



Army Research Laboratory's Staff Sgt. David A. Hoisington (left) and Sgt. 1st Class John C. Hardwick demonstrate how testing is performed at the Soldier Performance and Equipment Advanced Research facility at Aberdeen Proving Ground, Md. At the SPEAR facility, researchers examine how equipment affects Soldier performance. Hoisington is an enlisted advisor for Human Research and Engineering Directorate at Aberdeen Proving Ground. Hardwick is senior enlisted advisor for ARL's Simulation and Training Technology Center in Orlando, Fla. (Photo by Martha C. Koester / NCO Journal)

NCOs Lend Expertise to Army Research Laboratory

By Martha C. Koester

NCO Journal

Working among the scientists and engineers at the U.S. Army Research Laboratory has given Sgt. Maj. Kevin M. Connor a new appreciation for how much work goes into the equipment he and his Soldiers have used on the battlefield. Before he came to Maryland, and an issue with military equipment arose, Connor didn't know there was an organization in the Army he could turn to, one which links the military and science communities.

As sergeant major for ARL in Adelphi, Md., Connor now has the opportunity to fix those things before they get to the Soldier.

"[As a noncommissioned officer,] I came up through the ranks, knowing certain equipment didn't necessarily work for me," Connor said. "Hopefully, we [NCOs assigned to ARL] can give Soldiers a better experience with the equipment versus some of the challenges we have faced in our previous assignments and duty stations."

As the premier laboratory for the United States' land forces, ARL of the U.S. Army Research Development and Engineering Command has touched all NCOs and their Soldiers by providing the enabling technologies in many of the Army's critical weapons systems. NCOs play a direct role in the development of weapons technology,

servicing as advisers for ARL's directorates and assisting in equipment testing.

"Most of the Army doesn't even know ARL exists," Connor said. "So, one of the things I do when I'm at other military installations is I try to meet other sergeants major and educate them about ARL and say, 'Did you know that we can help you solve some problems or issues you have with equipment?' Or I will talk to Soldiers if they have a better equipment design or something of that nature [so I can pass it along]."

Doing Their Part

At the Soldier Performance and Equipment Advanced Research facility at Aberdeen Proving Ground, Md., NCOs such as Connor assist operations by providing the Soldiers who will test equipment. SPEAR puts equipment, which is intended to augment Soldiers, through vigorous testing.

For example, Soldiers may run through an obstacle course to test whether exoskeletons offer improved agility, or Soldiers may test devices developed to assist in carrying their loads as scientists measure their activity on a treadmill, said Philip Crowell, SPEAR biomechanics team leader.



Sgt. 1st Class John C. Hardwick sees how testing of advanced combat helmets is done at Army Research Lab's Environment for Auditory Research. EAR is a part of the Human Research and Engineering Directorate. (Photo by Martha C. Koester / NCO Journal)

"Our research focuses on how equipment affects Soldier performance," Crowell said. "For the Soldiers who participate in our studies, it's an opportunity for them to see a different part of the Army. They get to see the research and development side where equipment and concepts are created and refined long before they get fielded.

"Because we value their feedback regarding the studies, this is also a chance for them to have an influence on things that are being developed for use by Soldiers in the future," Crowell said.

Soldier participation is important to the scientists who research human factors and the ways Soldiers interact with military equipment. At ARL's Environment for Auditory Research, which is part of the Human

Research and Engineering Directorate, or HRED, at Aberdeen Proving Ground, a Soldier is valued for his or her knowledge of jargon and types of cues or commands used in military communication systems during the testing of advanced combat helmets, said Dr. Angelique A. Scharine, EAR auditory research team lead.

Acting branch chief Christopher Paulillo praised Staff Sgt. David A. Hoisington, an enlisted advisor for HRED, and said Hoisington's intelligence background is invaluable when analyzing software data for the Communications-Electronics Command, or CECOM, at Aberdeen Proving Ground. CECOM researcher Diane Quarles also said Hoisington's experience contributes greatly to research.

"[Staff] Sergeant Hoisington was asking questions that a user would want to know and I don't have the operational knowledge that a user has to ask those questions," Quarles said. "He was able to ask the questions that the Soldiers would want to know, as opposed to me just saying, 'Does your software do this and how?' With his support during these interviews, we were able to collect more detailed information on the systems."

A Collaboration

NCOs also see their subject-matter expertise as a vital contribution to ARL's piece in the big Army puzzle.

"We offer that ground-level, subject-matter expertise," said Sgt. 1st Class John C. Hardwick, senior enlisted advisor for ARL's Simulation and Training Technology Center in Orlando, Fla. "I think it's important to have that NCO, that subject-matter expert involved in the early stages of the research and the development. They can point out some of those things at the beginning when flaws are easily fixed."

We have the opportunity to reach out and work with a lot of people, during the opening stages of military equipment development, Hoisington said.

"We're looking at the human factors of what can be better, how can we make it work easier and what are the basic things that you can look at to change and integrate better for the Soldier," he said.

Soldier feedback counts greatly for teams such as HRED's Dismounted Warrior Branch at Aberdeen Proving Ground, which focuses on shooting performance research and development.

"I love this job. It's the best job in the world," said Frank Morelli, an experimental psychologist for the Dismounted Warrior Branch. "It's very satisfying working with Soldiers. You can see the appreciation they have for what you do because what you do is try to make their jobs better, try to make them more capable. It makes us feel good because that's who we work for."

Impact on the Future

For NCOs accustomed to being at larger military installations where civilians are in the minority, working



Staff Sgt. David A. Hoisington works at the Communications-Electronics Command, analyzing software data. CECOM researchers say Hoisington's experience contributes greatly to research. (Photo by Martha C. Koester / NCO Journal)

for ARL may be a little disorienting. Its workforce of scientists and engineers vastly outnumbers Soldiers.

"It was culture shock because I had been in Germany, where we didn't have many civilians and it was primarily Soldiers," Hoisington said. "We had two or three civilians supporting us. It's definitely been a growth opportunity because I was used to dealing with Soldiers. Dealing with civilians is completely different."

"I know for me it was a very eye-opening experience, having been an infantry Soldier and pretty much being operational my entire career," Hardwick said. "This was an entirely different part of the Army I never knew existed. I look at it as very rewarding because I am now on the technology end of military equipment and technology and helping out the Army of the future."

As sergeant major for ARL in Adelphi, Connor's working relationship with subordinate NCOs in his charge has to be long distance.

"It is a little different being in ARL versus a garrison because most of the NCOs in the unit are in another location," Connor said. "It's really having the faith and trust in those NCOs who are out in other locations."

ARL's NCOs realize their time there has afforded them many advantages and lessons they can take and use later in their Army careers.

"It has helped me develop interpersonal skills," Hardwick said. "It's given me that perspective on this entire other side of the Army that I was just never really aware of. Now, I know who I can reach out to and say, 'There's a problem with this piece of equipment.' Or if I have a Soldier who has a good idea for a piece of equipment, I know the system and the process of how to get that to RDECOM."

"There are a lot of people here doing a lot of things for the Army that people just don't know about," Connor said. "When I go back to the mainstream Army, I can say to my Soldiers, 'You don't realize all the work that goes into the equipment in your hands. This is years in the planning to get it to you.'"

Equipment issues?

The Army Research Laboratory's Operations Center is ready to assist with equipment issues. Please contact the center by email at usarmy.adelphi.rdecom-arl.mbx.arleoc@mail.mil or by calling (301) 394-0988 or via DSN at 290-0988. ■

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