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Air Force Professional Military Education

Considerations for Change

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Published by the RAND Corporation, Santa Monica, Calif.

Library of Congress Cataloging-in-Publication Data is available for this publication.

ISBN: 978-1-9774-0711-5

Cover: Photo of students: U.S. Air Force photo by Melanie Rodgers Cox.

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Preface

Professional military education (PME) is provided to Air Force officers at several points throughout their careers. All officers at the rank of major or lieutenant colonel who intend to continue in the Air Force are expected to complete a command and staff college (officers with the rank of major) and a war college (officers with the rank of lieutenant colonel). These colleges are offered by the Air Force through its Air University, at the other U.S. military services colleges or U.S. joint-service colleges, and at select international military institutions. The majority of officers complete these requirements through distance learning (DL); however, a select few spend one or two years away from their regularly assigned duties to attend these in-residence educational experiences. In addition, some officers are selected to attend a year at smaller fellowship programs offered at various public and private universities and other organizations. These officers spend a year participating in a fellowship and complete their command and staff college and war college requirements through distance learning. Senior Air Force leadership has in recent years observed that there is an apparent imbalance in the assignment of Air Force officers to specific PME programs. Notably, a greater proportion of officers who were ranked lower by the central developmental education board are assigned to PME at Air University than those higher on the central developmental education board rankings. Although there is speculation about why this occurs, the actual reasons are unknown.

In this report, we consider the outcomes of the process by which officers are selected for assignment to these in-residence schools and fellowships and the opinions of recent graduates of these programs in answer to the question, "What options for change might the Air Force consider in order to increase the value of PME to the Air Force?"

The research reported here was commissioned by the Director, Force Development, Deputy Chief of Staff for Manpower, Personnel and Services, Headquarters U.S. Air Force, Washington, D.C., and conducted within the Manpower, Personnel, and Training Program of RAND Project AIR FORCE as part of a fiscal year 2019 project titled "Balancing Readiness and Officer Development." This report is intended for Air Force leaders who are responsible for officer development.

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This report documents work originally shared with the DAF on September 24, 2019. The draft report, issued on September 30, 2019, was reviewed by formal peer reviewers and DAF subject-matter experts.

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Summary

Issue

Senior Air Force leadership has in recent years observed that there is an apparent imbalance in the assignment of Air Force officers to specific professional military education (PME) programs. Notably, a greater proportion of officers who were ranked lower by the central developmental education board are assigned to PME at Air University—the Air Command and Staff College (ACSC) for Air Force intermediate developmental education and the Air War College (AWC) for senior developmental education—than those higher on the central developmental education board rankings who tend to be assigned to non–Air Force schoolhouses or fellowship programs. Although there is speculation about why this occurs, the actual reasons are unknown. Air University (AU) itself recognizes that it must improve the selection, recruitment, and assignment of students, noting that "when students have a choice of programs to attend, preference for AU's programs becomes a powerful indicator of how much Airmen value the university" (Air University, 2015, p. 9). However, in the end, the underlying question for the Air Force is, Who should go where for in-residence PME in order to best meet the needs of the Air Force and its members?

Approach

We used a mix of quantitative and qualitative methods. First, we reviewed U.S. Air Force (USAF) and Department of Defense (DoD) policies related to PME. Second, we interviewed senior USAF leaders with responsibility for overseeing and conducting PME. Third, we conducted a survey of recent PME in-residence graduates from intermediate developmental education (IDE) and from senior developmental education (SDE) programs.[1]

Conclusions

- In practice, the officers ranked most highly do not tend to attend PME at Air University.
- Officers do not give the quality of Air University schoolhouses a high ranking relative to other available programs.

[1] In the interest of transparency, we note that the RAND Corporation operates a fellowship program for Air Force SDE. We discussed Air Force SDE PME in general with the 2019 RAND USAF Fellows as part of our process in developing the survey. However, we did not collect or include any comments from those discussions in this report. In addition, although all academic year 2014–2018 RAND USAF Fellows were included in the survey population as the result of the way the survey population was drawn, the survey was conducted in such a way that we did not, and in any case were unable to, identify them in the survey responses.

- Some senior leaders have pointed to problems with Air Force PME, but the concern is not universal.
- Vectoring by development teams plays a critical role in PME assignments.
- Changing the distribution of assignments so that the most highly ranked officers would be more likely to choose PME at an Air Force institution requires moving more than one lever in the overall system of PME.
- There is discontent with the location of Air University, but little discussion of changing it.

Recommendations

- Take steps to encourage vectoring practices that place a higher value on Air Force (AF) institutions, such as arranging for the Chief of Staff of the Air Force (CSAF) or the Vice Chief of Staff of the Air Force (VCSAF) to address development teams regarding the AF view of AF schoolhouses.
- Enhance the value of attending PME at AU by providing AU students with valuable experiences unavailable elsewhere, such as engagement with three- and four-star generals for mentoring and knowledge transfer.
- Consider adding new, more boutique-like programs at AU that members can request and be vectored to directly.
- Look more deeply into what graduates would recommend for changes at the schoolhouses, including faculty and course content.
- Task the Air Force Personnel Center to take steps to improve the relevance of follow-on assignments.
- Implement a new communications plan that conveys and reinforces the value of "bluing"[2] in PME, including the unique value of attending AU, the attributes that already exist, and improvements that are in progress or planned.
- Reconsider relocating Air Force schoolhouses from Maxwell Air Force Base to a location that would present fewer difficulties to faculty, students, and their families. This would make the schoolhouses more attractive and have a positive effect on instructor quality, which would in turn affect education quality, officers' interest in attending, and the steps in the assignment process that begin with officers stating their preferences in MyVector.

[2] Bluing is shorthand for instilling and reinforcing core Air Force values and professional standards.

Acknowledgments

We wish to thank Russell J. Frasz, AF/A1D, for regular discussions and input. We also appreciate input from stakeholders at the Air Education and Training Command, Air University, and other parts of the Air Force too numerous to mention.

Abbreviations

A1	Deputy Chief of Staff for Manpower, Personnel and Services, Headquarters U.S. Air Force
A1D	Director, Force Development, Deputy Chief of Staff for Manpower, Personnel and Services, Headquarters U.S. Air Force
ACSC	Air Command and Staff College
ADSC	active-duty service commitment
AETC	Air Education and Training Command
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instruction
AFIP	Air Force Intern Program
AFIT	Air Force Institute of Technology
AFPC/CC	Commander, Air Force Personnel Center
AFPD	Air Force Policy Directive
AMC/TRANSCOM	Air Mobility Command/U.S. Transportation Command
AOC	Air Officer Commanding
AU	Air University
AWC	Air War College
CJSC	Chairman of the Joint Chiefs of Staff
CJSCI	Chairman of the Joint Chiefs of Staff Instruction
CSAF	Chief of Staff of the Air Force
DAF	Department of the Air Force
DE	developmental education
DG	distinguished graduate
DL	distance learning
DLA	Defense Logistics Agency
DoD	Department of Defense
DoDI	Department of Defense Instruction

DT	development team
EFMP	Exceptional Family Member Program
IDE	intermediate developmental education
JIIM	joint, interagency, intergovernmental, and multinational
JOM	joint officer management
JPME	joint professional military education
LAF	Line of the Air Force
MDOS	Multi-Domain Operational Strategist Concentration
NDF	National Defense Fellows
NDU	National Defense University
NPS	Naval Postgraduate School
NWC	National War College
PAF	RAND Project AIR FORCE
PAFSC	Primary Air Force Specialty Code
PCS	permanent change of station
PME	professional military education
SAF/MR	Assistant Secretary of the Air Force for Manpower and Reserve Affairs
SDE	senior developmental education
SECAF	Secretary of the Air Force
SECDEF	Secretary of Defense
USAF	United States Air Force
USC	United States Code
VCSAF	Vice Chief of Staff of the Air Force

1. Introduction

Background and Motivation

In-residence professional military education (PME) is a scarce resource that is allocated to a small percentage of all active-duty Air Force officers. Although PME begins early in an officer's career with a 6.5-week Squadron Officer School for captains, this report focuses on intermediate developmental education (IDE), which is typically attended by officers with the rank of major, and on senior developmental education (SDE), which is typically attended by officers with the rank of lieutenant colonel.[1] Both IDE and SDE in-residence are one-year-long, full-time programs of education. Policies governing PME are set by both the Joint Staff and the individual military services. For example, policies require that some number of Air Force officers attend PME that is conducted by the other U.S. military services, and some number of members from the other U.S. military services are required to attend Air Force PME. Air Force Instruction 36-2656 (2018) refers to officer PME in the following way:

> According to the Office of the Secretary of Defense, professional military education is defined as a broadening opportunity and, as such, is designed to help prepare officers for an array of potential assignments within and outside their occupational expertise. (p. 17)

As a scarce resource, the Air Force has policies and procedures in place that guide how officers are selected and assigned to attend specific PME programs. The key entities in the selection and assignment process are the individual officer, the officer's senior rater, a central developmental education board, development teams (DT), and a school match board.

Senior Air Force leadership has in recent years observed that there is an apparent imbalance in the assignment of Air Force officers to specific PME programs. Notably, a greater proportion of officers who were ranked lower by the central developmental education board are assigned to PME at Air University—the Air Command and Staff College (ACSC) for intermediate developmental education (IDE) and the Air War College (AWC) for senior developmental education (SDE)—than those higher on the central developmental education board rankings, who tend to be assigned to non–Air Force schoolhouses or fellowship programs. Although there is speculation about why this occurs, the actual reasons are unknown. Air University (AU) itself recognizes that it must improve the selection, recruitment, and assignment of students, noting that "when students have a choice of programs to attend, preference for AU's programs becomes

[1] Civilian employees of the U.S. government and members of foreign military services also attend many of the same PME programs attended by U.S. military officers. This report focuses only on the selection, assignment, and attendance of Line of the Air Force (LAF) officers at in-residence IDE or SDE.

a powerful indicator of how much Airmen value the university" (Air University, 2015, p. 9). However, in the end, the underlying question for the Air Force is, Who should go where for in-residence PME in order to best serve the interests of the Air Force?

In fall 2018, Air Force leadership asked RAND to undertake research to help them to understand and address the imbalance in assignment to PME programs noted above. The RAND project team identified the following research questions to be addressed in this study:

- Based on official Department of Defense (DoD) and U.S. Air Force (USAF) documents, what are the boundaries within which PME must operate?
- How do senior DoD and Air Force leaders view the purpose of PME?
- How do recent in-residence students view the purpose, value, and quality of the PME they attended?

In the next chapter, we describe our approach to addressing these questions and the options for change the Air Force might consider in order to increase the value of PME to the Air Force.

Organization of This Report

Chapter 2 describes our analytic approach, including the details of a survey of recent Air Force PME graduates that the RAND team conducted. Chapter 3 provides an overview of Air Force PME, the policies that bound its content and purpose, views of senior Air Force leaders, and a discussion of how Air Force officers are selected and assigned to attend specific in-residence programs. Chapter 4 includes the results of the survey of Air Force PME graduates. Chapter 5 summarizes the conclusions and recommendations of our research.

2. Analytic Approach

We used a mix of quantitative and qualitative methods to approach the research questions listed in Chapter 1. First, we reviewed USAF and DoD policies related to PME. We conducted a systematic search for applicable policies within the Air Force, as well as applicable policies within DoD. In some cases, we also followed suggestions of the stakeholders we interviewed. Second, we interviewed senior USAF leaders with responsibility for overseeing and conducting PME. We concentrated on stakeholders within the Air Force, although in some cases we did interview stakeholders within DoD more generally. The focus of these interviews was on stakeholders' views of the PME system generally, potential challenges these stakeholders saw with regard to PME, and how the system could be improved. Interviews were not structured and could range widely in order to cover topics of concern to a given stakeholder. We also conducted a systematic search of public statements made by Air Force and other service leadership regarding perceptions of PME and officer development generally and reviewed these statements for themes.

Third, we conducted a survey of recent PME in-residence graduates from IDE and from SDE programs. That survey provided a large body of both quantitative and qualitative data.

Survey Population and Respondent Characteristics

Using USAF personnel files, we identified the census of Air Force officers who had graduated from either IDE or SDE in-residence for the five-year period from 2014 through 2018 as the survey population ($N = 4{,}036$).[1] We emailed these officers with an invitation to participate in our survey. Our survey was in the field June 19, 2019, through July 30, 2019. After the initial invitation went out, we followed up with four reminders. Many officers responded: 1,313 provided enough information to be included in analysis (they consented to the survey, thus answering our first item), resulting in an overall response rate of 33 percent ($N = 870$ from IDE and $N = 443$ from SDE). However, a further 91 officers (65 from IDE and 26 from SDE, respectively) who consented to the survey appear not to have answered any of the items on the survey and of necessity are not included in the analyses described below. Excluding these 91 officers from calculations yields a response rate of 30 percent.

[1] In the interest of transparency, we note that the RAND Corporation operates a fellowship program for Air Force SDE. We discussed Air Force SDE PME in general with the 2019 RAND USAF Fellows as part of our process in developing the survey. However, we did not collect or include any comments from those discussions in this report. In addition, although all academic year 2014–2018 RAND USAF Fellows were included in the survey population as the result of the way the survey population was drawn, the survey was conducted in such a way that we did not, and in any case were unable to, identify them in the survey responses.

Survey content varied to ensure that it was relevant for the officers receiving it: Ultimately, we fielded four versions of the survey based on type of experience and level of education program attended most recently. There were versions for officers attending in-residence fellowships and alternatives for schoolhouse experiences, which asked questions specific to fellowship-type experiences and schoolhouse-type experiences as appropriate. Both fellowship and schoolhouse surveys had iterations that were tailored for recent IDE attendees and SDE attendees as well, resulting in the four combinations. All versions of the survey are presented in Appendix A, with annotations to indicate where questions were unique to the schoolhouse version or unique to the fellowship version. Where items were tailored to specify IDE or SDE, the survey text reads "IDE[SDE]." The essential difference between the IDE and SDE versions of the survey was in the list of PME programs to be ranked on the basis of quality.

The characteristics of the survey population and sample who responded to the survey are shown below. We compared the survey population to the sample who responded and determined that the differences between the population and the sample who responded were not significantly different on a number of relevant variables including race/ethnicity, gender, and one-digit Primary Air Force Specialty Code (PAFSC). We considered not only the main effects of differences between the population and respondents but also interactions among these variables. This led us to conclude that weighting for nonresponse would not be necessary. Generally speaking, our sample was 87 percent male, 13 percent female, and 84 percent white non-Hispanic, 16 percent black, Hispanic, and Asian/Pacific Islander. The most common one-digit PAFSC was Operations at 61 percent.

In the tables below, attention should be paid to the columns in each table that compare the percent of the survey population with the percent of the sample responding to the survey.

Table 2.1. Characteristics of the IDE Survey Population by Program, Gender, and One-Digit PAFSC

One-Digit PAFSC	Fellowship Programs						School Programs					
	Male (*N*)		Female (*N*)		Percent Male		Male (*N*)		Female (*N*)		Percent Male	
	Population	Sample	Population	Sample	Population	Sample	Population	Sample	Population	Sample	Population	Sample
1	225	70	19	4	92	95	1,367	442	119	39	92	92
2	24	12	7	4	77	75	118	33	23	11	84	75
3	12	2	4	2	75	50	176	49	67	22	72	69
4	26	7	24	12	52	37	25	3	22	12	53	20
5	5	2	2	0	71	100	40	12	10	2	80	86
6	25	8	6	2	81	80	270	89	51	12	84	88
7	0	0	0	0	0	0	12	2	3	2	80	50
8	1	1	0	0	100	100	10	5	3	1	77	83
9	2	1	0	0	100	100	17	6	6	1	74	86
Total	320	103	62	24	84	81	2,035	641	304	102	87	86

Table 2.2. Characteristics of the SDE Survey Population by Program, Gender, and One-Digit PAFSC

One-Digit PAFSC	Fellowship Programs						School Programs					
	Male (*N*)		Female (*N*)		Percent Male		Male (*N*)		Female (*N*)		Percent Male	
	Population	Sample	Population	Sample	Population	Sample	Population	Sample	Population	Sample	Population	Sample
1	112	31	7	3	94	91	629	197	50	16	93	92
2	5	5	0	1	100	83	75	29	6	1	93	97
3	12	7	3	1	80	88	104	34	15	6	87	85
4	10	7	5	0	67	100	39	16	25	5	61	76
5	0	0	0	0	0	0	22	9	10	6	69	60
6	12	4	1	0	92	100	100	34	9	5	92	87
7	2	1	0	0	100	100	8	3	3	1	73	75
8	0	0	0	0	0	0	4	0	1	0	80	0
9	9	3	0	0	100	100	34	18	3	0	92	100
Total	162	58	16	5	91	92	1,015	340	122	40	89	89

Table 2.3. Characteristics of the IDE Survey Population by Program and Race/Ethnicity

	Fellowship Programs				School Programs			
Race/Ethnicity	Population	Sample	Population (percentage)	Sample (percentage)	Population	Sample	Population (percentage)	Sample (percentage)
Amer Ind/Alaskan	2	0	1	0	20	7	1	1
Asian/Pac Isle	16	6	4	5	102	23	4	3
Black	15	5	4	4	105	28	4	4
Hispanic	21	8	6	6	110	31	5	4
Other	3	0	1	0	15	3	1	>1
Unknown	16	6	3	5	74	26	3	4
White	309	102	81	80	1,913	625	82	84
Total	382	127	100	100	2,339	743	100	100

Table 2.4. Characteristics of the SDE Survey Population by Program and Race/Ethnicity

	Fellowship Programs				School Programs			
Race/Ethnicity	Population	Sample	Population (percentage)	Sample (percentage)	Population	Sample	Population (percentage)	Sample (percentage)
Amer Ind/Alaskan	2	1	1	2	7	3	1	1
Asian/Pac Isle	5	2	3	3	31	10	3	3
Black	9	2	5	3	60	14	5	4
Hispanic	7	4	4	6	44	16	4	4
Other	0	0	0	0	12	5	1	1
Unknown	6	1	3	2	20	4	2	1
White	149	53	84	84	963	328	85	86
Total	178	63	100	100	1,137	380	100	100

Overview of Survey Content and Analyses

The survey content covered several areas: the perceived purpose of PME; the perceived value of PME and its usefulness and relevance for various other career elements; perceptions of structural quality aspects of PME; perceptions of key content covered and the assignment system more generally; factors affecting PME program choice; rankings of the quality of PME programs; and suggestions for areas of improvement. The survey consisted of three types of items. First, several questions asked respondents to rank their top three or five choices in order of importance from a list of choices we provided. For example, participants were asked to rank options that they considered to be the purpose of PME. Second, we provided several opportunities for respondents to provide open-ended comments to these and other items and an overall comment at the end of the survey. Third, some questions asked respondents to choose one of several alternatives without ranking them. Finally, the remaining questions asked respondents to rate items using a 4- or 5-point Likert-type scale. For example, participants were asked to rate the quality of the peers attending their program.

We considered two main effects to be of primary interest, generally speaking. We were interested in examining whether there were differences between IDE and SDE, and we were interested in understanding any perceived differences between qualities of Air Force schoolhouse options, other schoolhouse options (e.g., Army or Navy schoolhouses), and fellowships. In many cases, to examine these effects we split the respondents into six analysis groups based on the program they completed because of specific interest in Air Force officers' opinions about schoolhouse PME programs at Air University. The breakdown was as follows:

- IDE
  - Army Command and Staff College (ACSC) ($N = 460$)
  - Other schools (e.g., Army Command and General Staff College) ($N = 283$)
  - Fellowship programs ($N = 127$)
- SDE
  - Air War College (AWC) ($N = 141$)
  - Other schools (e.g., National War College) ($N = 239$)
  - Fellowship programs ($N = 63$)

For the items that asked respondents to rank-order their top three or five choices in order of importance, we created a binary outcome for each respondent for each choice offered. The score for each person for each choice was given the value of one if a respondent ranked the choice among their top three and was given the value of zero otherwise. These items are analyzed and the results reported in terms of the proportion of respondents ranking a choice among their top three.

For the Likert-type rating items and the fixed-choice items, we explored the factor structure of similarly constructed items in order to minimize the possibility of finding results by mere chance through testing each item on its own. Based on this exploratory analysis as well as

consideration of the item content, we aggregated related items into scales for significance testing during analysis. As the scales created generally follow subsequent content discussion, each scale is briefly addressed in the following chapters.

For ranking questions, respondents were also presented with optional open-ended questions that allowed respondents to provide other answers if they perceived that their desired answer was not represented in the list of options. Finally, respondents were presented with a final open-ended comments box, where they could write any comments related to PME.

All comments were coded for thematic content. Comment boxes associated with ranking items used coding schemas drawing from associated item content and developing new codes for new content as needed. The final comments were coded using a schema developed from themes represented in the comments themselves. Throughout the report, we present comments selected for the extent to which they exemplify a given theme. The comments are redacted to preserve confidentiality. Among the 1,313 who responded to the survey, 335 provided comments on a wide variety of topics in the open-ended comments box.

3. Overview of the PME Landscape

In this chapter, we provide a brief overview of the landscape of Air Force PME. We describe how it is outlined and defined in guiding documents from DoD, the Chairman of the Joint Chiefs of Staff (CJCS), and the Air Force (AF). We also highlight the senior leader priorities that PME is expected to address. Finally, we summarize the process by which the Air Force currently makes PME assignments.

