Reaching and Including Veteran Students in the Technical Communication Classroom

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Abstract

Rates of veteran enrollment in colleges and universities are approaching levels not seen since the fifties, due in large part to the Post-9/11 G.I. Bill, an educational assistance plan for eligible veterans. Connecting veteran students with the support skills they need is crucial to their continuing success, in the classroom and beyond. Studies suggest that veteran students perform to their academic best when given clear objectives and product exemplars, with a focus on best-practice—a result that runs contrary to received wisdom in composition pedagogy research. This paper argues that a Technical Writing and Communication (TWC) classroom organized around project-based learning is a best fit for veteran engineering student success. When pedagogy is guided by longitudinal research on veteran engineering TWC experience, results suggest that a deficit model of veteran engineering students’ abilities is not appropriate. Instead, veteran engineering students are uniquely suited to occupying leadership roles in the classroom and modeling TWC best practices.

This paper presents a brief overview of technical writing as a discipline, its institution-specific implementation at The Citadel, and current veteran academic success markers. By recommending the implementation of a survey tool, this paper also seeks to identify the range of veteran TWC experiences that can be leveraged in the classroom, outlining the diversity of veteran experience, training, and confidence regarding TWC-driven tasks. Finally, by eliciting veteran students’ previous technical writing training in a military context, the recommended survey apparatus can be used as a meaningful tool for teaching TWC educators how to provide opportunities for veteran students to demonstrate in-classroom leadership and contribute experiential insight for the collective benefit of veteran students and their traditional student counterparts.

Introduction

At its height of participation in December 1947, the Servicemen’s Readjustment Act of 1944, Public Law 346, provided for 1,245,000 veteran college enrollments [1]. As of 2016, veteran education beneficiaries has again risen to over 1,000,000, with the Post-9/11 G.I. Bill providing assistance for 79% of veteran enrollments [2]. As military veterans enter colleges and universities at increased rates, we find similar cyclical patterns of engagement with college writing classes as were found in the period following World War II—namely, TWC instructors tasked with teaching technical writing praxis to engineers-in-training, a growing portion of whom were then, as now, veterans [3-4].

After passage of the Servicemen’s Readjustment Act of 1944, the demographics of college enrollment changed, with veterans of varied social backgrounds, and increasing numbers of women and minorities participating in the college-level education. Changing demographics also co-occurred with changes in expectations regarding higher education and its aims. More than a historical footnote, this changing student demographic pivoted the then-fledgling field of technical writing, providing students with instructors whose ties with the military and industry
informed their teaching of industry-specific situational writing [3]. This was in sharp contrast to traditional writing courses offered in English, which focused on literature, rhetoric, and in the development of writerly voices in their non-veteran students [3].

As growth in technical writing offerings continued through the 20th century, technical writing instructors with military or industrial ties began to retire, taking with them the focus on what we now call ‘authentic documents’ and exposure to situational writing tasks. In the absence military-trained technical writing instructors, technical writing courses were often taught by adjuncts and instructors in English and Engineering departments. Growing enrollments in technical writing courses were directly related with engineering enrollments—resulting in two important events for TWC: a more clearly defined discipline and disciplinary in-fighting with regard to programmatic goals [3]. As new technical writing-related organizations, journals, and academic programs appeared in the seventies, so too did disagreements about goals and trajectory of the field, with the older, retiring cohort championing praxis, e.g., [5], and the new cohort valuing writing as a process for critical reflection, social responsibility, and audience-awareness.

Because of the historical schism in technical writing pedagogy, veterans today will often find themselves immersed in writing curricula that “engage students in communal writing practices, focused on self-exploration and personal meaning-making” [5]. This pedagogical approach emphasizes the need for students to discover their own writing processes, a strategy that may be successful for traditional students but which does not align with veterans’ past training experiences. Researchers suggest that current writing pedagogy does not effectively leverage veterans’ existing professional preparation and expectations, which includes iterative training, persistence until successful task completion, and relative inflexibility in instruction and standards [4], [6].

Veterans in the technical writing classroom

Curiously, research supports the notion that the success of veteran writers is predicated on the acknowledgement of their prior writing training, and their supported presence in the writing classroom, in turn, serves as a viable success model for traditional students. In large-scale initiatives, partially driven by deficit models of veterans’ academic contributions, researchers have shown strong correlations in veteran retention, success, and perceived self-efficacy when experiential learning opportunities are provided in the writing classroom [7-8]. In her thesis investigating factors that influence veteran success in the writing classroom, Hadlock calls on writing faculty to accommodate “new literacies,” or, ways of understanding, and make clear to veterans and their classroom peers the relevance of military writing for all kinds of writing, even conventional academic prose [9].

