Funding Changes from the Department of Veterans Affairs: Measuring the Impact on Undergraduate Flight Student Career and Academic Goals

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Abstract

Financial support for the education of veterans and their dependents has been a part of higher education since after the Second World War. This support is also essential to assist veterans in their transition from military to civilian careers. Periodically, funding for educational financial support from the VA comes under scrutiny from the public, Congress, and special interest groups. Recent criticism of excessive VA payments for veterans undertaking flight training at public institutions of higher education has resulted in multiple legislative proposals to limit (cap) or eliminate flight training funding. This article focuses on changes to potential student outcomes if either of these changes is implemented. Forty students currently receiving veteran benefits and enrolled in flight or flight-related degree programs at a four-year public institution were surveyed. Thirty-two percent of respondents would change to a non-flying major or leave college if funding was capped at the proposed level of \$20,235. By comparison, 67 percent of respondents would change to a different major or drop out of school if funding for flight training was eliminated. The results of this survey have broad implications for the aviation industry. Public institutions offering flight training may be forced to scale back or close their programs. Furthermore, reducing financial support for flight training costs may cause future veterans to avoid undertaking flight training altogether. In the long term, this may have an adverse impact on the already challenged domestic pilot supply. Avenues for further investigation are proposed. Keywords: pilot supply, flight training, Veteran's Affairs, educational funding, educational outcomes, completion rates.

Financial support for education has been a cornerstone of the benefits package offered to military veterans that have served and separated from the armed forces in the United States. Since the introduction of the Servicemen's Readjustment Act of 1944 (also referred to commonly as "the GI Bill"), enrollment for veteran students in higher education has risen dramatically, with nearly 1.1 million veterans receiving educational support as of 2013 (U.S. Department of Veterans Affairs [VA]: Veterans Benefits Administration, 2014). For decades, a substantial number of veterans have elected to use their educational benefits to pursue flight training with the aim of securing employment in the aviation industry. In particular, the 2011 version of the Post-9/11 GI Bill resulted in a significant increase in benefits paid to veterans for flight training (Pending Health and Benefits Legislation, 2015b). However, possible exploitation of these benefits by flight training providers has drawn public attention. Consequently, legislation has been proposed to amend the VA benefit program to reduce or eliminate payment for flight training costs. If enacted, this legislation could have profound negative effects on the ability of veterans to pursue careers in aviation, as well as to reduce the supply of professional pilots to the aviation industry.

The availability of the GI Bill to service members has changed the landscape of college accessibility for veterans; however, the expanding population of veterans entering into higher education has presented a number of unique challenges impeding veteran student success. These include acclimating to "civilian life", associating with non-veteran fellow students, managing visible injuries, and invisible injuries such as, but not

limited to, post-traumatic stress disorder (PTSD). These key issues create significant barriers to veteran student learning as they transition from military life to higher education. The VA provides several assistance programs for students enrolling in post-secondary education to mitigate these issues, including educational financial support. This support varies depending on factors such as time of service, duration of service, and intended area of continuing education. VA educational assistance provides the necessary financial support, facilitating educational achievement for post-service veterans and their dependents.

Background

The VA is one of the fastest-growing elements of the federal budget (Huber, 2015). The agency's budget in 2014 was \$152.7 billion. Of this, \$86.1 billion was allocated for mandatory benefits, including disability benefits compensation and education benefits. For FY 2016, the agency's budget request increased to \$168.8 billion. Altogether, an estimated 1 million veterans received education benefits in 2014 worth more than \$12 billion at some 12,149 schools (Huber, 2015).