Policy Foundations for PME

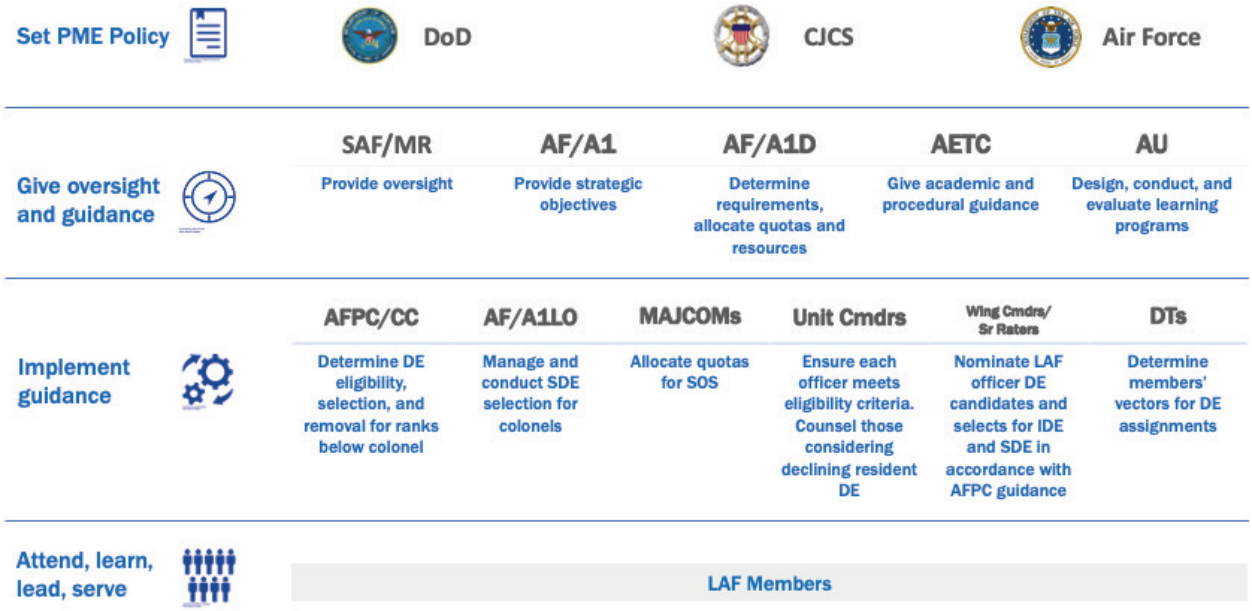
Professional military education is guided primarily by policies set by the DoD, the CJCS, and the AF. These policies describe the purpose of PME and requirements for the curriculum and the selection of students. At the DoD level, the *Summary of the 2018 National Defense Strategy of the United States of America* (DoD, 2018) and DoD Instruction 1300.19 (DoDI, 2018) provide guidance on PME. At the CJCS level, CJCS Instruction 1800.01E (CJCSI, 2019) defines a number of policies, procedures, objectives, and responsibilities for officer PME and joint professional military education (JPME). It also draws on requirements that are included in Title 10 USC Ch. 107 that dictate curriculum and attendance. At the Air Force level, Air Force Instruction 36-2656 (2018) on developmental education is a directive that describes Air Force–specific criteria for attendance, eligibility, selection, and removal of students. It also describes the roles and responsibilities that relate to PME within the Air Force. There are a number of other AF documents that influence PME, including the *USAF Strategic Master Plan* (U.S. Air Force, 2015), Air Force Policy Directive 36-26 (AFPD, 2019) on force development, and the *Air University Strategic Plan* (Air University, 2015). Figure 3.1 depicts the various entities that set the policies and oversee, guide, and implement PME, as well as the officers who attend PME (i.e., the officers who attend the offered programs). It illustrates the complexity of the PME system and the many groups of individuals involved, and it provides a way to think about where adjustments in policies or practices might need to be made if the Air Force were to make substantial changes to its system of PME.

How Is PME Defined?

Definitions of PME are broad and vary across policies within the DoD. In the CJCSI 1800.01E (2019), for example, the purpose of PME is "to convey a body of professional knowledge and establish the habits of mind essential to our profession." PME should produce strategically minded joint leaders and critical and reflective thinkers.

The definition of PME also varies across documents in the Air Force. AFI 36-2656 (2018) broadly defines developmental education as "an array of resident, non-resident, and blended

Figure 3.1. Overview of Air Force PME Policymakers, Implementers, and Stakeholders



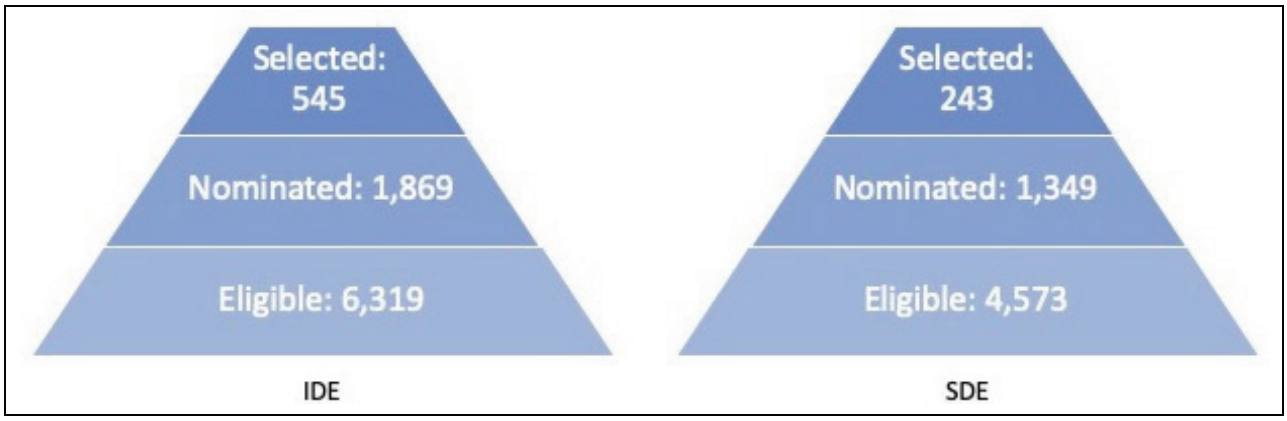
educational opportunities composed of formal and experiential programs." This Air Force Instruction also references the Office of the Secretary of Defense's definition of PME as being a broadening opportunity to prepare officers for future assignments in and outside of their career field. The *Air University Catalog* defines PME as a way to "educate Airmen to leverage air, space, and cyberspace power to achieve national security objectives" (Air University, 2018, p. 7) and the AU strategic plan defines it as "education designed to help Airmen acquire the technical, management, and leadership skills they will need to be successful in their careers" (Air University, 2015, p. 35).

Schools and Fellowships Provide PME

Each of the military services has its own command and general staff college and its own war college. In addition, there are also joint and international military schools and fellowship programs. For school year 2018, a total of 69 schools and programs are listed in the *2018 Officer Developmental Education Guide* for Air Force officers (USAF, 2018).

The scope of the problem of selecting and assigning Air Force officers for in-residence seats for IDE and SDE encompasses thousands of officers (see Figure 3.2). For example, for academic year 2018, across the Air Force, 6,319 officers were eligible for IDE in-residence and 4,573 were eligible for SDE in-residence. Senior raters nominated 1,869 for IDE and 1,349 for SDE. The central developmental education board ranked 1,579 officers for IDE and 1,132 for SDE. At the end of the process, 545 officers for IDE and 243 officers for SDE were selected and assigned to in-residence seats. To accommodate these numbers of in-residence officers, the Air Force assigns each of them to an option among the 69 schools and programs listed in the guide. As an example,

Figure 3.2. In-Residence PME Selection Pyramids for Academic Year 2018



72 SDE officers were assigned to attend SDE at the AWC. A complete listing of programs available to Air Force officers is provided in Appendix B.

How Do Current Policies Bound Its Content and Purpose?

While there is some flexibility in the structure and content of PME, there are also strict requirements for JPME that are laid out in the CJCSI, as required by Title 10. These include general requirements for all JPME and specific requirements for the different phases of JPME. In general, Title 10 USC Ch. 107 states that JPME should cover six main subject matters:

1. National military strategy
2. Joint planning at all levels of war
3. Joint doctrine
4. Joint command
5. Joint Force and joint requirements development
6. Operational contract support

For intermediate education, which emphasizes the operational level of war, the content should focus on warfighting within the context of operational art, introduction to theater strategy, operational art in all domains, and joint leader development (CJCSI, 2019). According to the U.S. Code (USC) for senior developmental education, which emphasizes the strategic level of war, the content should focus on theater strategy and campaigning, planning and processes and systems, and joint, interagency, intergovernmental, and multinational (JIIM) capability. The CJCSI also outlines specific content focuses for service schools versus joint schools for senior development education.

What Do Current Policies State About Who Should Attend PME and Who Should Attend Which Types of PME?

Both the CJCSI policies and Air Force policies discuss who should attend PME and the different types of PME. The CJCSI states that "officers with potential for increased responsibility" should attend PME. This policy also notes that officers who are "experts in service matters and educated or experienced in joint matters" should be assigned to faculty positions for PME.

Air Force policy acknowledges that because of limited resources, not all officers can attend PME in-residence. Thus, resident PME attendance should be "limited to the best qualified." The term "best qualified," is again used in AFPD 36-26 (2019) to describe which type of airmen are selected to attend in-residence developmental education.

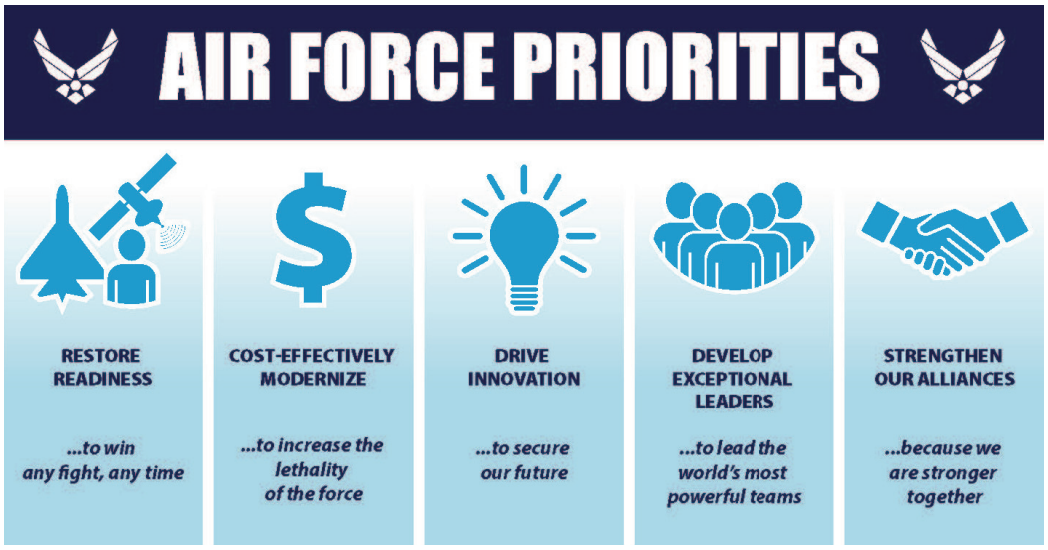
There are also some requirements set by the legislation in 10 USC Ch. 104 with regard to the ratio of students and faculty. This states that for senior-level service schools that provide JPME II, the percentage of students from the service administering the school cannot be greater than 60 percent, and the remaining student body must proportionally represent the other services. This 60-percent rule is also held to the population of military officers assigned as faculty at the school.

Senior Leaders' Views and Priorities

The 2018 National Defense Strategy notes that PME across the board has "stagnated" and suggests that existing PME and overall developmental processes do not sufficiently foster the skills and abilities necessary for independent action during combat and national-level decisionmaking. While this strong statement does offer some suggestions for problem areas in the PME system, the nature of the document precludes detailed commentary on areas for improvement. Certainly, no service was singled out explicitly for specific attention. Other stakeholders within the Air Force have presented strong visions of how the entire PME system may be reconfigured in concert with training to better prepare officers (and airmen, more generally) for the future and foster lifelong learning (Roberson and Stafford, 2017) and prepare them to innovate (Norman, 2018). However, although different visions of modularized learning and just-in-time education and training have been presented, when citing their priorities, senior Air Force leaders quite often speak more generally about the importance of professional development and the responsibility to develop leaders capable of exercising airpower in a joint context (Secretary of the Air Force Public Affairs, 2018), implying incremental change to the system of training and educating airmen rather than suggesting a complete revision is necessary.

In August 2017, then–Secretary of the Air Force (SECAF) Dr. Heather Wilson, Chief of Staff of the Air Force (CSAF) David Goldfein, and Chief Master Sergeant of the Air Force Kaleth Wright laid out their five priorities for the service: restore readiness, cost-effectively modernize, drive innovation, develop exceptional leaders, and strengthen alliances—all represented in Figure 3.3 (SECAF Public Affairs, 2017). As CSAF, General Goldfein has also

Figure 3.3. Air Force Senior Leaders' Priorities



articulated his own priorities, which are to revitalize squadrons, strengthen joint leaders and teams, and improve multi-domain command and control. He has told students at ACSC that there were three things he wanted them to gain from attending ACSC—"to expand thinking and understanding of joint warfare, to build a robust and diverse network, and to find balance." These priorities are consistent with the strategy and objectives articulated in the National Defense Strategy issued by then–Secretary of Defense (SECDEF) James Mattis in 2018 (DoD, 2018). The design and implementation of PME must take all of these priorities into account.

Allocating Air Force PME

Because the number of eligible officers exceeds the number of seats available for in-residence PME, the Air Force has developed a system for deciding which officers will be selected for in-residence PME and for assigning them to attend specific PME programs. In broad strokes, the process proceeds as follows:

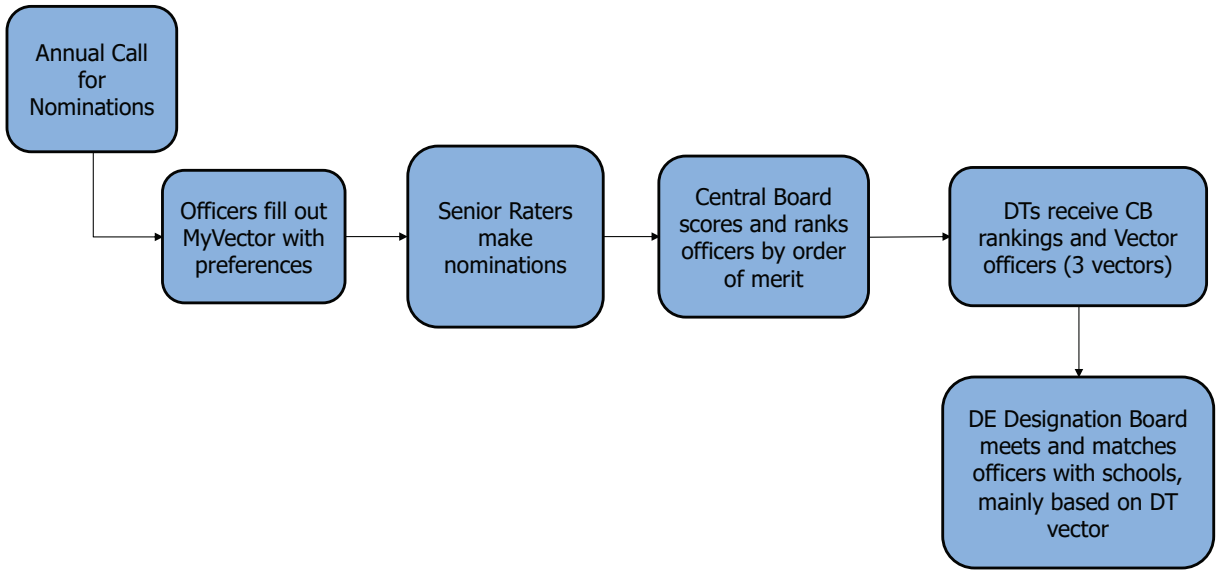
1. Each eligible officer fills out a developmental education plan, which includes listing personal preferences for PME program attendance.
2. Nominations are solicited from senior raters for officers to complete in-residence PME.
3. Separate IDE and SDE central developmental education boards create an order of merit based on the service record for the list of officers nominated for in-residence PME.
4. The Air Force Personnel Center separates the central board order of merit lists by development team. Each development team receives its list along with the quota of officers the DT can choose to send to IDE and SDE.
5. Development teams divide their list into "primary designee" and "alternate"[1] officers.

[1] Alternates may be selected to attend in-residence PME if, for some reason, a primary designee is unable to attend.

6. For each primary designee, the DT provides three development vectors based on a combination of officer preference and the order of merit where each vector is a specific PME program and the vectors are ranked first, second, and third in order of priority as recommended by the DT.
7. The school match board uses the central board order of merit assigned to each primary designee and assigns a specific program seat to each officer with the goal of assigning each officer to the highest-priority DT vector possible, given specific program requirements for background and experience, the individual's choices and their senior rater's comments, assignment possibilities for a military spouse, and the availability of seats for each specific program.

Figure 3.4 illustrates the process.

Figure 3.4. Overview of Air Force PME Assignment Process



The opportunities available for Air Force officers to attend in-residence PME include programs at joint schools (e.g., National War College), Air Force service schools and AF sister service schools (e.g., Air Command and Staff College, Army War College), international schools (e.g., French War School), and fellowship programs (e.g., Air Force Strategic Policy Fellowship). However, many more Air Force officers are eligible to attend in-residence PME than the Air Force has resources to support. For example, for school year 2018, 1,579 officers vied for the 545 in-residence IDE seats and 1,076 officers vied for the 243 SDE seats that the Air Force was resourced to provide.[2]

[2] Counts are for Line of the Air Force (LAF) officers. Actual assignment to in-residence PME is selective but is not quite as selective as it appears from these data because officers have an eligibility window of three years for IDE and four years for SDE. In school year 2018, 37 percent of those in their first year of eligibility, 34.5 percent in their second year of eligibility, and 31.7 percent in their last year of eligibility were designated to go to in-residence PME.

Although the DTs have information available to them about each officer's desires, and comments from the officer's senior rater, each DT is the final arbiter of setting the priority list of specific PME programs for each officer. The DTs include a general officer and colonels from across the Air Force that represent the different Air Force major commands. As a result, it can be argued that the priority ordering of vectors by the DTs, by definition, represents the views of a sizable number of senior Air Force officers.

The final match results for 2018 resulted in 60 percent of the officers assigned to attend a specific IDE program being assigned to the first choice in their DT vector and 20 percent being assigned to the second choice in their DT vector. These numbers were 53 percent and 23 percent for SDE. We provide further detail regarding the specifics of these data in Chapter 4.

4. Students' Views of PME Quality and Value

This chapter discusses the results of our survey of recent in-residence Air Force attendees at IDE or SDE. A total of 1,313 officers responded to the first item of the survey (consenting to take the survey), comprising our survey sample. The survey population was all officers who attended either IDE or SDE in-residence for the five-year period from 2014 through 2018. As described in Chapter 2, the survey covered a variety of content and included a variety of question types, which included ranking, Likert scales, and multiple choice. For ranking questions, respondents were also presented with optional open-ended questions that allowed respondents to provide other answers if theirs was not represented in the list of options. Finally, respondents were presented with a final open-ended comments box, where they could write any comments related to PME. In this chapter, we present the quantitative results for each question, along with a small selection of the respondents' comments that pertain to selected topics. Among the 1,313 who responded to the survey, 335 provided comments on a wide variety of topics in the open-ended comments box.

Perceived Purpose of PME

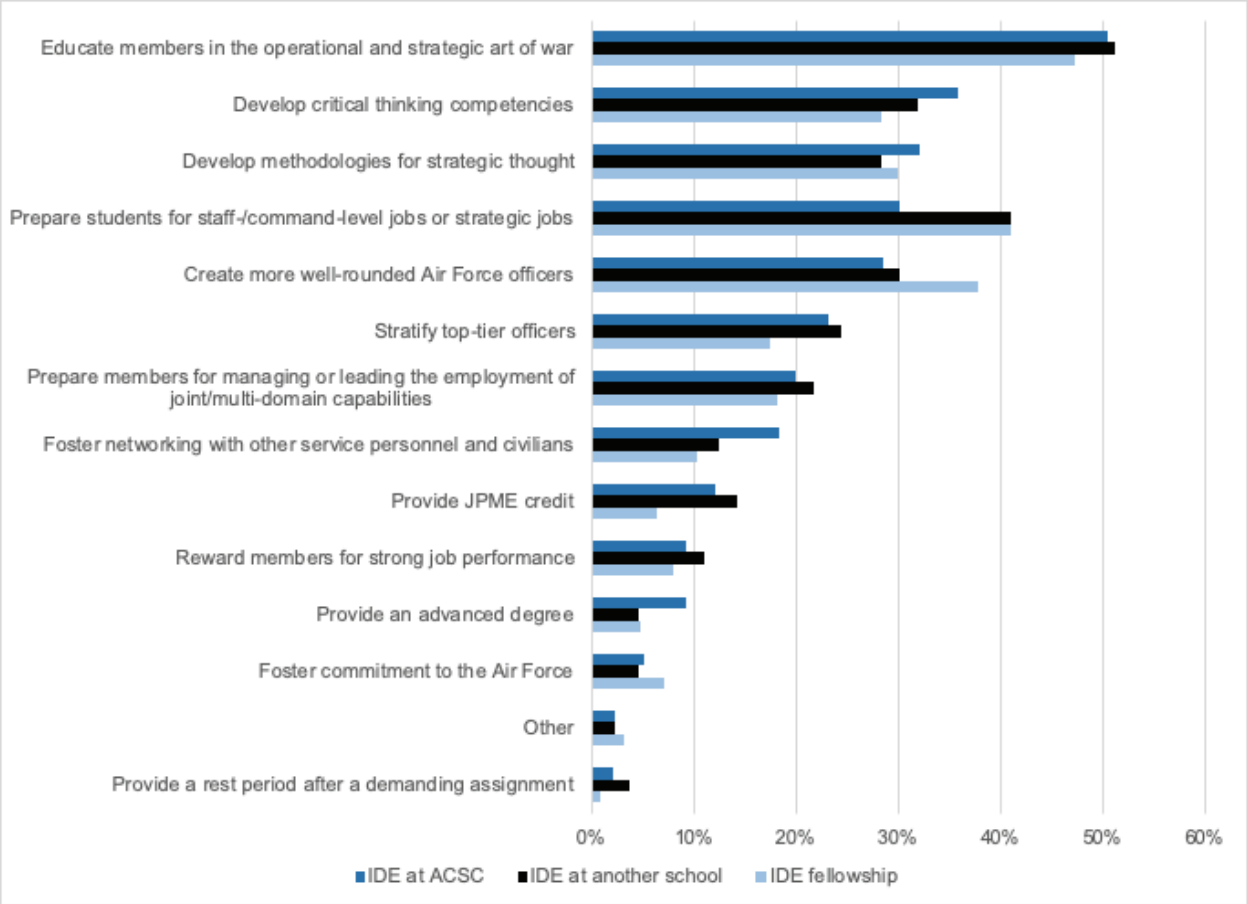
We provided respondents with a list of 14 potential purposes of Air Force PME, plus a write-in option. We asked respondents to rank-order what they think are the Air Force's top-five purposes for PME, what they think the purposes for PME should be, and which purposes of PME provided them with the most personal benefit. In all of the results we present drawing from importance rankings, we base our analyses on the percentage of respondents who ranked a choice among their *top three* in order to better identify which choices Air Force PME graduates consider most important.

In Figures 4.1 through 4.3, we explore differences in opinion among officers who completed PME at Air University (i.e., either Air Command and Staff College for IDE or Air War College for SDE) compared with those who completed PME at a school not at Air University (e.g., Army Command and General Staff College) and to those who completed a fellowship program for IDE (e.g., Whitehouse Fellowship). From Figure 4.1 we see that, regardless of which PME they completed, there is general agreement among IDE in-residence graduates that the Air Force's primary purpose is to educate members in the operational and strategic art of war. There is also widespread agreement in the rank order of the Air Force's purposes in sending officers to in-residence PME. These views align with the broad objectives of PME as stated in policy and described in Chapter 2.

