM educational and career pathways. For example,

	67% of mentors reported recommending extracurricular programs that align with students' goals, 79% discussed STEM career opportunities with the DoD or other government agencies, 83% recommended AEOPs that aligned with students' goals, and 92% discussed STEM career opportunities in private industry or academia.
Apprentices and mentors reported high levels of satisfaction with their HSAP experiences and offered a variety of suggestions for program improvement.	Apprentices reported high levels of satisfaction with HSAP program features, with two-thirds or more reporting being somewhat or very much satisfied with all program features about which they were asked. For example, large majorities of apprentices were somewhat or very much satisfied with the amount of stipend pay (93%), communication with host site organizers (90%), and physical locations of program activities (90%). Few apprentices expressed dissatisfaction with any program features, although 4 apprentices (13%) reported being "not at all" satisfied with the variety of STEM topics available to them and 4 apprentices (13%) were not satisfied with the timeliness of stipend payments.
	Apprentices were satisfied with features of their HSAP experience relating to their mentors and their research experiences (87% - 100% somewhat or very much satisfied with all items). For example, all apprentices (100%) were at least somewhat satisfied with their working relationship with their team or group, 97% were at least somewhat satisfied with their research experience overall, and 90% were at least somewhat satisfied with their working relationships with their mentors.
	Apprentices' most frequently mentioned areas of improvements included improvements to communication from the program (e.g. information about program requirements); ensuring the timeliness of stipend payments; providing a larger choice of disciplinary areas or projects; offering a longer program; providing examples of abstracts, posters, and papers; and expanding HSAP to provide more locations and include more students.
	Large majorities of mentors were satisfied with features of HSAP, with 79% or more indicating they were at least somewhat satisfied with all features they had experienced. For example, nearly all mentors were at least somewhat satisfied with communicating with ARO (96%) and the research abstract preparation requirements (92%), while 88% were at least somewhat satisfied with their communication with HSAP organizers and 83% with the support for instruction or mentorship.
	Mentors offered a variety of suggestions for program improvement. One of the most frequently mentioned improvements focused on communication from the program, including communicating program requirements more effectively, communicating more with high schools, providing brochures designed especially for high school students, and providing apprentices with more information on DoD careers. Mentors also encouraged the program to provide apprentices with opportunities to present their research, to streamline or improve administrative details (e.g., accepting students earlier,

	completing administrative work before the start of the apprenticeship, and providing mentors access to apprentices' application materials), and to provide more opportunities for apprentices to interact with one another.
Outcomes Evaluation	
HSAP had a positive impact on apprentices' STEM knowledge and competencies	All students reported some level of gain in each area of STEM knowledge, and a large majority (90%-100%) reported medium or large gains in each area of their STEM knowledge. For example, all students reported medium or large gains in their in-depth knowledge of STEM topics and 97% in their knowledge of how scientists and engineers work on problems in STEM.
	A majority of apprentices (60% - 90%) reported medium or large gains on all items related to their STEM competencies. For example, 90% of apprentices reported medium or large gains in their ability to communicate about their experiments in different ways and 87% reported at least medium gains in identifying the strengths and limitations of data, interpretations, or arguments presented in technical or scientific texts.
Apprentices demonstrated observable gains in their 21st Century Skills during their HSAP experiences and self-reported growth in these skills.	HSAP apprentices demonstrated significant gains in their 21st Century Skills on the four-point scale as assessed by their mentors in the domains of Creativity & Innovation (0.31 gain), Critical Thinking and Problem Solving (0.35 gain), Flexibility, Adaptability, Initiative, & Self-Direction (0.35 gain), and Productivity, Accountability, Leadership, & Responsibility (0.31 gain).
	A large majority (87% - 97%) of apprentices reported medium to large gains on all items associated with their 21st Century Skills. For example, 97% of apprentices reported medium or large gains in their ability to communicate effectively with others and 94% in setting goals and reflecting on performance and including others' perspectives when making decisions.
HSAP apprentices experienced growth in their STEM identities and confidence as a result of their apprenticeship experiences.	Apprentices reported that HSAP had positive impacts in all areas of STEM identity with 84% - 97% of apprentices reporting medium to large gains on all STEM identity items. For example, nearly all apprentices (97%) reported medium or large gains in their desire to build relationships with mentors in STEM, and 94% reported similar gains in their decisions on a path to pursue a career in STEM.
	All apprentices (100%) credited HSAP with their increased confidence in their STEM knowledge, skills, and abilities.
HSAP apprentices were more likely to engage in STEM activities outside of regular school activities as a result of their apprenticeship experiences.	A large majority of apprentices (91%) reported that participating in HSAP contributed to their interested in participating in STEM activities outside of school.
	More than half of apprentices reported being more likely or much more likely to engage in all activities about which they were asked as a result of their participation in HSAP. Apprentices reported being particularly more likely to work on a STEM project or experiment at a university/professional setting