Veteran Participation in Flight Training

The use of veteran benefits for flight training is not new. In the post-Vietnam era, many veterans with accrued benefits pursued Private Pilot certificates for recreational or other purposes, with many having no intention of pursuing a professional career in aviation. The U.S. General Accounting Office (1979) reported that from 1972 to 1978, an average of 35,000 veterans enrolled in flight training annually, with an average cost of over \$51 million per year. However, only 16 percent of veterans who had received flight training benefits reported full-time employment directly related to that training, falling below Congress' objective that at least 50 percent of veterans secure employment in their selected occupational category (U.S. General Accounting Office, 1979). Consequently, funding for flight training of veterans was eliminated by Congress and was not reinstated until 1990. Bedell (1995) notes the reinstatement of flight training benefits included a requirement that veterans obtain a Private Pilot certificate at their expense before becoming eligible for funding. Ostensibly, this would reduce the pool of applicants for flight training benefits to those seeking advanced training for employment purposes. By 1993, 56 percent of veterans who had received the reinstated flight training benefits were employed in aviation-related jobs (Bedell, 1995).

In the post-9/11 era, flight training has remained an attractive benefit for veterans, although the numbers of veterans enrolled in flight training are only a fraction of those seen in the post-Vietnam era. In FY 2013, 1,713 veterans received benefits while enrolled in flight training programs. This increased slightly to 1,884 veterans in FY 2014 (Huber, 2015).

Current VA Funding for Flight Training

Payment for flight training is available to veterans under a variety of programs, including the Montgomery GI Bill, Post-9/11 GI Bill, Reserve Educational Assistance Program, and others (Huber, 2015; U.S. Department of Veterans Affairs, 2015). Each program has various eligibility requirements and funding levels. This discussion focuses on benefits provided under the Post-9/11 GI Bill, as the legislative proposals described below would amend the benefits of this particular program.

The Post-9/11 GI Bill provides up to 36 months of educational benefits, generally within 15 years of a veteran's separation from active duty. Veterans may use their Post-9/11 GI Bill educational benefits for flight training if they are enrolled in a degree program at an accredited college or university (institution of higher learning, or IHL), and that training counts towards degree completion. Notably, students enrolled in a degree program may receive benefits for their entire flight training, with no requirement that the veteran obtain a Private Pilot certificate at their own expense.

Benefits paid to veterans attending *private* colleges and universities are subject to an inflation-adjusted annual cap, currently set at \$21,084 for the 2015-16 academic year (U.S. Department of Veterans Affairs, 2015). By contrast, *public* IHLs are not subject to the tuition and fee cap applicable to private colleges/universities. At public IHLs, VA will pay the actual net cost of a veteran student's in-state tuition and fees for their degree program, including all flight training fees (Pending Health and Benefits Legislation, 2015a; U.S. Department of Veterans Affairs, 2015). In FY 2013, the VA spent \$42 million on tuition and fees on behalf of the 1,713 veterans enrolled in flight training programs, an average cost of \$24,518 per student. In FY 2014, the cost increased to \$80 million, amounting to \$42,462 per student (Huber, 2015).

Concerns with VA Flight Training Funding

The lack of a benefits limit at public IHLs has led many independent flight schools to establish contractual relationships with public colleges and universities to provide flight training. These types of contractual relationships have been particularly prominent in the case of helicopter flight training schools (Pending Health and Benefits Legislation, 2015b; Zarembo, 2015a). This type of contractual relationship is advantageous for both parties, as the overhead costs of establishing a flight training program are high, and many public IHLs are unable to accommodate purchases of expensive aircraft and equipment (Congressional Budget Office, 2015). For flight schools, partnering with a public IHL provides access to a stream of wellfunded prospective students who desire to use their VA benefits to pay for flight training. According to Huber (2015), as of FY 2014, there were 111 VA-approved public IHLs with flight training programs. This figure does not distinguish between IHLs with contracted flight programs and those that choose to operate their own flight program in-house. In late 2014, the VA became "concerned about high tuition and fee payments for enrollment in degree programs involving flight training at public IHLs...in some cases, public institutions seem to be targeting veterans with their flight-related training programs" (Pending Health and Benefits Legislation, 2015b, p. 22). Although flight training benefits are a relatively small percentage of the total amount, VA pays for educational benefits overall, Huber (2015) reported the increase in flight training costs to the VA has greatly exceeded the overall rate of growth of educational benefits.