Where we observe differences among those who completed different programs for IDE is that a significantly greater percentage of those who completed IDE at a non-AU school ($p < 0.002$) or

in a fellowship program ($p < 0.021$) (see Figure 4.1) ranked preparing students for the staff-/command-level jobs or strategic jobs higher as the Air Force's purpose than did ACSC graduates. A significantly greater percentage of those who completed fellowship programs also ranked creating more well-rounded Air Force officers higher as the Air Force's purpose than did those officers who completed IDE at ACSC ($p < 0.042$) or another school (marginal at $p < 0.086$).

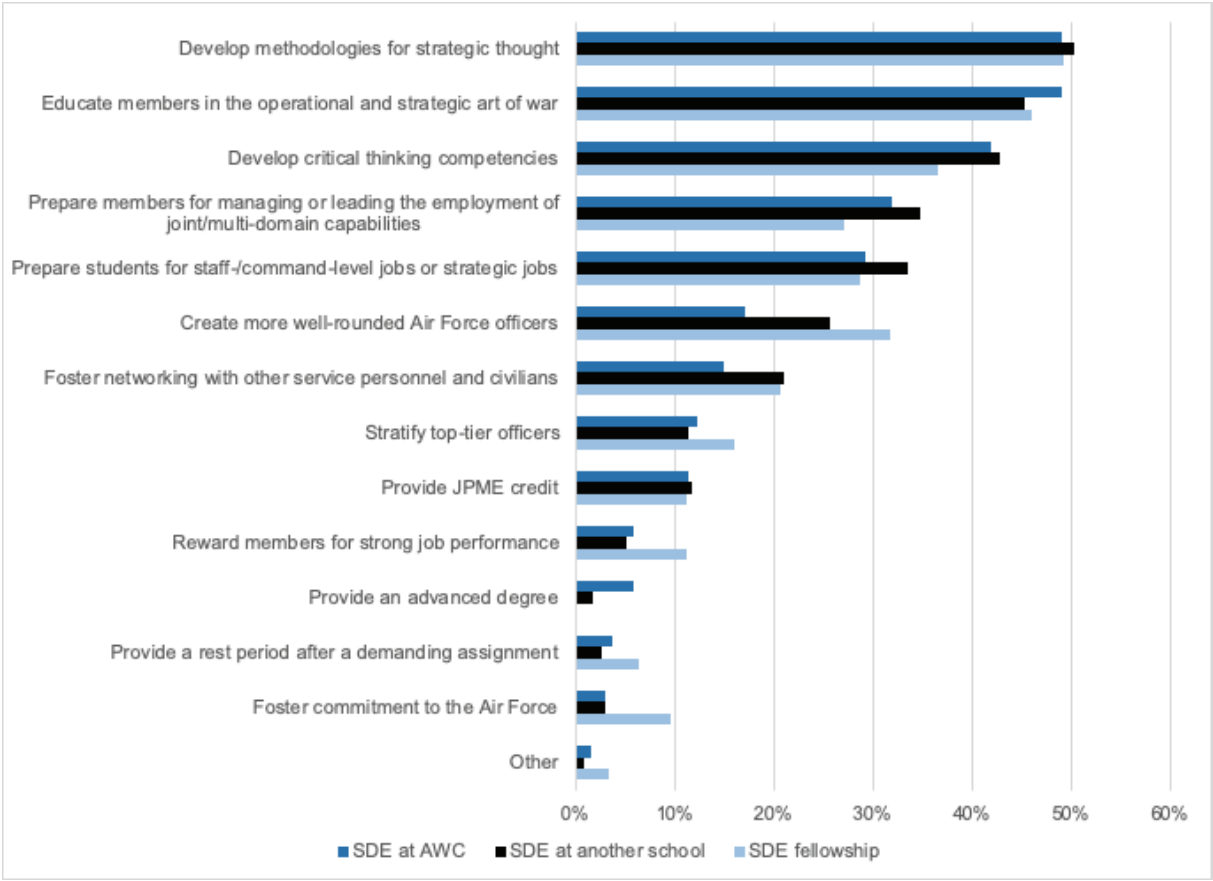
Figure 4.1. From IDE In-Residence Grads: What Do You Think Is the Air Force's Primary Purpose in Providing You with PME?



NOTE: Respondents were asked to rank the above purposes for PME in order of importance. Percentages in the figure represent the percent of survey respondents who ranked each option among their top three in importance. Data are based on survey responses from 805 officers who completed in-residence IDE from academic years 2014 through 2018.

Among those officers who completed SDE (Figure 4.2), there is general agreement in rank order of importance of the Air Force's purpose in sending officers to in-residence SDE. Developing methodologies for strategic thought slightly edges out educating members in the operational and strategic art of war in overall rankings by SDE graduates, but this difference is certainly not significant.

Figure 4.2. From SDE In-Residence Grads: What Do You Think Is the Air Force's Primary Purpose in Providing You with PME?



NOTE: Respondents were asked to rank the above purposes for PME in order of importance. Percentages in the figure represent the percent of survey respondents who ranked each option among their top three in importance. Data are based on survey responses from 417 officers who completed in-residence SDE from academic years 2014 through 2018.

There are also differences between IDE and SDE graduates in their ranking of developing methodologies for strategic thought. Only approximately 30 percent of IDE graduates ranked this option among the top-three purposes they believe the Air Force has for PME while approximately 50 percent of SDE graduates ranked it among the top-three purposes the Air Force has for PME—perhaps a reasonable reflection of the increased level of sophistication expected to be imparted through SDE over IDE.

As shown in Figures 4.1 and 4.2, preparation for subsequent command and staff positions is not necessarily considered to be the primary purpose of PME by either those who completed IDE or SDE. However, as also noted above, officers' views of PME's purpose do adhere to policy guidance. It would be far more concerning were this purpose listed farther down in officers' prioritization.

As shown in Figures 4.1 and 4.2, a small percentage of respondents ranked "other" as an option and provided write-in comments describing other purposes. We received 33 write-in

comments in the IDE schoolhouse survey, nine in the IDE fellowship survey, eight in the SDE schoolhouse survey, and four in the SDE fellowships survey. Some comments elaborated on the purposes shown in the figure, while others introduced other purposes of PME. The most common purpose, present in 17 comments across three surveys, was to stratify top-tier officers, with an emphasis on promotion. An example of this is shown in the following comment:

> "The purpose has been hijacked to flag officers for future promotion."—IDE graduate

While many comments described purposes, the second most common theme was that IDE or SDE did not have a clear purpose. This theme was present in 15 comments, including the following comment:

> "I really struggled to figure out what the purpose of IDE was while I attended."—IDE graduate

The comments described a number of other purposes of IDE and SDE. There were six comments that mentioned increasing knowledge of the Air Force. Four comments focused on educating members in the operational and strategic art of war, four comments focused on creating more well-rounded Air Force officers, and a small number of comments mentioned educating officers in history and foreign policy, developing soft skills, fostering networking, fostering commitment to the Air Force, and providing officers with time away from operational requirements to focus on their education. One other interesting theme that came up in three comments was that the purpose of IDE and SDE is to retain officers through additional service commitments. An example of this is shown in the following comment:

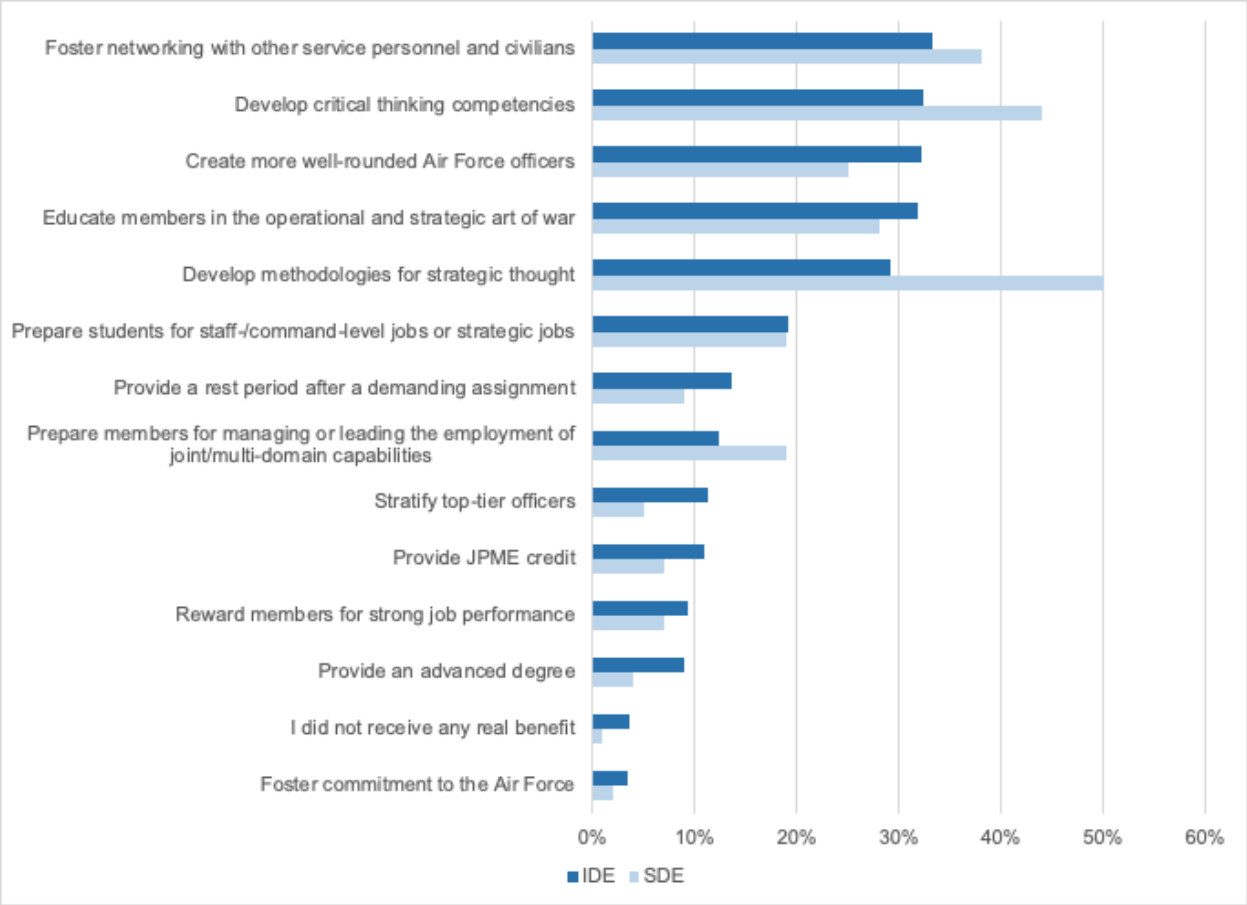
> "Retaining talent by requiring completion for promotion then adding a three-year pay back (or almost five years from the time the officer is selected to attend for promotional advantage)."—SDE graduate

Benefits Received from PME

Figure 4.3 contrasts what IDE and SDE graduates rank as the most important benefits they *received* from PME in-residence, as opposed to what they think the purpose is or should be. Far and away, the majority of SDE graduates rank developing methodologies for strategic thought and developing critical thinking strategies as the most important benefits they received from PME, and a significantly greater percentage of SDE graduates ranked these higher than their IDE counterparts. All graduates ranked fostering networking with other service personnel and civilians as a highly ranked benefit of PME in-residence. Although few chose providing a rest period after a demanding assignment as a highly ranked benefit derived from PME, a significantly greater percentage of rated officers chose this among the highly ranked benefits they received from PME than did nonrated officers (not shown).

In addition to the benefits presented in Figure 4.3 from which respondents could choose, respondents were able to write in "other" benefits of their IDE and SDE experiences. We

Figure 4.3. What Were the Primary Benefits You Received from Your Most Recent PME Experience?



NOTE: Respondents were asked to rank the above benefits they received from PME in order of importance. Percentages in the figure represent the percent of survey respondents who ranked each option among their top three in importance. Data are based on responses from 805 officers who completed in-residence IDE and 417 officers who completed in-residence SDE from academic years 2014 through 2018.

received 44 write-in comments in the IDE schoolhouse survey, 12 in the IDE fellowship survey, 23 in the SDE schoolhouse survey, and five in the SDE fellowship survey. Several comments were related to the original 14 options presented. The most common theme, found in 14 comments across three surveys, related to fostering networking with other service personnel, civilians, international service members, and other Air Force officers. While many comments described specific benefits, the second most common theme was not receiving a benefit at all. This was present in 12 comments across all surveys. An example is shown in the following comment:

> "I asked myself at the completion of ACSC what knowledge I would be walking away with that I did not possess before I walked in the door. After much contemplation and a year in D.C. on Joint Staff, there is very little that I gained, aside from a healthy dose of history lessons that may or may not have applicability to modern warfighting."—IDE graduate

The comments described a number of other benefits. A common theme found in nine comments was being stratified as a top-tier officer. These comments mentioned promotion and checking a box required for advancement. Across all surveys, nine comments related to becoming a more well-rounded officer. Another eight comments across all surveys described gaining foreign language and cultural knowledge. Several other benefits were mentioned to a lesser degree, including exposure to other agencies, policy knowledge, soft skills, critical thinking, and preparation for staff- and command-level jobs.

Some themes were unique to specific surveys. For instance, nine comments from the IDE schoolhouse survey emphasized historical knowledge. Another six comments related to being educated in the operational and strategic art of war. In the SDE schoolhouse survey, two comments focused on knowledge of economics and resource management. Comments from the IDE fellowship survey focused on unique benefits from specific fellowships, including knowledge of the legislative process and nuclear technology. An example is shown in the following comment:

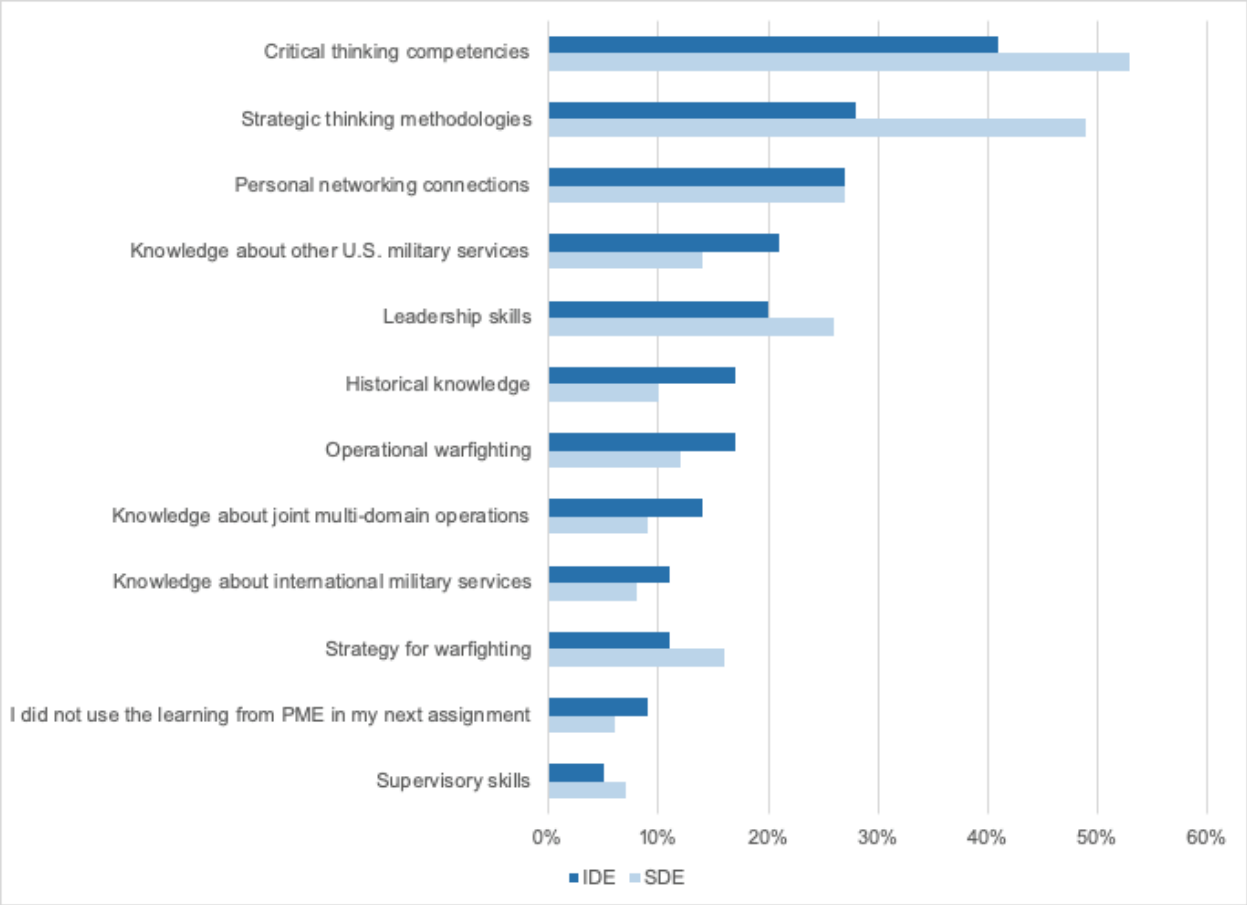
> "Gained an understanding of the historical development of nuclear weapons technologies with an emphasis on applying knowledge to current/future stockpile activities and applications and developing knowledge of U.S. nuclear community for use in issue resolution on behalf of Air Force. Incredible education and experience that greatly improved my skills to help improve U.S. nuclear community."—IDE graduate

We also asked graduates to rank in order of importance the aspects of learning from PME that they used in their next assignment. Figure 4.4 shows these results. The rank orders are the same for IDE and SDE graduates in most cases. However, a significantly higher percentage of SDE graduates ranked critical thinking competencies and strategic thinking methodologies among their top three than did IDE graduates, again perhaps demonstrating increasing levels of sophistication over levels of education.

In addition to the aspects of learning shown in Figure 4.4, some respondents used the write-in "other" option. We received 60 write-in comments in the IDE schoolhouse, 18 in the IDE fellowship survey, 18 in the SDE schoolhouse survey, and 10 in the SDE fellowship survey. While some comments related to the 12 aspects of learning shown in Figure 4.4, the most common theme, present in 24 comments across three of the surveys, was that little to no learning from IDE or SDE was used in the next assignment. However, many comments did introduce aspects of learning that were used in assignments. One common theme, found in 13 comments across all surveys, was knowledge of other federal agencies or entities. Another common theme present in eight comments across three of the surveys was the utility of communication skills gained through PME. An example of this is shown in the following comment:

> "How to communication [sic] about a project with people and organizations who have totally different background from me and know nothing about my project/ area/background."—IDE graduate

Figure 4.4. When You Completed PME, What Aspects of Learning from PME Did You Use in Your Next Assignment?



NOTE: Respondents were asked to rank the above learning they received from PME in order of importance of what they used in their next assignment. Percentages in the figure represent the percent of survey respondents who ranked each option among their top three in importance. Data are based on responses from 805 officers who completed in-residence IDE and 417 officers who completed in-residence SDE from academic years 2014 through 2018.

Some themes were unique to certain surveys. For instance, the IDE schoolhouse comments included an emphasis on operational warfighting, leadership skills, and knowledge of joint/ multi-domain operations. It is interesting to note that several of the IDE schoolhouse comments emphasized the usefulness of the Multi-Domain Operational Strategist (MDOS) program, as seen in the following comment:

> "I was in [MDOS] at ACSC. The multi-domain skills, operational and strategic planning methods that I learned were of great value in my follow-on assignment."—IDE graduate

Perceptions of the Usefulness of PME

We also asked respondents to provide *ratings* on several aspects of the usefulness of their in-residence PME. Given the related nature of these items, we combined them into a seven-item scale for analysis purposes in which *coefficient alpha*[1] was 0.87. Included items were as follows:

To what extent did . . .

- you use knowledge/skills from PME[2] in your next assignment?
- PME prepare you for further career field work?
- PME prepare you for additional leadership or command responsibilities?
- PME provide you with knowledge and skills useful in your Air Force career?
- PME strengthen your Air Force career options?
- PME strengthen your external career options?
- the Air Force place you in your next assignment after PME where you could use your gained knowledge and skills?

We included this scale score as the dependent variable in a multiple regression model, including career field (rated/nonrated) as a control variable because of its importance in career trajectory and the main effects for type of PME (Air Force schoolhouse, other schoolhouse, and fellowship) and education level (IDE/SDE), in order to determine which variables contributed to perceptions of the quality and value of PME in follow-on and later assignments.

Both type of PME and education level made significant contributions to the model. In general, SDE was rated as being of greater value than was IDE. Furthermore, both other schoolhouse and fellowship options were perceived to be of higher value than were AU schoolhouse options.

Figure 4.5 illustrates the differences between ratings of Air Force schoolhouse, other schoolhouse, and fellowship items on the question of whether the officers' next assignment was perceived to utilize knowledge and skills gained from their recent PME. One can see that overall, only a minority indicated they did not use the knowledge and skills gained during PME in their next assignment at all. This also shows that discrepancies between the different PME options are greatest for those who found their studies to be "greatly" useful, with fellowship options clearly taking the lead in perceptions.

