PROFESSIONAL CERTIFICATION OF ARMY ENGINEER OFFICERS

By Major Kelcey R. Shaw

You are going to make sure that our own troops move ahead against all opposition, and you are going to see to it that enemy obstacles do not interfere with our advance. . . . You will build, tear down, and fight better than any other soldier in the world because you will be an American engineer.

—Field Manual (FM) 21-105, *Engineer Soldier's Handbook*
2 June 1943

Sixty-eight years ago, FM 21-105 used these words to describe the skills that Army engineers were expected to bring to battle and the obligations they needed to fulfill when serving maneuver commanders at all echelons. Now Army engineers are faced with the challenge of applying the same skills on a modern battlefield, after 10 years of conflict. These challenges require answers to three questions:

- What changes to the Officer Education System must be made to develop future leaders?
- What is the role of professional certification for the Army engineer officer?
- How does the Army engineer officer remain relevant in the joint, interagency, intergovernmental, multinational, industrial, and academic environment?

ENFORCE 2011 addressed these questions and engaged in the hard debates to ensure that the Engineer Regiment leads innovation and that Army engineers remain relevant in all formations.

- ***What changes to the Officer Education System must be made to develop future leaders?*** Never before has the need for engineers on the battlefield been greater. The demand that engineer leaders—especially at junior levels (company and below)—be able to plan and think in combination is constantly increasing. Platoon leaders and platoon sergeants are being asked to be as adept at route clearance as they are at vertical construction. The demand for a diverse set of knowledge, skills, and abilities is driving a departure from the "one size fits all" education system that many engineers are accustomed to and comfortable with from past experience.

The Engineer Captains Career Course is leading the exodus away from the familiar to meet the needs of the force. The Army Learning Concept 2015 and its implementation process for the Officer Education System—the Midgrade Learning Continuum 2015—is how it is being done. This is a new approach that will require a paradigm shift in the way that the Army community views professional development. The days of attending brick-and-mortar schools for a predetermined period are gone. Learning must now be seen as an iterative, lifelong process that is customized to individual needs but grounded in basic principles and presented with sufficient rigor to provide engineer officers with the tools required to serve the maneuver force.

The U.S. Army Engineer School's approach to this new education model is called *Engineer University*. This redesigned approach follows a university model, using "tracks" and "elective specialization" and, like a university, providing a tailored learning experience. This gives the student and the Regiment greater input to training and education outcomes and supports the objectives of the Army Learning Concept 2015.

The ultimate goal of Engineer University—to borrow the model of the Army engineer profession propounded by Brigadier General Bryan G. Watson (former commandant of the U.S. Army Engineer School)—is to train, educate, and certify experts with the right skills. This enables the development of leaders adept in applied engineering. *Leaders, applied engineering,* and *certify experts* are key terms. The Regiment has always counted remarkable leaders among its ranks. The balance between sound design and the expediency required by combat to meet the maneuver commander's intent is the hallmark of military engineering and describes how engineering has been applied to serve the Nation through all its conflicts. Certifying experts through professional registration and certification is where new efforts must be focused.

- ***What is the role of professional certification for the Army engineer officer?*** Now that we are willing and able to challenge the status quo on ***how*** to teach, the next step is to ask ***what*** to teach. The professional engineer (PE) license has long been the mark of excellence and competence for military and civilian engineers. In addition to the PE license, Engineer University will offer several certification options, enabling engineer officers to gain and show competences and validating them in the joint community. Officers can and should pursue options such as attendance at the Joint Engineer Operations Course and certification as project management professional (PMP), certified facilities manager, or certified contract manager.

There are challenges to the widespread acceptance of a new approach to engineer officer certification. There are few certifications tied to skill identifiers and even fewer assignments coded for officers possessing a particular

skill identifier. This breeds an attitude that professional registration is not required and that the lack of it will not hinder progression or promotion. This must change if the Regiment wants junior leaders to continually seek broad, relevant professional development. At a minimum, professional certifications allow for the instant recognition of skills that add value to an organization. Professional certifications also show tangible evidence of an officer's willingness to invest intellectual capital in self-development. The Regiment wants officers who are willing to invest in themselves and in the profession and those who are willing to seek out the hard jobs. The best jobs should be linked to certifications in order to attract the best officers.

