Assessing Department of Defense Demand for Veterans During and After Degree Completion

Dr. Alyson Grace Eggleston, The Citadel

Alyson G. Eggleston is an Assistant Professor in the Department of English, Fine Arts, and Communications at The Citadel, The Military College of South Carolina, where she teaches STEM-focused technical writing and communication, writing-intensive courses for international students, and linguistics. She received her PhD from Purdue University in Linguistics, and she has a BA and MA in English with concentrations in TESOL and writing pedagogy from Youngstown State University. Her research and teaching interests are in technical and scientific writing pedagogy and the interaction of language and cognition. She is a member of Sigma Xi and ASEE.

Dr. Robert J. Rabb P.E., The Citadel

Robert Rabb is a professor and the Mechanical Engineering Program Director at The Citadel. He previously taught mechanical engineering at the United States Military Academy at West Point. He received his B.S. in Mechanical Engineering from the United States Military Academy and his M.S.E. and PhD in Mechanical Engineering from the University of Texas at Austin. His research and teaching interests are in mechatronics, regenerative power, and multidisciplinary engineering.

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Federal agencies have expended great efforts to support veteran employment. The Department of Defense (DoD) is no different and is the nation's largest employer of veterans. Even in some geographic areas with numerous opportunities for veterans to fully integrate into the civilian sector, many veterans choose employment with a DoD organization or one of the local contractors supporting DoD organizations. Veterans' desire to gain employment with a DoD or supporting agency seems to be well matched with the DoD organizations' desire to hire veterans. In The Citadel's region, the demand for engineering graduates has grown significantly over the past decade as new industries and their feeder industries continue to grow. At the same time, DoD organizations and their contracted subsidiaries in the area have only marginally grown. However, even with the high demand for engineers in the civilian sector, engineering student veterans still pursue DoD opportunities frequently. In both government and civilian sectors, there is emphasis on producing engineers that are technically proficient and possess professional skills such as leadership, organization, time management, and communication—behavioral characteristics often associated with veterans.

Surveys and individual follow-up qualitative interviews conducted with representatives from selected local DoD organizations suggest that these organizations receive abundant value from veterans. Veterans are noted for their leadership skills and teamwork; for their flexibility and ability to work in a changing environment without undue stress; for their dependability, integrity, and loyalty. Their military experience often fosters growth of these professional skills, making veterans effective and admired among peers in these organizations.

In surveys of student veterans, common themes emerge, such as a desire to work with other veterans, work in a somewhat familiar organization with a hierarchy and lateral subunits like many military organizations, and a personal desire to work on equipment supporting the defense mission but in a different capacity. In addition, many of the DoD organizations offer generous benefits compared to some civilian employers, including opportunities for personal and professional growth, travel, and advancement.

This paper discusses some of the professional skills recognized in veterans, as well as the cultural climate in some of the DoD organizations that attract engineering student veterans. It then provides examples of veterans in different DoD organizations as well as the civilian sector for comparison. This paper will be useful to veterans and employers alike. Veterans should be aware of differences in mentoring between their military service and civilian employment. Likewise, employers of veterans should note the different expectations of this group of employees.

Introduction – Veteran Perceptions

Following the wars in Iraq and Afghanistan, 1.9 million veterans have returned stateside and begun the process of reorientation with civilian life [1]. Excluding cases of trauma and injury, research has identified five perceptions held by veterans that correlate with an unsatisfactory transition to civilian life: 1) feeling like they do not belong; 2) missing the military culture and structured lifestyle; 3) retaining negative views of the civilian lifestyle; 4) feeling left behind compared to civilian career opportunities; 5) having difficulty finding meaning in the civilian world [2]. In a longitudinal study comparing veteran and civilian post-secondary outcomes, 71% of civilians enrolled in a 4-year institution within one year of high school graduation, compared with almost 25% of veterans who enrolled within one year of leaving the military. Veterans' perceptions of being "left behind" by their civilian counterparts are born out in this study, with 8 years needed post-high-school graduation for veterans to achieve parity with civilian counterparts regarding post-secondary enrollments [3].