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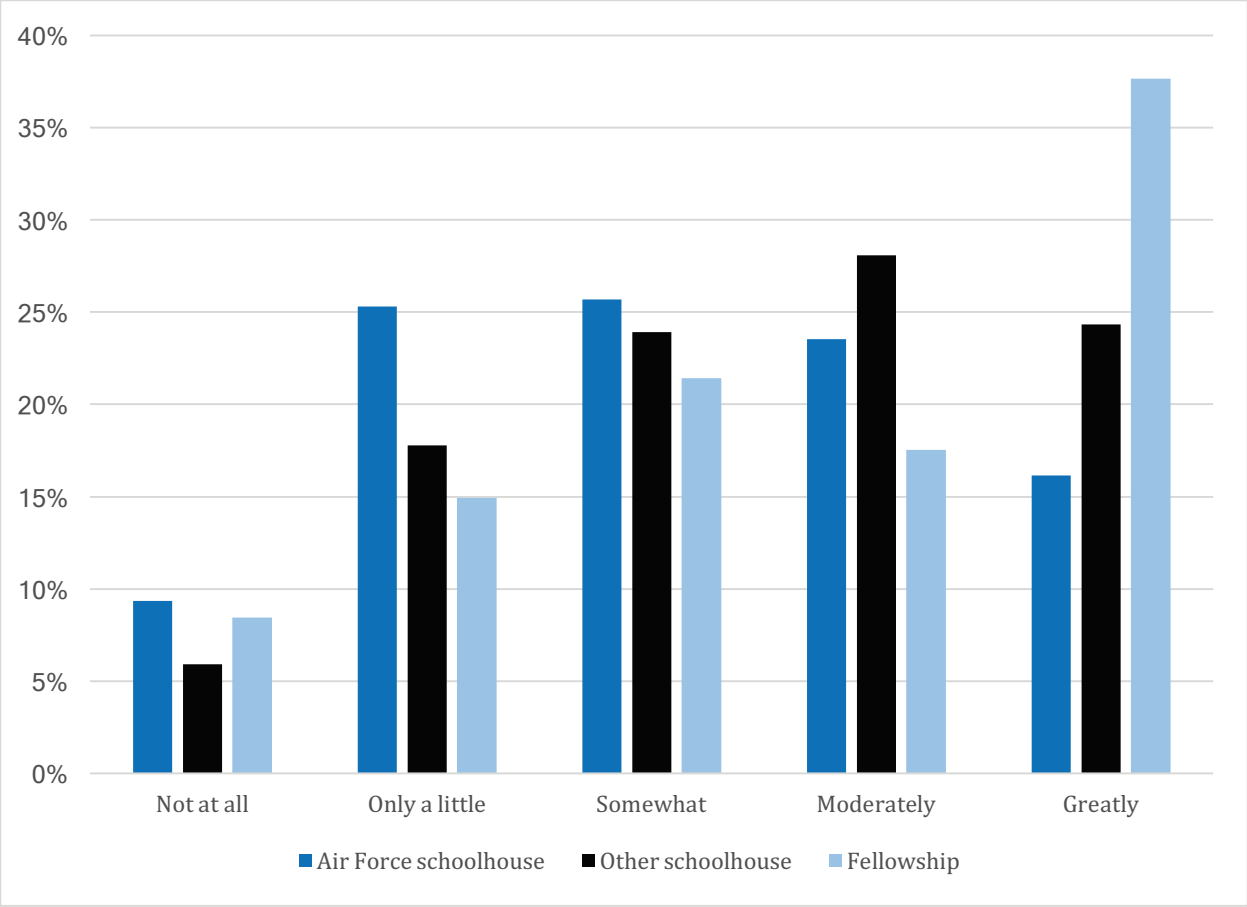
[1] This is a measure that ranges from 0 to 1 that indicates the degree to which the items in a group are actually measuring the same or similar things. A measure of 0.87 is a relatively high value of coefficient alpha, indicating good agreement among the items.

[2] Note that the acronym "PME" was substituted with either "IDE" or "SDE" as appropriate for the respondent.

Figure 4.5. Officer Perceptions Regarding Whether They Used the Knowledge and Skills from PME in Their Next Assignment

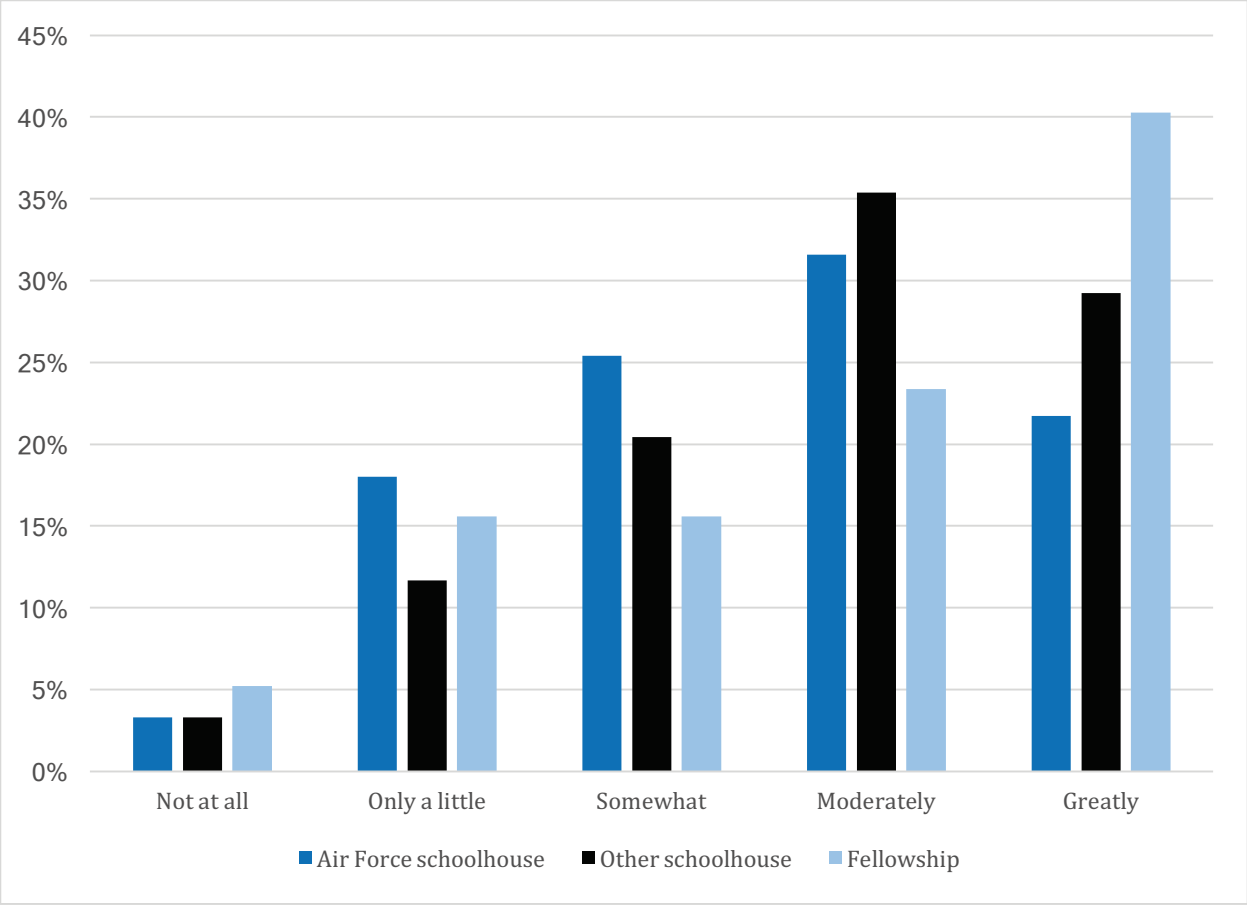


NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,124.

You can further see this trend for perceptions of whether officers found that their PME provided them with knowledge that was useful for their Air Force career, with the discrepancies once again largest for those who found the program they attended to be "greatly" useful (Figure 4.6).

These findings suggest that for the indicators of quality and value of knowledge we assessed, officers perceive greater value in SDE than they do in IDE, which would be expected as SDE is designed to provide similar content at a greater and more strategic level of sophistication. Thus, it appears to achieve this end according to officer perceptions. Moreover, those who attend Air Force options in-residence perceive that their PME is less useful than do those who attend other schoolhouse options in-residence or those who attend in-residence fellowship options.

Figure 4.6. Officer Perceptions Regarding Whether PME Provided Them with Knowledge Useful in Their Air Force Career



NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,125.

The individual items, response options, and average item scores are shown in Appendix C, Table C.1 for IDE and Table C.2 for SDE; all of the included items were given to officers regardless of the type of PME they attended (i.e., whether it was a fellowship or a schoolhouse option, these items were applicable).

Ratings on Structural Quality Elements: Perceptions of Peers, Faculty, and the Extent to Which PME's Objectives Are Met

We also assessed other facets of quality that tapped more structural elements, including ratings of peers and faculty as well as the extent to which PME taught to clear objectives and met those objectives. Because schoolhouse options tended to be more structured than fellowship options, both our questions and in some cases the wording of the items were somewhat different across survey versions, although we tried to align the content and intent as much as possible.

Given the related nature of these items discussed, we combined relevant items into a scale for fellowships (*coefficient alpha* for four items = 0.82) and a scale for schoolhouse options (*coefficient alpha* for seven items = 0.84). Items in the fellowship scale included the following:

- How would you rate the quality . . . of your peers?
- To what extent were objectives made clear to you at your PME?[3]
- To what extent did your PME meet its objectives?
- To what extent did your PME meet objectives important to you personally?

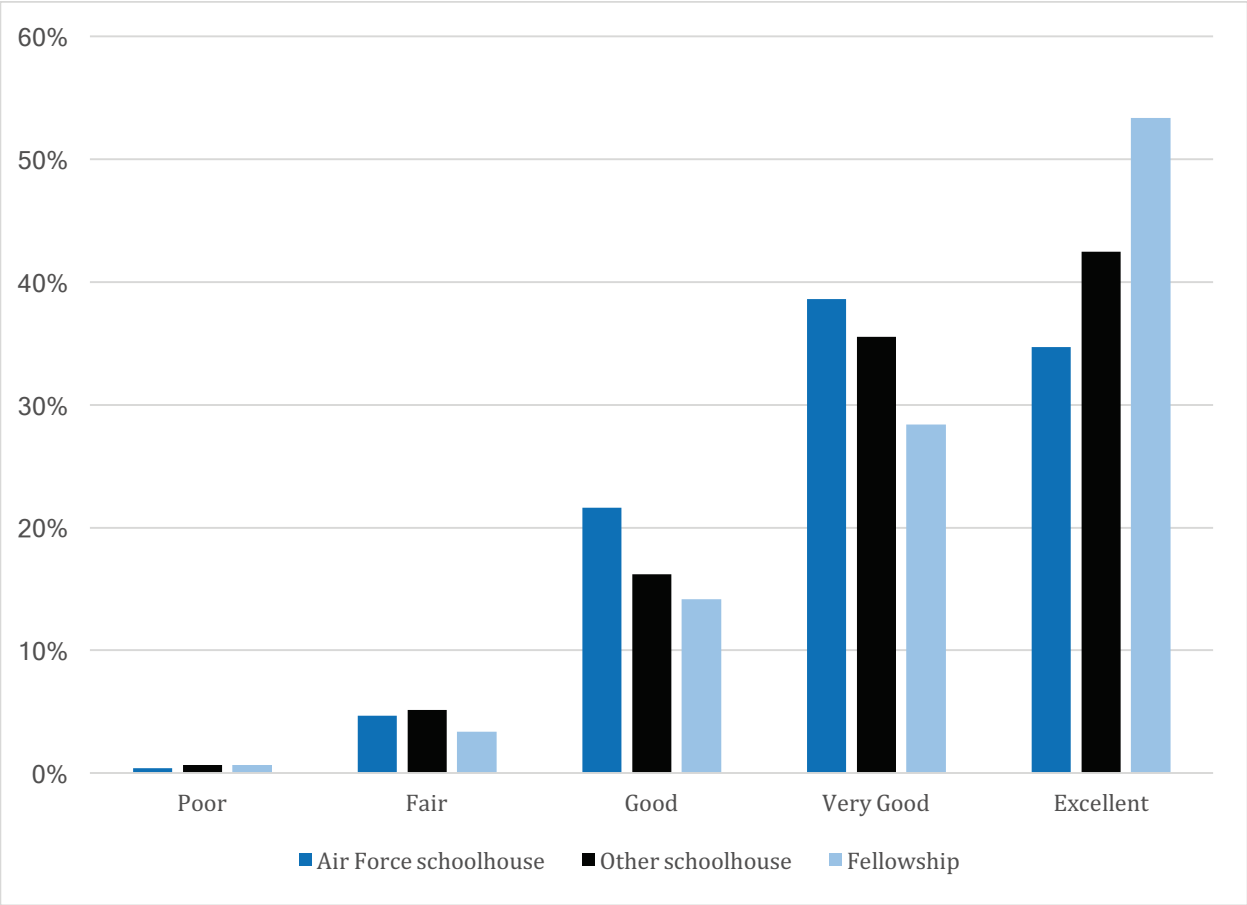
Schoolhouse objectives items were phrased slightly differently, asking about stated *learning* objectives and whether objectives were met. Several other facets of quality were also assessed that were not as relevant in a fellowship context: officers were asked to rate the quality of military faculty, civilian faculty, and guest lecturers, in addition to peers.

We included these scale scores as the dependent variable in separate multiple regression models. For the fellowship scale, we included career field (rated/nonrated) as a control variable and education level as a main effect. For the schoolhouse scale, we included career field as a control variable and the main effects for type of PME (Air Force schoolhouse, other schoolhouse) and education level (IDE/SDE), in order to determine which variables contributed to perceptions of structural quality.

Career field and education level were not associated with ratings of perceived fellowship peer quality and clarity and attainment of educational objectives. However, in the model for the schoolhouse version of the scale, both type of PME (here, a comparison of the AU option with other schoolhouses) and education level made significant contributions. In general, SDE was rated as being of greater quality than IDE and non-AU schoolhouse options were seen as having higher-quality peers, faculty, and lecturers than the AU schoolhouse options. Figure 4.7 displays one of the items in common between the surveys given to fellowship attendees and schoolhouse attendees, regarding perceptions of peer quality. In general, again, officers who attended a fellowship program were the most positive, although the majority of every in-residence group had positive perceptions (i.e., rating them "Very Good" or "Excellent") of their peers' quality regardless of type of PME they attended.

[3] Note that the acronym "PME" was substituted with either "IDE" or "SDE" as appropriate for the respondent.

Figure 4.7. Officer Perceptions Regarding the Quality of the Peers in Their PME

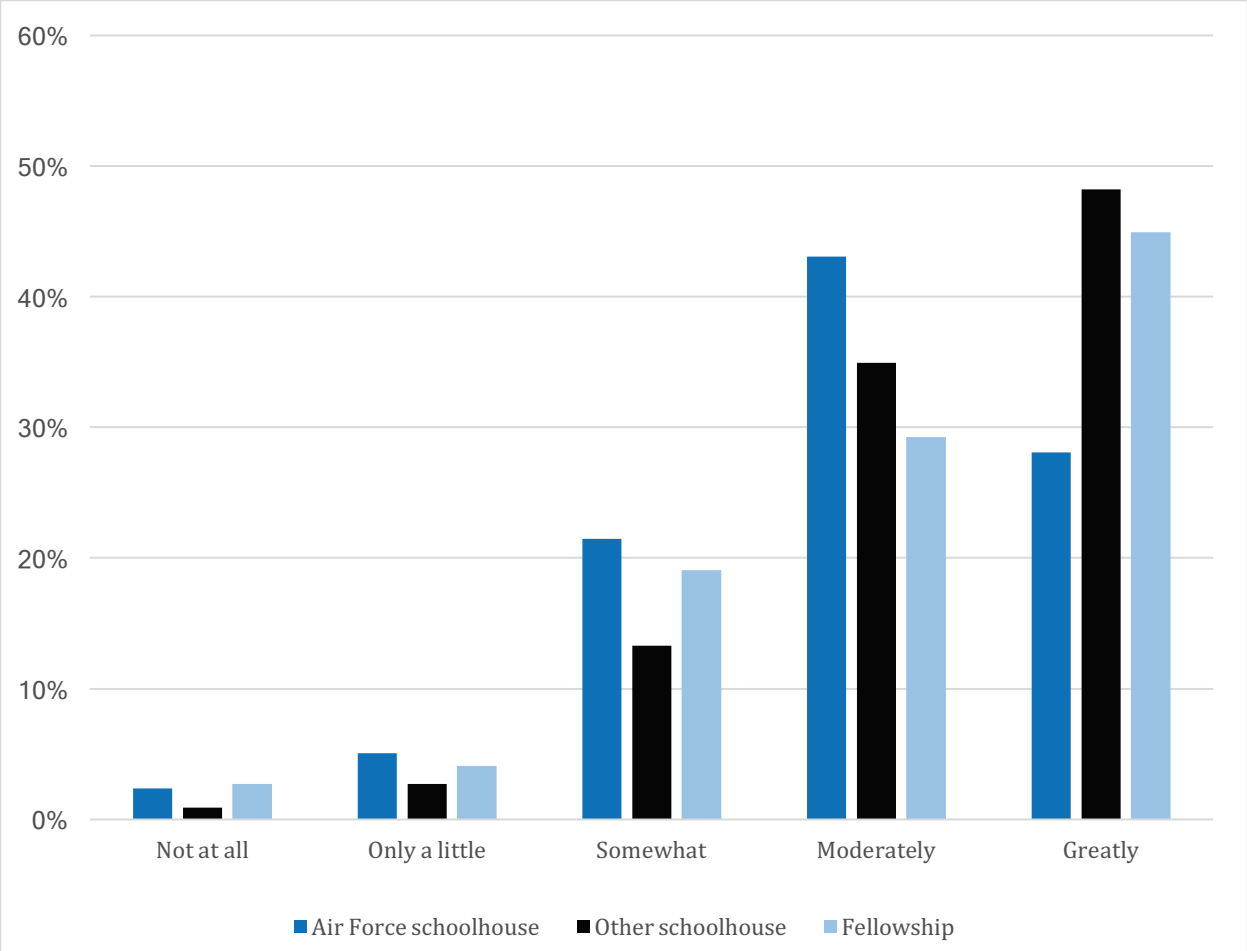


NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,106.

Figure 4.8 displays items that were similar to each other but not exactly identical for fellowship attendees and schoolhouse attendees, regarding perceptions of whether the PME option attended did indeed meet its objectives. For this quality indicator, schoolhouse attendees were generally a bit more positive than fellowship attendees, though given the structural differences in educational context the items themselves were slightly different (i.e., schoolhouse attendees were asked about the "stated learning objectives," whereas fellowship attendees were asked more generally about objectives). Those who attended non-AU schoolhouses were particularly positive in this regard—though, again, few officers were negative, indicating that they found that their PME did meet its objectives moderately or greatly.

The individual items, response options, and average item scores are shown in Appendix C, Table C.3 for fellowships, Table C.4 for IDE at schoolhouses, and Table C.5 for SDE at schoolhouses.

Figure 4.8. Officer Perceptions Regarding Whether Their PME Met Its Objectives (Fellowship) or Its *Stated Learning* Objectives (Schoolhouse)



NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure; fellowship *N* = 147 and schoolhouse *N* = 957.

Perceptions of Key Content: Ratings of Preparation for Joint Work, Independence of Action, and Intellectual Leadership and Military Professionalism

Utility of coursework for career is one aspect of quality; consideration of structural aspects such as clarity of objectives and quality of instructors is another. However, a third related aspect of quality is one that was called out in the 2018 National Defense Strategy's discussion of PME: key content. Thus, we also wanted to assess officers' perceptions regarding the extent to which their professional military education prepared them for independence of action and work in a

joint context and facilitated their professional warfighting capabilities. We therefore asked officers directly to rate the extent to which their PME[4] . . .

- prepared them for further work in a joint environment?
- built trust and interoperability across the Joint Forces and with allied and partner forces?
- emphasized independence of action in warfighting?
- emphasized intellectual leadership and military professionalism in the art and science of warfighting?

These items, closely related in their assessment of important aspects of content, formed a scale (*coefficient alpha* = 0.81 for four items) that we used as the dependent variable in a multivariate regression model including career field (rated/nonrated) as a control variable and the main effects for type of PME (Air Force schoolhouse, other schoolhouse, and fellowship) and education level (IDE/SDE), in order to determine which variables contributed to perceptions of content quality.

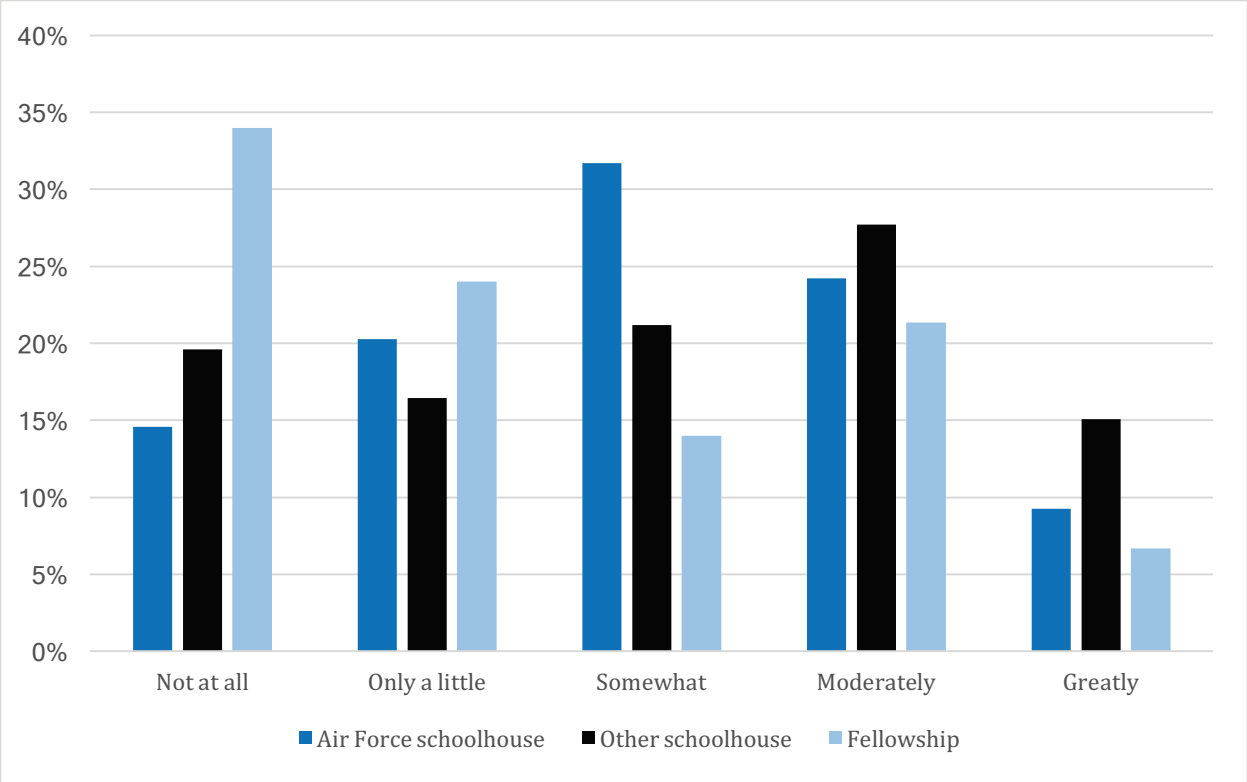
Rated and nonrated officers did not significantly differ in their perceptions, but both type of PME and education level made significant contributions to the model. In general, SDE was rated as being of greater quality than was IDE, following the trend of other analyses. However, while other schoolhouse options were more highly rated than AU schoolhouse options, officers considered fellowship in-residence PME to be poorer preparation in terms of key content areas than were ACSC and AWC. The more structured environment of schoolhouse PME options were preferred in terms of their ability to impart Joint Force preparation. This likely speaks to the control over the course content that Air Force and other schools are able to provide, ensuring a focus on these key aspects of learning highlighted in the National Defense Strategy and more generally in the CJCS Instruction.

Figure 4.9 illustrates the differences between ratings of AU schoolhouse, other schoolhouse, and fellowship items on the question of whether officers' PME emphasizes independence of action in warfighting, which conveys the apparent difficulty in imparting this content—for both structured schoolhouse and more ambiguous fellowship in-residence options. Fellowships fared particularly poorly in officers' estimation with regard to this key content area.

