

Veteran Students: The Recruitment, Program Selection, and Issues Related to Transition to College Life at The Citadel

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Abstract

The Citadel's Strategic LEAD Plan 2018 identified the need for the expansion of veteran student services and programming for those wanting to further their education at an institution that appreciates and understands their sacrifices and educational needs. Financial aid and scholarships are provided in order to assist service members, veterans, and their dependents. The campus also has a chapter of The Student Veterans Association, which was founded in order to facilitate a supportive environment for veterans transitioning into a student civilian environment. The Citadel's School of Engineering is actively involved in recruiting and fostering military and veteran students and the veterans account for almost 5% of mechanical engineering students. The mechanical engineering program is available to the cadet population during the day as well as to the evening students transferring from community and technical colleges (2+2 programs). The veteran and military students have the freedom to attend either day or evening classes.

Results from previous research suggest that veteran students still struggle in navigating and transition from military to academic life and faculty is continuously striving to make the transition stress-free, assist students in challenges and support them every step towards graduation. This paper explores the military and veteran student recruitment, preparedness, transition to college life, and performance. Surveys and additional students' comments are assessed in order to understand students' perception of benefits of engineering and attending a college and to minimize the effect of transition from military to college.

Keywords

Veterans, recruitment, transition to college

Introduction

As a teaching-focused school, The Citadel's School of Engineering has had a proud record of significant contributions since its inception in 1842. The School of Engineering's six-year strategic plan, LEAD 2018¹, includes objectives in retention and graduation numbers. The leadership team established the following goals (which were a subset from the institution's strategic plan) that established the foundation for creating new initiatives to address the most pressing issues: 1) enhance student retention, 2) expand engineering student enrollment, 3) enhance the non-traditional student experience by transforming the delivery of student services, 4) expand veteran, reservists, and active duty enrollments, 5) expand diversity, and 6) recruit and retain a diverse faculty and staff². Based on that, the recruitment and retention of veteran and active duty students became one of the goals for the new department. This paper studies the

military and veteran student recruitment, preparedness, transition to college life, selection of day or evening program, retention, and performance.

The veteran student population in higher education is expected to grow due to force reduction in our military, expanded benefits of the Post-9/11 GI Bill³ and the Yellow Ribbon Scholarship Program⁴. To support this group of students universities develop and improve the services offered to student veterans, built student veteran centers, and provide counseling and advising services. In doing so, universities establish their standing as “military-friendly”⁵ and often more diversified as, compared to civilian students, veterans are more likely to be older, first-generation college students, disabled, African American, or Latino⁶.

Several researchers have recognized that military veterans may be especially well qualified for degrees in engineering and science^{7,8,9}. Pursuing engineering studies makes sense for military veterans who have had technical responsibilities as part of their service and it may give them an advantage over their non-veteran peers¹⁰. However, veterans without the technical experience may still be attracted to engineering because of financial opportunities and/or job security¹¹. Veteran students acknowledge that specific skills and dispositions they had gained during military years contribute to their academic success. Research shows that they often identify enhanced perseverance, stress and time management, leadership and teamwork skills^{12,13}.

The transition from military to civilian life, possible academic pursuit and subsequent fulfilling career in engineering and related fields may not be always smooth for many veteran students and may negatively affect their retention and persistence in the field¹⁴. The veterans transition from “the highly structured, group oriented, and masculine culture of the military to the less structured, individualistic, and more gender equal culture of higher education”¹⁵. On top of that, the veteran students may face the following challenges: age differences, limited financial resources, studying while working full time, family responsibilities, and scarce veteran resources on campus¹⁶. Veteran students, compared to traditional students, may lack the support system provided by parents and other family members when navigating unfamiliar territory applying for both the school and their education benefits. This can result in “a higher level of anxiety that may be compounded if the veteran has Post-Traumatic Stress Disorder or neuropsychological affects from Traumatic Brain Injury”¹⁷. Engineering programs, which are extensively filled with math and science courses, may present additional challenges for veteran students who have been out of school for a long period of time¹². Some attend college or work before enlisting in the military while others enlist and serve prior to beginning their engineering studies¹⁰. An additional challenge is that most post-9/11 student veterans are first generation college students, coming from households without a college-educated family member¹⁸.

