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Cultivating Awareness, Allyship, and Advocacy for Veterans and Service Members in Engineering Education: A Modular, Assets-based Training Framework

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Abstract

As a growing U.S. college student population with strong potential to bring intersectional diversity, technical skills, and leadership experience to engineering education, veterans and service members deserve particular attention. Student Veterans and Service Members (SVSM) include those who have served but no longer serve (i.e., military veterans), and those who concurrently serve part-time while attending college. One key reason that higher education policies and practices require added scrutiny relates to how SVSM uniquely experience more than one transitioning identity as they enter college: military service member to civilian veteran, professional or technical expert to student learner, a member of the "military family" culture to a "lone wolf" embedded within an academic culture that is likely (a) uniformed and (b) implicitly as well as explicitly adverse to who SVSM were/are as military service members. These experiences create asymmetric obstacles—those unaligned with or unaffected by common college support structures—for SVSM. To provide equitable support for SVSM in engineering education, emerging research suggests it is crucial to educate and engage the broader instructional and support community in providing awareness, allyship, and advocacy for SVSM in engineering education.

This full paper describes the development and outcomes of a modular, assets-based training framework that aims to fill critical awareness gaps within the support community and unmet needs of SVSM in engineering. Derived from a need-based origin, military awareness trainings are often maintained at an institutional level and (unintentionally) framed using deficit thinking. Particularly harmful to students from non-dominant groups, deficit thinking places "blame" for difficulty and failure on missing or aberrant student attributes, characteristics, or traits stemming from students' personal identities, cultures, and communities–rather than acknowledging how institutional structures may favor typical or "traditional" students. Resultantly, higher education military awareness trainings often lack the broad contextual awareness, peer inclusion, and mentorship aspects needed to support SVSM in light of their varied identities and experiences.

Our evidence and community-informed approach called engaged scholarship, aligned within the critical research paradigm, aspires to restory deficit perspectives by increasing awareness of multi-layered SVSM transition experiences and highlighting unique strengths SVSM bring to engineering education. Findings from our ongoing research with undergraduate SVSM in engineering, as well as insights from the empirical literature and collaboration with institutional agents (i.e., faculty, staff, advisors, and administrators), inform our developmental efforts. The training framework not only addresses asymmetric barriers experienced by SVSM in engineering, but also brings visibility to the strengths and motivations SVSMs enact. The training includes financial, social, academic, and identity-related topics derived from the eight categories of wellness to promote holistic SVSM support. Espousing an equity-based support model of awareness, allyship, advocacy, and accompliceship, the training framework strives to acknowledge existing levels of SVSM awareness among IA and student peers, while showcasing opportunities to move further along this continuum. The framework's modularized form enables

IAs across different roles and institutions, including two- and four-year institutions, to tailor training for varied audiences. Outcomes from framework implementation with authentic audiences and future work will be presented and discussed.

Introduction

An often-overlooked student group within U.S. systems of higher education, veterans and service members comprise a unique student population pursuing undergraduate degrees in engineering. In this work, student veterans and service members (SVSM) are a considered to be a heterogeneous group comprising prior enlisted military veterans (i.e., those who have served in the enlisted ranks of the U.S. military but no longer serve) and those who concurrently serve as enlisted service members such as in the Armed Forces Reserves or National Guard while attending college [1]. Compared to their civilian counterparts, SVSM have a strong potential to bring intersectional diversity [2], along with matured technical skills and teamwork and leadership experience.

While institutional support has been shown to positively influence student success and experience [3], the efficacy of targeted support for SVSM in college has fluctuated due to a lack of standardized best practices within and across institutions [4]. Improving programs for SVSM in the transition to higher education has positive outcomes for SVSM and aid in building a community of connection among peers [5]. As such, the authors sought to answer the following questions: [RQ1] How can Military and Veteran student awareness trainings be implemented among engineering faculty, staff, and administrators across various institution types? and [RQ2] How can existing literature about Veteran and Service Member support in higher education be utilized to refine the implementation of awareness trainings in engineering?

Resultantly, the focus of this work centers on furthering the development of institutional agents (i.e., faculty, staff, and administrators) in becoming informed and empathetic instructors, mentors and advisors to SVSM in engineering. This paper describes the processes used to develop and implement an assets-based training designed to foster recognition and understanding of SVSM experiences and strengths among institutional agents (IA) in higher education, generally, and engineering, specifically.