	(90%), and over three –quarters (77%) were more likely to talk with family or friends about STEM after participating in HSAP.
HSAP apprentices expressed increased interest in participating in other AEOPs in the future, although many had not heard of AEOPs for which they currently are or will soon be eligible.	Nearly all (97%) of apprentices indicated that they were more aware of other AEOPs as a result of HSAP and credited HSAP with their increased interest in participating in AEOPs in the future. More than half of apprentices reported being interested in URAP (74% somewhat or very much interested) and SMART (52% somewhat or very much interested).
	Substantial proportions of apprentices reported having never heard of AEOPs such as CQL (65%), GEMS Near Peer Mentors (52%), and the NDSEG Fellowship (48%).
HSAP participation and mentors were the most impactful resources for apprentices to learn about AEOPs, however few mentors discussed specific AEOPs with their apprentices.	Apprentice reports about the impact of HSAP and AEOP resources on their awareness of AEOPs (somewhat or very much impactful) was variable. For example, 91% reported that participating in HSAP was at least somewhat impactful and 74% that their mentors were at least a little impactful on their awareness of AEOPs. Less than half of apprentices (42%) rated the AEOP brochure as at least somewhat useful, and only 3% reported that AEOP on social media was at least somewhat useful.
	More than half of apprentices (68%) reported not having experienced AEOP on social media, 39% had not experienced the AEOP brochure, and 33% had not experienced presentations or information shared through the apprenticeship program.
	All mentors reported that participation in HSAP was either somewhat or very much useful for informing apprentices about AEOPs. Mentors also reported that the HSAP program administrator or site coordinator (92%) and AEOP website (83%) were at least somewhat useful for informing apprentices about AEOPs.
	Half of mentors reported having discussed AEOP generally with their apprentices, but without reference to any specific programs. The most frequently discussed programs were HSAP (67%) and URAP (50%). A third of mentors (33%) discussed REAP with their apprentices, and a quarter (25%) discussed SMART. It is noteworthy, however that most mentors did not discuss other programs such as JSHS (88%), SEAP (88%), and CQL (92%), for which apprentices are or will soon be eligible.
HSAP apprentices had positive opinions about DoD research and DoD researchers.	All but 1 apprentice (97%) reported being more aware of and having a greater appreciation for Army or DoD STEM research as a result of participating in HSAP.
	A large majority of apprentices (94% - 97%) agreed or strongly agreed with a series of statements about DoD research and researchers. For example, 97% of apprentices agreed or strongly agreed that DoD researchers advance science and engineering fields and that DoD researchers develop new, cutting edge technologies.

HSAP positively impacted apprentices' STEM educational and career aspirations.	After participating in HSAP, all but one apprentice (97%) reported they aspired to, at a minimum, finish college (get a Bachelor's degree). And a large majority (84%) reported they aspired to obtain some sort of advanced degree (Master's or higher).
	Over three-quarters of apprentices (81%) reported being more interested earning a STEM degree and in pursuing a career in STEM as a result of participating in HSAP. Over two-thirds (68%) of apprentices were more interested in pursuing a STEM career with the Army or DoD as a result of participating in HSAP.

Responsiveness to FY17 Evaluation Recommendations

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

FY16 Finding: AEOP objectives include expanding participation of historically underrepresented and underserved populations. Between 2014 and 2016, HSAP has engaged more apprentices who identify with a typically underrepresented group in STEM, which is a positive trend. Additionally, it is positive that the HBCU/MI sites increased from 2 in 2014 to 7 in 2015 to 16 in 2016. HSAP should explore how to accommodate more participants in coming years – as the 18% placement rate indicates a much larger interest and need than is currently being accommodated.