Research modeling successful veteran readjustment is scant. Most studies focus on PTSD, TBI, and mental health challenges that some veterans experience, and their associated outcomes. Of the studies that focus on post-secondary education outcomes, transitional challenges for student veterans focus on veteran expectations related to culture [4], [5], mentoring [6-8], and professional promotional advancement [9].

Factors Involved in Successful Veteran Transitions

Veterans report civilian culture as a key challenge to successfully transitioning from military to corporate contexts. During their service time, veterans note that commitment to mission and group solidarity are integral to their success. While the military service branches retain unique cultures within each branch, the trust service men and women develop for and with their team is a common feature. This trust also functions as a signal for a high standard of professionalism— because the mission is first, individuals build trust within their teams that tasks will be completed on schedule with no excuses. The cultural values developed by service men and women also include other aspects of professional expectations: timeliness, discipline, accountability, and authenticity. The reason veterans tend to seek out other veterans and conversely may feel discomfort with civilians is largely the same—regardless of race, religion, or political affiliation, veterans largely match each other with an overlapping set of shared values that inform their professional posture to work.

Successful transitions also hinge on effective mentoring. While officers receive significant mentoring as they progress through the ranks of promotion, transitioning to a second career in the civilian sector requires tertiary, external support. So-called 'bridge' consulting services have sprung up since the Vietnam-era, seeking to link veterans with connections in higher education and industry that will best serve their new trajectories. These consulting services help veterans develop communicative and soft skills, while also helping veterans to meaningfully translate their resume content, including responsibilities, trainings, and awards into skills that will be

recognized as valuable to potential employers. Access to these services is varied, and many veterans report the absence of mentoring or guidance regarding next steps as persistent challenge as they transition.

Mentoring and promotional advancement are linked activities within the military, and veterans report being accustomed to a clear path to promotional advancement that is dictated by well-understood metrics and timelines. Industries with an absence of certainty and the presence of differing cultural values within civilian organizations give rise to veterans' negative self-perceptions of maladaptation and isolation. Challenges related to this final factor are more difficult to solve, but surveys of both veterans and industry stakeholders indicate that increased education, coupled with placement in DoD-support industries can do much to reduce veterans' discomfort within the crucial eight-year transitional window.

Survey Results

Veterans' Perceptions
Preliminary data from a survey administered to current student veterans (N = 16) and those with active duty military status (N = 4) corroborates much of the contemporary research on veteran perceptions, as summarized in Figure 1. All student veterans and active duty in this sample were males and between 28 and 38 years old. Survey questions can be found in Appendix 1.

Using a standard five-level Likert scale with response levels indicating "strongly agree" through "strongly disagree," Veteran and Active Duty (VAD) students answered 19 survey items, indicating their level of agreement with each statement. The final two survey items elicited qualitative responses on veterans' perceptions about their strengths and challenges. Only six of the survey items are discussed in this study. Many of the additional survey questions were included to check for response consistency and to detect random answers.

Responses to the survey item about leadership role preparedness are weaker than expected among VAD students. Responding to the statement "My military experience has positioned me to move into a leadership role as I transition to my next career," only 50% of those surveyed strongly agree with this statement, while 33.33% somewhat agree, and 16.67% remain neutral. It is not well understood if this result reflects veterans' modesty and humility, or points to feelings of ambivalence toward civilian organizations as they contemplate a transition to a corporate environment.