Background

Social integration of SVSM has been a recurrent issue in higher education since the beginning of our nation. Historically, the responsibility for integrating SVSM into the social fabric of college has largely fallen on administrators of civilian institutions. This reality has resulted in varying and inconsistent experiences for SVSM in higher education over time, with and little to no targeted support provided for them at the college and lower institutional levels [6].

In response, “Green Zone” (GZ) style trainings were more recently developed and put in place to help support SVSM integration into college [7]. Initiated by Virginia Commonwealth University (VCU) in 2012, implementation of GZ training variations spread to over 20 other U.S. based institutions [8]. The idea for the GZ programs was derived from similar “Safe Zone” programs intended to provide places of refuge for LGBTQIA+ students. Safe Zone and GZ programs share

common motives, including increasing awareness, challenging current perceptions and biases held by participants, and developing best practices to consider while working with students in each respective group [9].

Similarities between the two programs, however, has not proved sufficient to ensure accurate and empathetic representation of SVSM to institutional agents, as many GZ style trainings remain rooted in deficit-based thinking and lack the nuance necessary to enable holistic and specialized support [10], [11]. "Deficit-based" thinking frames the student as lacking the traits, characteristics, or abilities of their "typical" or "ideal" academic counterpart [13]. Focusing on a sense of blame towards SVSM enables those receiving training to reinforce preconceived notions and encourages stereotypes regarding SVSM to perpetuate. By perceiving student veterans as "lacking," IAs can ignore the potential within the population and typecast them into a role beneath those they perceive as successful. However, when the focus is shifted towards an anti-deficit mindset, IAs are encouraged to recognize how traditional support structures are constructed, and how those structures may inherently favor students from an "ideal" background.

Importantly, providing support for SVSM should not be considered as the exclusive domain of institutional administration. In addition to more obvious interactions with faculty, college students also frequently interact with institutional staff members across various departments and programs prior and during college enrollment. Effective GZ style training is needed for faculty and staff, too, to enable institutions to provide comprehensive support outside of administrative spaces designated as "safe zones" for a particular group. Many students specifically identify staff members at institutions as supportive and personable [12], while student veterans specifically identify administrators and other non-faculty staff members as in need of particular training on SVSM [13]. Empowering all institutional agents in accurate knowledge and empathy begins with restructuring a deficit-based mindset into a contemporary context of SVSM experience.

Today, unlike institutional Safe Zone programs that have proliferated and thrived, many GZ programs have become stagnant and are currently in decline [14]. For example, the Aurora Foundation, an organization that helped fund VCU's GZ program, ceased operations in 2020, and no longer provides grant funding for institutions seeking to increase awareness for SVSM [15]. Without support from outside organizations and stakeholders, the responsibility for implementing such a training relies on individuals and offices rather than departments, colleges, and other organizations within institutions that have greater ability to initiate measurable change. An additional critique of Green Zone trainings focuses on the affiliations with one military branch over another, with the "green" potentially failing to represent those from an intersectional service background.

Therefore, the need to provide anti-deficit, assets-based training to institutional agents on behalf of SVSM is ever present. As such, ongoing research and development to design and implement programs that provide comprehensive awareness training and empathy building among student-facing personnel and assess these programs to build an integrated collection of evidence-based best practices for supporting student veterans intuitionally and within diverse disciplines is critically needed. By developing this framework and increasing the visibility of awareness-style trainings, we hope that institutions who may not have available the resources to self-develop a training can utilize our work and continue to provide support for SVSM.

Project Team Positionality

Development of the awareness training framework outlined in this work initiated from an ongoing research project related to improving understandings and support for SVSM experience in engineering education. The project centers on restorying the perceptions of SVSM deficit in engineering; development of an awareness training for institutional agents comprises one aspect of the project plan. The broader goals of the project team focus on increasing inclusion of and opportunity for SVSM within engineering and STEM disciplines. The team adopts an anti-deficit, asset-based mindset by focusing research on the unique strengths of SVSM in engineering to improve inclusion and awareness within and beyond classroom settings.