The individual items, response options, and average item scores are shown in Appendix C, Tables C.6 and C.7.

[4] Note that the acronym "PME" was substituted with either "IDE" or "SDE" as appropriate for the respondent.

Figure 4.9. Officer Perceptions Regarding Whether Their PME Emphasized Independence of Action in Warfighting



NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,102.

Respondents' Comments on the Quality of Their PME Experience

As mentioned at the beginning of this chapter, respondents had the option of providing open-ended comments on any PME-related topic before exiting the survey. Analysis of the comments revealed a mix of positive and negative views about the PME experience. Among the 335 comments provided, 82 (24 percent) indicated a positive perspective and 53 (16 percent) indicated a negative perspective.[5] Examples of positive perspectives included the following:

> "I found immense value in my IDE experience. . . . Overall I found my IDE experience very exceptional. I learned a lot about operational and strategic thought. I learned a lot from my international and joint colleagues and I grew in my ability to comprehend joint warfighting. ACSC was exceptional."—IDE graduate

[5] Here and elsewhere in the report, we provide numbers and percentages for the open-ended comments strictly for descriptive purposes. We caution against using these numbers to draw inferences about the entire survey sample or the population of recent PME graduates. The information is meant simply to describe the quantity of responses from those who chose to comment.

> "I felt the AF PME in-residence at the AWC was very valuable. It gave a perspective that I didn't see before. It opened my aperture for strategic environment and thinking by helping me understand the why behind the policy decision made at the national level. The AWC provided great experience, knowledge, and confidence to become a better senior leader."—SDE graduate

On the other hand, the following examples express negative perspectives, showing that there are strong feelings on both sides:

> "I personally believe it was a wasted year and had significant impacts on my family to move for that period of time. It added no value to my five years of command and wish IDE would have provide more preparation for Command specifically."—IDE graduate

> "[I] was very disappointed in the material that was taught and the focus that was given to facts and figures and getting through the slides that the instructors were using."—SDE graduate

Views on the Assignment System

Several items directly assessed officers' perspectives on various aspects of the assignment system, both their understanding of the current system and their opinions of some alternatives. We asked officers to rate, on a scale from 1 ("Not at all") to 5 ("Greatly"), the extent to which they

- understand the current system of assigning Air Force officers to specific in-residence PME[6]
- agree that assigning AF officers to a specific in-residence PME based on random assignment would be fair
- agree that assigning AF officers to a specific in-residence PME based on personal preference and order of merit would be fair
- agree that officers attending both IDE and SDE in-residence should be required to attend one at AU.

Although these items are related in that they tap aspects of assignment system perspectives, they are clearly evaluations of distinct aspects. Hence, we examined each item on its own rather than attempting to form a scale for analysis. Each item was used as a dependent variable in a multivariate regression, including career field (rated/nonrated) as a control variable because its influence on career trajectory and the main effects for type of PME (Air Force schoolhouse, other schoolhouse, and fellowship) and education level (IDE/SDE), in order to determine which variables are related to views of the assignment system.

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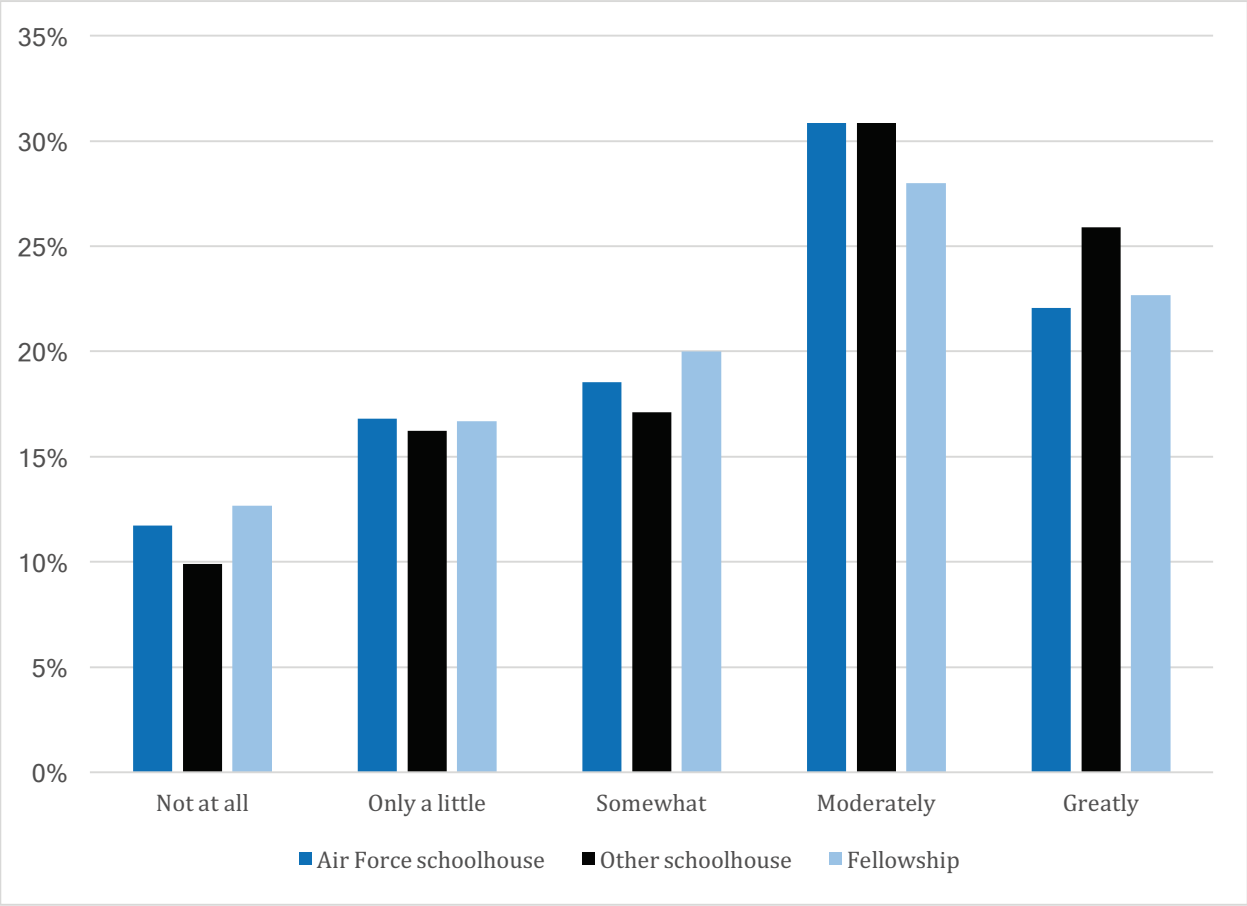
[6] Note this item was not given on the IDE fellowship survey because of administrative error. Also note that the acronym "PME" was substituted with either "IDE" or "SDE" as appropriate for the respondent.

Regarding understanding of the current system, nonrated officers felt that they understood the system significantly better than did rated officers ($p < 0.01$). This raises the possibility that given that rated officers are far more likely to attain general officer rank that may enable them to influence PME and assignment policy, it may be helpful to provide them with more information. More senior officers (those whose most recent education level was SDE rather than IDE) perceived a greater understanding as well. Figure 4.10 shows the similarity of views across education type of understanding the current assignment system, with most officers feeling that they understand the current system moderately well.

Figure 4.10. Extent to Which Officers Understand Current Assignment System



NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,106.

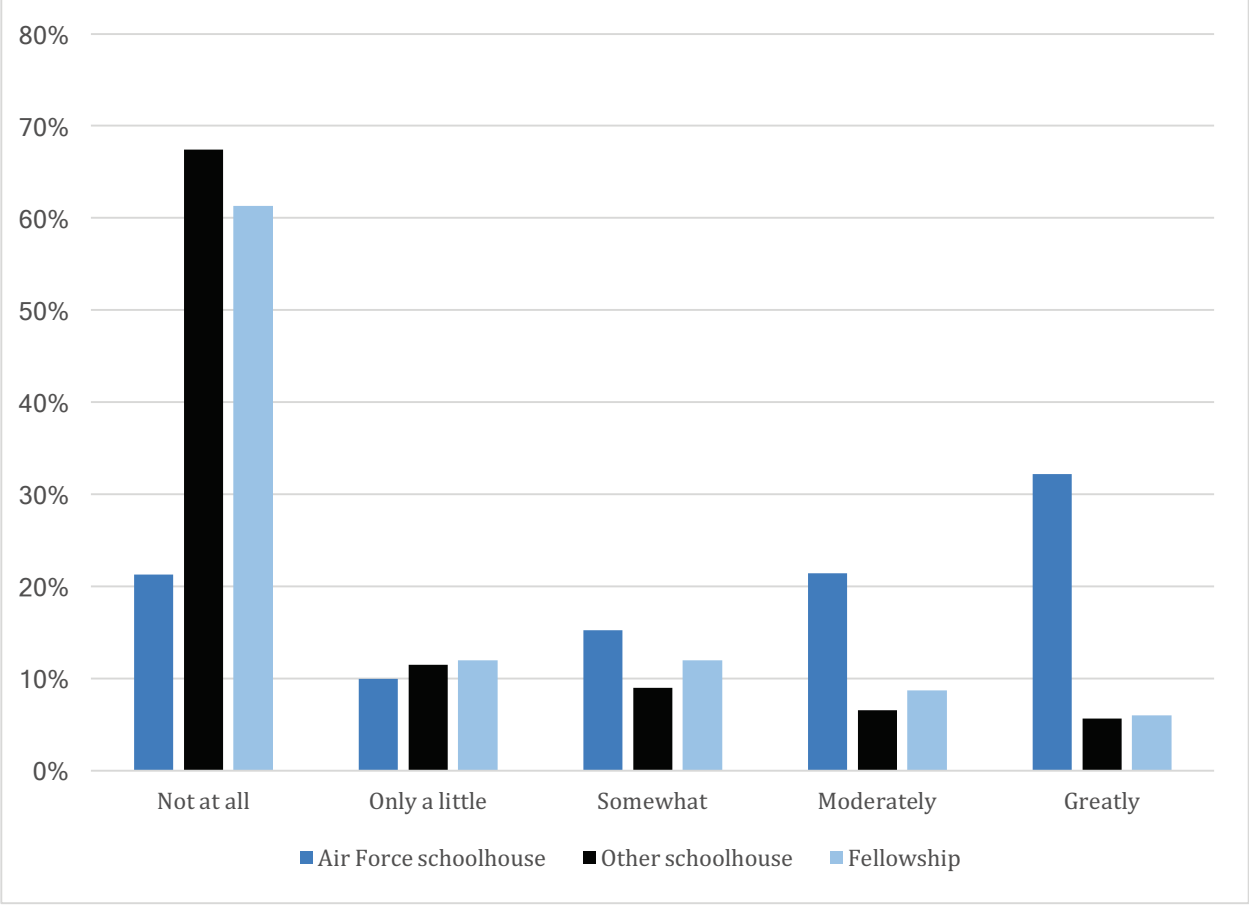
The only significant influence on perceptions of the fairness of random assignment was education type, with other schoolhouse attendees significantly less likely than AU attendees to perceive the system as fair.

The only significant influences on perceptions of the fairness of the current system of assigning officers to PME based on personal preference and order of merit were career field,

with nonrated officers perceiving it as more fair, and education type, with other schoolhouse attendees significantly less likely than AU attendees to perceive the system as fair.

Both education type and education level predicted agreement on the fairness of requiring officers who had two in-residence PME assignments to spend one at AU. More senior officers who had completed their SDE more recently felt that this was more fair than did more junior officers, and officers who had attended their most recent PME at AU felt this requirement was more fair than those whose most recent PME was at other schoolhouse options or with a fellowship. Figure 4.11 shows that many officers, particularly those whose most recent PME was elsewhere, felt that the requirement was not at all fair, and a substantial minority of officers who attended ACSC or AWC felt the requirement would not be fair.

Figure 4.11. Extent to Which Officers Perceive a Requirement That at Least One In-Residence PME at AU Is Fair



NOTE: For illustrative purposes, we have combined officers who recently completed IDE with officers who recently completed SDE for this figure, *N* = 1,108.

The individual items, response options, and average item scores are shown in Appendix C, Table C.8 and C.9.

The comments in the final open-ended comments box that related to this topic provide insight on some respondents' feelings about attending PME located at Maxwell Air Force Base (AFB) in Montgomery, Alabama. Among the 335 who provided open-ended comments of any kind, 31 (9 percent) commented negatively about the location of PME at Maxwell. The following comments are examples:

> "I will only put schools not at Maxwell, and if I get Maxwell, I will decline SDE."—IDE graduate
>
> "I've seen the decision to attend IDE/SDE at Maxwell be destructive to families who know they need the member to attend the school, but whose families refuse to accompany them due to the location. I would opt to quit the Air Force rather than choosing to move to Montgomery, Alabama."—IDE graduate
>
> "I attended ACSC in-residence at Maxwell, and [comment redacted for privacy]. I would have declined school if I had been chosen for AWC. Montgomery, Alabama is a terrible place to live, and the AF will continue to have problems filling AWC slots, simply because of that."—SDE graduate
>
> "I feel, based on discussions with fellow SDE graduates, that AWC has trouble attracting high caliber faculty, guest speakers, and students due to its location in Montgomery, Alabama."—SDE graduate

Again, among the 335 who provided comments of any kind, 15 (4 percent) expressed concerns about school quality in the area around Maxwell AFB. Two examples are as follows:

> "Air Force senior leaders need to understand that the quality of life in the Montgomery, Alabama, area is significantly worse than most places around the U.S., specifically with the Montgomery County Public School System. This is a huge problem for officers that move their families to the Montgomery area and ends up seriously hindering children academically for years after the IDE assignment. If I had known about how poor the schools were in Montgomery, I would have never even considered IDE in-residence."—IDE graduate
>
> "The quality of schools in Montgomery and Prattville are awful and the primary reasons most don't want to attend IDE and SDE in AU. Please consider moving AU and any other one-year schools away from Maxwell AFB to a location with decent schools. Unless you can get congressional legislation to provide funding for private schools for all military families living in the area. They are the worst public schools of anywhere we've lived in 21 years."—SDE graduate

Factors Affecting Choice of a PME Program

Although the specific PME that an officer attends is the result of input from several sources, including ranking by a central board process and allocation of seats that takes into account the needs of career fields, eligible officers are given the opportunity to express their preference for a specific PME program. The survey asked, "What factors affected the choices of PME that you

requested?" Table 4.1 summarizes the results of the survey for that question. We categorized survey respondents according to whether they completed IDE or SDE at ACSC or AWC, another school (e.g., Army War College), or in a fellowship program. From this table we conclude the following:

- IDE and SDE graduates differ in the importance they attach to perception of quality in their choice of PME.
- Perception of quality is most important in the choice of PME for SDE graduates, followed by personal preference and the prestige of the specific PME.
- Perception of quality and personal preference are somewhat equally important for IDE graduates, except for those who attended a non-AU school, where personal preference was more important.
- Family preference was chosen as less important by IDE fellow grads relative to other PME graduates.

In addition to the factors listed in Table 4.1, some respondents used the write-in option to describe other factors affecting their choice of PME. We received 139 write-in comments in the IDE schoolhouse survey, 26 in the IDE fellowship survey, 78 in the SDE schoolhouse survey, and nine in the SDE fellowship survey. While many purposes related to the factors listed in the table, the most common theme was that there was little choice or that preferences for PME were not taken into account. This was common in 100 comments across all four surveys. An example is present in the following comment:

> "My preferences did not matter. I wasted my time in requesting sister service schools. My career field manager made a choice to only send one member to a sister service command and staff college because they found that the AF would not recognize DG foremother services. This information was not actually given to any of us at the time of application."—IDE graduate

Another common theme was location, which was present in 46 comments across four surveys. Many of these comments expressed negative attitudes toward attending a program at Maxwell AFB. The following comment expresses these sentiments:

> "The factor that most affected the choices of IDE I requested was location. I absolutely did not want to go to IDE at Maxwell AFB. . . . I absolutely don't want to go to SDE if I am selected to go to Maxwell AFB, Alabama. The schools and community remind me of several third world countries where I have been deployed."—IDE graduate

A common theme present in 25 comments across three surveys was an interest in a non–Air Force experience. The following comment is an example:

> "To experience something other than the Air Force view, and/or to be challenged by civilian academia or industry because I see a need for senior military leaders to understand that side of national military strategy or national interest."—SDE graduate

Several other factors were described in the comments. There were 20 comments related to the quality of the education experience. Many comments focused on how a program influenced one's future. For instance, 20 comments related to specific opportunities in the future, including follow-on assignments and other career opportunities. Another 17 comments focused on the perception of a program's influence on one's career, with some focusing on specific career fields and others focusing more generally on their career in the Air Force. Several other themes appeared to a lesser extent. There were 15 comments related to personal preferences, 14 comments related to family preferences, 12 comments specifically focused on opportunities for military spouses, seven comments relating to prestige associated with the educational offering, five comments about receiving an advanced degree, three comments focusing on advice from senior raters, three comments related to advice from friends or mentors, and three comments based on a supervisor's recommendation. Some comments regarding advice from others described officers facing pressure to list AF options, even if those were not their preference. The following comment is an example:

> "Even though I was a board select officer, I was ordered by my senior rater to include ACSC among my choices as a condition of his endorsement."—IDE graduate

Table 4.1. What Factors Affected the Choices of IDE or SDE That You Requested?

Factors Affecting Choice of PME	Program Attended					
	IDE at ACSC (percentage)	IDE at Another School (percentage)	IDE Fellowship (percentage)	SDE at AWC (percentage)	SDE at Another School (percentage)	SDE Fellowship (percentage)
My perception of the quality of the experience	35	36	38	32	51	56
My personal preferences	36	46	35	34	38	33
My family's preferences	29	38	17	29	28	25
Advice from friends or mentors other than my supervisor	26	30	28	23	26	21
Prestige associated with the educational offering	22	21	28	21	36	35
Advice from my senior rater	28	24	16	21	23	14
Advice from peers	14	11	8	9	12	2
My supervisor's recommendation	15	9	9	8	8	0
My peers' perception of the educational experience	8	4	4	6	8	8
Advice from a personnel list	1	1	0	0	0	0
Commander's call topics information	0	0	1	1	0	0

NOTE: Respondents were asked to rank the above factors affecting their choice of PME in order of importance to them. Percentages represent the percent of survey respondents who ranked each option among their top three in importance. Data are based on responses from 805 officers who completed in-residence IDE and 417 officers who completed in-residence SDE from academic years 2014 through 2018.

What Programs Do PME Graduates Consider to Be of the Highest Quality?

Because perceptions of quality are important to Air Force officers in the choice of PME program, we provided a list of PME programs in the survey and asked respondents to rank programs based on their perceptions of quality. Specifically, we asked, "Which PME programs did you consider to be the highest quality based on information available to you when you filled out your list of desired PME programs?" We limit the results we display in the tables below to programs for which at least 5 percent of IDE or SDE respondents ranked the program in their top three in terms of quality. It is clear from Tables 4.2 and 4.3 that, when asked, officers tend to rank programs other than those at AU more highly. Specifically, over a quarter of officers recently completing IDE consistently ranked the White House Fellowship and the Air Force Legislative Fellowship among their top three, regardless of the program they attended themselves.

Table 4.2. Which IDE Programs Did You Consider to Be the Highest Quality Based on Information Available to You When You Filled Out Your List of Desired IDE Programs?

	IDE Program Attended			
IDE Program	IDE at ACSC	IDE at Another School	IDE Fellowship	Overall
White House Fellowship	28	30	26	28
Air Force Legislative Fellowship	26	28	27	27
Olmsted Scholarship	16	16	15	16
Legislative Fellowship	17	14	11	15
Air Force Strategic Policy Fellowship	12	10	13	11
Naval Command and Staff College	10	13	6	10
Air Command and Staff College (ACSC)	11	3	9	8
Naval Postgraduate School (NPS) Master's Program	8	5	13	8
CSAF Master's Programs	7	6	6	7
Defense Advanced Research Program Agency Fellowship	6	5	9	6
McConn Public Policy Fellowship	7	5	8	6
Air Force Institute of Technology (AFIT) Ph.D. Programs	5	5	4	5
Army Command and General Staff College	3	9	6	5
National Intelligence University	5	6	2	5
Strategic Policy Intern	5	6	5	5

NOTE: Respondents were asked to rank all available IDE school and fellowship programs for quality. Percentages represent the percent of survey respondents who ranked each program among their top three in quality. Only those programs that had a minimum of 5 percent of respondents rating it among their top three are included in the table. Data are based on responses from 805 officers who completed in-residence IDE from academic years 2014 through 2018.

Table 4.3. Which SDE Programs Did You Consider to Be the Highest Quality Based on Information Available to You When You Filled Out Your List of Desired SDE Programs?

	SDE Program Attended			
SDE Program	SDE at AWC	SDE at Another School	SDE Fellowship	Overall
National War College	48	49	17	44
Harvard National Security Fellowship	30	35	38	34
Dwight D. Eisenhower School	33	32	16	30
White House Fellowship	20	24	24	23
National Security Fellowship at JFK School of Gov	16	17	17	17
Hoover Institution on War Revolution and Peace at Stanford	9	14	14	12
SECDEF Corporate Fellowship	7	14	13	12
Air War College	13	5	2	7
National Defense Fellowship	9	5	11	7
Fletcher School of Law and Diplomacy Fellowship National Defense Fellowship (NDF)	1	8	5	5
George C. Marshall Center for Security	8	3	3	5
RAND Fellowships	4	5	6	5

NOTE: Respondents were asked to rank all available SDE school and fellowship programs for quality. Percentages represent the percent of survey respondents who ranked each program among their top three in quality. Only those programs that had a minimum of 5 percent of respondents rating it among their top three are included in the table. Data are based on responses from 417 officers who completed in-residence SDE from academic years 2014 through 2018.

For SDE options, programs such as the National War College and the Harvard National Security Fellowship were preferred, although overall 7 percent of officers recently completing SDE indicated that AWC was one of their top-three highest-rated programs in terms of quality.

Of the 335 open-ended comments provided, 26 (8 percent) addressed perceptions of the Air Force PME school's quality or ranking. The following comments from respondents provide insight to the findings in Tables 4.2 and 4.3:

> "There is certainly a perception that Air War College is at the bottom of all schools in terms of promotion impact."—SDE graduate

> "AWC is working hard to reverse the perception that it's a second-tier SDE institution, but when the vast majority of general officers come from Eisenhower or NWC [National War College], it's tough to argue that we're on the same level."—SDE graduate

> "Currently Air War College is the bottom of the rung for AF officers; the future three and four stars of the Air Force are not going to Maxwell—they are in fellowships, national, or sister schools. And maybe this is okay!"—SDE graduate

Additional Data and Explanations for the Observed Imbalance in Program Assignment

Tables 4.2 and 4.3 indicate that recent graduates of in-residence PME rank fellowship programs and two school programs (Naval Command and Staff College and National War College) higher in quality than the Air Force offerings of ACSC and AWC. It is possible that the imbalance of specific program assignments (i.e., a smaller proportion of officers with higher central developmental education board ranks are assigned to AU than those with lower ranks) indicates a similar overall view of program quality by a significant number of senior Air Force officers—those who sit as members of development teams. We describe our reasoning here.