VAD students also slightly preferred a military style organization (58%) over a civilian organization (42%). This result was a little closer than anticipated, as informal discussions among student veterans and with faculty tend to emphasize a stronger preference for military-style organizations when considering post-graduation employment.
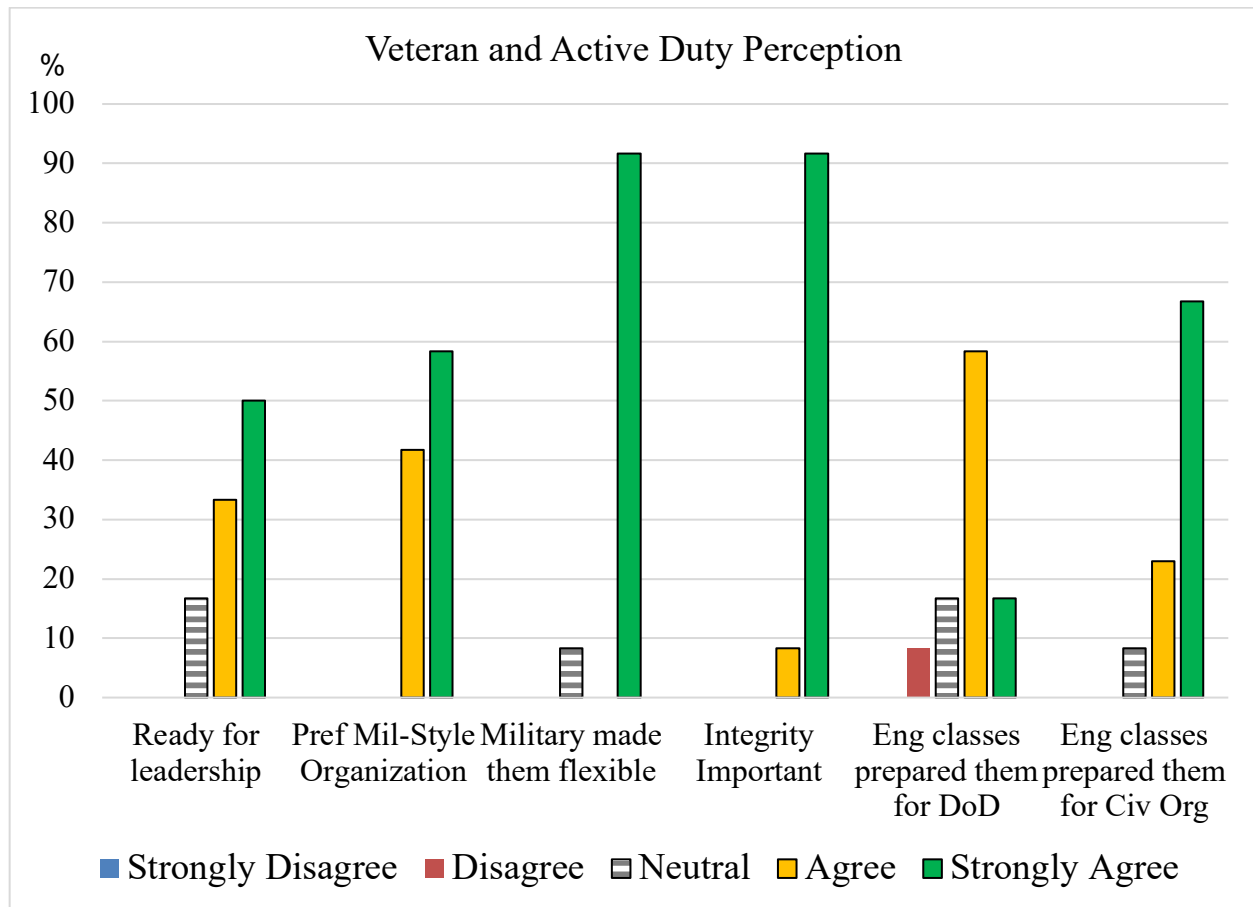
Figure 1: Veteran and Active Duty Self-Perception

VAD students strongly self-identify with the following statement: "My military experience has trained me to be flexible and adapt to changing project demands." 91.67% of veteran and active duty chose "strongly agree," while 8.33% chose "neither agree nor disagree." This is an important perception capture as it signals VAD students' comfort with rapid changes to plans and timelines, a pressure they would have had to work successfully within the military. Civilian counterparts are not always aware of the performance pressure to which veterans would have become accustomed and may inaccurately view employees with veteran backgrounds as rigid and inflexible.

Similarly, VAD students strongly identify with the following statement: "Working with team members who demonstrate integrity is important to me." Again, 91.67% chose "strongly agree" and 8.33% chose "agree" for this item. This aligns with research that identifies shared values as a key contributor to veteran comfort in civilian organizations, post-transition. Veterans are likely to interpret 'integrity' as behavior that is consistent, authentic, and accountable.

