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DISSERTATION ABSTRACT
PERCEPTIONS OF GRADUATES AND THEIR SUPERVISORS RELATED TO THE AIR AND SPACE BASIC COURSE

Terry R. Bentley

The Air and Space Basic Course (ASBC) was established as a basic-level Professional Military Education (PME) school for newly commissioned Air Force officers and selected civilians. Its purpose was to prepare graduates for their post-graduate roles as airmen leaders. This study was undertaken to ascertain the differences in perceptions of new ASBC graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the Air and Space Basic Course. Therefore, this study (a) provided information related to the demographic characteristics of participants, (b) revealed the extent to which each content area of the ASBC program was perceived by graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation, (c) illustrated the extent to which each content area of the ASBC program was perceived by the ASBC graduates' immediate supervisors to be relevant to the graduates' roles as airmen leaders at their first duty assignment after graduation, (d) revealed the extent to which there were differences in perceptions of graduates and their supervisors regarding the relevance of the Air and Space Basic Course curriculum content to the role of airmen leaders, (e) established the extent to which a difference in perceptions existed between graduates who were rated and non-rated regarding the relevance of the ASBC curriculum content to the role of airmen leaders, and (f) acquired specific suggestions from the graduates and their supervisors regarding content changes in the Air and Space Basic Course.

Three hundred and ninety subjects participated in the study. Two hundred and twenty-one of these subjects were from the graduating body of Class 02D (i.e. the fourth graduating class of 2002) of the Air and Space Basic Course. One hundred and sixty-nine of these subjects were the immediate supervisors of the graduates from ASBC Class 02D.

The views expressed in this article are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the U.S. Government

PERCEPTIONS OF GRADUATES AND THEIR SUPERVISORS RELATED TO THE AIR AND SPACE BASIC COURSE

Terry R. Bentley

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Auburn University
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August 4, 2003

DISSERTATION ABSTRACT

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immediate supervisors to be relevant to the graduates' roles as airmen leaders at their first duty assignment after graduation, (d) revealed the extent to which there were differences in perceptions of graduates and their supervisors regarding the relevance of the Air and Space Basic Course curriculum content to the role of airmen leaders, (e) established the extent to which a difference in perceptions existed between graduates who were rated and non-rated regarding the relevance of the ASBC curriculum content to the role of airmen leaders, and (f) acquired specific suggestions from the graduates and their supervisors regarding content changes in the Air and Space Basic Course.

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CHAPTER I.

INTRODUCTION

The Air and Space Basic Course (ASBC) is headquartered at Maxwell Air Force Base near Montgomery, Alabama. It is aligned under Squadron Officer College (SOC), one of several resident colleges that fall under the administrative direction of Air University. Air University and other U.S. Air Force training and degree-granting educational institutions of higher learning fall under the direction of the Air Education and Training Command, Randolph Air Force Base, Texas.

The ASBC is a new addition to the continuum of graduate-level Professional Military Education (PME) afforded to officers and others affiliated with the United States Air Force. The ASBC began its operation on July 6, 1998, in response to a problem that was perceived by senior Air Force leaders. Part of the problem was that Air Force officers had, ". . . strayed away from the fundamental principles of the value of airpower taught by early pioneers such as Billy Mitchell, Ira Eaker, Claire Chennault and Haywood Hansell" (Newton, 1998). Therefore, senior Air Force leaders felt it necessary to provide all new officers and selected civilians with an overview of the fundamental principles of airpower theory. Another pressing part of the problem was that some officers were tunnel-visioned about their roles as officers and warfighters. As Builder (1994) noted, "Some believe that the Air Force . . . is in trouble and needs to find and take corrective actions...Air Force people are increasingly favoring their own careers and interests over that of the Air Force mission or institution" (p. 20). That is to say, many

Air Force officers thought of themselves first in terms of their specific specialties, e.g., lawyer, doctor, pilot, engineer, etc., rather than thinking of themselves as airmen. "Ask any Marine Corps member what he or she is and the response will resound loud and clear, 'I am a Marine.' Present the same question to an Air Force member and the typical response will be, 'I'm a pilot, personnel officer, communications officer, space operations officer,' etc." (Newton, 1998). According to senior officials, this attitude was potentially detrimental to, ". . . the inherent values and factors that tie . . . [airmen] together as a coherent force" (Newton, 1998). Therefore, the ASBC was created as an airman's school so that officers across all specialties could have a common understanding of airmanship and how to be a leader in today's United States Air Force.

The organizational mission of ASBC is stated as: "To inspire new USAF officers to comprehend their roles as airmen; one who understands and lives by USAF core values, articulates and demonstrates USAF core competencies, and who dedicates oneself as a warrior in the world's most respected air force" (ASBC Mission Statement, 2002). The ASBC viewpoint is that completing the organizational mission enables students to fulfill their specific missions. The mission articulated for the ASBC students states that the students should strive to, ". . . become a corps of professional airmen who can articulate air and space doctrine and develop a common bond with fellow war fighters" (ASBC Mission Statement, 2002). Therefore, the school endeavors to prepare junior Air Force officers and selected civilians, ". . . to comprehend their role as airmen" (Fact Sheet, 2002).

The curriculum content of the Air and Space Basic Course focuses on the influence of aerospace power at the operational level of war down to the individual

warfighter. The curriculum centers on the needs of newly commissioned lieutenants and selected civilians. The course is four weeks in duration, includes more than 139 contact hours, and, ". . . includes modules of study ranging from core competencies and aerospace power employment to operations planning" (Fact Sheet, 2002). The approach taken emphasizes ". . . teamwork and how all the career fields work together to create aerospace power as well as how the Air Force as a service fits with the country's other armed forces" (Fact Sheet, 2002). The ASBC coursework is carried out in 42 to 44 small seminar teams (called flights) of 14 students each, ". . . representing line, non-line, Active, Reserve, Guard and civilian [students]" (ASBC Mission Brief, 2000).