VA paid an approximate average of \$42,000 per individual in tuition and fees for all beneficiaries enrolled in flight-training programs at public institutions in 2014 (Congressional Budget Office, 2015; Huber, 2015). However, some veterans, especially those enrolled in helicopter training, received benefits well in excess of this amount. A series of articles in the *Los Angeles Times* (Zarembo, 2015a; Zarembo, 2015b, Zarembo, 2015c) brought widespread public attention to several examples of high training costs for individual veterans enrolled in flight training. Zarembo (2015a) characterized the unlimited funding level for veterans as a "windfall" for flight schools; the training for 12 students at one school had cost over \$500,000 for each student. Huber (2015) notes in one instance VA paid more than \$534,000 for flight training fees and tuition for one student for one year.

While flight training in helicopters is more expensive than training in fixed-wing aircraft, in many cases these large costs stem from flight schools offering a significant amount of training in more expensive turbine helicopter equipment rather than traditional entry-level piston helicopters. Zarembo (2015a) quoted one flight school operator: "Because there was no cap, we started to one-up each other...You kind of end up with an arms race."

An additional concern VA has expressed is that many veterans are electing to take flight training purely as elective courses to 'round out' an unrelated degree, even though it is not specifically required for that degree (Pending Health and Benefits Legislation, 2015b).

Proposed Changes to Flight Training Benefits

Concern regarding prominent examples of large per-individual costs being paid by VA has resulted in several legislative proposals intended to address the situation. H.R. 476, also known as the GI Bill Education

Quality Enhancement Act of 2015, was introduced in January of that year. Section Four of that bill would take the annual cap on benefits currently imposed on beneficiaries attending private or non-US IHLs, and also apply it to beneficiaries undertaking flight training at public IHLs. For the 2014-2015 academic year, this benefits limit was set at \$20,235 per year (H.R. 476, 2015). At present, it appears this bill has stalled in the House Veteran's Affairs Committee.

However, similar language was also incorporated by the sponsor into H.R. 3016, the VA Provider Equity Act. Section 306 of that bill also applies the \$20,235 annual cap to flight training costs at any public IHLs. Notably, this includes a two-year delay on the reduction of benefits for students who are currently enrolled in flight training programs (H.R. 3016, 2015). As of December 2015, this bill has been referred to the whole House of Representatives for a vote.

The United States Senate Veteran's Affairs Committee has also circulated a draft bill regarding flight training fees (Pending Health and Benefits Legislation, 2015), but no formal bill has been filed in that chamber. Section Three of the draft under discussion applies the \$20,235 cap to flight training at public IHLs. However, the cap would *only* apply to public IHLs that enter into a contract or agreement with a third party (other than another public institution of higher learning) to provide flight training. It appears that public IHLs who maintain flight training programs in-house would not be subject to the cap. This draft bill does not include a delay on the reduction of benefits.

It should be stressed that the language of these proposals remains subject to amendment. Students whose annual flight training fees, tuition, and other costs are under the cap would not be affected. The Congressional Budget Office (2015) estimates approximately 600 students per year would be impacted by the caps, in that their tuition and flight training fees would be in excess of the cap. In 2014, 544 students would have exceeded the cap had it applied to them during that year. These students had average individual flight training costs of \$62,000, or \$42,600 over the cap level. Overall, it is expected that payments to schools for flight training would decrease by \$342 million over the period from 2016-2025 if the cap is implemented. This value excludes an offset in payments through the Yellow Ribbon Program (Congressional Budget Office, 2015).

Review of Literature

Educational Characteristics Unique to Veterans

It would be inappropriate to discuss educational outcomes of students receiving VA benefits without also identifying some of the unique demographic background shared by a large portion of this student subset. Numerous studies have been undertaken to illustrate specific factors as well as unique characteristics of post-service veterans as learners in the collegiate environment. For the purpose of this publication, it is appropriate to begin discussion on recent VA trends in higher education and finish with challenges unique to post-service veterans.