As noted earlier, the school match board process for matching officers to PME programs is relatively, though not completely, a mechanical one. Its overarching goal is to maximize the assignment of officers to what the DTs have identified as the highest-priority program possible for each officer, given the availability of seats. The extent to which the school match board succeeds is tracked and reported. For example, for school year 2018, 60 percent of IDE in-residence assignments were to the first-priority vector from the DTs. An additional 20 percent of IDE in-residence assignments were to the second-priority vector. Only 5 percent were given assignments that did not match a vector from the relevant DT. For SDE in-residence assignments, these numbers are 53 percent, 23 percent, and 11 percent, respectively. Because the process of the school match board is largely mechanical, the assignments given are essentially instantiating the will of the DTs, so it is not the school match board that is responsible for the imbalance in PME assignments.

Although the DTs have information available to them about each officer's desires and comments from the officer's senior rater, each DT is the final arbiter of setting the priority list of specific PME programs for each officer. The DTs include a general officer and colonels from across the Air Force that represent the different Air Force major commands. As a result, it can be argued that the priority ordering of vectors by the DTs, by definition, represents the views of a sizable number of senior Air Force officers.

We did not have data showing the complete vectors that were given to officers by their DTs. However, the results of the school match process provide clues to what was in the vectors. For IDE in school year 2018, among the 21 top designees, one from each DT, 16 were assigned to an in-residence program that matched their first-priority vector and only two of these 16 were assigned to an ACSC program at AU. The choice by the DTs of their number-one designees also reflects top ranking by the central developmental education board. The average central developmental education board rank for the number-one designees from the DTs was 70. From this, we can conclude that DTs tended not to give AU as a first-priority vector to their top designees. On the other hand, of the 21 last designees, again one from each DT, 12 were given a first-priority vector to an ACSC program at AU. The average central developmental education board rank for

the 21 last designees was 658. From these results, we can conclude that DTs tend to rank an AU program as the highest priority for the last designee on their list.

Looking at the overall outcomes of the assignment process to SDE PME programs for school year 2018, we note that for those in the top 50 percent of central developmental education board ranks, only 3 percent were assigned to AWC while 24 percent were assigned to the National War College and almost 12 percent were assigned to the Naval War College. Among those in the bottom 50 percent of central developmental education board ranks, 56 percent were assigned to AWC.

Together, these results show the imbalance in assignment of officers to PME programs that has raised concern. The system, in which DTs are the final arbiter, does not send the best of the best Air Force officers to AU for PME. However, it should also be clearly recognized that the observed imbalance is between the absolute best of the very best and the best of the very best Air Force officers.

The reasons for these outcomes cannot be discerned with any certainty from either the ratings of program quality by recent PME graduates, the vectors given by the DTs, or by an examination of the final outcomes of the selection and assignment process for in-residence PME. Alternative explanations exist, and it is most likely that the imbalance exists for some combination of them. One possible reason is that individual Air Force officers and the Air Force writ large simply do not value the Air Force's own PME programs as highly as they do programs outside of the Air Force. Another is that it is because of stated concerns about the quality of schools and the lack of spouse employment opportunities associated with the location of AU at Maxwell AFB in Montgomery, Alabama. For example, a story from December 2018 in a local newspaper, the *Montgomery Advertiser*, reporting on a "newly formed public education-focused working group at Maxwell Air Force Base," stated:

> About 56 percent of airmen in last year's Air War College came to Montgomery without their families, said [LtGen Anthony] Cotton, the commander and president of Air University at Maxwell Air Base. Schools were the No. 1 reason given in surveys to find out why they spent the time apart. (Johnson, 2018)

Finally, some may consider the choice to send officers elsewhere more likely to position these top-rated officers to become future general officers. However, in the end it is difficult to tease out the factors causing the imbalance in specific program assignments.

Factors That Affect the Decision to Bring Family During PME

Overall, an examination of officers who had family members revealed that, on average, they indicated that the length of PME made them no more and no less inclined to bring their family with them (mean = 2.03, where 2 corresponds to a rating of "did not influence my decision"). As this was discussed as a particular issue for officers anticipating in-residence PME at AU, we examined it further. We examined a series of models using each item as a dependent variable and including control variables such as AFSC (rated/nonrated), gender, and race/ethnicity. We then

entered our main effects predictors for type of PME (Air Force schoolhouse, other schoolhouse, and fellowship) and education level (IDE/SDE). With the exception of the influence of length of PME on the decision to bring family along, in which officers attending SDE were less likely to bring their families, a distinction between education level was not significant and we combined IDE and SDE attendees in the following discussion. For all variables relating to bringing a family, including length of PME, officers attending AU schoolhouse options were likely to say that each factor influenced them in such a way that they were significantly less likely to bring their families than those at other school options (means range from 1.41 to 1.94 for AU schoolhouse options, 1.93 to 2.35 for other IDE schoolhouse options, and 1.85 to 2.20 for fellowship options). The difference, although significant, was smaller for length of PME than it was for some others (ACSC mean = 1.984, other IDE school options mean = 2.12, and fellowship mean = 2.10). The most extreme discrepancy was for "school quality": those attending ACSC were likely to indicate that this factor made them less likely to bring their children (mean = 1.41) in comparison to those attending other school options (mean = 2.35) or fellowship options (mean = 2.16); this difference was significant at $p < 0.01$.

The factors related to bringing a family, represented by individual items, were interrelated (coefficient alpha = 0.71 for five items) and hence combined into a scale score used as a predictor for the dependent variable of whether or not officers brought their family with them to their in-residence PME in a multivariate logistic regression. The first set of variables included control variables such as AFSC (rated/nonrated), gender, and race/ethnicity. We then entered our main effects predictors, for type of PME (Air Force schoolhouse, other schoolhouse, and fellowship) and education level (IDE/SDE), in order to determine if these variables contributed, and then entered the scale score for location factors. The demographic control variables made a significant contribution to the model, driven by gender such that men were more likely to bring their family with them than women (odds ratio = 3.49). Neither type of education nor level of education made a significant contribution to the model ($p > 0.01$) but, as would be hoped, factors affecting choice of whether to bring family did make a significant contribution to model fit.

The surveys also allowed respondents to write in another factor that influenced their decision to bring their family. We received 162 write-in comments in the IDE survey, 18 write-in comments in the IDE fellowship survey, 81 comments in the SDE schoolhouse survey, and 10 comments in the SDE fellowship survey. The most common theme related to opportunities for spouses in the military. This theme was present in 56 comments across all four surveys. Some comments dealt with spouses who were also attending IDE, while others were focused on other assignment opportunities.

Another common theme was location, present in 31 comments across three of the surveys. Many comments expressed negative attitudes toward IDE programs at AU because of location. Some excerpts showing this sentiment include "not Maxwell AFB" and "attending IDE anywhere but Maxwell AFB, Alabama." There were certain aspects of location that made officers more likely to bring their family. These included not having to move at all, which was described in 13 comments, and going to a program that was in close proximity to family, which

was described in ten comments. Eight of the location-focused comments emphasized cultural aspects, which exemplified in the following comment:

> "Racist/misogynistic attitudes of SDE location made me want to leave my family at home."—SDE graduate

One common theme was the importance of keeping family together no matter the circumstances. This was present in 29 comments across three surveys. Related to this, 17 comments mentioned that IDE and SDE allowed them to spend more time with family than other assignments or deployments allow.

Length of stay was another common factor, mentioned in 15 comments. Many comments mentioned that the one-year programs are a challenge for families. Consider the following comment:

> "The short one-year tour made it tough to uproot my family two summers in a row and is why I won't want to do it again. It's tough on military families to pull one-year assignments."—IDE graduate

Related to this, 18 comments focused on the availability of local follow-on assignments as positively influencing their decision to bring family. A number of other factors appeared to a lesser degree and are not covered here.

Aspects of IDE or SDE That Officers Would Like to See Improved

We asked explicitly what aspects of PME[7] needed improvement and provided the following list of options:

- Level of engagement (fellowship survey only)
- Level of responsibility (fellowship survey only)
- Course content (schoolhouse survey only)
- Instructor quality (schoolhouse survey only)
- Post-PME assignment matching
- Shorter length
- Longer Length
- Location
- Other

For officers who completed either IDE or SDE, among common items, the most frequently chosen aspect to improve was "post-PME assignment matching," with 34 to 51 percent of each PME group picking this option among their top-three choices (see Tables 4.4 and 4.5). For schoolhouse options, another priority was course content, with over 32 percent of IDE

[7] Note that the acronym "PME" was substituted with either "IDE" or "SDE" as appropriate for the respondent.

Table 4.4. What Aspects of IDE Would You Like to See Improved (Fellowships)?

Aspect Needing Improvement	Program Attended	
	IDE Fellowship (percentage)	SDE Fellowship (percentage)
Post-PME assignment matching/utilization	51	51
Level of responsibility: appropriate use of member's competencies in fellowship activities	29	33
Selection process for students	22	24
Location	19	14
Level of engagement: availability of opportunities to contribute	17	22
Other	17	14
No improvements are necessary	7	16
Length (shorter)	6	3
Length (longer)	5	3

NOTE: Respondents were asked to rank in order of importance the aspects of PME (IDE or SDE) they would like to see improved. Percentages represent the percent of survey respondents who ranked each aspect needing improvement among their top three in importance. Data are based on responses from 127 officers who completed an in-residence IDE fellowship program and 63 officers who completed an in-residence SDE fellowship program from academic years 2014 through 2018.

Table 4.5. What Aspects of IDE Would You Like to See Improved (Schools)?

Aspect Needing Improvement	Program Attended			
	IDE at ACSC	IDE at Another School	SDE at AWC	SDE at Another School
Course content	52	41	43	32
Post-IDE assignment matching/utilization	34	45	38	44
Selection process for students	30	33	28	17
Instructor quality	34	19	23	22
Location	27	22	29	17
Other	17	16	16	17
No improvements are necessary	7	14	13	23
Length (shorter)	4	3	2	3
Length (longer)	3	4	1	4

NOTE: Respondents were asked to rank in order of importance the aspects of PME (IDE or SDE) they would like to see improved. Percentages represent the percent of survey respondents who ranked each aspect needing improvement among their top three in importance. Data are based on responses from 460 officers who completed ACSC in-residence, 283 who completed another IDE school in-residence, 141 who completed AWC in-residence, and 239 who completed another SDE school in-residence from academic years 2014 through 2018.

officers choosing this as one of their priorities. A much larger 52 percent of ACSC graduates ranked improvements in course content among the top-three most important desired improvements. A similar pattern was observed among SDE schoolhouse graduates, with 43 percent of AWC graduates ranking course content as one of their top-three most important

improvements desired, compared with 32 percent of officers who completed SDE in another schoolhouse.

In contrast, among officers sent to fellowships, the second most frequently chosen priority for change was "level of responsibility," the choice of 29.1 percent of IDE fellowship attendees and 33.3 percent of SDE fellowship attendees. In no case was a change in length of PME chosen as a frequent priority; less than 5 percent of officers selected this as an important aspect of PME to change in terms of one of their top-three priorities; these options were in fact marked as any part of a prioritized list even less commonly than "other."

In addition to the options listed above, respondents could use the write-in "other" option. We received 153 write-in comments in the IDE schoolhouse survey, 26 in the IDE fellowship survey, 82 in the SDE schoolhouse survey, and 10 in the SDE fellowship survey. The most common theme, present in 61 comments across all surveys, was improvements to course content. An example of this is shared in the following comment:

> "Change the name or change the content so the name and content reflect what the school is producing. It's called Air Command and Staff College but the focus was not on preparing officers to command an organization. You could tie the historical knowledge and ops planning to staff work but I believe in-res[idence] ACSC should be placed in positions where they are helping with strategic-level decisions requiring an understanding of military history, political science, military planning."—IDE graduate

The second most common area of improvement was the selection process for students, with 56 comments across all four surveys. The following comment is an example:

> "The process for selection seems to be quite an unknown publicly. Transparency in this process would serve members by preventing them from wasting time applying to programs of which there is zero chance their career field will allow them to attend."—IDE graduate

The comments revealed several other areas of improvement. One common theme was the need to improve post-assignment matching and utilization, which was present in 28 comments across all four surveys. As mentioned in 28 comments, too much focus was put on the advanced-degree requirements of IDE and SDE. There were 26 comments, mainly in the schoolhouse surveys, that focused on improvements to instructor quality. These mainly focused on improvements to the quality of military instructors and not civilian instructors. Another common theme was location, with 23 comments, again mainly from the schoolhouse surveys. As an example, consider the following comment:

> "Regarding location, the likelihood of relocating ACSC is extremely low. However, improving the existing location by aggressively partnering with state and local leaders in Montgomery and broader Alabama to drive and bolster quality dependent education options and spouse employment opportunities would drastically improve members' willingness to relocate their families and attend in-res IDE."—IDE graduate

Also specific to the schoolhouse surveys, 22 comments mentioned the workload and academic rigor. While the majority of these comments focused on decreasing the workload, some felt that it should be increased, and others noted that the workload can vary considerably depending on the program.

A number of themes were present to lesser degrees. There were five comments asking for more career-specific content and five comments focused on more real-world applications; 13 comments described improving the quality of students, ten comments were about changing or removing the distinguished graduate program, and seven comments asked for more opportunities in other sectors. There were six comments about reducing the length of programs, six comments about providing opportunities for pilots to stay qualified, six comments focused on the JPME requirements, four comments on changing or reducing the service commitments, and four comments on better preparing and supporting students who are in non-AF programs.

Last, there were 15 comments that proposed major changes to IDE and SDE. Some ideas included changing the location of AU, creating one joint school for all services, moving more programs to civilian institutions, and changing the structure of the program to shorter modules. The following comments provide some examples of these ideas:

> "Developmental education should be continuous professional development, which addresses commensurate core competencies gained at/by certain grades. This can be a combination of both distance and in-residence learning—however should not be disparate. Additionally, special skill courses (i.e., joint planning, command, program and budgeting) should be available as continual learning that can/should be taken before moving to the next position and be mission dependent/ relevant. Banking education in a yearlong program for potential future use is not the most effective means of higher-level professional development."—SDE graduate

> "The Air Force needs to utilize private institutions for the majority of SDE. Our University system in the U.S. is incredible. Our PME system is marginal, at best. We must partner with institutions like Harvard, Johns Hopkins, Georgetown, Princeton, Stanford, et cetera to truly educate our leaders. The current construct of NDU fails to take advantage of the international experts in the surrounding area. There is no reason why a lesson on great power competition should be taught in a classroom of 15 lieutenant colonels and colonels by a GS-15 DLA civilian. We need to leverage the professors, think tanks, and institutions that have been studying these topics for decades, vice reading the random articles in a syllabus a few days before."—SDE graduate

5. Conclusions and Recommendations

Air Force officer PME, including in-residence PME, is part of a complex system intended to prepare officers of all services for command and staff work in a joint context. The system must accommodate thousands of officers every year, some in-residence at service or other schoolhouses such as the National Defense University, some through fellowship opportunities at varying locations, and still others through distance learning. For both intermediate and senior levels, officers must proceed through coursework and content designed by the Joint Staff and the armed services to prepare officers to take their place in the next step of command, including a variety of positions requiring ever-more mastery of the joint, interagency, intergovernmental, and multinational context and requiring ever-greater sophistication, strategic thought, and critical thinking skills. The Air Force stakeholders in this complex system consistently seek to improve it with an eye to better outcomes for all participants involved.[1]

RAND was asked to help the Air Force leadership understand and address a perceived imbalance in assignment to PME programs—that fewer of their very top officers were assigned to attend IDE or SDE in-residence at Air University compared with programs such as fellowships or sister service schoolhouses. To gain context on the issue, we reviewed USAF and DoD policies related to PME; interviewed senior USAF leaders with responsibility for overseeing and conducting PME; and conducted a survey of recent PME in-residence graduates from IDE and from SDE programs to determine their perceptions of their experiences and the system itself.

Conclusions

As noted, IDE and SDE programs offered by the Air Force are intended to help officers prepare for subsequent command and staff work in an ever-more joint environment. Other stated goals of the curriculum include development of critical thinking skills and fostering the ability to think strategically, as well as preparation to execute the operational and strategic levels of warfighting. When officers were asked what the purpose of their PME was, most recent attendees of both IDE and SDE programs agreed that achieving these goals was indeed the Air Force's purpose in sending them to PME. Thus, officers generally agree with policy regarding the purpose of their attendance in PME.

Agreement regarding purpose does not mean that these were the benefits conferred, however: Thus, we also asked in-residence officers about the personal benefits they actually received from attendance. Development of critical thinking and education in the operational and strategic art of

[1] For a historical perspective on the Air Force's ongoing efforts to improve this system, see Davis and Donnini (1991).

war also ranked highly, indicating that officers perceived that their PME met these goals. Other highly ranked benefits of attendance at their programs include perceptions that their PME fostered networking with other service personnel and civilians, though this does not match their perceptions of what PME should provide. Competencies such as critical thinking and methodologies for strategic thinking were among the skills most highly ranked as being used in the assignment subsequent to their PME, particularly among officers who had most recently attended SDE. When queried regarding the usefulness of PME to their Air Force career, many officers indicated that their program had been "moderately" or "greatly" useful to them. In general, officers also agreed that their PME met its objectives.

We also queried officers for their views on their understanding of the assignment system through which their in-residence program options were determined and regarding some options for changes to that system, as well as factors affecting the choices that they themselves input into the system. When asked whether officers attending both IDE and SDE in-residence should be required to attend Air University for one of these options, the majority indicated "not at all." This trend was particularly evident for officers who had themselves attended a program at another schoolhouse or a fellowship, rather than at Air University. Unfortunately, it is impossible to clearly disentangle the influence of quality considerations from location considerations. Our stakeholder discussions as well as explicit comments on the survey make clear that Montgomery, Alabama, is not considered an ideal location for a yearlong posting, and this must play some part in officers' reaction to the possibility of such a requirement.

When asked what factors influenced officers' choices for IDE or SDE programs, officers—particularly recent SDE attendees—emphasized perceptions of program quality, as well as personal and family preferences. When asked to rank-order IDE and SDE programs on quality, options at Air University were not as highly rated as, for example, the White House Fellowship (for IDE) or the National War College (for SDE). Specifically, only 8 percent of recent IDE in-resident graduates ranked ACSC among the top three IDE programs in terms of quality; only 7 percent of recent SDE in-resident graduates ranked AWC among their top three.

The Pattern of Assignments to PME Encourages Officers to Favor Options Other Than Air University

Senior Air Force leadership has in recent years observed that there is an apparent imbalance in the assignment of Air Force officers to specific PME programs. Notably, a greater proportion of officers who were ranked lower by the central developmental education board are assigned to PME at Air University (i.e., ACSC for IDE and AWC for SDE) than those higher on the central developmental education board rankings. This tendency shows a demonstrated preference by influences in the system of assigning officers to PME to value non-AU options. Officers themselves, their senior raters, and development teams all play a part in the process of vectoring officers to given programs. However, the end result is that although in-residence seats are consistently allocated to the top officers as ranked by the central board's order of merit,

relatively few of the officers at the very top rankings are placed at Air University while designees lower in the ranking are more often assigned to either ACSC or AWC.

Some Senior Leaders Have Cited Problems with PME, but Concern Is Not Universal

The 2018 National Defense Strategy notes that PME across the board has "stagnated" and suggests that existing PME and overall developmental processes do not sufficiently foster the skills and abilities necessary for independent action during combat and national-level decisionmaking. While this strong statement does offer some suggestions for problem areas in the PME system, the nature of the document precludes detailed commentary on areas for improvement. Certainly, no service was singled out explicitly for specific attention. Other stakeholders within the Air Force have presented strong visions of how the entire PME system may be reconfigured in concert with training to better prepare officers (and airmen, more generally) for the future and foster lifelong learning (Roberson and Stafford, 2017) and prepare them to innovate (Norman, 2018). However, although different visions of modularized learning and just-in-time education and training have been presented, when citing their priorities, senior Air Force leadership quite often speaks more generally to the importance of professional development and the responsibility to develop leaders capable of exercising airpower in a joint context (SECAF Public Affairs, 2018), implying incremental change to the system of training and educating airmen rather than suggesting a complete revision is necessary.

Officers Do Not Rank the Quality of AU Schoolhouses Highly Relative to Other Available Programs

Our survey of officers who recently completed PME in-residence suggests that officers view PME at Air Force schools less favorably than other options on a number of fronts. For example, when asked questions such as whether their PME was useful in subsequent assignments, their Air Force career, and additional leadership or command responsibilities, officers who had attended PME at Air University schoolhouses generally indicated that they found their PME experience of less value than did officers who completed other programs. Moreover, few of the officers who responded to the survey ranked AU options as top quality when asked to order PME programs by quality. Students coming from AU programs were also more likely than other officers to indicate that improvements were needed to course content of PME. Last but not least, respondents on our survey voiced concerns about the location of AU—concerns also voiced by Air Force leadership. In particular, local schools are often singled out as a cause for concern (Air University, 2015).

There Is Discontent with AU's Location, but Little Discussion of Improving It

From both the survey and our team's discussions with various stakeholders, we received numerous comments about the difficulties members face with this location, including the quality of local schools and employment options for spouses. Furthermore, there was widespread

acknowledgment that these factors also impede AU's ability to recruit top-notch faculty to the area. At the same time, many expressed the belief that the location could never be changed.

With these conclusions in mind, we offer the following options for the Air Force to consider for addressing the concerns raised.

Points to Explore

Some points are relevant as the Air Force considers further optimization of the system. As the Air Force has more control over the course content at its Air University programs, it can ensure that the content emphasizes the most urgent priorities of Air Force leadership. As noted in AU's strategic plan, "The need for innovative Airmen drives Air University to develop leaders, enrich minds, advance airpower, build relationship, deliver solutions and inspire service" (Air University, 2015, p. 4). Given this key agenda and the flexibility to execute it, the Air Force may consider that the experience of IDE or SDE at Air University may be essential preparation for its highest levels of leadership.

Other points to ponder, given that in-residence seats are limited in quantity and even the larger number of seats at IDE is not sufficient for all officers the Air Force sends in-residence, include determining whether the IDE or SDE programs offer the most essential in-residence experience. If one or the other of IDE or SDE is more important, that would suggest that policies encourage an emphasis on attending one education level in particular at Air University when possible. A final question to consider is whether it is essential that these educational experiences require an in-residence component for the Air Force's future general officers: Are there aspects of these programs that must be conveyed in person rather than through distance learning? For example, is the networking mentioned by officers as a benefit received from their in-residence experience truly a key aspect or can distance learning suffice for fulfilling JPME requirements?