> The highlight of the course is a four-day wargame where students are thrust into decision-making positions, splitting their time between a wing operations center and a joint air operations center. This exercise demonstrates to students the teamwork required to successfully plan a joint aerospace campaign. (Fact Sheet, 2002)

The Air and Space Basic Course, ". . . emphasizes team achievement over individual achievement and there is no distinguished graduate program" (ASBC Curriculum, 2002). The lessons taught in the ASBC program integrate the foundations of aerospace doctrine, the six Air Force core competencies, and the employment of aerospace power. "The rigorous . . . [curriculum] at ASBC provides an environment for the students to analyze and improve group and individual skills through application exercises and simulations, seminars, lectures, and field activities" (ASBC Curriculum, 2002). The core curriculum areas of the Aerospace Basic Course are as follows: (1)

Profession of Arms, (2) Leadership and Management, (3) Military Studies, (4) Communications, and (5) International Studies (Squadron Officer College, 2001, pg 7).

The Air and Space Basic Course is four weeks in duration and open to newly commissioned officers with approximately one year or less total active federal commissioned service (AFI 36-2301, 2002, p. 11). In addition, ". . . selected Air Force intern civilians in the grade of GS-07 or above may attend. To date, ASBC students have represented the three main sources of commissioning, the Air National Guard and Air Force Reserve, and the DoD [Department of Defense] civilian work force" (ASBC Curriculum, 2002). Eight ASBC classes, designated as Class 02A through Class 02H, were planned and conducted for Academic Year 2002 with approximately 600 students per class (ASBC Curriculum, 2002).

The effectiveness of the ASBC is perceived to have a significant impact on the defense capability of the United States and the careers of graduates. Graduates normally assume duties in line with the education they have just completed. Many are thrust into supervisory positions immediately after graduation and all assume some nature of a leadership role as an airman; furthermore, much is at stake in the manpower and resources that they control. Consequently, it is critical that students enrolled in the ASBC receive an education that is well focused on post-graduation needs. It is essential that students receive quality content and instruction to ensure their success as leaders and airman, as well as to ensure the viability of the American military.

The Problem Statement

Six months or more after graduation from the Air and Space Basic Course (ASBC), graduates and their supervisors may be able to identify areas in which the

curriculum could be improved so that the course may better prepare students to meet the challenges of airmanship after graduation. The lack of information related to the perceptions of new graduates and their immediate supervisors about graduates' preparation for their post-graduate roles based on their completion of the Air and Space Basic Course served as the focal point for this study.

Need for the Study

The Air and Space Basic Course solicits feedback from field commanders and supervisors; however, it does not currently use any type of graduate and/or graduate supervisor evaluation system. The ASBC has no mechanism in place to guarantee feedback about how the course has or has not prepared its graduates to function as airmen leaders. Consequently, this study was needed in order to give timely feedback for effective changes that may help to improve the ASBC curriculum content for current and future students.

Previously there was no established mechanism for graduate and/or graduate supervisor feedback about the relevance of the ASBC curriculum. However, a comprehensive on-site (internal) student evaluation system existed. This internal evaluation assessed student performance, ". . . in relation to a published set of standards. Student competence is measured through faculty observation recorded on feedback sheets and cognitive-based tests" (Squadron Officer College, 2001, pg 53). With this evaluation system in place, faculty were able to document student achievement of the curriculum; however, this still provided no mechanism to determine whether or not the curriculum was satisfactory in serving the needs of graduates, supervisors, and the military service.

This study was needed to provide feedback about the relevance of the ASBC curriculum in preparing airmen leaders.

Purpose of the Study

The purpose of this study was to ascertain the differences in perceptions of new graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the ASBC.

Research Questions

Specifically, this study addressed the following research questions.

1. What are the demographic characteristics (gender, ethnicity, service component, rating, marital status, class standing or years of supervisory experience, and age group) of (a) graduates of the ASBC and (b) their supervisors?
2. To what extent is each content area perceived by graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation?
3. To what extent is each content area perceived by graduates' immediate supervisors to be relevant to graduates' roles as airmen leaders at their first duty assignment after graduation?
4. To what extent is there a difference in the perceptions of graduates and their supervisors related to the relevance of the content in the ASBC program?
5. To what extent is there a difference between the perceptions of graduates who are rated and those who are non-rated regarding the relevance of the content in the ASBC program?
6. What specific program content changes do graduates suggest?

7. What specific program content changes do graduates' immediate supervisors suggest?

Null Hypotheses

In order to address these questions, the following null hypotheses were formulated for this study:

1. $H_{01\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of graduates and their immediate supervisor related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.
2. $H_{02\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Definition of Terms

In order to establish a common understanding of the language in this study, the following terms were defined:

1. Air Force Specialty (AFS): The occupational specialty an individual performs as his or her Air Force duty (chaplain, nurse, navigator, etc). Specifically, an

AFS is a, ". . . group of positions requiring common qualifications. Each AFS has a title and a code" (Classification Guide, 2002, p. 45).

2. Air Force Specialty Code (AFSC): This is a series of alphanumeric characters that identifies the occupational specialties of men and women in the U.S. Air Force. For example the AFSC "52RX" identifies an individual as a chaplain, the AFSC "11AX" specifies a pilot, and AFSC "51JX" identifies an attorney (Classification Guide, 2002, p. 45).
3. ASBC Flight: A flight is a small seminar team of approximately 14 students. In a typical ASBC class, there are 42 to 44 flights. Each flight is composed of students from the line, non-line, Active, Reserve, Guard and civilian sectors of the Air Force (ASBC Mission Brief, 2000).
4. ASBC Flight Commander: The individual charged with direct supervision of students within a flight. This individual also serves as the primary instructor for the students assigned to his or her flight.
5. ASBC Student Squadron: A squadron is the basic administrative unit of aviation forces within the U.S. Air Force (AFI 38-101, 1998, p. 10). In order to execute an effective span of control for supervision, the approximately 600 students attending ASBC are divided up into flights and assigned, by flight, to one of five student squadrons (ASBC Mission Brief, 2000).
6. ASBC Student Squadron Commander: The individual who commands one of the five ASBC squadrons each of which is composed of several student flights. Students within each flight report directly to their flight commanders and the respective flight commanders report directly to the squadron

commander. The ASBC squadron commanders report to the commandant of the Air and Space Basic Course. Generally, a commander is a, ". . . specialty that identifies jobs of broad responsibility for command, direction, and planning or staff supervision of diverse activities across several functional areas" (Classification Guide, 2002, p. 46).