To provide numerical context, approximately 2.4 million American men and women have served in conflicts in the Middle East since 2001 (McCaslin, Leach, Herbst, & Armstrong, 2013). To highlight the impact of these individuals and their returning influence on enrollments in higher education, there were approximately 397,598 veterans receiving benefits under VA programs in 2000. By 2012, that number increased by more than 150 percent (McCaslin et al., 2013). Specific to the University of North Dakota (UND), there were approximately 1,100 veteran students as of Spring 2015 receiving some assistance from the VA or another governmental program. (Office of Institutional Research (OIR)). Note that veteran students who were not receiving support were not included in this number, and thus, the total veteran student population is likely higher than 1,100. The notable increase in veterans receiving benefits can be attributed to the increasing population of enlisted, reserve or military officers returning from Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) as well as related conflicts during the years

2001-present. Table 1 shows data from the Annual Report on Education from Veterans Affairs breaks down the numbers of students enrolled in one of the seven VA programs.

2009	2010	2011	2012	2013
34,393	365,640	555,329	646,302	754,229
34,1969	247,105	185,220	118,549	99,755
63,469	67,373	65,216	60,393	62,656
-	-	-	12,251	67,918
42,881	30,269	27,302	19,774	17,297
81,327	89,696	90,657	87,707	89,160
448	286	112	76	29
	34,393 34,1969 63,469 - 42,881 81,327	34,393 365,640 34,1969 247,105 63,469 67,373 42,881 30,269 81,327 89,696	34,393 365,640 555,329 34,1969 247,105 185,220 63,469 67,373 65,216 42,881 30,269 27,302 81,327 89,696 90,657	34,393 365,640 555,329 646,302 34,1969 247,105 185,220 118,549 63,469 67,373 65,216 60,393 - - - 12,251 42,881 30,269 27,302 19,774 81,327 89,696 90,657 87,707

Table 1Beneficiaries Receiving VA Education Benefits by Fiscal Year.

The data above provides context for the nominal count of veteran students in higher education in the recent past as well as the number of students who benefit from VA educational programs. The data does not show the qualitative or human-side story of the veterans as adult learners including retention, completion rates, and academic performance of those populations. However, the data above does help provide a numerical reference when estimating the impact of legislative changes to VA financial educational support for both aviation and non-aviation related degree programs.

Does VA Assistance Support Educational Attainment?

As noted earlier in this review, the amount of veterans receiving financial support for education from the VA has increased substantially since 2000. As of 2013, the total number of veterans receiving benefits was 1,091,044 with a total of \$12,072,603,175 funds distributed to this population (VA, 2014). It should be noted that approximately 84 percent of this funding was distributed specifically to Post-9/11 GI Bill recipients (VA, 2014).

Data from the VA reports that a relatively large population (over 1 million veterans) receives support for educational goals through the VA. However the question remains whether this support is placed where it will produce the greatest net benefit for those individual students as current participants in higher education. A 2009 article focused on the protective effects of the GI Bill (and other various forms of support) and relationship to successful re-entry and continuous enrollment in higher education, however, more narrowly focused on injured or disabled veterans' achievement in higher education (Smith-Osborne). The research seemed to indicate that the GI Bill, non-VA financial aid, and use of the VA health system did not appear to reduce the impact of a veteran's disability on the educational outcome, yet other observations were noted.

The final model was significant (CI=.0001-.0048). The results were that non-labor income and informational social support had a positive mediational effect, and number of dependents had an inverse mediational relationship, suggesting that more sources of cash benefits and increased density of social networks (i.e., social support directed to providing access to information) mediated the risk of disability on educational attainment, while increasing numbers of dependents had a suppressor effect on educational attainment. (Smith-Osborne, 2009, p. 119)

The results of this study seem to suggest that traditional support for veterans as adult learners is not as effective as we would have otherwise accepted. Factors that were observed to have a more positive impact included established supportive peer-networks and non-labor cash benefits, whereas a negative factor included

a number of dependents the veteran student may have. Although this article focused on a particular subset of veteran students, what conclusions can be drawn to the population as a whole? What are other colleges and universities doing to address the gaps noted by Smith-Osborne?

