Image courtesy of the U.S. Navy.

Leslie Taylor
Vice Commander (retired)
Naval Air Systems Command

Movers & Shakers

Industry Leader Insights – Past, Present, and Future

By Andrea Templeton

SPOTLIGHT ON

Leslie Taylor

Vice Commander, Naval Air Systems Command (retired)

From Engineer to NAVAIR Vice Commander

Talking with Leslie Taylor about 37 Years of Growth

Engineering was not something women generally were encouraged to pursue when Leslie Taylor graduated from high school. "I was going to be a nurse. But I showed up at my college, which was an engineering school, and the guidance counselor said, 'You have amazing grades in math, you should be an engineer.' " Her mother, a teacher, and her father, a construction superintendent, encouraged her to pursue the field.

"There were a handful of women in engineering. I'd say, out of a couple of hundred, there were ten of us. It was hard. Some instructors tried to weed out women. They wound up being among my favorite instructors. I think they made me who I am, because I'm not a quitter. They made me much more resilient."

In a traditionally male-dominated field, Taylor has been a trail-blazer. She turned this unexpected beginning into a 37-year career as a civil servant holding key positions, contributing significantly to naval aviation tests and acquisitions. Starting as an engineer working in weapons fragmentation, she rose to the second-highest ranking civilian in the Naval Air Systems Command (NAVAIR) and developed a unique leadership style and impressive breadth of knowledge. Following are key points from several hours of talking with Taylor about her time helping shape naval aviation.

"I THOUGHT THE NAVY WAS SHIPS"

Upon graduation in the early 1980s, Taylor was a passionate environmentalist. She planned on joining the U.S. Army Corps of Engineers. She also considered becoming an architect (she designed the home she lives in). Then, she visited a friend at the U.S. Naval Air Station in Patuxent River, Maryland.

"It was a world I had never been introduced to, growing up in rural West Virginia. I did not know anything about naval aviation; I thought the Navy was ships. But what made me really want the job was driving around the base, seeing all the activity and the aircraft, knowing it was the home of the Navy's Test Pilot School. It was just fascinating."

In addition to the U.S. Navy's aircraft test wings, Patuxent River Naval Air Station is also the headquarters of NAVAIR. The base employs over 17,000 military and civilian

ACHIEVEMENTS

- Vice Commander, Naval Air Systems Command, *NAVAIR*
- Executive Director, Test Flight Engineering *USN*
- First Female Executive Director of Naval Air Warfare Center Aircraft Division *(NAWCAD)*
- Former Deputy Assistant Commander for Test and Evaluation *NAVAIR*

(Current as of The Pax Museum.)

personnel, and NAVAIR has more than 30,000 personnel stationed at nine locations.

"It is the job of NAVAIR," explains Taylor, "to make sure that the naval aviation systems we acquire from our industry partners actually meet the intent for those systems."

"YOU DON'T GET THESE JOBS OVERNIGHT"

Taylor was selected for her first leadership position in her 20s. She was put in charge of the team she was on, leading a team of twenty-five. "The people who worked for me were my only friends in the county. So, I learned how to be a supervisor of my best friends. That's when I learned you really have to focus on leadership. It doesn't come naturally."

"As a mentor, I tell people, you don't get these jobs overnight. You grow into them." Taylor's own growth involved both promotions and strategic moves. After a few years of leading her first branch, she says, "I knew I was turning into a one-trick pony. I went to my boss, Neil Siegal, and asked, 'Could you please move me somewhere?' He transferred me into a lateral position, leading a different branch."

Her new position made her responsible for approving test plans in a field she had not been immersed in as an engineer. She learned to work closely with the experts in her new branch, forming a team that reviewed every test plan with her before she approved it. "That's when I learned I needed my people more than they needed me. I needed to break down barriers and help them achieve their goals. You can't know everything, so you have to trust your folks."

After several years as a branch head, Taylor was asked to take on leadership of the Joint

When Leslie Taylor was young, engineering was not something women and girls were often encouraged to pursue.

Image courtesy Leslie Taylor.

Image courtesy of the U.S. Navy.

Leslie Taylor waves from the cockpit of a T-A7, upon her completion of Selected Passenger training to fly in naval jet aircraft.

Image courtesy Leslie Taylor.

After meeting with a college counselor, Leslie Taylor was encouraged to pursue engineering by her parents, a teacher and a road construction leader

Advanced Strike Technology (JAST) program (which later became the F-35 team) as a collateral duty. Taylor was chosen for her proven ability to bring teams together. "They picked me, because they thought they could work with me. I reference the likeability factor when I mentor people. It's an important aspect of being on a team."