The first author brings a strong commitment to equity and inclusion to the project. Having extensive experience working in and developing programs for university-level equity and inclusion spaces, the first author supports the project team in adopting best practices for communicating across multi-level groups, introducing student perspectives into trainings, and integrating specific components within the framework to effectively support meaningful and recurrent conversations and interactions with IAs. In addition to work in equity and inclusion spaces, the first author supplies experience working in several programs catered to first year students at a public land-grant university. Through the lens of first year student challenges, additional insights and benefits grant the project further roots in modern contexts.

Theoretical Framing

Beginning with a strong equity-minded and SVSM-focused theoretical base, we categorized requirements for a modern SVSM awareness training that builds from the strengths of GZ programs. Established theories of anti-deficit thinking, Veteran Critical Theory (VCT) [16], and Community Cultural Wealth's (CCW) [17] support an intersectional understanding of holistic support. Tenets of VCT shape the intention for presenting to an audience revitalized as institutional as agents of change. Put simply, given opportunity to recognize SVSM strengths and the disparity in SVSM opportunity in higher engineering education, IAs are equipped to initiate productive change at a systemic level.

Common among equity literature, consistent reference to anti-deficit framing ensures consistent thematic messaging throughout. Applied to SVSM, anti-deficit framing focuses on the unique strengths and characteristics held by an individual that enable success throughout higher education. Some reference anti-deficit framing as a categorization of theoretical frameworks devoted towards critical thinking within both engineering education and the broader research community [18]. As such, anti-deficit framing creates an interwoven foundation of equity-based frameworks that inform the training's pedagogy.

Through a focus on the capital and asset potential in SVSM, IAs can challenge their current perceptions and restory that of a "deficit" or "lacking" student veteran into a student with unrecognized potential. The unique capital offered by SVSM can also provide strengths catered to STEM disciplines. Resilient capital may be nurtured by military service, aiding in yield and increasing the chances of SVSM persisting to graduation [19], metrics desirable by

administrators of institutional oversight. Distinctive and singular assets held by an individual make up the specific capitals of their overall Community Cultural Wealth (CCW) [17].

In some ways, SVSM may have lost capital during their service. It is important to isolate this loss of capital from the idea that it creates a deficit. Instead, this transition can be described as "role exiting," as SVSM transition from their role as active-duty military personnel to their role as a veteran, then from veteran to student [20]. Through examining the loss of capital through the lens of a role exit, the story shifts from creating a deficit to the evolution of identity, allowing SVSM to build new sources of capital founded on their military experiences while catered to higher education.

In addition, many principles from the GZ program literature shed light on areas for training improvement. Dillard & Yu [8] outline the best practices established by the GZ program, focusing on "training, rather than merely education." Basic education details the process of acquiring and retaining knowledge, while training entails a further stance of action through the application of acquired knowledge. Once trained, institutional agents become active participants in their role as brokers of institutional support, contributing to the provision of "top down" support.

Conceptual Framing

Model of Engaged Community Support. As shown in Figure 1, we propose that engagement with and support of marginalized communities comprises a spectrum divided into 4 states of being: Awareness, Allyship, Advocacy, and Accompliceship. Awareness begins when and individual can identify the unique challenges facing SVSM when compared to their traditional counterparts and strategies that can aid in countering said challenges. Following awareness is allyship; a state where the same individual not only recognizes and identifies the challenges facing SVSM, but has a more complete understanding of the solutions, resources, and ongoing progress needed to close the disparity between educational accessibility for engineering and STEM students.

Figure 1. Spectrum of Engaged Community Support

Traditionally, allyship goes beyond simple awareness of a marginalized population by providing an identified safe space. Allyship training may also provide some measure of training completion status as an achievement or certification. Advocacy consists of allyship with an active component, focused on speaking up and actively working to create change and help not only SVSM, but all members of campus community collectively. The most developed staged identified in this work is accompliceship. Developed from research conducted on racial inequities, accompliceship takes place when the individual "assumes a greater amount of risk to take an active, substantive role to challenge and overthrow the systems, institutions, and norms that lead to inequality" [21].