In two items designed to measure VAD preferences for industry placement relative to their academic preparedness, VAD students indicated they felt their engineering program more

adequately prepared them to work for a civilian organization than a DoD-mission-affiliated industry.

Responding to the following statement "My engineering coursework at The Citadel has prepared me for success in a DoD-affiliated organization," 16.67% of VAD students strongly agree; 58.33% somewhat agree; 16.67% neither agree nor disagree; and 8.33% somewhat disagree. The majority of students offer tentative agreement for this statement. In contrast, in response to the following statement, "My engineering coursework at The Citadel has prepared me for success in a civilian organization," 66.67% of VAD students strongly agree, 23% somewhat agree, and 8.33% remain neutral. The authors suggest that ongoing research into traditional and VAD student success outcomes in internship contexts at The Citadel may explain this result, with veterans encountering highly specialized work while interning or working within DoD-affiliated organizations. Accustomed to technical training that maps exactly to expected duties in the service, VAD students may perceive post-secondary engineering classes as more general and theoretical, and therefore less applicable to the professional contexts in which they find themselves. One comment from industry during this study indicated that veterans already understand and know what the DoD customer or end user wants due to their own personal experience, allowing veterans to shorten the time it takes to clarify customer requirements. This also points to the idea that veteran job applicants pursuing DoD-related work should expect a highly specialized environment, which contrasts to their industry counterparts, and those job pursuers who choose employment with organizations with little or no DoD interaction. This perception gap may point to an important launch point for future research into VAD student perception management within the engineering program at The Citadel.

Industry Stakeholders' Perceptions of Veterans

Preliminary data from a survey administered to industry stakeholders (N = 15) in the region show that employers are extremely positive about the benefits that veterans bring to their organizations, with some caveats that echo the transitional challenges discussed in previous research, as shown in Figure 2. About half of the employers were in a DoD organization or a subcontractor for one, while the other half of the employers were not a DoD affiliate, but had familiarity with veteran employees. Survey questions can be found in Appendix 2.