7. Graduate: Any individual who has successfully completed the Air and Space Basic Course.
8. Line Officer: Any commissioned U.S. Air Force officer who holds a combatant-type position in the competitive promotion category called Line of the Air Force (LAF). The LAF includes all officers except those in the competitive categories (specializations) of, ". . . Judge Advocates (JA), Medical Corps (MC),Dental Corps (DC), Chaplains (CH), Medical Service Corps (MSC), Biomedical Sciences Corps (BSC), and Nurse Corps (NC)" (AFI 36-2501, 1998, p. 60).
9. Non-Line Officer: Any commissioned U.S. Air Force officer who holds a non-combatant-type position. This includes those officers in the competitive categories (specializations) of, ". . . Judge Advocates (JA), Medical Corps (MC), Dental Corps (DC), Chaplains (CH), Medical Service Corps (MSC), Biomedical Sciences Corps (BSC), and Nurse Corps (NC)" (AFI 36-2501, 1998, p. 60).
10. Non-Rated: An officer who does not hold an aeronautical rating due to the fact that the officer's primary duties do not involve being a flyer. Specifically, non-rated officers perform any duties except that of, ". . . pilot, navigator,

flight test positions, astronaut, and air battle manager" (Classification Guide, 2002, p. 48).

11. Professional Military Education (PME): This is the area of military specific instruction that, ". . . (1) Provides . . . [education] in the employment of aerospace power . . . (2) Provides Air Force personnel with the skills and knowledge to make sound decisions in progressively more demanding leadership positions . . . and (3) Develops strategic thinkers and warfighters" (AFI 36-2301, 2002, p. 3).
12. Rated: An officer who holds an aeronautical rating due to the fact that the officer's primary duties involve that of being a flyer (but not necessarily a pilot). Specifically, rated officers include aircrew in, ". . . AFSCs (11XX, 12XX, 13AX, and 13BX) [which] identify aircrew members serving in, or qualified to serve in, pilot, navigator, flight test positions, astronaut, and air battle manager" (Classification Guide, 2002, p. 48).
13. Service Components: The U.S. Air Force is compartmentalized into several competitive categories and individuals compete within each category for promotion purposes. The military categories include (1) Line of the Air Force (LAF), (2) non-line, and (3) guard/reserve (ANG/AFRES) (AFI 36-2501, 1998, p. 60). For the purposes of this study, civilians are considered a separate service component category.

Limitations of the Study

This study was subjected to the following limitations:

1. Only graduates who completed the program in March of academic year 2002, ASBC Class 02D, were included (Class 02D started on March 4 and was graduated March 29, 2002).
2. It is likely that, due to the newness of the ASBC, most of the supervisors of graduates were not, themselves, graduates of the program. This could mean that since most supervisors do not share a common ASBC experience with their subordinates, they may have a limited understanding of some of the survey items.
3. The extent to which items on the survey form were representative of perceptions of graduates and supervisors may have been a limitation.

Assumptions of the Study

Several assumptions were implicit in this study.

1. Graduates and their supervisors had adequate access to the internet and the appropriate computer skills to complete the on-line survey instrument.
2. Graduates had retained adequate knowledge regarding the ASBC curriculum content to enable them to respond appropriately to the survey form.
3. Supervisors of graduates had enough working knowledge about the substance of the ASBC curriculum content to respond appropriately to the survey form.
4. Graduates and their supervisors responded honestly to the survey form.

Methods and Procedures

Sources of Data

The population was comprised of 567 graduates of the Air and Space Basic Course, Class 02D, and their respective supervisors (potentially up to 567 supervisors); these nearly 600 graduates were the total population from the class 02D that was graduated on March 29, 2002.

Instrumentation

The researcher developed two research instruments for this study. The two instruments were nearly identical. One instrument was specific to graduates only, while the other was exclusive for the graduates' supervisors. Specifically, the graduates' survey included a question regarding their class standing (bottom third, middle third, or top third) upon graduation—since this did not apply to supervisors, this item did not appear on the supervisors' survey. Likewise, the supervisors' survey contained an item that requested total years of supervisory experience—this item did not appear on the graduates' survey. Also, items regarding course content were worded specifically for graduates on the graduates' instrument and for supervisors on the supervisors' instrument. Both instruments requested participants to respond to related items for each of the five core ASBC content areas in terms of assessing how important the area was in preparing graduates for their post-graduate positions as leaders of airmen in the United States military. Each instrument included fifty-one total items: nine demographic items, one open-ended item, and forty-one items on a Likert-type scale. Responses on 40 of the scaled items (items 10 through 49) dealt specifically with curriculum content and ranged from "critical" information for job performance to "not necessary" for job performance.

Responses on the scale for these items were valued as follows: (a) critical = 4, (b) important = 3, (c) useful = 2, and (d) not necessary = 1. Therefore, the total score of each of these 40 items indicated the magnitude of respondents' perceptions of relevance of the curriculum item to preparing ASBC graduates for their initial post-graduation duty assignment. Responses on one of the scaled items (item 51) rated the overall effectiveness of the Air and Space Basic Course (how effectively the ASBC performed at achieving its stated mission). The responses for this question were on a five-point Likert-type scale and ranged from "Outstanding" to "Unsatisfactory" in accomplishing the mission. Responses on the scale were valued as follows: (a) outstanding = 5, (b) excellent = 4, (c) satisfactory = 3, (d) marginal = 2, and (e) unsatisfactory = 1. Statements on the instruments were written in hypertext markup language (HTML) using Microsoft FrontPage software in order to allow electronic submission. Figure 1 shows a sample of the instrument for graduates and a sample of the instrument for supervisors.

GRADUATES' INSTRUMENT

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
14. Understand how aerospace power enhances warfighting?	O	O	O	O	-	14.
15. Understand how the proper employment of aerospace systems enhances airpower?	O	O	O	O	-	15.
16. Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	O	O	O	O	-	16.
17. Have a working understanding of the Air Force core competencies?	O	O	O	O	-	17
18. Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	O	O	O	O	-	18.
19. Comprehend the implications of the Goldwater-Nichols Act of 1986?	O	O	O	O	-	19.

SUPERVISORS' INSTRUMENT

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
14. Understand how aerospace power enhances warfighting?	O	O	O	O	-	14.
15. Understand how the proper employment of aerospace systems enhances airpower?	O	O	O	O	-	15.
16. Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	O	O	O	O	-	16.
17. Have a working understanding of the Air Force core competencies?	O	O	O	O	-	17
18. Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	O	O	O	O	-	18.
19. Comprehend the implications of the Goldwater-Nichols Act of 1986?	O	O	O	O	-	19.