The concepts of an accomplice have been developed to challenge that of simply being an ally, critiquing the idea that an ally feels as if there is no substantial work they are able to contribute,

and as such tokenizes the population they wish to aid and becomes complacent in the system that benefits them without contributing to change that restructures traditional norms [22]. As such, critical understandings fundamentally view allies as those who aid a population in distress, creating a hierarchy and establishing deficit in the population set up to receive aid. Establishing this type of ally must be avoided. Instead, IAs should be encouraged to recognize allyship as a trail marker, not the destination. An ideal ally should recognize the work that is yet to be done, along with the systems in place that inherently and disproportionally target underrepresented minorities. Essentially, allyship is best defined as the state of discovery, a place to identify oneself on the road to becoming more active as an advocate and an accomplice.

Once knowledge has been recognized and established, allies can only be categorized by those within the group they seek to be an ally for [23], otherwise the individual risks developing the tokenizing savior mentality and souring their ability to progress [22]. If successful in this endeavor, an ally internally recognizes the fluidity of the spectrum of engagement, and that there is no end goal or final step on some theoretical staircase. Acknowledging the need to progress, an ally becomes an advocate when their actions focus on aiding other IAs in developing along their own path towards moving to or beyond simple awareness, working either with or for the groups they represent [24]. Effective advocacy does not fail to include the group they seek to represent and must continue their own collaboration and development as an engaged community member.

Within the scope of this framework, accompliceship manifests itself by evaluating potential risks that can modify and overthrow systems within an institutional structure. To paraphrase from Jones, accompliceship diverges from advocacy when the individual "confronts their own status and privilege to determine what risks they can take," [21] therefore working in solidarity with, not on behalf of marginalized groups. A successful result of accompliceship in higher education would modify the systems in a way that closes the disparity in educational opportunity for various populations and increases a level of top-down support.

Effective and true accompliceship actively combats tokenization through a constant and reaffirmed requirement to work with and not for any given population [22]. If assuming some level of risk with the desire to create systemic change, the level of support offered by accompliceship can only be achieved with constant and reliable collaboration with SVSM. Like the earlier stages, accompliceship is also not a destination nor a point of rest, instead it recognizes all the trail markers passed and the ones yet to come, with a burning desire to aid others in achieving success along the trail.

Unintended consequences of promoting accompliceship may result in individuals taking action that contradicts the best interests of or is out of tune with SVSM. If properly stressed, the concept behind the spectrum discourages an individual working as a vigilante accomplice through acting without the appropriate and required collaboration and rationale. Obviously, this entirety of this potential scope of work and involvement will not be completed through one workshop, but the intention behind this framework is to train IAs to fully engage with their community and hopefully trend institutions towards being better equipped to support SVSM.

This conceptual model was developed collaboratively amongst the team of researchers and relied on prior work to construct methods that would allow for IAs at various institutions to apply the

content within their role. By categorizing the training as a framework, it can focus on the intention, while staying flexible enough from the host university to apply to other institutions. Once a slide deck was prepared, the development of a script began as a resource to familiarize potential presenters with the training. The accompanying script is not intended for an exact reproduction, instead those interested in delivering the content can utilize it as a starting point, modifying content to cater to their audience but maintaining the message and principles within.

Awareness Training Development

Development of our training program began through careful review of existing materials provided by a Veteran Resource Office (VRO) at our institution. Consisting of a one-time, live session subsequently recorded and uploaded to the Utah State University YouTube account, existing training materials were found to comprehensively cover the experiences of active military deployment duty and only briefly covered the experiences of a post- or mid-transition student veteran. Initial notes from the team noticed an underlying theme of awareness and knowledge, with a focus on education about military experience rather than on training for the future success of SVSM in college. As such, the first notable change we made was moving the focus of the training towards equipping IAs to actively operate within their role in support of SVSM.

Additional categories were identified as areas for improvement and became benchmarks to be included throughout development. We found that one underutilized area is an IAs capacity to operate as an *institutional broker* through their role as a student facing individual representing the overarching organization. Any IA can operate as an institutional broker when they connect a student to a resource, mentor, opportunity, or service that may have limited or obscure access [25]. Many of these agents my act as an unintentional broker, and their success is reduced without a robust knowledge of the resources available to broker. To address various levels of institutional knowledge, the need for well-equipped brokers can be met through increasing awareness levels regarding resources facing students at the institution and community at large.