A Field Hearing by the U.S. House of Representatives (USHR) Committee on Veterans Affairs addressed some of the questions related to veterans as adult learners and the impact of support on their educational outcomes. Specifically, the panel witnessed the testimony of three officials in the higher education system in California; represented by University of California – Riverside, DeVry University, and Riverside Community College. The testimonials echoed a similar story, that each institution has great support for veteran students and that the government (VA) was a key partner in the support of those programs.

The testimony of Ms. Pamela Daly, Campus President of DeVry University, pointed out some unique metrics and programs specifically associated with DeVry. According to the hearing, DeVry provides a variety of support to veteran students, including those noted below.

To make DeVry University education more affordable for active duty military and their spouses, these students receive special tuition rates. We also provide veterans with tuition grants, and veterans and service members alike can qualify for credits based on their military coursework as we follow the American Council on Education Military Guide. We also participate in the Department of Veteran Affairs' Principles for Excellence program, and DeVry University is a member of the Service Members Opportunity Colleges Consortium, as well as the SOCS degree network system. DeVry University has a dedicated military affairs team. It is comprised of former service members, veterans, reservists, spouses, that provide ongoing support to the veterans and active-duty members throughout their education. We also have student success coaches who closely assist military students to complete education plans, identify potential barriers to success, and to obtain resources to overcome those barriers and assist them with registration from semester to semester. We offer our staff sensitivity training through the VA and provide the VA Vet Centers open access to the campus, allowing for free communication with veterans and early identification of issues that they might face.

A prospective student goes through a pre-screening with a military education liaison who is a member of the Military Affairs Team and is typically the veteran's initial contact. They then meet in our comprehensive interview with an admissions advisor. The advisor explains the interview is a two-way process. We are interviewing the candidate, and they are also interviewing us to ensure that this is the right choice for their educational and career goals. DeVry University has resources in place to help our military students' transition to school and work through the challenges that they face. The program is called the DeVry ASPIRE program. It provides confidential and free counseling services 24/7 to all enrolled students and their family members, and it helps them with things such as financial and legal consultation and referrals, mental/emotional/behavioral issues, PTSD, child care issues, family concerns, anything that might create an obstacle to the student's success in their degree program. On campus, we have a veterans Resource Center that is dedicated space for veterans to find military resources and contacts, including an advisor to again help them who is dedicated to military-oriented problems and challenges.

The San Diego campus has hosted military educator forums in collaboration with local ESOs and created and promoted designated military job fair opportunities. To further support veteran students, DeVry University has an active veteran community at many of our campuses, and at San Diego, we have just initiated the Student Veteran Association, which will be having its first meeting in January.

(USHR, 2013, pp. 7-8)

The various programs and methods mentioned by Ms. Daly, whether directly supported by government programs or supported independently by colleges and universities, do appear to be somewhat representative of the services offered at many institutions. Although those programs and levels of investment may not exist at all colleges and universities, some form of veteran support appears to be consistent on most campuses as witnessed through an informal online search of individual universities.

Contemporary Challenges to the Pilot Supply

The challenge of maintaining an adequate supply of professional pilots for the aviation industry has been under debate in recent years and is currently under review by government, academia, and industry groups. Challenges faced in obtaining pilots include, but are not limited to, increasing costs of flight training, uncertain risk/reward of the professional pilot career path, pilot retirements, a decline in the number of pilots commencing training and the yet-to-be-defined impact of changes to legislation relating to pilot qualifications.

The numbers of individuals obtaining flight training have consistently declined for many years. FAA data for the past decade shows the number of Private and Commercial Pilot certificates issued are down 41 percent and 30 percent, respectively (Carey, Nicas, & Pasztor, 2012). As it relates to the ultimate objectives of these pilots, a survey of the flight training industry administered by AOPA (2010) suggests only 29 percent of student pilots express an intent to seek a professional flying career.