Figure 1. Items 14 through 19 from graduates' and supervisors' survey instrument.

Both instruments included two identical open-ended items (item 50) that requested suggestions for improvements to the ASBC curriculum content. As was the case with all other instrument items, the open-ended questions were written using Microsoft FrontPage software in order to allow electronic submission. A copy of the complete instruments is in Appendices C and D.

Data Collection Procedures

Each instrument was posted electronically to an Auburn University Webpage server so that respondents could access the page with any common Web browser, complete the survey electronically, and submit the survey anonymously. When respondents accessed the survey instrument, completed the questionnaire, and submitted their responses, an e-mail containing the responses was generated from the Auburn University Webpage that contained the survey. This e-mail was sent from the Webpage to the researcher's Auburn University e-mail account. Hence, no response could be traced to a particular participant. Therefore, participation in the study was voluntary and anonymous.

Data Analysis Procedures

Demographic information from the survey was analyzed and reported by number and percent for each group as follows: males and females, ethic group, age group, class standings of graduates, years of experience of supervisors, rating (rated versus non-rated), and service component (LAF, non-line, civilian, and ANG/AFRES). The mean score and standard deviation for each item were reported by group for graduates and supervisors.

Null hypothesis $H_{01\ (a\text{-}e)}$ was tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of graduates and their

immediate supervisor related to the relevance of each content area in the ASBC program in preparing graduates for their roles as airmen leaders. Null hypothesis $H_{02\ (a\text{-}e)}$ was tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program. Open-ended items on each instrument were analyzed for common themes.

Significance of the Study

This study may help to improve Professional Military Education (PME) conducted at the Air and Space Basic Course. The world citizenry depends on having a prepared American Air Force whose officer corps understand the theory and employment of air and space assets. The ASBC is the only entry-level PME school that is designed to fulfill this goal. This study highlighted areas that may need to be changed in order to provide ASBC students with adequate preparation for their post-graduation roles as airmen leaders. Results of this study may be used as a basis for revising the ASBC curriculum so that it meets the needs of students, the military, and the world more effectively and efficiently.

CHAPTER II.

LITERATURE REVIEW

This study focused on the Air and Space Basic Course Professional Military Education program by investigating the perceptions of graduates and their supervisors related to the relevance of the course content in preparing graduates to perform their roles as airmen leaders. Chapter I introduced and provided a context for this study, stated the problem, need and purpose of the study, defined terms, listed limitations and assumptions of the study, methods and procedures, and the significance of the study.

This chapter presents a review of literature regarding the history and need for Professional Military Education (PME) in the Air Force. A review of literature was conducted pertaining to the underlying theory expressed by senior leaders that a problem existed in the Air Force that necessitated the addition of the ASBC to the continuum of Air Force PME already in existence. Furthermore, literature pertaining to the purpose and scope of the ASBC and its curriculum as well as assessment of the ASBC was examined. Finally, since the policies of the USAF require it to follow the Instructional Systems Development (ISD) model as the basis for course development and/or revision of the ASBC, a review of literature concerning the ISD process is presented.

The Need for Air Force PME in Theory Development

The need for military members to be trained and educated in the art of warfare has been recognized through the ages. Even the ancient Chinese warrior, general, and philosopher Sun Tzu realized as early as the Fourth Century B.C. that leading warriors

was, ". . . a matter of vital importance to the State, [and it] demanded study and analysis . . ." (Griffith, 1987, p. x). In Europe by the early part of, ". . . the 18th century it became apparent to the great armies that it was too costly for all officers to be general practitioners who learned their craft solely on the battlefield" (Efflandt and Reed, 2001, p. 83). The United States military has long shared this historical view that in order to fight a war successfully, its people must be trained in the techniques of war and educated in the art of war. This was a view also shared by the founding fathers. Chief among them was President George Washington who proposed the founding of a U.S. military academy. Just prior to his death, Washington wrote, ". . . while I was in the Chair of Government I omitted no proper opportunity of recommending it . . ." (Twohig, 1999, p. 454). Others such as, "Hamilton, Knox, and Pickering all urged the establishment of a military academy to provide a hard core of professionally trained officers to command in any future emergency" (Finney, 1992, p. 1). The U.S. Military Academy (USMA) began operation at West Point on July 4, 1802 and its chief purpose was to educate prospective officers in the art of war and prepare them to receive specialized training in artillery, cavalry, infantry tactics and other subjects after their graduation from the academy (Finney, 1992, pp. 1-2).

Although the founding fathers' original goal of the military academies was to provide a basis of Professional Military Education, the focus of these institutions became one of building both military ethos and academic intellect through scholastic rigor. Therefore, the U.S. Military Academy became a university rather than a school focused solely on PME. "Continued curriculum changes allowed [the] USMA's admission and membership in the Association of American Colleges in 1927. In 1933 Congress

authorized [the] USMA . . . to confer Bachelor of Science degrees" (Efflandt and Reed, 2001, p. 83). To date, each branch of the military operates its own academy. These academies provide a civilian-style quality education; however, unlike their civilian counterparts, the academies educate students within a regimented military environment (Valceanu, 2000, p. 9). In addition to providing a curriculum that is similar to that found in civilian universities, military academies also provide basic-level Professional Military Education, but not in a free-thinking atmosphere and not in a concentrated manner such as provided in a graduate PME setting. Academies have two main purposes: (1) to grant a degree to its students so they will qualify for a military commission and (2) to commission young men and women as military officers.

Military academies, including the USAF Academy which began operating in July, 1955 (USAFA Fact Sheet, 1995), are not PME schools; they are universities. They provide the rigors of basic military training more so than providing any free-thinking type of PME. Furthermore, to some degree, academy life instills the principles of followership and obedience on the premise that in order to be a good leader, one must be a good follower. It is this rigor and regimen that helps prepare the graduate for what lies immediately ahead in his or her future, the specialized training he or she will receive to qualify as a pilot, navigator, air battle manager, etc. This specialized training step is obedient and meticulous, not a free-thinking theory development education such as the one he or she may encounter in a graduate PME setting.