The team was made up of representatives from the U.S. Navy, U.S. Marines, and U.S. Air Force. Within six months, they had done what was considered impossible by some, documenting eighteen disciplines shared across the services. "We delivered a collaborative approach."

Following this success, Taylor was invited to permanently join the team as the Weapons Integration Lead. "I didn't really want to go. I loved my branch. But Siegal told me, "It's the best thing for you, and it's the best thing for the U.S. Navy." Taylor took his advice. "He was right. It was the best thing for me. Ever. It expanded my knowledge of mission systems, along with my weapons background. I was also responsible for lethality-related requirements for the F-35 fighter and attack aircraft. Those responsibilities led to me being competitively selected as a division head in NAVAIR's Warfare Analysis Department."

After serving for three years as Weapons Integration Program Team Lead for the Joint Strike Fighter Program, Taylor was selected as NAVAIR's Director for Warfare Analysis and Integration, where she oversaw 200 multidisciplinary analysts and engineers. After seven years in Warfare Analysis, she was sitting at her desk one day, when her phone rang. It was Siegal again.

"He said, 'Leslie, there's this job. You've got to put in for this job. And I'm not taking no for an answer.'" The job was Director of Flight Test Engineering for the U.S. Navy, a Senior Executive Service position. When Taylor hesitated, her mentor again convinced her to go for it.

Taylor was selected and catapulted to leading a team of 900. "I learned how to lead differently. You can get to know 200 people. You can't get to know 900. Those branch heads, those first-level supervisors, have the pulse of the organization. If you're going to do anything in that organization, you need those branch heads to believe in what you're trying to do."

After another seven years, she was promoted to Executive Director of the Naval Air Warfare Center Aircraft Division (NAWCAD), overseeing a team of 10,750. "I learned to trust in the leaders at all levels to know their jobs." Trust, explains Taylor, is something she grants at the start of a relationship. Team members have it, and it is theirs to keep or lose.

Even as the breadth and focus of her leadership shifted, many of her same methods applied, while she engaged new tools. She continued to focus on trust and communication. She employed video conference Q&A sessions, and relied on her communications team and leaders in her organization to relay messages. Still, whenever possible, Taylor prefers to reach out directly. "I believe in face-to-face, upfront, and transparent communication."

"HAZARDOUS FRAGMENTATION"

In her early 20s, Taylor's first position on base was working with weapons fragmentation, serving as a "hands-on engineer" on the test plan for a bomb that had been in service for some time. A change was being made in the kind of explosive fill internal to the bomb. Testing was being done to ensure the updated weapons were performing the same way they had previously. It should have been cut and dry.

"I was getting the fragmentation data to make sure it didn't change, creating a more hazardous fragmentation hazard environment for the delivery aircraft and the aviators. I ran a lot of that data, I did the math and the physics, and I proved our old fragmentation file was incorrect — in an unsafe way. When I showed it to my boss, another female engineer, she knew my work was correct and supported it. We presented that information to our bosses at the higher levels." The file was updated.

Due to safety concerns related to the finding, an Operational Immediate message (a message level for information that has an immediate effect on national security) went out to the entire fleet with Taylor's name and phone number at the bottom. Not long after, her phone rang. It was an aviator calling to thank her. He had dropped a Mark 84 bomb (a model involved in the findings), and fragments of

Image courtesy Leslie Taylor.

the bomb had struck his aircraft. Although he was able to land safely, the pilot was held responsible for the fragmentation strike.

Taylor's commitment to updating the file cleared the pilot's name and eased concerns that it had been pilot error — it was not. She also helped prevent future aviators from experiencing similar or worse results from being struck by fragmentation from the Mark 80 series bombs. Realization of the impact her work had on warfighters stayed with Taylor.

"WARFARE HAS CHANGED IMMENSELY"

One of the major shifts in Naval Aviation that Taylor has seen is the transition from analog to digital warfare. "Warfare has changed immensely. Everything and everyone must view the operational picture the same way, within a networked force. That did not exist when I started."

"We didn't have 'cyber.' The threat vectors are very different now. That makes our mission more challenging. It's a highly complicated, complex warfare environment that we find ourselves in. We're not just testing an F-18 or an F-35 or a P-8. We're testing how it interacts in a battlespace with other very complicated systems."