Veteran students are a tremendous asset to the universities and student body. They are older, mature, focused, goal-oriented, and with more life experiences and respect for authority than traditional students. They have stronger work ethic and discipline which they attribute to years of military service and the additional life experiences¹⁴. As students, the veterans often experience academic success. After experiencing high levels of stress throughout their military career, handling stress related to schoolwork seems easier¹². Reports show that in post-secondary education veteran students on average earn a 3.35 GPA compared to national average of 2.94 (data for 2017¹⁹) and have better retention and graduation rates²⁰.

Veteran and Military Students at The Citadel

The Citadel has attracted veteran students for a number of years, and subsequently expanded the college's services by opening the Office of Military and Veterans Services and a new Veterans Center in 2014. These initiatives are part of The Citadel's Strategic LEAD Plan 2018. The Office of Military and Veterans Services is dedicated to assisting service members, veterans, and their dependents in managing their Veteran educational benefits. The office also assists in interpreting, explaining, and administering VA regulations. The Citadel is a member of the Yellow Ribbon Scholarship program and is ranked by U.S. News and World Report (2018) as the No. 1 Public College for Veterans in the South.

The Veterans Center, which is open to all campus day and evening veterans, is designed to foster social interaction and community-building with the use of trending technology. The campus also has a chapter of The Student Veterans Association, which was created in order to facilitate a supportive environment for veterans transitioning into a student civilian environment. The goal is to connect student veterans through social functions, intramural sports, academic support, and mentor leadership. The association was founded by veteran students, for veteran students, and is run by veteran students to assist fellow veteran students².

The veteran students are allowed to join one of the following programs at The Citadel: Non-Cadet Day Veterans, Returning Cadet Veterans or Graduate and Undergraduate Evening Veterans. There is also a separate program for Active Duty Day Students. Veteran applicants must meet the academic standards or provide evidence of previous satisfactory college work. Qualified veteran students applying as transfer students must meet the requirements of designated programs. Students qualified for junior or senior years can enter the undergraduate evening program, which is a "2+2" transfer program. The undergraduate evening program also allows completion of the first two years of study at a regionally accredited college or university, then transfer to The Citadel for the final two years to complete the degree. Day veteran students take courses together with uniformed cadets while evening students are educated in a civilian environment. All veteran students have full access to all of the student and academic resources that The Citadel offers.

Veteran Student and Active Duty Performance

Veteran and active duty students perform quite well compared to their civilian counterparts. Although they may have had a break in their schooling, they take their academics seriously and assist each other. Figure 1 shows institutional research data collected by registrar for six semesters (to include summer semesters) of comparison for civilian students, veteran students, and active duty at The Citadel in all undergraduate engineering majors. It is clear that veteran students have a GPA 0.20 higher than the civilian students, while the active duty are nearly 0.85 higher, averaged over the six semesters.

A comparison of the mechanical engineering majors shows a similar trend in Figure 2. There were no active duty mechanical engineering students during the reported period. Here, the veteran students' average is 0.32 points higher over six semesters. Similar data exists for other engineering programs (civil and electrical) at The Citadel.