Military training and education, although closely related and overlapping, are different from one another. Practicing warfighting techniques is categorized as training. Training is normally specific to a particular type of drill, equipment, or maneuver so that

military members become familiar enough to operate the equipment or execute the maneuver automatically in times of high stress and under battlefield conditions. Understanding the theories associated with warfighting, and the underlying principles and strategies that can be applied situationally while avoiding war, planning for war, or during war, is one of the goals of military education.

The U.S. military aviation arm has long been recognized as the best trained among all the aviation forces of the world, yet not necessarily the recipients of the best theory-based education. Prior to the establishment of airpower education schools, not even the officers who actually piloted the airplanes were fully aware of their contributions to the success of warfare. Furthermore, these pilots were often commanded by people with little or no aviation background and no working theory of how to conduct war from the air. Although well trained to operate their aircraft, their ideas were often limited to the tactical maneuvers of using their aircraft as single fighting ships with no real regard to the importance of developing overarching airpower theories and coordinating their efforts with ground and other air assets. Furthermore, they were unable to achieve their niche as a military service—and, ". . . aviation remained as an adjunct to the [Army] signal corps" (Finney, 1992, p. 3). However, the early pioneers of airpower soon developed theories of airpower employment that they shared among other aviation corps personnel. However, their theories had to be circulated in an ad hoc fashion since no airpower Professional Military Education schools yet existed and, ". . . the formal professional training provided for [aviation] officers was in no way comparable to that furnished officers of other arms and services . . ." (Finney, 1992, p. 3).

Airpower Theory Prior to Professional Military Education for Aviators

Early airpower theorists did not learn airpower theory in a Professional Military Education (PME) classroom, they derived theory from practice. One of the early coherent airpower theories was that aircraft could provide synergy to the ground forces by providing close air support (CAS). Close air support is a coordinated air attack conducted, ". . . against hostile targets in close proximity to friendly force" (AFDD-1, 1997, pp 49-50). Close air support provides friendly ground forces the direct fire support needed to be successful. Since its objective is to injure the enemy's field forces that are in direct contact with friendly forces, CAS must be employed through detailed integration of air and ground forces. With proper coordination, CAS often serves as the most, ". . . critical mission by ensuring the success or survival of surface forces" (AFDD-1, 1997, pp 50).

Before the advent of airpower PME schools, early close air support theory was not taught per se; however, its application was practiced as the result of on-scene innovation by pilots flying over the battlefield (Hallion, 1989, p. 20). The embryonic stage of CAS, ". . . began somewhere over the seemingly endless trenches that stretched from Flanders' Fields to the Pyrenees Mountains during the First World War" (Williams and Mirande, 1988, p. v). It began as isolated attacks on ground positions. According to the official Air Force historian, Richard Hallion, CAS was not part of a grand scheme (1989, p. 20). It was the result of unorganized efforts of individual pilots and the sporadic attacks by airmen on opposing ground forces as targets of opportunity. German recipients of these attacks termed them "punishment" in their native tongue, ". . . using the verb *strafen*" (Hallion, 1989, p. 20).

The U.S. Air Service (which later became the Air Corps and finally the Air Force) had no PME school as a forum in which to teach aviators how to support the ground war through CAS. The Air Service did not continue to develop CAS theory in the years immediately following World War I, especially since supporting ground troops with CAS often placed aviation in a subservient role to ground commanders. Lack of thought and innovative ideas about how to lead airmen in appropriate airpower roles and missions soon took its toll on the Air Service. It was seen as a useless service by Army leaders and its budget and other resources were curtailed severely by the War Department. By, ". . . mid-1922 [the Air Service chief, General Mason Patrick,] . . . complained to the War Department that the Air Service had been virtually demobilized and could no longer discharge even its peacetime duties" (Shiner, 1983, p. 22). Meanwhile, the Air Service's parent, the U.S. Army, although also suffering from limited budget and resources, focused on educating its mid-level officer corps through two PME schools it had created: one was the, ". . . General Service and Staff College at Fort Leavenworth [in Kansas,] and the [other one was the] Army War College [at] Washington, D.C. (Finney, 1992, p. 2).

The U.S. Army was reluctant to focus on airpower theory and education. Separate and equal Professional Military Education for aviators was not seen as a primary concern since aviation was not yet considered a key component to winning future wars. Opinions on the subject were often diametrically opposed between Army leaders and those in the air arm. Army leaders wanted the Air Service to be completely subservient to battlefield commanders, and Air Service officers wanted to run their own war independently. The

Army's official view was stated by Brigadier General H. A. Drum from the War Department's general staff:

> The idea that the present or future development of aviation has or will create a third element in national defense known as "air power" coordinate with land and sea power is fundamentally unsound from every tactical and strategical standpoint. There is no possible separate responsibility, separate mission, or separate "theater of action" which can be assigned to such a separate force . . . there is no place for a separate air command independent of the Army and Navy . . . establishment of a separate air force independent of the Army can not be justified on any grounds whatever. (Aircraft Inquiry, October 17, 1925, p. 459)

True to the Army's official view, Drum saw no need to develop airpower theory and viewed the airplane as a piece of field artillery; therefore, aviators were welcomed to attend Army PME but it was seen as a waste to devote too many resources to airpower PME. Drum was widely viewed by airmen as, ". . . a thick-witted Army traditionalist who refused to abandon his early claim that the American doughboy would forever remain the decisive element in war" (Faber, 1997, p. 205). To airmen, he was the epitome of the Army's archaic ideas about airpower and he transmitted that the Army's outmoded position was firm. Meanwhile, air-minded leaders such as Billy Mitchell saw the Army's position as being ignorant and arrogant (Mitchell, 1925, p. 74). He believed ground officers were too naive and shallow thinking to run an air arm from the ground. Mitchell (1925, p. 74) stated, "Let the groundman run the ground, let the waterman run the water,

and let the airman run the air." Even some outside the military expressed their opinions that the Army was being myopic in not seeing the broad potentials of an independent air arm and airpower theory development. Hanson Baldwin, the military correspondent for the *New York Times*, wrote in a personal letter to Air Corps Major Haywood Hansell (a future World War II general) that where the Air Corps was concerned, the Army leadership was full of, ". . . short-sighted old fogies" (Baldwin, 1939, p. 2). Mitchell, however, did not restrict his comments to personal correspondence. He was eager to make his own dissenting views known in testimony before the aircraft board of inquiry:

> Colonel Mitchell said those in control were non-flying officers who regarded aviation as merely an auxiliary to present activities. 'Their testimony regarding air matters is almost worthless, sometimes more serious than this,' he added. Aviation, said Colonel Mitchell, had been treated like a stepchild and was constantly being pushed down by those in control. (Aircraft Inquiry, October 3, 1925, p. 423)

Industrial Web Theory and Professional Military Education

Among the U.S. services, the last to gain an officer-level Professional Military Education school was the air arm of the Army, known as the Army Air Corps. Prior to the inception of an airpower PME school, ideas and theories on airpower employment were not widely disseminated among airman. As a result, there was not much of a common warfighting bond among the Air Service and later the Air Corps. Therefore, the air arm was devoid of any logical reason for it to exist as an independent fighting arm. As a result, the War Department's position about aviation, ". . . centered on the view that the

Air Corps could not win a conflict by itself [like an army or a navy might]" (Johnson, 1999, p. 49). However, all that was soon to change with the determination of instructors at the air arm's new PME school.

The air arm PME school was first opened in November 1920 at Langley Field, Virginia, as the Air Service Field Officers' School. This basic PME school was designed solely to prepare officers for command duties. However, as aviation leaders began to realize the potential of an aviation PME forum to advance theory and educate officers about the role of airmen, the scope of the program began to broaden. Therefore, the school was appropriately renamed as the Air Corps Tactical School and then moved to its final operational location at Maxwell Field (now Maxwell Air Force Base) near Montgomery, Alabama, in 1926 (Finney, 1992, pp. 8-25).

According to Griffin, McFarland, Molloy, Muller, Pecoraro, and Rosko (1995, p. 4), the Air Corps Tactical School (ACTS) was the school designated to provide Professional Military Education specifically for aviators. However, the new PME school ignored close air support theory although CAS had proven to be an extremely valuable mission in World War I and aviators, ". . . considered general air support of ground forces a prime mission function" (Mortensen, 1987, p. 6). Research into theory development at the ACTS revealed a clear and overriding theme: the desire for independence was a major influence on the development of the air arm. Although, close air support was a seemingly valid and invaluable role for military aviation, it was viewed as keeping the air arm subservient to ground commanders, ". . . anything to do with army cooperation seemed to . . . smack of 'subservience' to the older military branches" (Smith, 1990, p. 16). Also, airmen believed that an air arm administered by ground leadership would continue to

have its resources diverted away from aviation. Moreover, without any substantiation, air-minded officers at ACTS had a profound faith and theory that strategic bombardment could defeat adversaries from the air cheaper and quicker than ground forces supported by CAS (Griffin, et al., 1995, p. 17). Therefore, the Air Corps wanted to create a separate force rather than be maintained as a support arm. Since CAS kept the air arm in a support role, its theory development was suppressed in favor of one that would prove that airpower could be a separate and equal military service.

Looking for ways to prove the airpower alternative to positional (trench stalemate) warfare encountered in World War I, airmen at the ACTS Professional Military Education school explored the ideas of three prominent men: generals Douhet, Trenchard, and Mitchell. These airpower thinkers believed the military was best served by an independent air force, not tethered to the ground as CAS theory had done. Therefore, in light of the philosophy to free airpower to do its own warfighting and in light of the aviators' newly granted freedom to theorize and create air doctrine within an academic environment, ACTS instructors began developing a theory that would support an air force that was independent from the Army. In an effort to prove the Air Corps could fight a war as an independent service, Griffin, et al. (1995, pp. 16-17, 30) described the processes air-leaders went through to develop the industrial web theory which was disseminated at the PME school. The industrial web theory asserted that the airplane could reach beyond the stalemate of the trenches and perform a strategic bombardment role to attack and destroy vital centers of production or transportation so that the enemy could not wage an effective war. It was theorized that industrial production was tied together in an interconnecting web so much so that many end products or war

deliverables depended upon a few vital components or transportation centers that if damaged or destroyed would stop or severely hamper production or delivery. For instance, under this theory it was not necessary to destroy a whole industry to stop production. If a vital center of any facility could be destroyed, for example the power supply to an aircraft engine factory, then the factory could not operate and a ripple effect would occur throughout the industry.

The Air Corps Tactical School PME school became the think-tank for the industrial web theory. Theory development was based on the assumption that if America's industrial web could be defined then the American web could be overlaid upon any industrialized enemy nation (Griffin, et al., 1995, p. 40). Therefore, Mitchell's disciples, several ACTS officers, began to search for vital centers that could be targeted through strategic bombing. Lieutenant Colonel John F. Curry, the ACTS Commandant, launched a systematic quest for target information in 1934. "Requests were sent far and wide, to military, governmental, and commercial sources . . . specifically in the areas of power, industry, transportation, and raw materials" (Griffin, 1995, et al., p. 30). This study did in fact identify many key vulnerabilities within America and ACTS instructors believed that these same vulnerabilities existed within the "industrial web" of every modern nation (Griffin, 1995, et al., p. 30-43).

During their exhaustive study of America's industrial web, Air Corps Tactical School PME instructors found many examples of very specialized industries that, if targeted, could stop whole systems from being used. In one situation, instructors discovered a critical backlog in delivery of new aircraft. In this case, new airplanes were being flown from the factory to their delivery destination and their propellers were

promptly removed and shipped back to the factory. The propellers were reinstalled on other new aircraft that repeated the same cycle of delivery and disassembly. This rendered the newly delivered aircraft as useless and delayed the delivery of other aircraft at the factory. Hansell stated:

> Inquires showed that the propeller manufacturer was not behind schedule . . . it was a relatively simple but highly specialized spring that was lacking, and we found that all the springs made for all the controllable pitch propellers of that variety . . . came from one plant and that plant in Pittsburgh had suffered from a flood. There was a perfect and classic example. To all intents and purposes a very large portion of the aircraft industry in the United States had been nullified by the loss of one small plant . . . (Hansell, 1951, pp. 11-12)

With these key vulnerabilities in mind, ACTS instructors became committed to the theory that airpower could go beyond the enemy's front lines and knock out these specialized plants or vital centers within any given industry. ACTS textbooks and materials asserted that instead of using airpower to support infantry missions,

> . . . consideration should be given to attacking an enemy's capital, commerce, and industrial centers—striking an enemy's vital centers instead of undertaking massive battles of attrition . . . this perspective grew into the theory of strategic bombardment which became the predominant theory of ACTS . . . (Griffin, 1995, et al., p. 16-17)