She discusses advantages of advances in modeling capabilities. "With things as complicated as they are, and our need to go as fast as humanly possible, we've become much more reliant on modeling and simulation."

The anechoic chamber at Naval Air Station Patuxent River is among the best in the world. "Inside the chamber, we are able to put systems in a virtual world, in a virtual warfight, against virtual threats. Live virtual and constructive modeling all come into play in how we evaluate systems today."

This modeling environment brings capabilities to the warfighter faster. "We don't have to worry about the weather. We can be highly classified inside those walls and do things that we will never do on an open-air range. We can work 24 hours. We can run simulations overnight. It accelerates the entire process."

"COLLABORATE, COORDINATE, INTEGRATE"

According to Taylor, U.S. Navy program offices are undergoing shifts from old school "waterfall" to "agile" program management. "There's an administrative side to everything we do. And you only go as fast as the slowest part. Administratively, we need money to move fast, we need contracts to move fast. Everything has to have a sense of urgency."

In the context of the changing environment and faster pace of delivery, a close partnership with industry is even more critical. "It changes how much you have to collaborate, coordinate, and integrate across organizational and industry lines. As an example, the E-2 and F-18 are built by two different companies, and the teams must work together across networks to pull things off. Information has to flow back and forth seamlessly and with the right timing. So we shifted how we exchange technical information, in documentation, as well as in the air."

While industry collaboration is ever more important, some things remain the same. "It's what I've always felt. We are partners, we're in this together. Whether it be working across Department of Defense lines or with our industry partners, we need to have trusted relationships. Our country needs us. Whether we're in uniform, civil servants, or original equipment manufacturers, we have to work together for the greater good."

Image courtesy of the U.S. Navy.

Leslie Taylor stands with a group, along with Matthew Shepard's parents, at an event focused on supporting LBGTQ+ inclusion, at the Patuxent River Naval Air Station.

Image courtesy of U.S. Navy, Photo by Donna Cipolloni.

Leslie Taylor at the opening of the Women in Aviation exhibit.

Leslie Taylor stands with a Women in Leadership group in the Patuxent River Naval Air Museum in front of an early prototype of the F-35C.

"WE STAND OUT IN A CROWD"

Taylor has been the first female to hold many of the roles she has held. "I have benefited as much being a female engineer as it's ever hurt me. We stand out in a crowd where there's only a few of us in a roomful of 100 people."

She was lucky regarding mentors. "As a white female in a man's world, I had a powerful mentor in Jesse McCurdy, an African American man. We would talk about the diversity and inclusion challenges we faced." She has made it a point to mentor others facing these challenges.

As the Director of Flight Test Engineering, along with strong partnerships with Avian Engineering and the U.S. Navy's Test Pilot School, she created an award-winning training venue for flight testers, which she titled Naval Aviation T&E University and later transformed into NAVAIR University, to train the organization's entire workforce. She also developed new capabilities-based test and evaluation methodologies to test not just a system but systems-of-systems in the battlespace.

Taylor was a founding champion of the Women's Advisory Group and later of the LGBTQ+Allies; both groups promote diversity, equity, and inclusion. She stresses that having varied voices from a wide breadth of backgrounds and experiences is the key to flourishing in today's expansive warfare environment.

She adds that it is not enough to hire diverse talent, unless you include them. Since she started working with the U.S. Navy, she points out, the service has made huge strides in diversity and inclusion, for instance, allowing women in combat and on submarines.

"People need to see others like them achieve higher level positions to know it can happen."

PAST AND FUTURE STEPS

"I landed where I was meant to be when I came to work for the Navy. It was serendipity that I got hired into this field. But I can't imagine being fulfilled doing anything else."

Taylor recounts steps in her career that built on one another. She concludes, "Just everything that's happened to me, even some of the worst things, not even a year later, generally, a few months later, I'll go, 'Wow, I'm so glad it happened that way and worked out the way it did.'"

Attribute it to chance, her skill as an engineer and a leader, or her trust and openness to contribution — whatever the cause, Leslie Taylor has amassed an incredible series of achievements that fulfilled her, and, as Siegal put it, was the best thing for the U.S. Navy.

In May 2022, Taylor founded Leslie Taylor Consulting Services. Currently, the company is aiding in the assessment of the skills needed for the future workforce of NAWCAD. It also advises on potential cost savings in naval aviation. Taylor also will complete eCornell's Diversity and Inclusion certification program later this year. As she moves forward with her company, she will continue to seek ways to support diversity and inclusion. AAD