Recognizing the need for a universal training that can be adapted to work at various levels and locations within a large university setting, a *modular framework* was identified as being as an ideal medium to deliver a training across all locations. By utilizing a modular nature, the framework focuses on the principles required to provide support, rather than in depth conversations about the context of any given university. While examples are utilized from Blinded University, the intention behind these examples are to connect participants with how the message within applies to their institution. Careful consideration was taken during the development of both content and activities to ensure that the intent was not lost whether conducted with a department of 10 or a college of 200.

Once delivered at organizations of any size, some members of a campus community may feel as if a training of this nature doesn't apply to their role. However, when interacting with IAs students may choose not to disclose aspects of the personal identity characteristics. One student noted that moving through the bureaucracy of a large, state university created additional stressors, and once the participant connected with the correct student facing resource, they felt further alienated by the staff member [13]. While not every faculty and staff member will be able

to provide highly specialized support catered for the contextual and individual needs of each member of the student body, a broader perspective of student experience can help ease the potential alienation of underrepresented students.

Robust support of SVSM from Institutional Agents provide more than just resources and an increased sense of belonging, Working in tandem, brokering resources, a sense of belonging, and quality support from faculty, staff, and administrators increases student success and retention [26], [27], both metrics that institutional stakeholders prioritize across higher education. Returns extend beyond SVSM, as the principles, frameworks, and literature utilized within this work can inform IAs in their interactions with additional groups through their role within the campus and community.

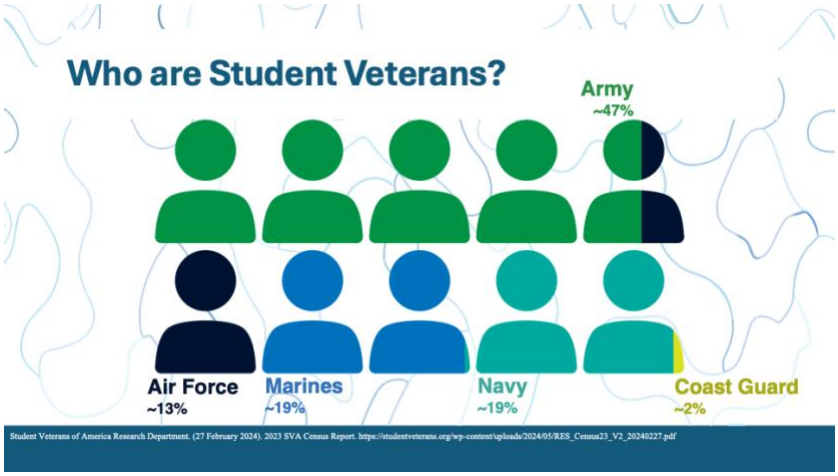
Methodology

The inclusive nature of our training development processes build from our focus on design-based research [28] and collaborating with researchers and practitioners to design and develop an effective and informed training product. Utilizing current and past available data allows for a broader scope to be covered within the content. Principles from existing trainings are not irrelevant solely based on their age or depth. In contrast, modern principles may not apply to each student, allowing for greater flexibility on applicable course content.

Framework Structure. Many aspects of the existing presentation became the foundation of new framework, including 1) a focus on providing background information about military culture and service, 2) an emphasis on the interactions between military and civilian audiences, 3) establishment of a context for working with SVSM in higher education, and 4) an emphasis of available medical and STEM education resources for SVSM. Then, as a team, we formed updated categories that became the structure of the training itself: Background, transition, resources, and a call to action.

Beginning with a general *overview section*, the purpose behind the training along with setting desired intentions with the audience, along with a pre-survey to gauge initial participant understanding sets a tone and creates a sense of direction. This section can also be utilized to introduce the speaker(s), rationale for why the training is being presented to the given audience, and positionality of those presenting, although time is also reserved for the speaker(s) to introduce positionality as an activity via the *positionality section*.

Figure 2: SVSM Branches of Service



The *background section* introduces the audience to the modern contexts of student veterans and service members. Seeking to answer the question: "Who are Student Veterans and Service Members?", first by using recent data from the Student Veterans of America Census for overall and individual insights as shown in the figure above [2]. Data derived from the Department of Defense also helps illustrate and contrast likely experiences among individual SVSM. While unique, common themes among contrasting deployment types are presented. Stressing the duality between individuality and commonality among the larger subset, audience members are urged to consider the singular needs of individual SVSM.