Instructors can and should address military service in a way that can be comfortable and generative through knowledge of military writing experiences. Hadlock notes that despite their stated discomfort in a writing classroom, veteran students often have previous training in writing concepts, but they can also fail to connect previous training with the kind of assignments found in college writing classes [9]. Veteran students need to know how the elements taught in a composition class are expansions of ideas to which they have already had exposure. TWC instructors with a military background may be best positioned help veteran students connect
military literacies with academic writing. Connecting experience with course content represents an opportunity for instructors to facilitate the movement from military literacies, through an academic discourse, and eventually to one that a college graduate may employ in future endeavors.

While Hadlock’s findings go beyond the disciplinary boundaries of technical writing, the strategies employed by veteran writers that she identifies in her research are well-suited to technical writing environments. Technical writing assignment objectives are clear, with established approaches to organizational structure, audience awareness, document design, and content—and where, as in veteran students’ engineering coursework, there are competing constraints. She describes a few of the constraints as reducing military jargon and subverting them to fit “the temporary and contingent conditions” of the current assignment, as well as veteran student preconceived notions of “good writing.”

**Military writing standards**

The military has long recognized the need for effective communications. The US Army Engineer School in 1954 published the “Guide to the Preparation of Military Reports of a Technical Nature [10].” The opening chapter delivers a universal message from a 1925 textbook, *The Composition of Technical Papers*:

> An Engineer who is inarticulate is quite as useless as one who is professionally incompetent…. The inability of an engineer to communicate his ideas clearly, concisely, and accurately will not only handicap him in many ways but may even affect detrimentally the work of others with whom he is associated. His ability … to … write with coherence and force is a professional and social accomplishment the value of which no thinking engineer will deny [11].

Today, Army Regulation 25-50, *Preparing and Managing Correspondence* defines the Department of the Army standards as being understandable in a single rapid reading and generally free of errors in grammar, mechanics, and usage. These standards should apply to every writing assignment prepared. Effective writing generally transmits a clear, concise message that is easily understood, well-organized and to the point. Most audiences should understand what message one is trying to convey without difficulty of interpretation [12]. Each service has a similar regulation or manual for its members.

Many of the veteran students have served in technical positions, and all have had some exposure to the technical communications requirements of their service branch. This has kept some of them more current in their communication skills after completion of high school and before they enrolled in college. A recent survey of veteran students majoring in engineering revealed some of the technical communications exposure they had prior to enrolling at The Citadel. Some of the military requirements of veteran students are listed below:

a. **Proposals for additional unit equipment** - Small unit leaders can formally begin a procurement process through the Letter of Request, or "LOR". The LOR is a document generated by an end user and submitted through the logistics channels. It can be either a
request for the purchase of defense items or services, or it can request rough-estimate Price and Availability (P&A) data to help the government decide whether or not to pursue a purchase further. LOR’s are sometimes known as requests for proposal (RFPs).

b. Personal biography for promotion boards or higher positions - Soldiers, Airmen, Sailors, and Marines seeking advancement must prepare a short military resume, often known as a biography. A biography should inform the board members of past experience and responsibilities that lead up to the current situation. The biography should convince the board members of the potential to perform at the next level. Familiar templates for the biography include: name, branch, rank, deployment status, current place of deployment, age, date of birth and hometown. It then continues with chronological listing of the individual’s military history, military awards, honors, and decorations, service ribbons and other qualifications. It then outlines military schools and specialty training. Finally, it may include family background and any civilian schooling.

c. Operations Orders - The five paragraph order or five paragraph field order is a style of organizing information about a military activity for a unit in the field. It is an element of United States Army, United States Marine Corps and United States Navy Seabees of small unit tactics, and similar order styles are used by military groups around the world. Since Marines and soldiers work in small teams, it is important that each member know and understand the order in its entirety so as to be aware of which parts of the order apply directly to them and the subordinate unit to which they belong without being exceedingly aware of minute details provided for general situational awareness [13].

d. Information Brief - The information brief is designed to simply provide information to an audience. An information brief deals only with facts. The desired end state of this type of brief is listener comprehension. No conclusion or decision needs to be drawn from the brief. Times when an information brief may be utilized include: Passing information of high priority which requires the immediate attention of proper authority, when passing complex information requiring detailed explanation or an After Action Report for a military operation [14].

e. Technical Manuals (TM) - TMs are used to repair and maintain equipment. These manuals contains instructions for the installation, operation, maintenance, and support of weapon systems, weapon system components, and support equipment. They typically include operational and maintenance instructions, parts list, and related technical information or procedures exclusive of administrative procedures [15].

f. Construction documents - Many veterans were deployed overseas and are familiar with a variety of documents dealing with life support facilities and property. Two are listed here:

- Unified Facilities Criteria (UFC) - UFC documents provide planning, design, construction, sustainment, restoration, and modernization criteria, and apply to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with DoD Directive 4270.5 (Military Construction) [16].
• **Lease agreements** - Lease agreements for foreign property use contain provisions for property use in foreign countries that were not foreign government owned and covered in the Status of Forces Agreement (SOFA). These lease agreements allowed US forces limited use of property with additional provisions (shorter term, additional compensation, capital improvements, etc.).

g. **Instructional material** - Several veterans were instructors for specific, technical occupations in their branches. They include instructors at the Navy Nuclear Power School and generator repair course.