When considering the demand for new pilots, a study by Boeing (2015) forecasts the industry will demand an additional 95,000 pilots in North America over the next 20 years. Estimates from the U.S. General Accounting Office (Dillingham, 2014) suggest several thousand pilots will be required annually over the next ten years in the airline industry alone. The overwhelming majority of regional air carriers surveyed reported difficulty in recruiting entry-level pilots (Dillingham, 2014). Huber (2015) notes that the proportion of veterans enrolled in flight training annually is only a small percentage of the number of student pilots in the United States. Nevertheless, veterans represent an important supply of potential professional pilots to industry, as they are overwhelmingly pursuing flight training for professional pilot employment, when compared to the career intentions of the overall student pilot population.

The decline in the numbers of individuals seeking flight training, as well as the forecasted demand for pilots in an expanding global economy has already created a troublesome dilemma for the aviation industry; a dilemma that may be exacerbated by the proposed changes to VA financial educational support.

Research Questions

- How are aviation educational outcomes impacted should yearly funding for flight training be capped at \$20,235 for students receiving educational financial support from the VA?
- How are educational outcomes impacted should funding for flight training be eliminated for students receiving educational financial support from the VA?
- What influence do the individual student's completed credits have on educational objectives if capping or eliminating funding for flight training becomes law?
- What influence does the individual student's currently held FAA flight certificates have on educational objectives if capping or eliminating funding for flight training becomes law?

Methodology

Email addresses were used to disseminate the survey that was hosted via on Qualtrics[®]. Respondents, on the survey, that indicated they were currently receiving financial educational benefits from the VA were included in the dataset. Respondents that reported they were not currently receiving financial educational

benefits from the VA were excluded from the dataset. The collected data was processed via Statistical Package for Social Sciences (SPSS)[®].

Demographics

The subject population included undergraduate students with a declared aviation-related major at a four-year research university in the Midwest. The population consisted of 40 respondents with a mean age of 26.3 years. The majority of the respondents were single (58 percent), however, other marital statuses were reported with married (30 percent), divorced (10 percent) and separated (2.5 percent) also represented. The respondents reported an average of 0.55 dependents; however, the majority of respondents listed no dependents (75 percent). Those surveyed self-reported a mean of 83.5 completed credits. (Note: Two respondents reported values other than a discrete, nominal value. These two reports were adjusted to the lowest numerical value included in their response). The majority of students' surveyed were pursuing flight-related degrees (77.5 percent of respondents) to become professional pilots, with a smaller proportion for other areas of study including Unmanned Aircraft Systems (18 percent).

Results

To address the research questions, participants were asked their opinion on two proposed legislative scenarios that would cap or eliminate funding, for flight training at public colleges and universities. The first scenario would place a cap (\$20,235 per academic year) on flight training programs; the second scenario would eliminate all payment for flight training fees.

Overall results indicated that if funding is capped, 68 percent of the participants plan to finish their current degree program, and 32 percent plan to move to a different aviation degree, change to a non-aviation degree, or drop out of college (Table 2).

Table 2

- I afficidant Responses to Cadding v A Equivational Assistance to $\mathfrak{p}_2(\mathfrak{l}_2\mathfrak{I}\mathfrak{I})$	Participant Responses to Capping VA Educational Assistance to) \$20.235ª ve	ear.
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	Response (n=40)	Percent
I plan to finish my current degree program	27	68
I plan to finish in a different degree program within aviation	4	10
I plan to finish in a non-aviation major	2	5
I do not plan to finish college	7	17

Note. ^{*a*} The funding cap of \$20,235 represents the 2014-2015 inflation-adjusted funding value applicable to private IHLs. This value will adjust according to inflation for subsequent years.

If VA funding for flight fees is eliminated, the participants plan to finish their current degree program dropped to 33 percent (compared to 68 percent if capped), with 12 percent planning to move to a non-flying aviation degree. Fifty-five percent of respondents plan to finish college in a non-aviation major or drop out of school (Table 3).

Table 3

Participant Response to Eliminating VA Educational Funding for Flight Training.