After contexts through have been established through the background section, the *awareness section* connects the audience to the lived and perceived experiences of military service itself. A short vignette is utilized to connect the audience with the stressors of military service and how that experience overlays to civilian and student identity transitions. By focusing on the transition, we can illustrate the role exits from active duty for SVSM and encourage the audience to challenge their current perspectives of military service and focus their attention on the broader, more relevant steps involved while a SVSM transitions to higher education. Transitionary periods are neither linear nor consistent, and similarly congruent transitions may not apply to all students. While transitioning from an active military identity to veteran identity, civilian identity, and to a student identity, stressors may overlap or stand out at certain times as individual needs.

While the awareness section focuses on the experiences and stressors directly connected to military service, the *why? section* specifically focuses on the student aspect of the Student Veteran identity. Through analyzing the experiences and stressors directly and indirectly connected to military service, the audience can focus on this population within an educational space. Time is allocated to focus on the unique stressors that may exist for an SVSM that may not be present for a "fresh out of high school" first time undergraduate. Each stressor is supported through a vignette of lived experience by an SVSM, establishing a personal connection for recognizing not just the point of concern, but how that experience may negatively affect student success.

To ensure that the audience receives a proper training, rather than mere education and knowledge, the *positionality section* seeks to connect participants to SVSM on an individualized

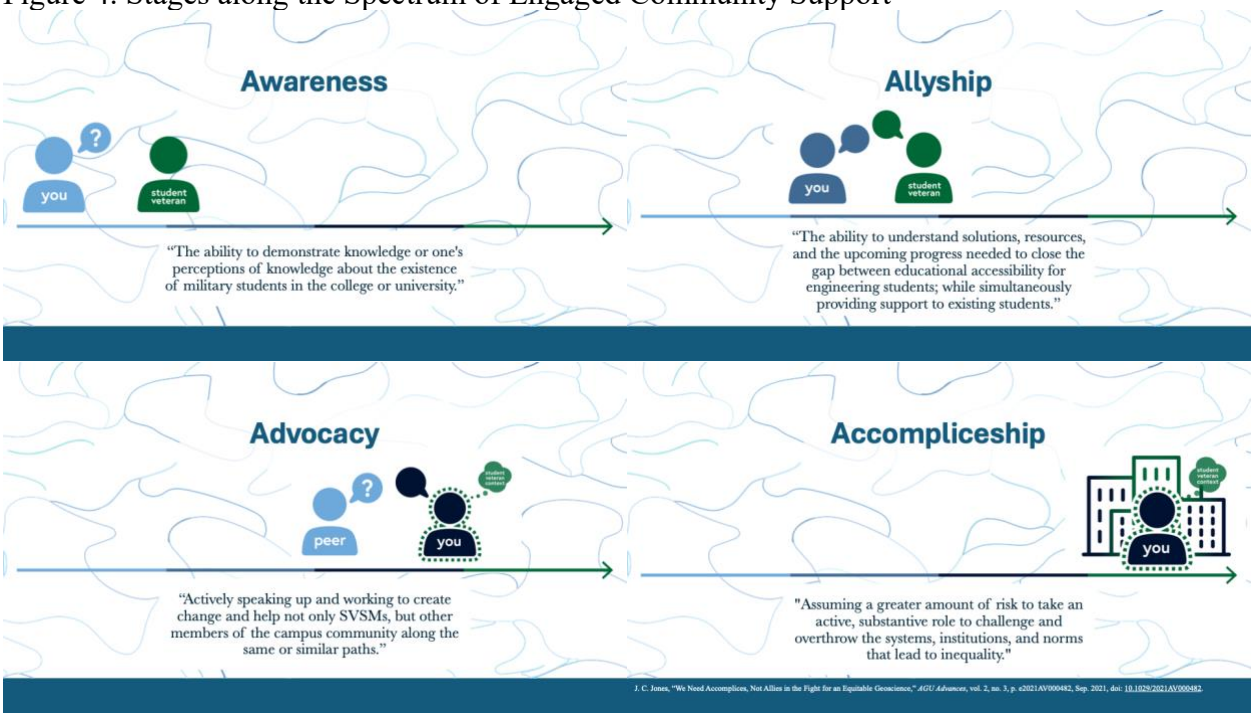
level. First, the speaker(s) share why they support military students, connections they have and how that shapes their role as an institutional agent and community member. Even without a direct connection (i.e. personal service, friend or family member served, etc.), the audience is invited to reflect and share connections they may have. Recognizing indirect connections provide rationale for the audience at large, calling on their service to our country, a general commitment to student support, or another aspect of the contexts provided surrounding SVSM to provide a connection to this population.