"The role of professional military education, in this case the Air Corps Tactical School, is a well-known facet of the development of the 'strategic bombardment' doctrine" (Muller, 1996, p. 174). Strategic bombardment theory was developed by faculty, refined by faculty and students, and was the doctrinal basis for the air strategy in World War II. That is, the doctrine of using strategic bombardment to deplete the enemy's supplies and troops before they could come to bear upon friendly forces, ". . . at points far removed from the field of battle . . ." (Mitchell, 1921, p. xix). As a result of the efforts at the Air Corps Tactical School, airmen surged into World War II with a doctrine for warfighting as encapsulated in Air War Plan Delta-1 (AWPD-1), the airpower war plan created by ACTS alumni, ". . . just 9 days at the dawn of American involvement in World War II" (Griffin, 1995, et, pp. 22). Thus, the industrial web theory and the precision daylight strategic bombing campaign that would be carried out in World War II were born (Griffin, 1995, et al., p. 22).

The ACTS faculty had correctly gauged the concerns of aviation commanders and supervisors. The feedback from all levels within the Air Corps was that in order to lead airmen in carrying out the airpower mission, students at the ACTS should be exposed to how an aviation force could be employed to win a war as an independent fighting arm. In fact, the ACTS industrial web theory, as the basis for strategic bombardment, was the major impetus for the decision to create an independent air force, not tethered to ground forces. The Air Corps Tactical School became the model for the aviation arm of Professional Military Education and the establishment of the Air and Space Basic Course.

The Continuum of Air Force Officer Professional Military Education

As envisioned by senior leadership, the Air Force Professional Military Education continuum is designed to help prepare officers and select civilians to assume positions of leadership in carrying out the airpower mission as, ". . . experts in aerospace power" (AFR 53-8, 1986, p. 8). The continuum consists of four episodes of PME school, each required to be completed by a set point within an officer's career (either by in-residence attendance or through distance education). Air University at Maxwell Air Force Base in Alabama is the hub of the continuum. It, ". . . operates colleges, schools, institutes, and other organizations aimed at educating and developing the USAF's future planners and leaders" (Ennels, 2000, p. 34). All PME for officers in the Air Force is administered by Air University and is therefore designated as graduate-level education. Air University's specific mission is, ". . . to educate Air Force people to develop and lead the world's best aerospace force—inspiring commitment to a war-winning profession of arms" (Farman, 1995).

Perhaps one thing that sets PME schools apart from civilian graduate-level institutions, however, is the student body they serve. Even the newest one of these students is already fulfilling a supervisory or leadership role prior to arriving at the school. Many are seasoned mid-level and senior career officers or civilians. They are experienced warfighters and leaders who are among the top performers and leaders in the Department of Defense (DoD). As two authors noted in recent articles, the military's best and brightest officers set aside their fighter jets and battle tanks so they can study warfighting, leadership, government and policy, and history at one of several graduate colleges operated by the U.S. military (Schmitt, 1995, and White, 1996). The officers

involved in graduate PME, ". . . improve their chances for promotion both within the armed services and in the civilian world" (Arnone, 2002, p A34). This is in line with the purpose of military graduate PME colleges; that is, to refine an officer's, or select civilian's, ability to perform in higher positions of military leadership.

Evolution of Air Force Professional Military Education

This system of graduate-level Professional Military Education is the result of many years of refinement. Although the roots of PME can be traced as far back as ancient China, "The earliest European influences on PME in the United States were French" (Simmons, 2000, p. 1). However, its U.S. Air Force roots began with the ACTS and finally came together officially during and just after World War II when, "Air Force leaders in the 1940s wanted PME to encourage forward thinking . . . These leaders expected Air University to produce graduates with broad views and a deep, thorough understanding of their profession" (Davis, 1989). Therefore, in an effort to cultivate officers throughout their careers, the continuum of officer PME originally, ". . . consisted of three isolated educational episodes at the junior, intermediate, and senior stages of an officer's career" (Davis, 1989). The first episode occurred after about four to seven years in the military when junior officers attended Squadron Officer School. The second occurred at about the 12-year point when intermediate officers attended Air Command and Staff College. And, the third was at about the 16- to 18-year point when senior officers attended Air War College. These re-visits to PME throughout an officer's career were and are critical in keeping the force educated about current trends and issues in airpower and to help ensure that each officer is prepared for his or her next career step (AFI 36-2301, 2002, p. 11).

The post-World War II concept of Air Force officer PME gave students a chance to learn and contribute to airpower theory in each of the three isolated episodes starting with Squadron Officer School. By this point, however, officers had been leading airmen for about four to seven years. Furthermore, these officers had spent these years perfecting their technical skills within their Air Force specialty (pilot, engineer, communications officer, etc.) and they did so without a baseline of airpower theory to guide them. The continuum was recently augmented with the addition of a basic PME course designed for new officers and select civilians at the beginning of their careers ("Launches Course," 1998, p. 13). This new addition to the continuum of PME was named the Air and Space Basic Course (ASBC). The ASBC was formed in response to a perception that officers lacked corporate purpose and a baseline of airpower theory to guide them (McCain, 2002, p. 2).

The Dilemma and Impetus for the Air and Space Basic Course

The impetus for the Air and Space Basic Course, ". . . can be traced back to a 1996 conference held at the Air Force Academy. During the conference, then Secretary of the Air Force, Sheila Widnall, and then Air Force Chief of Staff, General Ronald Fogleman, identified and resolved to fix several deficiencies in the Air Force officer corps" (McCain, 2002, p. 2). Widnall, Fogleman, and other leaders within the USAF believed their service and its people faced a dilemma. Many Air Force officers identified themselves first in terms of their specific specialties, e.g., software engineer, pharmacist, pilot, etc., rather than thinking of themselves as officers and leaders of airmen. To an extent, this was a function of the highly technological orientation of the Air Force. Furthermore, "The strong impetus toward occupationalism in the Air Force should not be

surprising because of the institution's dependency on technology and on specialists" (Builder, 1993, p. 8). As a by-product, the requirements for highly specialized technocrats had fragmented the service. The Air Force had become a conglomeration of people serving in various occupations who also just happened to be in the Air Force. The problem, from senior leadership's view, was that these occupationalists had lost their perspective; they had lost their calling to serve for a higher good. Officers were concerned more with their own self interests than those of the military and the society that they were sworn to serve (Builder, 1993, p. 20). Men and women in the Air Force appeared to dismiss their role of a military officer as being a profession, and instead, focused on their occupation as their profession.