In general, those attending IDE and SDE in-residence represent the best and brightest officers in the Air Force: those who rank highest on the central board's annual determination of the order of merit for officers eligible for in-residence PME. As such, it is important that their preparation engages them and develops them into the leaders the Air Force needs. In turn, these officers' engagement in and satisfaction with their own professional development is helpful to ensure the best officers continue to be fully engaged in their Air Force career. However, despite the clear stake that officers themselves have in the process, in the end the underlying question for the Air Force is, Who should go where for in-residence PME in order to *best serve the interests of the Air Force*?

Actions to Consider

Together the findings we have presented suggest that there is some cause for concern. However, based on public statements made and interviews conducted with stakeholders, the dire pronouncement articulated in the National Defense Strategy does not seem to be a prevalent

view. The outcomes of the existing system for allocating officers indicate that various influences within the system itself (which include officers' preferences as well as determinations made by DTs) result in the very brightest stars being allocated to non–Air Force alternatives more frequently while others of high caliber tend to be vectored more frequently to Air University options. One of the influences in the allocation system, officers themselves, also opined on our survey that Air University options, while meeting their objectives, are not as high quality as other options. Thus, the results of our research did not lead us to conclude that changes to the way the Air Force selects and assigns officers to PME are definitely needed, nor do we conclude that changes in PME are absolutely necessary. However, there are certainly changes worth considering. Importantly, we note that changing the distribution of assignments so that the most highly ranked officers would be more likely to choose PME at an Air Force institution requires moving more than one lever in the overall system of PME. Below we present some options for mitigating various challenges.

- **Take steps to encourage vectoring practices that place a higher value on Air Force institutions and emphasize the unique value proposition presented by an education at Air University.**
  For example, senior leaders could meet with DTs to reinforce the value of both the education and "bluing" that takes place at Air Force institutions to strengthen the understanding that the Air Force values this education. Furthermore, senior leaders could meet with development teams and emphasize to them that in their vectoring process it is important for some of the best Air Force officers to attend the Air Force's own PME programs. Currently, guidance does state that Air Force options are of value, but this could benefit from additional senior leadership attention and communication. The Air Force can more clearly articulate its priorities, for example, by highlighting the importance of having officers who go on to ascend to the highest levels of military leadership gain their educational experiences through the Air Force's own PME programs—programs that deliver content the Air Force's own leadership deems most important.
- **Enhance the value of attending PME at AU by providing AU students with valuable experiences unavailable elsewhere, such as engagement with three- and four-star generals for mentoring and knowledge.**
  As noted above, students do not perceive AU options to be of the highest quality and value. The current allocation system's outcomes demonstrate the widespread influence of this preference throughout various aspects of the system. However, if AU were to provide advantages clearly unavailable elsewhere, this would help to alleviate the perceptions that AU does not provide the highest-quality programs. Enhanced engagement with high levels of Air Force leadership, learning by observation how these strategic thinkers approach and solve problems, would be a clear advantage not offered by other educational programs. One way would be to provide AU students engagement with three- and four-star generals to which they would not otherwise have access. Such contact could be accomplished through videoconferencing. Devoting the resources, as represented by a time commitment from these leaders, would also demonstrate the value the Air Force places on its own educational options and reinforce the "bluing" that takes place at these institutions.

- **Consider adding new, more boutique-like programs at AU that members can be vectored to directly.**
  Currently AU maintains several boutique-like programs that students may be enrolled in *after* their allocation to Air University is already made and they have arrived on site. These programs offer unique opportunities for engagement, problem-solving, and focused content. However, placement in one of these programs is not guaranteed (and we do not suggest that it should be) and the alternative is the more typical IDE and SDE curriculum offered at Air University. Direct vectoring to these or similar programs that highlight their special nature might offer enticements more clearly and definitively, helping to outweigh concerns about quality or locale.
- **Look more deeply into what graduates would recommend for changes at the schoolhouses, including faculty and course content.**
  Although by the virtue of their current position in the hierarchy, recent students cannot be expected to understand all of the considerations that dictate course content and faculty selection, their dissatisfaction should still receive consideration. If their suggestions are reasonable and improvements in course content or faculty are warranted and possible, these changes should be made and widely publicized. The Air Force continually attempts to improve its offerings, but it is not clear that these efforts are widely recognized, and so potentially erroneous perceptions persist.
- **Task the Air Force Personnel Center to take steps to improve the relevance of follow-on assignments.**
  Immediate follow-on assignments are seen as not necessarily taking advantage of the education offered through PME. Although the purpose of these programs is general education and preparation rather than specific skills to be immediately applied, perhaps additional efforts can be made to ensure that subsequent assignments offer clearer opportunities to implement (and also more thoroughly learn) lessons conveyed through educational opportunities.
- **Implement a communications plan that conveys and reinforces the value of "bluing" in PME, including the unique value of attending AU, the attributes that already exist, and improvements that are in progress or planned.**
  Several of the options above involve articulating and enhancing the value proposition offered by AU. Without actual underlying quality, marketing the quality of Air Force options is bound not to succeed. However, it is also possible that persistent cultural perceptions of a lack of quality are a culprit. If this is the case, actively communicating the value proposition itself would be key to ensuring that officers in the Air Force are aware of the advantages conferred.
- **Reconsider relocating Air Force schoolhouses from Maxwell AFB to a location that would present fewer difficulties to faculty, students, and their families.**
  Although our research cannot clearly disentangle aspects of locale from issues of quality, the issue of the location of Air Force schoolhouses permeates consideration of how to improve the situation. Interviews with stakeholders consistently noted that it would be easier to attract quality speakers and faculty at a more appealing location, and personal and family factors are highly cited influences on officers' preferences for IDE and SDE options. It is no secret that the public school system is not optimal, and appealing career options for spouses are also likely limited. Although such a relocation would be very

expensive, both monetarily and politically, our review of the issues would be incomplete without mentioning the possibility of changing the location of Air University. A review of the factors involved in such a move could be framed to reveal where flexibilities can be found. For example, even if it is not possible to move the entirety of Air University from its current location at Maxwell AFB, it is worth exploring options to leverage other Air Force institutions, such as the United States Air Force Academy (USAFA), to situate some AU-sponsored programs at other locations.

Appendix A. The Survey

In this appendix, we provide the full contents of the survey, including the criteria for which questions were presented to which participants. The survey population of PME graduates was divided into four groups based on whether an officer attended an IDE or SDE program and whether the program was a school-based program or fellowship or another non-school-based program. The survey versions were tailored to each of the four groups of officers. Most of the survey items were presented to all survey respondents. In the survey shown below, the differences among the versions are labeled and set off by double borders.

AIR FORCE SURVEY OFFICE SURVEY CONTROL NUMBER: AF19-104A1D

Purpose of the Survey

The objective of this project is to evaluate Air Force officer professional military education (PME) with an eye towards ensuring that going forward it supports an appropriate balance between readiness and development and to recommend changes in officer PME that are necessary to accomplish this goal. This survey is to help Air Force leaders understand some of the factors that play into Air Force officers' desires for PME. Your input will help us by providing the perspective of the officers who have attended intermediate developmental education (IDE) [senior developmental education (SDE)] in-residence. The Air Force asked the RAND Corporation, a non-profit independent research organization, to conduct this survey.

What Survey Participation Involves

Participation involves completing this Web-based survey, which should take on average 20 minutes to complete. Your survey may take more or less time, depending on how many of the sections are relevant for you and how much time, if any, you spend providing written comments.

The survey will ask you about your perspective on IDE [SDE], including what factors led you to have preferences for different PME alternatives. The survey will also ask some background questions although we will keep these to a minimum.

The Benefits and Risks of Survey Participation

Your responses will be used to assist Air Force leaders in learning how well officer PME is meeting its officers' needs. They will help leadership decide where to focus their efforts and improve PME for the benefit of officers themselves and the Air Force. Thus, it is possible you, or officers junior to you, could benefit from improvements to policies and programs, although such changes take time to implement.

Participation is strictly voluntary and will neither help nor harm your future assignments, promotions, or specific educational opportunities in the Air Force, and is not a condition for receipt of any Air Force benefits. Because your responses are confidential, you cannot be penalized or rewarded for any of your answers. There is no penalty or punishment if you choose not to participate or do not complete this survey.

Confidentiality

The RAND research team will treat your answers as confidential. This survey is not designed or intended to collect personally identifying information. If you provide it, the research team will delete it before they analyze the results. If you enter any written comments on this survey, please DO NOT provide names of individuals, units, or locations. Remember OPSEC guidance and do not discuss or comment on classified or operationally sensitive information. We cannot provide confidentiality for your comments if you state that you have engaged in, or plan to engage in, criminal misconduct or you threaten to harm yourself or others.

Your responses will be combined with other survey respondents before being reported to Air Force leadership. While there is a possibility that DoD personnel responsible for the protection of human subjects may have access to RAND research records, in order to ensure your protection, your information will never be shared with anyone in your chain of command, any service providers, anyone you work with, or your spouse (if applicable).

Participation is Entirely Voluntary

Your participation in this survey is voluntary. Your commander and leadership will not know whether you participated in this survey, nor will they know how you answered survey questions. If you feel uncomfortable answering any of the questions, you may skip to the next question. You may decide not to participate or stop taking the survey at any time without any negative consequences.

Whom to Contact

If you wish to confirm that this survey appears on the list of Air Force approved surveys, login to the Air Force Portal here with your Common Access Card (CAC).

If you have any technical issues in taking this survey or questions about the purpose or content of the survey, please send them to: PMESurvey@rand.org.

If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee toll-free at (866) 697-5620 or by emailing hspcinfo@rand.org. If possible, when you contact the Committee, please reference Study #2018-0851.

Please note: Some questions allow for an open-ended response. Please be aware that we cannot guarantee confidentiality to a participant regarding comments involving criminal activity/behavior, or statements that pose a threat to yourself or others. DO NOT discuss or comment on classified or operationally sensitive information.

Consent to participate:

- ○ I do not wish to participate in the survey.
- ○ I have read and understand this statement. I agree to participate in this survey.

What do you think **is/are** the Air Force's primary purpose(s) in providing you with IDE [SDE]? Please rank up to five (5) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ Educate members in the operational and strategic art of war
- ☐ Create more well-rounded Air Force officers
- ☐ Foster commitment to the Air Force
- ☐ Prepare students for staff-/command-level jobs or strategic jobs
- ☐ Develop methodologies for strategic thought
- ☐ Develop critical thinking competencies
- ☐ Prepare members for managing or leading the employment of joint/multi-domain capabilities
- ☐ Foster networking with other service personnel and civilians
- ☐ Provide JPME credit
- ☐ Provide an advanced degree
- ☐ Provide a rest period after a demanding assignment
- ☐ Reward members for strong job performance
- ☐ Stratify top-tier officers
- ☐ Other

If you selected "Other" as one of the options above, please describe:

What do you think **should be** the Air Force's primary purpose(s) in providing you with IDE [SDE]? Please rank up to five (5) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ Educate members in the operational and strategic art of war
- ☐ Create more well-rounded Air Force officers
- ☐ Foster commitment to the Air Force
- ☐ Prepare students for staff-/command-level jobs or strategic jobs
- ☐ Develop methodologies for strategic thought
- ☐ Develop critical thinking competencies
- ☐ Prepare members for managing or leading the employment of joint/multi-domain capabilities
- ☐ Foster networking with other service personnel and civilians
- ☐ Provide JPME credit
- ☐ Provide an advanced degree
- ☐ Provide a rest period after a demanding assignment
- ☐ Reward members for strong job performance
- ☐ Stratify top-tier officers
- ☐ Other

If you selected "Other" as one of the options above, please describe:

On a practical level, what was/were the primary benefit(s) **you personally received** from your most recent IDE [SDE] experience, if any? Please rank up to five (5) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ I was educated in the operational and strategic art of war
- ☐ I became a more well-rounded Air Force officer
- ☐ My commitment to the Air Force increased
- ☐ I was prepared for staff-/command-level jobs or strategic jobs
- ☐ I developed methodologies for strategic thought
- ☐ I developed critical thinking competencies
- ☐ I was prepared for managing or leading the employment of joint/multi-domain capabilities
- ☐ I networked with other service personnel and civilians
- ☐ I received JPME credit
- ☐ I received an advanced degree
- ☐ I was given a rest period after a demanding assignment
- ☐ I was rewarded for strong job performance
- ☐ I was stratified as a top-tier officer
- ☐ Other
- ☐ I did not receive any real benefit

If you selected "Other" as one of the options above, please describe:

To which of the following knowledge or skill areas did your IDE [SDE] experience contribute **the most** in your follow-on positions? Please rank up to five (5) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ Operational warfighting
- ☐ Strategy for warfighting
- ☐ Historical knowledge
- ☐ Critical thinking competencies
- ☐ Strategic thinking methodologies
- ☐ Supervisory skills
- ☐ Leadership skills
- ☐ Personal networking connections
- ☐ Knowledge about other U.S. military services
- ☐ Knowledge about international military services
- ☐ Knowledge about joint multi-domain operations
- ☐ Other

If you selected "Other" as one of the options above, please describe:

When you completed your IDE [SDE], what **aspects of the learning** from IDE [SDE] did you use in your next assignment? Please rank up to five (5) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ Operational warfighting
- ☐ Strategy for warfighting
- ☐ Historical knowledge
- ☐ Critical thinking competencies
- ☐ Strategic thinking methodologies
- ☐ Supervisory skills
- ☐ Leadership skills
- ☐ Personal networking connections
- ☐ Knowledge about other U.S. military services
- ☐ Knowledge about international military services
- ☐ Knowledge about joint multi-domain operations
- ☐ Other
- ☐ I did not use the learning from IDE [SDE] in my next assignment

If you selected "Other" as one of the options above, please describe:

Overall, to what extent did you use the knowledge and skills you gained from IDE [SDE] in the assignment right after completing IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] prepare you for further work in your career field?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] prepare you for additional leadership or command responsibilities?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] prepare you for further work in a joint environment?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] provide you with knowledge and skills that are useful in your Air Force career?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] strengthen your career options <u>within</u> the Air Force?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did IDE [SDE] strengthen your career options <u>outside</u> of the Air Force?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent have you been able to maintain the personal networking connections you developed at IDE [SDE] after completing IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did the Air Force place you in an assignment right after completing IDE [SDE] where you could use the knowledge and skills that you gained?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did the location of IDE [SDE] affect your preference to attend IDE [SDE] in residence?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

Did you bring your family with you when you attended IDE [SDE] in residence?

○ Yes ○ No ○ Not Applicable

My desire to keep my child(ren) in the school system they were attending prior to my IDE [SDE] . . .

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.
○ I do not have school-age children.

My impression of school quality at the new location . . .

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.
○ I do not have school-age children.

Concerns about employment for my spouse . . .

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.
○ I am not married.

My impression of entertainment opportunities at the new location . . .

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.

The length of my stay for my IDE [SDE] . . .

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.

Other factor:

Please describe:

_____

Select influence:

○ Made me less inclined to bring my family.
○ Made me more inclined to bring my family.
○ Did not influence my decision.

What factors affected the choices of IDE [SDE] that you requested? Please rank up to three (3) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

- ☐ Advice from my senior rater
- ☐ Advice from a personnel list
- ☐ Commander's call topics information
- ☐ Advice from peers
- ☐ Advice from friends or mentors other than my supervisor
- ☐ Prestige associated with the educational offering
- ☐ My perception of the quality of the educational experience
- ☐ My peers' perception of the educational experience
- ☐ My supervisor's recommendation
- ☐ My family's preferences
- ☐ My personal preferences
- ☐ Other

If you selected "Other" as one of the options above, please describe:

This question was presented only to SDE graduates

Did a post-SDE service obligation affect whether or not you attended the SDE in-residence program you were selected for?

○ Yes

○ No

How would you rate the quality of your peers at your IDE [SDE]?

○ Poor ○ Fair ○ Good ○ Very Good ○ Excellent

These questions were presented only to graduates of school-based programs

How would you rate the quality of the military faculty at your IDE [SDE]?

○ Poor ○ Fair ○ Good ○ Very Good ○ Excellent

How would you rate the quality of the civilian faculty at your IDE [SDE]?

○ Poor ○ Fair ○ Good ○ Very Good ○ Excellent

How would you rate the quality of guest lecturers at your IDE [SDE]?

○ Poor ○ Fair ○ Good ○ Very Good ○ Excellent

To what extent were learning objectives made clear to you at IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did your IDE [SDE] meet its stated learning objectives?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

These questions were presented only to graduates of fellowship and non-school-based programs

To what extent were objectives made clear to you at IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did your IDE [SDE] meet its objectives?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did you set your own objectives at IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did your IDE [SDE] meet objectives that were important to you personally?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent do you understand the current system of assigning Air Force officers to specific in-residence IDE [SDE]?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent do you agree that assigning Air Force officers to a specific in-residence IDE [SDE] based on random assignment would be fair (after the DE board has first made a selective cut based on officer performance)?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent do you think that officers who attend both IDE and SDE in-residence should be required to attend **at least one** of IDE or SDE at Air University (AU), Maxwell AFB AL?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

What aspects of IDE [SDE] would you like to see improved? Please rank up to three (3) in order of importance (1 = most important). Rank the items below, using numeric values starting with 1.

These options were presented only to graduates of fellowship and non-school-based programs	**These options were presented only to graduates of school-based programs**
☐ Level of engagement: availability of opportunities to contribute	☐ Course content
☐ Level of responsibility: appropriate use of member's competencies in fellowship activities	☐ Instructor quality
☐ Post IDE [SDE] assignment matching/utilization	☐ Post IDE [SDE] assignment matching/utilization
☐ Length (shorter)	☐ Length (shorter)
☐ Length (longer)	☐ Length (longer)
☐ Location	☐ Location
☐ Other	☐ Other
☐ No improvements necessary	☐ No improvements necessary
If you selected "Other" as one of the options above, please describe:	If you selected "Other" as one of the options above, please describe:

To what extent did your IDE [SDE] experience emphasize independence of action in warfighting?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did your IDE [SDE] experience build trust and interoperability across the Joint Forces and with allied and partner forces?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

To what extent did your IDE [SDE] experience emphasize intellectual leadership and military professionalism in the art and science of warfighting?

○ Not at all ○ Only a little ○ Somewhat ○ Moderately ○ Greatly

This question was presented only to IDE graduates

Which IDE programs did you consider to be the highest quality based on information available to you when you filled out your list of desired IDE programs? Please rank up to five (5) in order of your perception of the highest quality (1 = highest quality). Rank the items below, using numeric values starting with 1.

- ☐ Air Command and Staff College (ACSC)
- ☐ Air Force Combat Air Force (CAF) Fellowship (11F)
- ☐ Air Force Legislative Fellowship
- ☐ AFIT Masters Programs
- ☐ AFIT PhD Programs
- ☐ Air University Fellowships
- ☐ Air Force National Lab Tech Fellowship Program
- ☐ Air Force Strategic Policy Fellowship
- ☐ Army Command and General Staff College
- ☐ Brazilian Air Force Command & Staff College
- ☐ Canadian Forces Command & Staff College
- ☐ Chilean Air Force Air War College
- ☐ Colombia Curso de Estado Mayor (CEM) Staff College
- ☐ CSAF Masters Programs
- ☐ Defense Advanced Research Program Agency Fellowship
- ☐ Foreign Political Advisor Fellowship
- ☐ German Armed Forces General Staff College
- ☐ India Defense Services Staff College
- ☐ Japan Air Command and Staff Course
- ☐ Joint Mobility Fellowship
- ☐ Korean Command and Staff Course
- ☐ Lean Aerospace Initiative Fellowship
- ☐ Legislative Fellowship

- ☐ Lincoln Laboratory Technology Fellowship
- ☐ Marine Corps Command and Staff College
- ☐ McConn Public Policy Fellowship
- ☐ National Intelligence University
- ☐ National Laboratory Technical Fellowship Program
- ☐ National Nuclear Security Administrative Fellowship
- ☐ Naval Command and Staff College
- ☐ National Defense Fellowship (NDF) Texas A&M - Bush School of Gov & Public Svc
- ☐ Norwegian Armed Forces Staff College
- ☐ Naval Postgraduate School (NPS) Masters Program
- ☐ Olmsted Scholarship
- ☐ Polad Fellowship
- ☐ Sandia Nuclear Weapons Fellowship
- ☐ School of Advanced Study of Air Mobility
- ☐ Singapore Command and Staff Course
- ☐ Spanish Air Command & Staff Course
- ☐ Special Ops Legislative Affairs (AFIP)
- ☐ Strategic Communication Intern
- ☐ Strategic Policy Intern
- ☐ Test Pilot School
- ☐ System Design & Management Fellowship
- ☐ U.K. Joint Services Cmd & Advanced Cmd & Staff Course
- ☐ USAFA Squadron Air Officer Commanding (AOC) Masters Program
- ☐ Western Hemisphere Inst for Sec Coop (WHINSEC)
- ☐ White House Fellowship

This question was presented only to SDE graduates

Which SDE programs did you consider to be the highest quality based on information available to you when you filled out your list of desired SDE programs? Please rank up to five (5) in order of your perception of the highest quality (1 = highest quality). Rank the items below, using numeric values starting with 1.