- ***How does the Army engineer officer remain relevant in today's joint, interagency, intergovernmental, multinational, industrial, and academic environment?*** In an era of increasing partnership with sister Services, government agencies, and allied partners, there is a need to demonstrate the Army engineer's relevance. The U.S. Navy and U.S. Air Force require their engineer officers, including architects, to hold engineering degrees. They tie advancement, promotions, and assignments to requirements for professional registration. Therefore, when a Navy or Air Force engineer officer walks into a joint billet, it is assured that the officer is a degreed engineer and a registered professional engineer. It is entirely possible that the officer will also be warranted as a contracting officer or have extensive facilities management experience. These traits, found throughout the engineer ranks in those Services, cultivate recognition of their technical competence. What does the Army offer?

It is well known and accepted in the joint engineer community that Army engineers are experts at planning and the military decisionmaking process and that they are the best engineer officers to plan, lead, command, and organize chaos. This is where the Army truly adds value to joint organizations. The Army has engineer officers who are adaptive, broadly educated masters of project management. They are the portland cement that allows aggregate and water to form concrete. Army engineer officers provide the leadership and management required to leverage technical competencies against problems.

Leadership and technical competence are required for success as an engineer officer. The Army has perfected its craft in producing the world's greatest leaders, and its sister Services are proficient at developing technical expertise. In the joint environment, the marriage of these skills defines the joint professional military engineer. Many ENFORCE 2011 participants believed that this blending should become the new and preeminent certification for which all military engineers should strive.

In order for it to work, each Service would have to use its core competencies as the baseline for the certification. The Army would probably rely heavily on its officers receiving PMP certification. This would be instant recognition of the management skills that Army engineers are already known to have. Combined with the Joint Engineer Operations Course and other experiences such as facilities management or contracting, the certification might be sufficient for qualification as a joint professional military engineer. A PE certification would always be a path to that qualification and would be the preferred path for Navy and Air Force engineers. Since the Army does not require all engineer officers to hold engineer degrees, it can't rely solely on the PE certification as an expression of engineer officer quality. It is expressly this diversity of backgrounds that makes Army engineers the generalists needed to coordinate efforts and solve complex problems. Using several paths (such as PE, PMP, or certified contract manager certification) leverages the broad nature of the Regiment and gives all Army engineer officers the ability to contribute to the joint fight.

The Department of Instruction at the U.S. Army Engineer School, in coordination with the U.S. Army Corps of Engineers (USACE) Kansas City District, has already started to make this happen. Department of Instruction personnel attended a PMP examination preparation course hosted by the Kansas City District office. This put Soldiers in a learning environment with USACE civilian employees, building a bridge between the Regiment and USACE. The training was extremely successful and led to Soldiers receiving the PMP certification. This proof of principle was repeated at Fort Leonard Wood, Missouri, with a combination of U.S. Army Engineer School, Department of Instruction, and USACE personnel training together to strengthen the bond between the Regiment and USACE.

Engineers are asked to build, tear down, and fight; this will not change. But the way leaders are educated to meet these demands will change. New educational philosophies and technologies—experiential learning, webinars, social media, social networks—must be paired with tailored curricula to produce the broad, adaptive engineer leaders of the future. Army engineer officers must lead the charge toward increased professional certification to maintain the confidence of the joint force as its finest leaders, planners, and managers. The Regiment and USACE will need each other more than ever to meet the demands of the force. The drive toward certification must ultimately lead to a new joint professional military engineer certification that garners instant recognition as the "total package" engineer for the officer possessing it. This total package engineer officer will be the one expected to plan operations, leverage joint engineer resources, and command diverse formations to support the maneuver commander at any echelon.

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Endnote:

[1]FM 21-105, *Engineer Soldier's Handbook,* 2 June 1943.