HSAP FY17 Efforts and Outcomes: ARO and AAS identified and targeted nearby high schools and organizations that have traditionally underserved and underrepresented populations in STEM, then directly sent emails advertising the HSAP program to those locations. The Total Title I School participation for HSAP in FY16 was 17%, in FY17 it increased to 28%. The HBCU/MSI in FY16 was 52% for HSAP and there was an increase to 56% for HSAP in FY17.

FY16 Finding: Similar to past years in HSAP, recruitment of apprentices is largely accomplished with personal interactions, either by knowing someone at the university or someone who works at HSAP. As a result, the ability of HSAP to recruit underserved or underrepresented populations of students depends upon the diversity of the high schools in which recruitment takes place. Thus, HSAP may want to emphasize recruiting a more diverse pool of mentors and apprentices, perhaps specifically targeting more urban schools or schools who receive Title 1 funding. AAS and ARO should work with AEOP SOI awardees and identify possible overlaps where we can leverage our strategic outreach partners' reach and network A focused and strategic plan to engage a more diverse pool of apprentices could ultimately improve the diversity of the STEM pipeline, based on the large impact that HSAP has on STEM knowledge, skills, and identity.

HSAP FY17 Efforts and Outcomes: Although HBCU/MSI and Title I school participation increased in FY17, diversity among students continues to be low. It is anticipated that diversity among students will continue to increase as the current approach to reach out to Title I high schools and HBCU/MSI has proven successful.

FY16 Finding: HSAP is very effective in offering apprentices authentic opportunities to engage in STEM professional activities, and for mentors to build the next generation of STEM professionals. Mentors are particularly skilled in being able to engage high school students in their laboratory by giving them meaningful learning experiences and asking them to report on their work to graduate students and STEM professionals. Most of the apprentices had not heard of the range of AEOP programs (78% had not hear of UNITE, 86% had not heard of CQL, and 79% had not heard of GEMS Near Peer). Although mentors are particularly skilled in their area of expertise, mentors should be better prepared by the program to provide information and resources on the array of AEOP opportunities. AAS/ARO should work with the Battelle and the CAM to develop materials and training/onboarding that could be used with mentors each year to target this area of need.

HSAP FY17 Efforts and Outcomes: In addition to ongoing mentor communication, in FY17, a Meet & Greet was developed and implemented at several universities where students and mentors came together to talk about their experiences and learn about other AEOP programs. We will expand this effort in FY18. We also assisted the CAM's office to create DoD Career webinars for students and mentors to learn about DoD careers.

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

No recommendations were provided in FY16 in this area.

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

FY16 Finding: HSAP mentors were effective in FY16 at informing apprentices about DoD STEM jobs/careers, as 97% of respondents reported hearing about one STEM career and 50% reported hearing about 5 or more, which is increased greatly from 2015. However, there was little overall impact of the program and mentors on apprentice awareness of DoD STEM careers, as only 68% of HSAP apprentices felt that their participation in the program impacted their awareness and 64% felt that their mentors impacted their awareness. Apprentices reported not utilizing the AAS website (83%), It Starts Here! Magazine (83%), social media outlets (72%), Invited speakers (61%), and the ARO website (53%). This lack of awareness/utilization is a potential barrier for communicating about Army/DoD STEM research and careers and the AEOP portfolio overall. In an effort to increase and standardize the information provided to apprentices, it would be beneficial to create a resource that profiles Army STEM interests and the education, on-the-job training, and related research activities of Army careers. Such a resource could not only start the conversation about Army STEM careers and motivate further exploration beyond the resource itself, but could be used to train the mentors to learn more about specific Army/DoD STEM research and careers. The application to be a HSAP site or a mentor could ask for their plan to explicitly discuss these resources (e.g., Army and directorate STEM career webpages, online magazines, federal application guidelines), thus developing a network of ongoing opportunities for the apprentices. Again, some type of onboarding/training for mentors – even virtual – would help to support progress in this area for HSAP.

HSAP FY17 Efforts and Outcomes: AEOP objectives identified that there was a lack of awareness of DoD STEM careers in FY16. In FY17, promotional materials, as well as a webinar was developed to help engage the apprentices in learning more about DoD STEM careers.