Figure 3. Support in 8 Dimensions of Wellness

To ensure a modular and cross compatible training, a brief *resources section* is put forward to invite the audience to examine the resources available within their institution, college, or department that can empower and increase success for students (Figure 3). Resources are broken into eight wellness categories following the Dimension of Wellness [29] consisting of physical, intellectual, emotional, social, spiritual, vocational, financial, and environmental. Through a brief activity, members of the audience are tasked to identify a resource at least 4 categories that are available to students at their institution, and a brief summation of what that resource provides.

Members are then asked to share what they concluded with peers in the audience. A case study applying the activity is then shared, with resources pulled from Utah State University in each of the eight dimensions. Through this activity, we aim to introduce members of the audience to potentially novel services as well as encourage them to self-educate to become a better equipped resource broker. Participants are also invited to recognize existing support structures designed to support SVSM within their institution. The Veterans Resource Office at Utah State University is used as an example of specialized support for these students. Participants are encouraged to utilize and broker to these resources but not overly depend on them, as a sense of complacency and overall feeling they are "doing enough" should be avoided. While they as an individual will not be able to broker students towards every resource offered by the institution or community, an overall understanding of how their role as an institutional broker aids in their ability to provide student support.

Figure 4. Stages along the Spectrum of Engaged Community Support



Progressing from the foundational contexts of SVSM discussed to this point, the training pivots from information provided to a challenge among participants. The spectrum of engaged community support encourages the audience to assess their current level and ability to provide support to SVSM. Simple and active participation throughout the training provides sufficient knowledge for the individual to self-realize their own stage of awareness and preparedness for action (Figure 4). Further intentional action can then be initiated within the campus community, or community at large, to progress beyond the initial awareness step represented by participating in training.

Progression along this spectrum is largely self-identified, as there is no clear tool to depict the efficacy of an ally or an advocate, and student success metrics do not provide enough constants to reliably measure. We can, however, measure the self-reported information by participants, and conclude the session with a post-survey to both contrast against results from the pre-survey and gather qualitative feedback from participants.

Research into Practice. Development of the awareness training framework relied on integrating aspects of research, both from the literature and from ongoing work by the research team, to create the training product described herein. This process, loosely defined as Research into Practice, aggregates emergent findings from ongoing research and uses dominant themes to identify potential strategies for mitigating forthcoming negative outcomes. For example, research recognized a lack of institutional support for SVSM within engineering disciplines [6], strategies alleviate this lack were analyzed and initiated the development of this work as one instance of practice originated from research.

Encapsulating the findings from research, best practices, and origin of this work contributes to the ever-present need for a framework rather than a training. As such, the deliverable itself is presented as a training, and can be effectively delivered without modification, and is most beneficial when presented by a student -facing institutional agent that has progressed beyond the initial step (i.e., awareness) of the spectrum of community engagement. This model of community engagement builds off peer support and takes place when the advocate or accomplice has the desire to aid their peers in developing their own path towards effectively engaging with their community. When presented by an someone active in community engagement, the framework should be modified where needed to suit the awareness level, operational capacity, or specific needs of the intended audience for optimal effect.

Observations

Ongoing progression of the framework has accelerated during the initial testing phase. The first sessions were held amongst the team, gathering feedback and implementing changes based on peer review. This continued as a manifestation of design-based research, utilizing practices learned from testing and newly discovered research and resources to supplement the content [30]. One such example was the addition of accompliceship to the community engagement spectrum, initially concluding with advocacy. Through team discovery, accompliceship manifested as a natural progression along the spectrum, further challenging the audience with a destination for scholarship while recognizing the potential for continued growth.

The process of presenting, workshopping, and revising created a feedback loop within the team, where connections between versions could be studied and an improved solution created. The process of iterative design also aided in the concurrent development of the script. Initially an outline for loose referral during the presentation, the script expanded to a comprehensive monologue. Paralleling best practices for public speaking, the presenter should utilize the script as talking points rather than reading word for word. An effective workshop would be held by an engaged scholar with reasonable knowledge to present naturally while including all relevant and necessary information to maintain a standard of proficiency.