Responding to 10 items using a standard, five-level Likert scale, industry stakeholders indicated their agreement with selected statements by chosing a response levels that ranged from "strongly agree" through "strongly disagree." Respondents aligned with statements that framed veterans as "adaptable team players," with 69.23% choosing "strongly agree" and 30.77% choosing "somewhat agree." The same result was found in response to the following statement: "our veteran-status employees are noted for their dependability," with 69.23% strongly agreeing and 30.77% somewhat agreeing. Designed to check for response consistency, the survey contains some additional questions that are not addressed directly in this research.
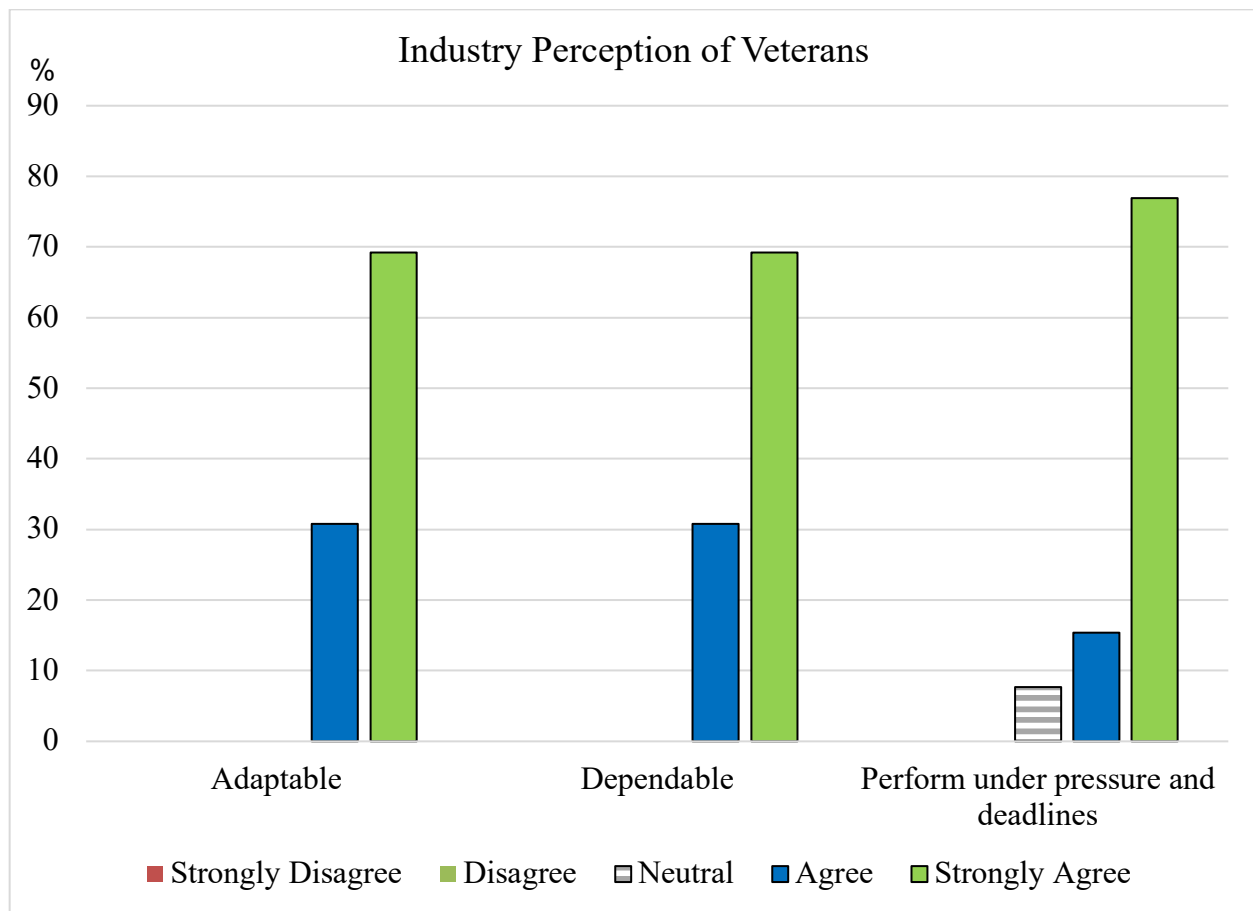
Figure 2: Industry Perceptions of Veteran Employees

Industry respondents shared VAD students' self-perceptions regarding adaptability and flexibility. Responding to the statement "our veteran-status employees work well under pressure and deadlines," 76.92% strongly agreed, 15.38% of those surveyed somewhat agreed, and 7.68% neither agreed nor disagreed.

Additionally, industry stakeholders offered insightful commentary on the observed veteran posture toward tasks, even in a civilian context. Emphasizing the high level of commitment and dedication to tasks, one respondent noted:

1)   "The practical and field experience translates well to our commissioning department because they understand how things work from a "hands on" point of view. Discipline, commitment, "no excuse" attitude bodes well for delivering quality products on time."

Another stakeholder focused on the challenges facing veterans transitioning to the civilian sector, highlighting the need for continuing education and perception management of non-veteran

recruiters. This respondent also indicates a change in image may be necessary for veterans to be truly valued for the benefits they bring to organizations. Often grouped with other diversity-hiring initiatives, civilian recruiters sometimes view veteran hiring as more charity than the strategic boon that it is:

2) "I have worked as a recruiter that hired strictly veterans for manufacturing roles and have also been with two software companies that targeted veterans. I am also a veteran myself. I think the biggest challenge I've seen is convincing hiring managers to hire for soft skills (i.e. leadership, work ethic, etc.) when they're used to hiring for specific experience. Mentorship is also huge in the military. I was very used to my superior officers mentoring me, giving me books to read, always developing me professionally. I've personally had a lot of veterans voice their disappointment because they come to the corporate world with those same expectations. […]"

Discussion

The student veterans surveyed echoed the importance of those shared values often found in a DoD organization, identifying them as a very important factor when deciding whether to pursue post-graduation employment in one of the many regional civilian employers or with a DoD employer. Among some of the lowest rated items on the survey were:

- The importance of employee benefits
- Seeking change from military to civilian style organizations
- Opportunity for travel
- Other opportunities

The average of these questions indicated they were neutral or disagreed with the level of importance for these factors. It is important to note that many of the veterans participate in academic internships or work during the summer with civilian and DoD employers, so they have a better sense of where and what kinds of work they want to pursue after graduation.