FY16 Finding: Participation in the HSAP evaluation improved for apprentices but less than desirable for mentors. Very few mentors (12%) and apprentices (55%) completed the evaluation survey. The program leadership reported the decrease in participants was greatly due to the use of Constant Contacts for the majority of marketing/promotion, instead of more personal approaches to participation in the evaluation survey. It is recommended that the program use a more personal approach to recruiting participation in the evaluation survey. This strategy worked well for recruiting participants in the evaluation interviews in FY16. A recommendation for the FY17 years and beyond would be for the HSAP program mentors to provide time for apprentices to complete the survey during their apprenticeship meeting time. This will provide a more accurate measure to gauge how effective HSAP activities and communications are in growing awareness of AEOPs.

HSAP FY17 Efforts and Outcomes: Under the umbrella of all the apprenticeships, and in a coordinated effort, all apprenticeships issue ongoing communication (links to evaluation, abstracts, 21st century skills, poster tips, etc.) throughout the summer to all participants. This is done by each IPA for a more personal touch. It also allows instant feedback from participants. A less personal approach, Constant Contact, was used last year for two of the apprenticeships which deemed unreliable.

Recommendations for FY18 Program Improvement/Growth

Evaluation findings indicate that FY17 was a successful year for the HSAP program. The number of applications for HSAP apprenticeship slots increased considerably in FY17 (629 compared to 363 in FY16) indicating the demand for the program is high. More than 60% of apprentices who participated were female. HSAP participants reported significantly higher engagement in STEM during HSAP than in school. All apprentices reported having access to their mentors. STEM knowledge and competencies increased for a large majority of participants and mentor assessed 21st Century Skills increased overall for HSAP apprentices. All participants reported increased confidence in STEM knowledge, skills, and abilities as a result of HSAP. While the successes for HSAP detailed above are commendable, there are some areas that remain with potential for growth and/or improvement. The evaluation team therefore offers the following recommendations for FY18 and beyond.

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

1. Despite considerable growth in interest in HSAP, evidenced by the nearly 50% increase in applications for FY17, there was a 20% decrease in the actual number of participants in FY17. HSAP failed to meet their enrollment goal of 70 apprentices as a result. HSAP should focus on growing infrastructure to support more potential participation in FY18.

2. The demographics of actual participants in HSAP reveal the program has more work to do to reach a greater percentage of underrepresented students. It is commendable that HSAP has been able to accommodate a majority of female apprentices. However, White and Asian groups are the majority in participants (42% and 25% respectively). This is a slight increase from FY16 in fact, while the percentage of African American students has remained at 15% and Hispanic/Latino apprentices held at 14%. HSAP should invest resources in FY18 to target underrepresented groups more strategically to recruit more diverse participation for the program.

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

In FY17, HSAP apprentices and mentors both echoed findings that have been prevalent across the AEOP portfolio. Only a very few number of participants and mentors are accessing and/or utilizing AEOP social

media, including the website. In regards to HSAP, 63% of mentors and 71% of apprentices did not experience AEOP social media at all. Therefore, the evaluation team recommends that HSAP work with the consortium members to determine a plan for the future utilization and marketing of AEOP social media and the website.

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

1. The FY17 evaluation findings indicate collective desire of the apprentices and mentors to improve communication across the program. This includes improving the delivery of information from the program leadership to the mentors and site directors, as well as information (program requirements, stipend payments, that is transmitted between AAS/ARO and the apprentices directly. It is recommended that AAS and ARO take steps to examine communication channels and determine how communication can be improved for HSAP.

2. HSAP made progress in growing apprentice awareness of AEOPs, as 97% indicated that they had learned about AEOPs during the program. 74% indicated they were interested in URAP. However, HSAP participants were not made cognizant of some applicable AEOP opportunities during the program in FY17. In fact, 65% of HSAP apprentices had not heard of CQL, and 42% had not heard of the NDSEG Fellowship. Mentors reported that they did not discuss other AEOPs with their apprentices including: JSHS (88%), SEAP (88%), and CQL (92%). It is strongly recommended that HSAP work with their staff and the consortium to develop a plan for marketing and informing participants frequently about other AEOP opportunities and resources.