Once a draft had been sufficiently refined, a mock training was delivered in collaboration with the host institutions Veterans Resource Office (VRO). In attendance a group of civilian students, student Veterans and Service Members, Veteran, and Non-Veteran Staff provided feedback through the lens of their respective background and role. The staff present had been trained using the foundational Green Zone training and their feedback inspired a newfound sense of direction for how development of the framework would proceed.

Elements such as the spectrum of engaged community support and activity around resources proved grounding for the message delivered while aspects such as the activity on current perceptions held by the audience received criticism and required reflection reframe the objectives behind the activity in a more productive manner. This session initiated a new cycle of revision and progress within the team as well. With a rediscovered sense of direction consisting of a two-part training, the first session consisting most of the content in the newly developed framework to better inform and educate IAs, and a follow up session with more interactive components that hopefully reiterate principles and aid in the audience becoming allies or advocates.

Growth within IAs will largely be self-determined and realized, with a pre- and post- survey taken to compare how supportive and aware the audience perceive themselves regarding supporting SVSM. Utilizing a 5-point Likert scale, participants are asked to rate their self-identification with the following statements:

1. I understand the unique challenges facing SVSM pursuing higher education,
2. I understand effective strategies for supporting SVSM pursuing higher education,
3. I understand how I can contextually support SVSM within my role at this institution,
4. I am knowledgeable about campus and community support resources available for aiding SVSM successfully through higher education, and
5. I would participate in follow-up professional development trainings related to supporting SVSM in higher education.

If a participant selects that at least one of the statements "does not describe them" or "describes them slightly well," they are asked a free response question enquiring on how the training could better reinforce the selected principles. Comparing data received through surveys, along with additional opportunities for qualitative feedback ensure each delivered session will contribute to a cyclical revision process.

A larger pilot session was held among educators and graduate students within the College of Engineering at Utah State University. Generally, participants rated themselves at least one scale higher on each question after attending the workshop. Further presentations will contribute to this data to derive specific strengths and shortcomings within the training structure.

Ongoing benefits of Design Based Research result in the use of personal experience within the training itself. Callouts and examples to lived scenarios from SVSM who have "made it through" the system allows IAs to reflect further upon how their role directly connects with student support. Continuing principles also allow for continual growth and progress, as experiences from students evolved over time and novel testimonials provide further context to deliverables.

Future Work

We anticipate devoted work to continue this project as the academic landscape continues to evolve. Initial adjustments will be catered to institutional adoption. Our hope is that student support agents within departments, colleges, and the institution will add the workshop into existing professional development efforts for faculty, staff, and administrators. These efforts will contribute to ongoing revision as presenters provide feedback, and organizations voice specific concerns and needs they would like addressed through the content.

Additionally, the development behind this framework is set to be presented at several peer events throughout the course of 2025. First, a poster detailing the project and it's underlying frameworks was accepted and presented at the 2025 session of *CoNECD (Collaborative Network for Engineering and Computing Diversity)* and a short presentation discussing the project has been selected as a part of an undergraduate event entitled *Research on Capitol Hill (ROCH);* a

partnership between Utah State University and the University of Utah where undergraduate researchers are selected to present a poster to legislators at the Utah State Capitol Building.

At the 2025 ASEE Annual Conference & Exhibition, this work will be presented as a workshop session, with the training itself being given as a portion of the session. The workshop will allow for peer review and feedback, along with a large population practice set to discover insights on the format, structure, and flow of the session. Exposure to peer institutions through this conference will hopefully aid adoption across the region and greater nation, escalating the benefits received from feedback and critiques.

Conclusions

There is no “one size fits all” approach to supporting students at institutions of any size. As such, this work will be ongoing and further refined to meet the needs of each institution, college, department, or organization it is presented to. This framework is not designed to be an all-encompassing and comprehensive course, but instead in initiator of conversation and progress towards awareness of and engagement with SVSM within engineering and STEM contexts. The overall hope of this work is to provide a context for effectively informing institutional agents on strategies that will instruct and encourage a desire to become a more engaged community member.

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