For employers, all indicators show a strong positive perception of the value veterans bring to their organizations, with some caveats. A common theme emerged in some of the open-ended responses received from employers, with some noting that veterans may not relate well to their civilian counterparts at first and tend to form insular groups among themselves. It is not well understood if this behavior is persistent or merely a coping mechanism present in the early stages of on-boarding with a new organization.

Conclusion

Given the high density of civilian organizations in the region, a high ratio of veterans chooses to pursue employment and a career in a Department of Defense-affiliated organization. Many of the civilian employers can offer higher pay and competitive benefits, but veterans appear to gravitate

to DoD employment, post-graduation. Many of the regional DoD and civilian organizations benefit from the student veterans earning engineering degrees. For many of the surveyed employers, veteran employees are leaders, directly and indirectly, and make a difference in their organizations. Their ability to adapt, organize, plan, and execute is a model for many. For student veterans, main attractions to DoD employment include the central focus of the work mission, shared integrity of fellow workers they believe are attracted to similar organizations, and the presence of a military-style DoD structure. This research also highlights areas for growth. Veterans should be aware of differences in mentoring between their military service and civilian employment. Likewise, employers of veterans should note the different expectations held by this group of employees. With greater emphasis given to enrichment models of student veteran skills, preferences, and tendencies, research can help hiring managers to look beyond the list of qualifications and focus instead on the professional skills that veterans can bring to their workforce. Finally, this research can aid engineering educators as they seek to provide curricular support for this important demographic, while also helping student veterans adopt new skills.

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Appendix 1 - Veteran and Active Duty Survey Questions

1. After my military career, I am interested in working for companies that serve the Department of Defense mission, or that pursue DoD contracts.
2. After my military career, I am interested in working for a civilian organization that does not have ties to the Department of Defense.
3. After my military career, I am interested in working for a civilian organization that does not have ties to the Department of Defense.
4. My military experience has equipped me with organizational abilities that generally surpass my civilian counterparts.
5. My military experience has trained me to be flexible and adapt to changing project demands.
6. My military experience has equipped me with organizational abilities that generally surpass my civilian counterparts.
7. Working with team members who share the same professional values is important to me.
8. Working with team members who demonstrate integrity is important to me.
9. Working with team members who share the same professional values is important to me.
10. DoD-affiliated companies offer better benefit compensation than their civilian counterparts.
11. DoD-affiliated companies offer better opportunities for professional growth and development than their civilian counterparts
12. DoD-affiliated companies offer better opportunities for professional growth and development than their civilian counterparts
13. DoD-affiliated companies offer better opportunities for professional growth and development than their civilian counterparts
14. DoD-affiliated companies offer better opportunities for professional growth and development than their civilian counterparts
15. If I could choose, I would prefer to work with other veterans.
16. I feel most comfortable working within a clear hierarchy with lateral subunits, similar to my time in the military.
17. After my military career, I would be more comfortable working with a civilian organization than a DoD-affiliated organization.
18. My engineering / STEM coursework at The Citadel has prepared me for success in a DoD-affiliated organization.
19. My engineering / STEM coursework at The Citadel has prepared me for success in a civilian organization.

Appendix 2 - Industry Survey Questions

1. Our veteran-status employee(s) function well in leadership positions.
2. Our veteran-status employee(s) function well as adaptable team-players.
3. Our veteran-status employees are noted for their dependability.
4. Our veteran-status employees work well under pressure and deadlines.
5. Veteran-status employees have better time management skills than their non-veteran counterparts.
6. Veteran-status employees have better initiative and internal motivation than their non-veteran counterparts.
7. Veteran-status employees have better follow-through and project completion times than their non-veteran counterparts.
8. Our organization's culture has benefitted from hiring veterans.
9. In the field below, comment on the benefits and challenges to your organization when hiring veterans.
10. Please comment on any professional or technical skills veteran employees bring to your organization.