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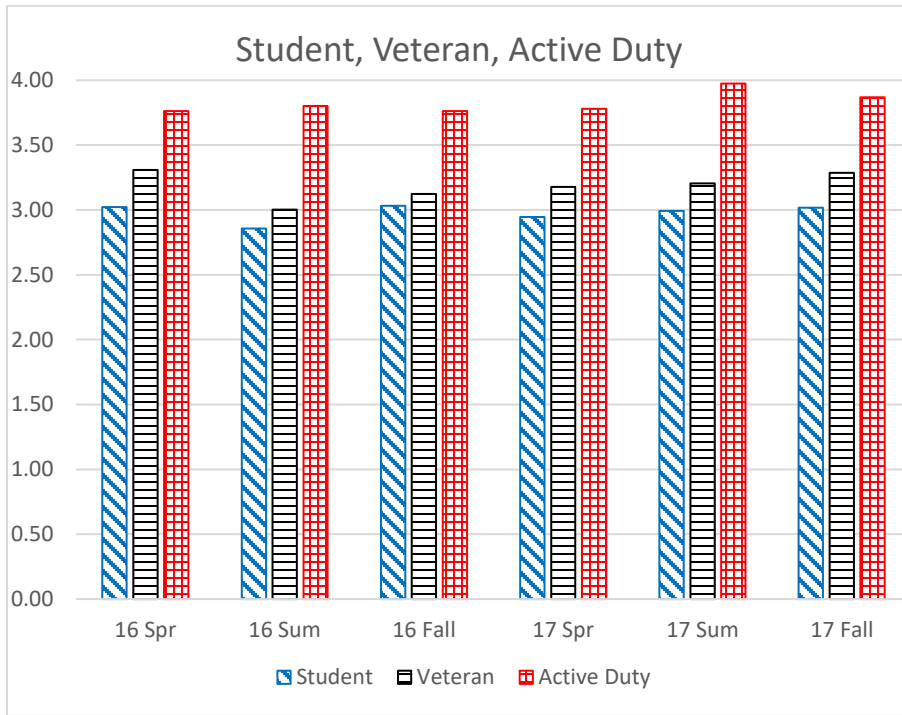


Figure 1. Overall GPA Comparison for Six Semesters for all Engineering Majors at The Citadel