- ☐ Advanced Strategic Leadership Studies Program
- ☐ Advanced Studies Group PhD Program
- ☐ AFIT PhD Programs
- ☐ Air Force National Lab Technical Fellowship
- ☐ Air Force Combat Air Force Fellowship
- ☐ Air War College
- ☐ Army War College
- ☐ Atlantic Council Fellowship (NDF)
- ☐ Australian Defense and Strategic Studies
- ☐ Belfer Center of International Affairs Fellowship (NDF)
- ☐ Center for New American Security Fellowship (NDF)
- ☐ Congressional Research Service Library of Congress Fellowship (NDF)
- ☐ College of Naval Warfare
- ☐ College of International Security Affairs
- ☐ College of Information and Cyberspace
- ☐ Department of State Fellowship (NDF)
- ☐ Director National Security Agency (DIRNSA) Fellowship
- ☐ Dwight D. Eisenhower School
- ☐ Fletcher School of Law and Diplomacy Fellowship (NDF)
- ☐ Air Command and Staff College (ACSC)
- ☐ Air Force Combat Air Force (CAF) Fellowship (11F)
- ☐ Air Force Legislative Fellowship
- ☐ AFIT Masters Programs
- ☐ AFIT PhD Programs
- ☐ Air University Fellowships
- ☐ Air Force National Lab Tech Fellowship Program
- ☐ Air Force Strategic Policy Fellowship
- ☐ Army Command and General Staff College
- ☐ Brazilian Air Force Command & Staff College
- ☐ Canadian Forces Command & Staff College
- ☐ Chilean Air Force Air War College
- ☐ Colombia Curso de Estado Mayor (CEM) Staff College
- ☐ CSAF Masters Programs
- ☐ Defense Advanced Research Program Agency Fellowship
- ☐ Foreign Political Advisor Fellowship
- ☐ German Armed Forces General Staff College
- ☐ India Defense Services Staff College

- ☐ French War School
- ☐ Geneva Centre for Security Studies
- ☐ George C. Marshall Center for Security
- ☐ Harvard National Security Fellowship
- ☐ Hoover Institution on War Revolution and Peace at Stanford
- ☐ Institute for Defense Analyses Fellowship
- ☐ Institute for Study of Diplomacy (NDF)
- ☐ Inter-American Defense College
- ☐ Japan National Institute for Defense Studies
- ☐ Joint Advanced Warfighting School
- ☐ Malaysian Armed Forces Defense College
- ☐ Marine Corps War College
- ☐ National War College
- ☐ NATO Defense College
- ☐ Lorenz Fellows for Advanced Research
- ☐ National Defense Fellowship
- ☐ National Laboratory Technology Fellowships
- ☐ National Security Fellowship at JFK School of Gov
- ☐ Office of the Director of the National Intelligence (NDF)
- ☐ Pakistan NDU National Security Course
- ☐ RAND Fellowships
- ☐ Royal Superior College of Defense Studies
- ☐ School of Foreign Service Georgetown University
- ☐ Japan Air Command and Staff Course
- ☐ Joint Mobility Fellowship
- ☐ Korean Command and Staff Course
- ☐ Lean Aerospace Initiative Fellowship
- ☐ Legislative Fellowship
- ☐ Lincoln Laboratory Technology Fellowship
- ☐ Marine Corps Command and Staff College
- ☐ McConn Public Policy Fellowship
- ☐ National Intelligence University
- ☐ National Laboratory Technical Fellowship Program
- ☐ National Nuclear Security Administrative Fellowship
- ☐ Naval Command and Staff College
- ☐ NDF Texas A&M - Bush School of Gov & Public Svc
- ☐ Norwegian Armed Forces Staff College
- ☐ NPS Master's Program
- ☐ Olmsted Scholarship
- ☐ Polad Fellowship
- ☐ Sandia Nuclear Weapons Fellowship
- ☐ School of Advanced Study of Air Mobility
- ☐ Singapore Command and Staff Course
- ☐ Spanish Air Command & Staff Course
- ☐ Special Ops Legislative Affairs (AFIP)
- ☐ Strategic Communication Intern

- ☐ SECDEF Corporate Fellowship
- ☐ Security Studies Program MIT
- ☐ Special Operations Low Intensity Conflict NPS
- ☐ System Design and Management Fellowship
- ☐ Washington Institute for Near East Policy
- ☐ White House Fellowship
- ☐ Strategic Policy Intern
- ☐ Test Pilot School
- ☐ System Design & Management Fellowship
- ☐ UK Joint Services Cmd & Advanced Cmd & Staff Course
- ☐ USAFA Squadron AOC Master's Program
- ☐ Western Hemisphere Inst for Sec Coop (WHINSEC)
- ☐ White House Fellowship

Thank you for completing the survey! Please click DONE to submit your answers.

If you have any other comments about the survey or AF PME, please share them below.

Appendix B. PME Programs

In this appendix, we list the PME programs that were available to Air Force officers for readers who wish to see the full extent of available offerings. They are identified in Tables B.1 through B.4 as either fellowship or school programs, based on the *2018 Officer Developmental Education Guide* (USAF, 2018) provided to RAND by the Air Force and then reviewed for accuracy and correction by the personnel officer who was at the time a RAND Fellow.

Table B.1. IDE Fellowship Programs

Def Advanced Research Project Agency (DARPA) Fellowship
Equivalent Program
Fellowship (other)
Joint Mobility Intern Air Mobility Command/Transportation Command (AMC/TRANSCOM)
Lean Aerospace Initiative Fellowship
Legislative Fellowship
Mansfield Fellowship
McConn Public Policy Intern (AFIP)
National Laboratory Technical Fellowship Program (NLTFP)
Olmsted Scholarship
Polad Fellowship
Sandia Nuclear Weapons Fellowship Program (SNWFP)
School of Advanced Study of Air Mobility (ASAM)
Special Ops Legislative Affairs Intern (AFIP)
Strategic Communication Intern (AFIP)
Strategic Policy Intern
USAF Academy Squadron Air Officer Commanding Masters Program (USAFA AOC)
White House Fellowship

Table B.2. IDE School Programs

AFIT (resident) Masters Programs
AFIT (resident) PhD Programs
Air Command and Staff College (ACSC)
Brazilian Air Force Command and Staff College
Canadian Forces Command and Staff College
Chilean Air Force Air War College
German Armed Forces General Staff College
India Defense Services Staff College (IDSSC)
Japan Air Command and Staff Course
Korean Command and Staff Course
Marine Corps Command and Staff College (MCCSC)
National Intelligence University
Naval Command and Staff College (NCSC)
Norwegian Armed Forces Staff College
NPS (resident) Masters Programs
Spanish Air Command and Staff College
Test Pilot School (equivalent credit)
U.S. Army Command and General Staff College (ACGSC)
U.K. Advanced Command and Staff Course
Western Hemisphere Institute for Security Cooperation

Table B.3. SDE Fellowship Programs

Advanced Strategic Leadership Studies Program
Air Force National Lab Technical Fellowship Program (AF-NLTEP)
Atlantic Council (NDF)
Belfer Center of International Affairs (NDF)
Center for New American Society (NDF)
Center for Strategic and International Studies
Congressional Research SVC LOC (NDF)
Department of State (NDF)
Director National Security Agency (DIRNSA) Fellowship
Equivalent program
Fellowship (other)
Fletcher School of Law and Diplomacy (NDF)
Foreign Policy Studies Program Brookings Institute
Harvard National Security Fellowship
Hoover Institute on War Revolution Peace Stanford
Institute for Defense Analyses
Institute for Study of Diplomacy (NDF)
International Security Studies Program Tufts University
John F. Kennedy School of Government Harvard University
National Laboratory Technical Fellowship Program (NLTFP)
Office of Director of National Intelligence (NDF)
RAND—DP
RAND—IL
RAND—Space
RAND—XO
RAND—XOI
RAND Corporation
School of Foreign Service Georgetown Univ.
Secretary of Defense Corporate Fellows
Security Studies Program Massachusetts Institute of Technology
Special Operations Low Intensity Conflict NPS
Strategy Forces and Resources Division Institute for Defense Analyses
Washington Institute for Near East Policy
Weatherhead Center for International Affairs Harvard
White House Fellowship

Table B.4. SDE School Programs

Advanced Studies Group PhD Program
AFIT (resident) PhD Programs
Air War College
Argentine National Defense School Senior Course
Army Advanced Operational Studies Fellowship Fort Leavenworth
Army War College
Eisenhower School for National Security
French Defense College
Geneva Centre for Security Studies
George C. Marshall European Center for Security Study
Inter-American Defense College
Japan National Institute for Defense Studies
Joint Advanced Warfighter School (JAWS)
Marine War College
National War College
NATO Defense College
Naval War College
Pakistan National Defense College
Royal Superior College of Defense

Appendix C. Item-by-Item Results for Survey

Tables C.1 through C.9 in this appendix include details on individual item statistics for Likert-type scale responses, individually, as well as individual item means.

Table C.1. Item Statistics: Assessing Quality Perceptions Among IDE Attendees for Items Relating to Value (*N* = 729–744)

To what extent did . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
You use knowledge/skills you gained from IDE in the assignment right after completing PME?	Air Force schoolhouse	10.2	26.1	27.9	21.6	14.2	3.04
	Other schoolhouse	6.9	18.6	24.3	26.3	23.9	3.42
	Fellowship	10.9	18.8	20.8	12.9	36.6	3.46
IDE prepare you for further work in your career field?	Air Force schoolhouse	14.1	27.5	24.2	24.2	9.8	2.88
	Other schoolhouse	7.7	18.6	23.1	31.2	19.4	3.36
	Fellowship	12.0	18.0	20.0	21.0	29.0	3.37
IDE prepare you for additional leadership or command responsibilities?	Air Force schoolhouse	11.4	26.8	25.8	24.0	12.1	2.99
	Other schoolhouse	7.7	15.8	23.1	30.4	23.1	3.45
	Fellowship	13.9	23.8	21.8	18.8	21.8	3.11
IDE provide you with knowledge and skills that are useful in your Air Force career?	Air Force schoolhouse	3.3	19.2	27.8	31.3	18.4	3.42
	Other schoolhouse	4.5	10.9	22.7	35.2	26.7	3.69
	Fellowship	5.0	19.8	14.9	24.8	35.6	3.66
IDE strengthen your career options *within* the Air Force?	Air Force schoolhouse	9.6	14.0	21.1	22.3	33.0	3.55
	Other schoolhouse	7.7	13.8	17.0	27.5	34.0	3.66
	Fellowship	14.9	9.9	16.8	26.7	31.7	3.50
IDE strengthen your career options *outside* the Air Force?	Air Force schoolhouse	26.0	27.5	25.0	13.9	7.6	2.49
	Other schoolhouse	17.0	14.6	21.9	28.3	18.2	3.16
	Fellowship	15.0	12.0	19.0	18.0	36.0	3.48
The Air Force place you in an assignment right after completing PME where you could use your knowledge and skills that you gained?	Air Force schoolhouse	15.9	23.3	22.0	20.8	18.0	3.02
	Other schoolhouse	21.9	17.4	17.4	18.6	24.7	3.07
	Fellowship	23.8	20.8	10.9	16.8	27.7	3.04

Table C.2. Item Statistics: Assessing Quality Perceptions Among SDE Attendees for Items Relating to Value (*N* = 376–382)

To what extent did . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
You use knowledge/skills you gained from SDE in the assignment right after completing PME?	Air Force schoolhouse	6.7	22.5	18.3	30.0	22.5	3.39
	Other schoolhouse	4.8	16.7	23.4	30.1	24.9	3.54
	Fellowship	3.8	7.5	22.6	26.4	39.6	3.91
SDE prepare you for further work in your career field?	Air Force schoolhouse	10.8	18.3	25.0	30.0	15.8	3.22
	Other schoolhouse	3.8	13.9	29.2	28.7	24.4	3.56
	Fellowship	5.7	15.1	18.9	24.5	35.8	3.70
SDE prepare you for additional leadership or command responsibilities?	Air Force schoolhouse	5.8	14.2	21.7	31.7	26.7	3.59
	Other schoolhouse	2.9	11.5	17.7	34.0	34.0	3.85
	Fellowship	7.7	19.2	26.9	21.2	25.0	3.37
SDE provide you with knowledge and skills that are useful in your Air Force career?	Air Force schoolhouse	3.3	14.2	17.5	32.5	32.5	3.77
	Other schoolhouse	1.9	12.5	17.8	35.6	32.2	3.84
	Fellowship	5.7	7.5	17.0	20.8	49.1	4.00
SDE strengthen your career options *within* the Air Force?	Air Force schoolhouse	10.0	8.3	19.2	30.0	32.5	3.67
	Other schoolhouse	9.1	12.4	16.3	29.7	32.5	3.64
	Fellowship	9.4	18.9	24.5	20.8	26.4	3.36
SDE strengthen your career options *outside* the Air Force?	Air Force schoolhouse	18.5	18.5	29.4	21.0	12.6	2.91
	Other schoolhouse	8.1	16.3	18.7	29.7	27.3	3.52
	Fellowship	7.5	11.3	17.0	28.3	35.8	3.74
The Air Force place you in an assignment right after completing PME where you could use your knowledge and skills that you gained?	Air Force schoolhouse	15.0	20.0	19.2	22.5	23.3	3.19
	Other schoolhouse	15.3	14.4	20.1	25.4	24.9	3.30
	Fellowship	13.2	15.1	20.8	17.0	34.0	3.43

Table C.3. Item Statistics: Assessing Structural Quality Perceptions Among Fellowship Attendees (*N* = 145–151)

How would you rate . . .	Poor (percentage)	Fair (percentage)	Good (percentage)	Very good (percentage)	Excellent (percentage)	Average rating
The quality of your peers at your PME?	0.7	3.4	14.2	28.4	53.4	4.30
To what extent . . .	**Not at all (percentage)**	**Only a little (percentage)**	**Somewhat (percentage)**	**Moderately (percentage)**	**Greatly (percentage)**	**Average rating**
Were objectives made clear to you at your PME?	5.3	5.3	23.2	29.8	36.4	3.87
Did your PME meet its objectives?	2.7	4.1	19.0	29.3	44.9	4.10
Did your PME meet objectives important to you personally?	4.7	2.0	14.7	23.3	55.3	4.23

Table C.4. Item Statistics: Assessing Structural Quality Perceptions Among IDE Schoolhouse Attendees (*N* = 629–633)

How would you rate . . .		Poor (percentage)	Fair (percentage)	Good (percentage)	Very good (percentage)	Excellent (percentage)	Average rating
The quality of your peers at your PME?	Air Force schoolhouse	0.3	4.6	22.9	38.9	33.3	4.04
	Other schoolhouse	1.3	6.3	19.6	39.2	33.8	3.98
The quality of your military faculty?	Air Force schoolhouse	4.6	21.4	34.6	31.0	8.4	3.17
	Other schoolhouse	1.7	10.5	25.9	34.3	27.6	3.76
The quality of your civilian faculty?	Air Force schoolhouse	1.0	7.7	20.2	40.2	30.9	3.92
	Other schoolhouse	1.7	4.2	14.3	34.9	45.0	4.17
The quality of your guest lecturers?	Air Force schoolhouse	1.0	6.9	26.1	40.7	25.3	3.82
	Other schoolhouse	2.9	7.5	19.7	32.6	37.2	3.94

To what extent . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
Were learning objectives made clear to you at your IDE?	Air Force schoolhouse	0.5	6.1	17.1	40.9	35.3	4.04
	Other schoolhouse	1.2	4.6	12.0	33.6	48.5	4.24
Did your IDE meet its objectives?	Air Force schoolhouse	2.5	5.9	24.4	42.7	24.4	3.81
	Other schoolhouse	1.3	3.3	14.6	40.6	40.2	4.15
Did your IDE meet objectives important to you personally?	Air Force schoolhouse	4.1	13.0	24.0	34.2	24.7	3.63
	Other schoolhouse	2.5	5.4	13.8	36.3	42.1	4.10

Table C.5. Item Statistics: Assessing Structural Quality Perceptions Among SDE Schoolhouse Attendees (*N* = 323–325)

How would you rate . . .		Poor (percentage)	Fair (percentage)	Good (percentage)	Very good (percentage)	Excellent (percentage)	Average rating
The quality of your peers at your PME?	Air Force schoolhouse	0.8	5.0	17.5	37.5	39.2	4.09
	Other schoolhouse	0.0	3.9	12.2	31.2	52.7	4.33
The quality of your military faculty?	Air Force schoolhouse	4.2	10.0	22.5	41.7	21.7	3.67
	Other schoolhouse	0.5	11.2	19.5	37.1	31.7	3.88
The quality of your civilian faculty?	Air Force schoolhouse	—	8.4	11.8	39.5	40.3	4.12
	Other schoolhouse	0.5	6.9	11.8	28.4	52.5	4.25
The quality of your guest lecturers?	Air Force schoolhouse	0.0	7.6	24.4	47.9	20.2	3.81
	Other schoolhouse	0.0	2.9	7.4	29.9	59.8	4.47
To what extent . . .		**Not at all (percentage)**	**Only a little (percentage)**	**Somewhat (percentage)**	**Moderately (percentage)**	**Greatly (percentage)**	**Average rating**
Were learning objectives made clear to you at your SDE?	Air Force schoolhouse	0.0	1.7	9.2	30.8	58.3	4.46
	Other schoolhouse	0.5	0.5	7.3	31.7	60.0	4.50
Did your SDE meet its objectives?	Air Force schoolhouse	1.7	2.5	11.7	44.2	40.0	4.18
	Other schoolhouse	0.5	2.0	11.7	28.3	57.6	4.40
Did your SDE meet objectives important to you personally?	Air Force schoolhouse	1.7	6.7	15.8	43.3	32.5	3.98
	Other schoolhouse	2.0	6.3	12.2	34.6	44.9	4.14

Table C.6. Item Statistics: Assessing Content Quality Perceptions Among IDE Attendees (*N* = 727–742)

To what extent did your IDE experience . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
Prepare you for further work in a joint environment?	Air Force schoolhouse	6.6	19.2	26.8	34.2	13.2	3.28
	Other schoolhouse	4.1	8.9	15.9	27.6	43.5	3.98
	Fellowship	8.9	25.7	19.8	20.8	24.8	3.27
Emphasize independence of action in warfighting?	Air Force schoolhouse	15.6	20.3	32.1	24.4	7.7	2.88
	Other schoolhouse	20.0	13.3	23.3	25.8	17.5	3.08
	Fellowship	34.0	22.7	13.4	21.6	8.2	2.47
Build trust and interoperability across the Joint Forces and with allied and partner forces?	Air Force schoolhouse	3.1	17.1	29.7	34.0	16.1	3.43
	Other schoolhouse	6.3	5.8	20.0	36.3	31.7	3.81
	Fellowship	17.5	25.8	11.3	23.7	21.6	3.06
Emphasize intellectual leadership and military professionalism in the art and science of warfighting?	Air Force schoolhouse	2.8	7.7	21.9	36.0	31.6	3.86
	Other schoolhouse	4.6	7.1	11.7	33.3	43.3	4.04
	Fellowship	16.5	15.5	20.6	22.7	24.7	3.24

Table C.7. Item Statistics: Assessing Content Quality Perceptions Among SDE Attendees (*N* = 375–382)

To what extent did your SDE experience . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
Prepare you for further work in a joint environment?	Air Force schoolhouse	3.3	11.7	23.3	37.5	24.2	3.68
	Other schoolhouse	1.0	7.7	17.2	28.7	45.5	4.10
	Fellowship	13.2	24.5	15.1	32.1	15.1	3.11
Emphasize independence of action in warfighting?	Air Force schoolhouse	11.0	20.3	30.5	23.7	14.4	3.10
	Other schoolhouse	19.1	20.1	18.6	29.9	12.3	2.96
	Fellowship	34.0	26.4	15.1	20.8	3.8	2.34
Build trust and interoperability across the Joint Forces and with allied and partner forces?	Air Force schoolhouse	3.4	3.4	27.1	37.3	28.8	3.85
	Other schoolhouse	1.0	4.9	15.6	36.6	42.0	4.14
	Fellowship	32.1	18.9	18.9	15.1	15.1	2.62
Emphasize intellectual leadership and military professionalism in the art and science of warfighting?	Air Force schoolhouse	0.8	6.7	10.9	42.9	38.7	4.12
	Other schoolhouse	1.0	3.9	11.2	28.8	55.1	4.33
	Fellowship	11.3	11.3	24.5	22.6	30.2	2.62

Table C.8. Item Statistics: Assessing Perceptions of Assignment System Among IDE Attendees (*N* = 632–730)

To what extent do you . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
Understand the current system of assigning Air Force officers to specific in-residence PME?	Air Force schoolhouse	12.5	16.1	20.9	30.9	19.6	3.29
	Other schoolhouse	10.4	19.2	17.5	29.6	23.3	3.36
	Fellowship	16.5	18.6	19.6	25.8	19.6	3.13
Agree that assigning AF officers to a specific in-residence PME based on random assignment would be fair (after the DE board has first made a selective cut based on officer performance)?	Air Force schoolhouse	47.2	22.7	12.8	11.7	5.6	2.06
	Other schoolhouse	63.8	17.9	10.0	5.4	2.9	1.66
	Fellowship	57.7	15.5	12.4	11.3	3.1	1.87
Agree that the current system of assigning AF officers to a specific in-residence PME based on personal preference and order of merit is fair?	Air Force schoolhouse	10.9	14.8	24.9	32.1	17.3	3.30
	Other schoolhouse	6.7	12.6	23.0	33.5	24.3	3.56
	Fellowship	—	—	—	—	—	—
Agree that officers attending both IDE and SDE in-residence should be required to attend **at least one** IDE or SDE program at Air University (AU), Maxwell AFB AL?	Air Force schoolhouse	19.6	11.2	15.0	22.1	32.1	3.36
	Other schoolhouse	72.1	12.1	7.9	5.4	2.5	1.54
	Fellowship	71.1	12.4	8.2	8.2	0.0	1.54

Table C.9. Item Statistics: Assessing Perceptions of Assignment System Among SDE Attendees (*N* = 377–378)

To what extent do you . . .		Not at all (percentage)	Only a little (percentage)	Somewhat (percentage)	Moderately (percentage)	Greatly (percentage)	Average rating
Understand the current system of assigning Air Force officers to specific in-residence PME?	Air Force schoolhouse	9.2	19.2	10.8	30.8	30.0	3.53
	Other schoolhouse	9.3	12.7	16.7	32.4	28.9	3.59
	Fellowship	5.7	13.2	20.8	32.1	28.3	3.64
Agree that assigning AF officers to a specific in-residence PME based on random assignment would be fair (after the DE board has first made a selective cut based on officer performance)?	Air Force schoolhouse	41.7	22.5	17.5	15.0	3.3	2.16
	Other schoolhouse	62.0	16.1	13.7	5.9	2.4	1.71
	Fellowship	60.4	13.2	15.1	7.5	3.8	1.81
Agree that the current system of assigning AF officers to a specific in-residence PME based on personal preference and order of merit is fair?	Air Force schoolhouse	7.6	20.2	19.3	37.8	15.1	3.33
	Other schoolhouse	4.9	8.3	21.5	38.5	26.8	3.74
	Fellowship	3.8	1.9	30.2	39.6	24.5	3.79
Agree that officers attending both IDE and SDE in-residence should be required to attend **at least one** IDE or SDE program at Air University (AU), Maxwell AFB AL?	Air Force schoolhouse	26.7	5.8	15.8	19.2	32.5	3.25
	Other schoolhouse	62.0	10.7	10.2	7.8	9.3	1.92
	Fellowship	43.4	11.3	18.9	9.4	17.0	2.45

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Professional military education (PME) for U.S. Air Force officers is part of a complex system for preparing officers of all services for command and staff work in a joint context. The system must accommodate thousands of officers every year—some in-residence at service schoolhouses, some through fellowship opportunities at varying locations, and still others through distance learning.

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The authors examine the process for selecting officers for assignment to in-residence schools and fellowships and review U.S. Air Force and Department of Defense policies on PME. Drawing on interviews with Air Force leaders who oversee and conduct PME and on recent graduates' opinions of these programs, the authors make recommendations designed to help the Air Force improve its system of PME to better serve the organization and its members.

$33.00

ISBN-10 1-9774-0711-0
ISBN-13 978-1-9774-0711-5

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RR-A401-1