A quick survey of veteran students at The Citadel revealed other technical materials they had prepared or worked with during their military service: finance proposals; documentation of malfunction or incident reports; End of Mission Reports; VIP movements and Personal Security Detail (PSD) instructions; and routine official correspondence.

**Institutional context**

Engineering students and veterans in the newly-implemented technical writing and communication course at The Citadel experience a technical writing approach grounded in project-based learning, featuring experiential learning opportunities, i.e. learning-by-doing. Students create authentic documents relevant to their discipline and growth as a technical professional. Experiential learning opportunities are supported by classroom content as well as a robust summer internship program for engineering students who choose to participate [17]. This experiential approach acknowledges and develops existing technical writing and communicative abilities inherent in veteran experience and training, detailed in the previous section. During recent job fairs, recruiters were obviously impressed by engineering veteran students, and invited them for interviews, internships, and employment.

The technical writing and communication course at The Citadel is designed to produce familiarity and the ability to execute a series of professional documents, using exemplars, peer review, and successive revisions as strategies for production. Students produce professional documents, demonstrating familiarity with the rhetorical objectives, ethics, and document conventions. Students are exposed to a variety of technical document types and conventions, e.g., email; memoranda; RFPs; proposals; progress reports; and procedural writing.

Students also gain familiarity with brief reports like white papers, producing their own state-of-the-art technical brief on a topic relevant to their chosen engineering sub-discipline, written and organized according to disciplinary convention. To prepare students to organize and execute a technical document, TWC instructors provide access and training in relevant software applications. These applications include: reference managers; third-party compiled LaTeX, cloud-based collaborative writing tools, and applications designed to improve syntax and clarity.

Students also practice delivering verbal briefs. Veteran engineering students often have experience delivering presentations and verbal briefs, and are well-positioned to model presentation delivery, provide peer student feedback, and help develop a sense of audience awareness in their non-veteran classmates.
Exposure to technical manuals is also key. Veteran engineering students often are quite knowledgeable in using technical manuals, and can be a great classroom support for evaluating the efficacy of selected technical manuals. The resulting project includes a brief report, and veterans often model prior knowledge regarding the motivations for TM design decisions for the benefit of non-veteran students.

A comparison of veteran and non-veteran performance in the TWC course showed that the veterans outperformed non-veterans in the same course. This result is unsurprising; however, the quantitative difference was larger than expected. A comparison of Citadel veteran engineering grades in TWC classes across four semesters shows an average GPA of 3.8 on a 4.0 scale. Non-veteran students averaged only 3.0 during this time. These veteran students were typically average veteran students at The Citadel with a 3.33 GPA while the veteran student population as a whole averaged 3.33 across all disciplines. Veteran enrollments in the TWC course are expected to increase, requiring the continuing observation of this cohort’s technical writing academic performance. This comparison is a coarse but effective indicator that veteran engineering students bring a wealth of prior, applicable knowledge to the TWC classroom. A veteran presence in the TWC classroom can be a valuable resource for modeling exercises, especially when this cohort is provided with leadership opportunities.

Overall student evaluations of the TWC course for Fall 2017 were positive, with a few complaints regarding the amount of reading and projects required for the course. In response to this feedback, the textbook was changed for subsequent semesters. A common theme in students’ evaluative commentary was utility. One student commented “it helped me learn how to write important documents that I will use for the rest of my life;” and another noted: “How helpful this class was for professional development and things to know and think about outside of the classroom setting. This was the biggest take-away from the class.” Students were also aware that they were writing in a new way in the TWC course, with one student commenting: “A good change from a regular English class. This class challenged me to think more like an engineer in my approach to writing.”

Discussion and future work

Qualitative, self-efficacy surveys of TWC-enrolled veteran students, coupled with continued study of academic performance are key to understanding how to best retain and capitalize on the previous skills with this population. As veteran enrollments increase, additional attention must be paid to categorizing useful strategies for incorporating and modeling veteran technical writing experience for the benefit of their traditional student peers, of whom up to 38% at The Citadel will also contract with a branch of the U.S. Armed Forces, following graduation. Collecting this data to inform continued TWC curricular growth can also serve to train other TWC instructors in best practices for meeting the needs of this population.
References