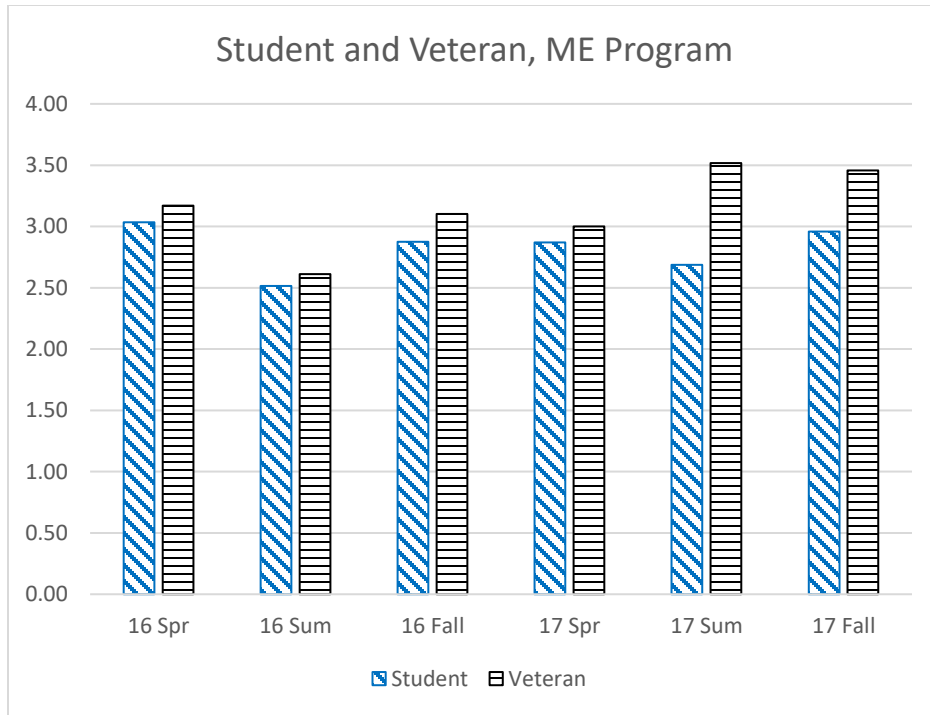


Figure 2. Mechanical engineering GPA Comparison for Six Semesters

Survey and Findings

The Citadel's School of Engineering is actively involved in recruiting and fostering military and veteran students and the veterans account for almost 5% of mechanical engineering students. There is a strong connection between The Citadel mechanical engineering faculty, staff and veteran students based on mutual understanding and respect. The authors of this paper, a veteran student and two faculty members, of which one is a retired military, believe that a better understanding of veteran students' background, the history of transition from civilian to military to civilian lives and the entire variety of issues that veteran students face, would greatly improve future students' recruitment and retention.

Fifteen mechanical engineering veteran students, from a freshman to seniors, were asked to fill out a survey and share thoughts about their military and college experience. The purpose of the survey was to better understand the recruitment process and veterans' preparedness and selection of a specific program. Day and evening veteran students are exposed to different environments and programs of study and they were asked to evaluate their academic experiences. The survey was divided into sections based on students' program of study and consisted of a total of 35 questions, majority of which were Yes/No questions with room left for justification of the selection and additional comments.

The fifteen students, which constitute 4.7% of the total mechanical engineering student population at The Citadel, were all male and represented the following Branches: Navy (33.3%), Marines (26.7%), Air Force (20%), Army (13.3%) and Coast Guard (6.7%).

Section 1. Introductory Questions

The results of introductory questions are listed below:

- 12 (80%) are day students
- 3 (20%) consider themselves both day and evening students
- 13 (86.7%) started as day students
- 1 (6.7%) started as evening student
- 1 (6.7%) started as both day and evening student
- 9 (60%) knew about The Citadel Veteran Program before they started
- 4 (26.7%) think The Citadel Veteran Program is advertised enough
- 7 (46.7%) think they would take the same path
- 10 (66.7%) transferred from another college
- 9 (60%) used an average of 23.1 transfer credits hours obtained before service
- 15 (100%) are happy with the decision about choosing The Citadel
- 7 (46.7%) considered a different college (examples were: University of South Carolina, Clemson, Embrey-Riddle, UNC Chapel Hill)

The veteran students were asked why they selected The Citadel. Selected answers are listed below:

- ❖ “Seemed like an easier transition. Other veterans, smaller classes, great veteran support.”
- ❖ “The Citadel is known throughout the South, also the military mindset is something I sought and needed after transitioning from active duty.”

The veteran students were asked if they were satisfied with the decision about selecting and attending The Citadel. Selected reasons are listed below:

- ❖ “The faculty in every department I have encountered is as dedicated, if not more, to the students as I had experienced in the military. They are also incredibly understanding of my non-traditional student status and my commitment to work and home.”
- ❖ “The transition back into the civilian world was a hundred times easier with likeminded individuals. The staff is supportive and I don’t feel like an outcast.”

The veteran students were asked if they knew about The Citadel Veteran Program before they started their studies and if they would take the same educational path. Their answers included:

- ❖ “No. I would have loved to start at The Citadel, instead of starting with the 2+2 program offered at [technical college].”
- ❖ “I got out of the military and worked for six years. If I knew about the program earlier, I would not have worked as long.”

Section 2. Questions for Day Students

The next section of the survey was designated for day students, attending freshman through senior years. The results are listed below:

- 6 (42.9%) started as a freshman
- 9 (64.3%) took MECH 101 Introduction to Mechanical Engineering
- 5 (out of 9, 55.6%) liked MECH 101 Introduction to Mechanical Engineering
- 8 (57.1%) took MECH 102 Engineering Computer Applications
- 8 (57.1%) started as a sophomore
- 11 (78.6%) took CIVL 202 Statics
- 9 (64.3%) took CIVL 203 Dynamics
- 10 (71.4%) took CIVL 304 Mechanics of Materials lecture and CIVL 307 M. of M. lab

Introduction to Mechanical Engineering course is designed as an introductory course for traditional freshmen. It introduces students to different branches and specializations in engineering but also enforces math knowledge and good study habits. The veteran students were asked to share their comments and suggestion regarding this course. The notes included:

- ❖ “It was a good basis for what’s to come.”
- ❖ “The class was far behind where I was in my studies so this made it more of a busy work class than anything.”