	Response (n=40)	Percent
I plan to finish my current degree program	13	33
I plan to finish in a different degree program within aviation	5	12
I plan to finish in a non-aviation major	13	33
I do not plan to finish college	9	22

A results breakdown by current FAA flight certificate held indicates 58 percent of student pilots plan to finish their current flight program if funds are capped, and 25 percent plan to complete their current degree program if funding is eliminated (there is 33 percent decline from capped to an eliminated funding scenario). If funding is capped, 88 percent of Private Pilots will continue with their current flight program, and if funding is eliminated, 41 percent will continue with their current flight program. Table 4 shows the responses to capping or eliminating funding by certificate level.

Certificates	Plan to finish current		Change	Change to a non-		Change to a		Drop out of	
Held	flight program		flight program flying aviation		non-aviation		College		
		degree Degree							
	Limit	Eliminate	Limit	Eliminate	Limit	Eliminat	Limit	Elimin	
						e			
Student (n=12)	7	3	2	0	0	7	3	2	
Private (n=17)	15	7	1	4	0	3	1	3	
Commercial	2	1	0	0	0	0	1	2	
(n=3)									
CFI	3	2	1	1	1	1	2	0	

Response by Current Certificate to Limit or Elimit	nate Funding
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Note. n=39

Table 4

The majority of students with a credit load of fewer than 60 credits plan to finish their current flight program if funding is capped (75 percent); however, only 31 percent plan to continue if funding is eliminated. Sixty-two percent of students with more than 60 credit hours plan to continue flight training if funding is capped, and 33 percent plan to continue their current flight program if funding is eliminated. Table 5 (below) outlines the responses by credit hour.

Table 5

Response by	Credit Hou	rs to Limit o	r Eliminate	Funding

	Plan to Finish Current Flight Program		Change to a different non-flying degree		Change to a non- aviation Degree		Drop out of College	
	Limit	Eliminate	Limit	Eliminate	Limit	Eliminate	Limit	Elimin.
*Less Than 60	12	5	1	2	1	7	2	2
**More Than 60	15	8	3	3	1	6	5	7

Note. *n=16, **n=24

The majority of students (51 percent) that indicated that flight is their primary major indicated they would continue their current degree program if funding were capped, and 28 percent said they would continue if funding were eliminated. Thus, capping decreases the number of potential pilots by 49 percent, and eliminating funding reduces potential future pilots another 23 percent (49 percent to 28 percent). Table 6 shows responses by declared major subgroup and how capping or eliminating funding may impact academic objective.

	Plan to F Flight Pr	inish Current ogram	Change to a different non-flying aviation degree		Change to a non- aviation Degree		Drop out of College	
	Limit	Eliminate	Limit	Eliminate	Limit	Eliminate	Limit	Elimin.
Flight Major	18	10	4	2	2	11	5	6
All Others	5	2	0	1	0	1	1	2

Table 6 Response by Declared Major

Note. n=35

Discussion

This study served to validate hypotheses surrounding the proposed changes to the flight training funding models currently under discussion. However, the magnitude of changes observed in the aggregated responses were larger than anticipated within some of the variable groupings. There was an anticipated reduction in the number of respondents who would continue their chosen flight-related program of study, yet, the decline was larger than expected. Sixty-eight percent of respondents would continue if funding is capped, dropping to 33 percent if funding is eliminated. The results of the survey show that capping or eliminating VA funding for flight training fees will have a negative impact on those veterans that responded, which will have adversely effected the commercial pilot supply.

The commitment demonstrated through the acquisition of the Private Pilot certificate (PPC) appears to correlate strongly with a desire to complete the planned degree. As noted above, if funding is capped, 88 percent of students with a PPC would continue their current aviation degree program, dropping to 41 percent if funding is eliminated. The continuation metrics for VA funding recipients who only hold a Student Pilot certificate (SPC) are 58 percent and 25 percent, capped and eliminated, respectively. As an SPC requires little commitment and is acquired through a simple application process, the trainee has neither invested nor committed any significant level of resources – time, money or otherwise – at the point of issuance. In summary, for those students who hold a PPC, capping has a negligible effect on continuing their current flight program, while eliminating funding shifts the majority of students to degrees that do not require flight training.