Statics, Dynamics and Mechanics of Materials courses are sophomore level courses offered by Department of Civil and Environmental Engineering. The mechanical engineering veteran students were asked if they felt that the civil engineering courses prepared them well for future mechanical engineering courses. Their answers included:

- ❖ “I most certainly do. Statics was especially beneficial, in that it has set the foundation for everything we have done after.”
- ❖ “Yes. They were interesting and challenging. I ended up having to retake Mech 304. Like many college courses, there is too much material and not enough time to understand what is being taught.”

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The veteran students were asked if any of the courses have a specific impact on their perception of engineering profession. The answers included:

- ❖ “I have not had an engineering course yet that has not changed or shaped my opinion of engineering.”
- ❖ “While crunching through hand calculations is fun, it was nice to see computers used to create and solve engineering problems.”

Section 3. Questions for Evening Students

The next section of the survey was designated for evening students, attending only junior and senior years at The Citadel. Only one veteran student started in the evening program and took CIVL 304/307 Mechanics of Materials lecture and lab over the opening summer. MECH 325 (Computer Applications: SolidWorks and MatLab) is also offered during that semester.

The students were asked if they made any changes to their study programs.

- 5 (33.3 %) switched between day and evening program
- 4 (26.7%) changed majors

The reasons for switching between day and evening program included:

- ❖ “I switched between day and evening, initially, due to childcare constraints.”
- ❖ “Full time job hours changed.”

The reasons for changing majors included:

- ❖ “I started as a Physics major. I switched to ME and kept the Physics minor.”
- ❖ “I started as an Electrical Engineer and stopped attending after obtaining full time employment. Resumed as a Mechanical Engineer.”

Section 4. Concluding Questions

The closing sections of the survey contained questions about student’s satisfaction, professional aspirations and balancing academic and family lives. The results included:

- 15 (100%) enjoy studying mechanical engineering at The Citadel
- 10 (66.7%) have a post-graduation job in mind
- 15 (100%) think that the ME program will prepare them for an engineering position
- 14 (93.3%) think that graduating from The Citadel will make finding job easy
- 13 (86.7%) think that graduating with a ME degree will make finding job easy
- 10 (66.7%) think that their math and science knowledge was appropriate for an engineering program considering a time gap in education
- 8 (53.3%) have enough GI Bill funding to pay for all semesters they need to graduate
- 4 (26.7%) would prefer to have a different life, military and academic experience
- 11 (73.3%) are married or live with a significant other
- 6 (40%) have children
- 10 (66.7%) are a first-generation college student
- 8 (53.3%) feel stressed and have problems with sleep
- 6 (40%) suffer from anxiety, depression, panic attacks or PTSD

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The veteran students were asked if they enjoyed studying mechanical engineering at The Citadel.

- ❖ “I love to learn how things work and how to apply different resources.”
- ❖ “Class material is interesting and the instructors are phenomenal.”

The students were asked to share their post-graduation aspirations. The selection included:

- ❖ “Nuclear Power, I want to work my way to Senior Reactor Operator.”
- ❖ “SpaceX. I want to work with a company that builds equipment for space exploration.”

The veteran students were asked if they felt prepared for an engineering position.

- ❖ “Some labs and classes are lacking equipment but overall I feel I will be prepared once completed.”
- ❖ “From what I’ve seen, yes. From what I’ve experienced working with interns and graduates from the ME course, some are not prepared.”

The veteran students were asked if they thought that graduating from The Citadel would make finding job easy. They said:

- ❖ “I do not believe graduating from The Citadel will give me any advantage over graduating from another school. I feel I will be well prepared.”
- ❖ “If not for my abilities then the name of the school should help.”

The veteran students were asked if they thought that graduating with a mechanical engineering degree would make finding job easy. The feedback was:

- ❖ “I hope so, by statistics other engineering disciplines have better odds.”
- ❖ “Basing a job off of a degree doesn’t guarantee a job.”

The veteran students were asked if they felt that their math and science knowledge was appropriate for an engineering program considering a time gap in education. Though many gave positive response they also shared how they dealt with the problem:

- ❖ “I had not been in school for twelve years and my highest math from school was Algebra I. I still have not taken a trigonometry class and had to learn as I went through each engineering course. The ability to study and retain knowledge on a subject you have little to no experience, takes time.”
- ❖ “For the higher level classes, look into having assistance besides the teacher, if possible. The cadets have each other and previous classmates to have a better understanding of the material. As a veteran, no such support system exists.”

The veteran students are non-traditional students with lots of life, military and academic experience. They were asked if they would do anything differently. The reactions included:

- ❖ “I would have finished my degree before joining the military or having a family. I can only dedicate about 50% of the time and effort that I want to school because of other commitments.”
- ❖ “I would have skipped [technical college] and just enrolled full time at The Citadel, instead of the path I took. [However,] the path I took allowed me to be in a position to switch to Mechanical Engineering.”

Finally, the veteran students were asked if there was anything else they wanted to share about their military and college experience. Their replies included:

- ❖ “A recommendation for the veteran program would be to advertise that veterans can jump straight into the day program. I and many other veterans were confused that we had to do the 2+2 program with [technical college]. The Citadel website was confusing about the admission process. The second, be able to provide more summer classes, many veterans have to catch up on being a “student.” Instead we transition slower and have to play catch up in the sophomore through senior years.”
- ❖ “I am happy to work with all of the young, future leaders [cadets] in the ME program. I enjoy helping them and teaching them things I have learned in the military, as well as civilian industry.”
- ❖ “I would do it the same way every time. I don’t think if I went to college first, I would have been mature enough to be successful.”

Conclusion and Future Work

Based on the survey filled out by fifteen mechanical engineering veteran students, all of them are pleased about the selection of The Citadel and their major. Most of them started the academics with day students while only one started as a 2+2 transfer evening student. Not all of them knew about The Citadel Veteran Program and about all the options offered by The Citadel. Many transferred from another college with more than 23 transfer credit hours on average. Most of the day veteran students took core engineering courses (Statics, Dynamics and Mechanics of Materials) in the Department of Civil and Environmental Engineering and considered them as an enjoyable educational experience. A few students switched between day and evening programs and even changed majors. In general, the veteran students like the day program better, based on better availability of courses and times, but they also appreciate the flexibility to take classes at different times of day.

Most of the students are confident that selecting mechanical engineering major will prepare them well for a job and help them secure a job they want. The majority (93.3%) believe that graduating from The Citadel should make finding job easy. However, some of them (33.3%) consider that their math and science knowledge was not enough for an engineering program, and that often they had to catch up on their own and that help was not easily available. In addition, many (46.7%) do not have enough GI Bill funding to pay for all semesters.

Most (73.3%) of the mechanical engineering veteran students are married or live with a significant other, 40% have children, 66.7% are a first-generation college student, and 53.3% feel stressed and have problems with sleep. Some (40%) suffer from anxiety, depression, panic attacks or PTSD. Many hope that they were better informed about their education options and that they started at The Citadel from the very beginning instead of attending a community or technical college.

The Citadel still has a lot to do to improve the educational experience of veteran students. Since the veteran and active duty students perform much better compared to their civilian counterparts, they should be treated as the driving force for high academic and military standards. Therefore, all academic programs should be better advertised and options and choices

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made more transparent to allow for the best utilization of funding and resources. Help should be available for veteran students to catch up with required courses that were taken years earlier or not taken at all. Mental support should be available for those who deal with stress, sleep problems, anxiety, depression, panic attacks or PTSD.

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