With respect to the completed credits, the researchers noted some mixed results along the 60 credit hour completion variable. At the sophomore level and above (represented by the 60 credit cut-point), students would be expected to be more engaged and committed to their goals and educational objectives and would have a higher expected level of retention in the face of changes to their originally anticipated educational (financing) plan. However, an interesting observation was noted: 75 percent of students with fewer than 60 completed credits hours would continue on their current flight-related degree program if funding was capped, whereas, only 62 percent for students with more than 60 completed credit hours would continue their current flight related degree. The responses declined to 31 percent and 33 percent, respectively, if funding is eliminated - which is a more expected outcome. Although the sample size is a limitation of the study, students whom are closer to completing their objectives would be expected to be more inclined to continue, particularly if funding for flight training is capped, and not eliminated. The researchers hypothesize that students whom may be closer to or enrolled in later flight courses are more aware of the larger costs of flight training and may be less inclined to pay for flight training unless it is completely funded. This funding model may have become the students' "expectation" by this point in their academic career and therefore a more elastic response to variations in the funding model, compared to their more junior peers. This information is valuable to decision-makers when considering impacts to educational outcomes, and specifically pilot supply related questions.

Related to the scope of this research, it is important to note the impact to institutions with potential changes to the VA funding of flight-related degree programs. Should funding be capped or eliminated, the resultant changes to students' academic objectives would also directly impact institutions, both large and small,

leading to potential closings or program suspensions. Smaller IHLs and IHLs whom offer helicopter training as a part of their curriculum may be particularly affected. As is noted earlier in this article, helicopter training carries with it a larger fixed and variable costs for the institutions and subsequently a higher individual student costs. An example of such an IHL who has announced its intentions to suspend its helicopter degree program indefinitely is Palm Beach State College, which was "notified to upgrade its curriculum to comply with the Department of Veterans Affairs." (Quesada, 2015) It is anticipated that additional program suspensions or flight school closings could occur should Congress pass the subject legislation. Limitations

The researchers note an approximate response rate of \sim 49 percent of those surveyed and currently receiving educational financial support within the aviation program at the studied university. The dataset and subsequent research conclusions could be strengthened through the dissemination of the survey to additional four-year educational institutions with flight-related degree programs as well as a higher response within the current organization. It should also be noted that the two legislative vehicles which may be responsible for these changes were amended to include a funding "grandfather clause" to the recipient of either one (HR 3016) or two years (HR 476). It is not anticipated that any of the respondents had any meaningful knowledge or awareness of these amendments at the time of the survey issuance, and therefore, responses would not have been unduly influenced. It is anticipated that the answers may change if students understood that their degree completion (including funding for flight training) would be continued for one (or two) years after the date of enactment of said legislation.

Conclusions

This research provided valuable information relating to VA funding model changes to flight and flightrelated degree programs that can be used by legislators and university decision-makers alike when forecasting student educational outcomes. The research validated key hypotheses including the percentage of students who change to a non-flight related major or leave school when funding is capped (32 percent reduction) and when funding for flight training is eliminated (67 percent reduction). Additionally, the research supports the notion that if funding is capped or flight fees eliminated, previous attainment of a PPC seems to demonstrate significant commitment to a flight-related degree program, when compared to students who simply hold a SPC. The data is somewhat less expected when we consider how completed credits correlate to flight program continuance post-funding changes.

Although this study had a limited population (N=40), the broader significance and importance should be carefully considered. Additional suppressive legislation onto an already stressed supply chain of professional pilots may have unintended consequences not foreseen by current decision-makers. To further validate the study and determine potential secondary or tertiary impact, further research is needed with a wider geographic sampling of four-year colleges and universities which offer degrees involving flight training. The implications of the significant legislative changes currently outlined in HR 3016 and HR 476 may have wide-reaching impacts to students' educational outcomes and, as a result, the future supply of qualified airline pilots in the United States.

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