Samuel Huntington (1957) addressed the issue of the military professional and provided a now famous model of professionalism. According to Huntington, "A profession is a peculiar type of functional group with highly specialized characteristics" (Huntington, 1957, p. 7). Huntington's model asserted that this functional group must possess three essential characteristics: expertise, responsibility, and corporateness. As Huntington worked through his model, he noted that military officers possess each of the characteristics in abundance.

The first characteristic, expertise, coincides with two areas of an Air Force officer's professional existence. First, "The professional . . . is an expert with specialized knowledge and skill in a significant field of human endeavor" (Huntington, 1957, p. 8). Along these lines, it is important to note that officers are not generalists, each one has a specialty, an occupational aspect. Within an officer's specialty, he or she performs his or her vocation of air traffic controller, physician, computer engineer, pilot, etc. The officer

must be extremely well versed in his or her occupational specialty. As a detriment, however, officers often over identify with being employed only to perform their specialties. The Air Force officer possesses and exhibits specialized skills in carrying out his or her duties as a military officer, no mater what his or her occupational specialty is. For example, one would not naturally think of a chaplain as a warfighter, and he or she is not one, as recognized in the Geneva Convention (1949). However, he or she must be aware of the warfighting mission of the people in his or her unit or congregation. Furthermore, he or she must understand and properly execute his or her role as a leader of the military and civilians assigned under his or her supervision.

The second characteristic, responsibility, concerns the higher good to which an officer is pledged. The Air Force officer is responsible to the members of, ". . . society, individually and collectively" (Huntington, 1957, p. 9). Huntington (1957, p. 9) asserts that, "This social responsibility distinguishes the professional man from other experts with only intellectual skills . . . the professional man can no longer practice if he refuses to accept his social responsibility: a physician ceases to be a physician if he uses his skills for antisocial purposes." Air Force officers exist to serve a higher purpose than themselves, they serve society.

The third characteristic, corporateness, pronounces that officers have a corporate identity. That is, they are, ". . . members of a profession [that] share a sense of organic unity and consciousness of themselves as a group . . ." (Huntington, 1957, p. 10). Being an Air Force officer is a highly corporate endeavor. One cannot become an officer unless he or she submits himself or herself, by taking an oath, to following the orders of the corporate chain of command. They must wear distinctive clothing that identifies them as

Air Force members. They have a shared corporate purpose, the defense of the nation. In addition, in order to defend the nation, Air Force officers must fulfill their purpose of being leaders of airmen.

It is clear from Huntington's model that being an Air Force officer, ". . . meets the principal criteria of professionalism" (Huntington, 1957, p. 11). Effective officers possess and display a high level of expertise, responsibility, and corporateness. Senior Air Force officials, however, noted a deficiency in professional responsibility and corporateness (McCain, 2002, p. 2). That is to say, officers had begun to place their own concerns about their careers and other self interests above that of their responsibility to society (Builder, 1993, p. 20). Generally, Air Force officers did not unify themselves under their higher corporate calling of being leaders of airmen. This was a departure from the history of officers in the Air Force and did not fall in line with the theory of airpower. "The theory of air power—the idea of aviators unified in a cause much larger than themselves—was originally conceived around the airplane as a new means to broad and important ends" (Builder, 1993, p. 29).

Air Force officials, under the leadership of its Chief of Staff, General Fogleman, felt it mandatory to infuse the Air Force with a renewal of professionalism (Lawson, 1996, p. 11). They wanted to renew each officer's sense of responsibility to society and unify all officers under their corporate purpose of leading airmen to do the airpower mission. "The Air Force has lost its sense of vision, but it has a strong affinity toward re-establishing one" (Builder, 1993, p. 23).

> Looking to strengthen the professionalism and dedication of its officer corps, the Air Force chief of staff declared Nov. 21 [1996] that the service

> will establish an Air and Space Basic Course, modeled after The Basic School for Marine officers. (Lawson, 1996, p. 11)

The Basic School (TBS) is a Professional Military Education course that dispels the notion of careerism and occupationalism for the Marine Corps officer. Unlike most Air Force officers who normally identify themselves by occupation, Marine Corps officers are unified in corporate purpose. "A Marine will tell you who he is—a Marine—before he tells you what he does" (Lawson, 1996, p. 11). The Marine understands the corporate purpose of his or her service. At The Basic School, ". . . every Marine officer . . . learns what the Air Force hopes to teach its officers: a common understanding of all things relating to their service" (Lawson, 1996, p. 11).

In an interview with Chris Lawson of the *Navy Times*, General Billy Bowls, then commander of the Air Education and Training Command, described why Air Force officers fell short in the area of corporateness. Bowls told Lawson that one reason USAF officers were not unified in purpose and did not, ". . . appreciate the overall missions and capabilities of the Air Force, as the Marines do about their Corps," (Lawson, 1996, p. 11) is due to the lack of a basic USAF Professional Military Education course. When a Marine is commissioned, he or she goes almost immediately to TBS. However, directly after Air Force officers are commissioned into service they, ". . . are then sent immediately to a job-specific school. They get no general immersion in Air Force concepts, structure, strategy and so on until they reach the rank of captain—usually after four to seven years of service . . ." (Lawson, 1996, p. 11).

As a result of most officers having spent these years perfecting their technical skills within their Air Force specialty without a baseline of airpower theory and corporate

purpose to guide them, they had begun to see their occupation as their profession over and above their higher calling of being an officer (Builder, 1993, p. 20). Therefore, General Fogleman and his staff felt it necessary to provide all new officers a PME experience similar to that of TBS (Lawson, 1996). Fogleman mandated the initiation of a new Air Force PME school for all new officers and selected civilians that would provide an overview of the fundamental principles of airpower theory (McCain, 2002, p. 2). Thus, the ASBC was created as an airman's school so that officers across all specialties could have a common understanding of airmanship and how to be a leader in today's United States Air Force. "This four-week [graduate-level PME course was] . . . chartered to help new Air Force officers understand their role as airmen . . ." (Bush, 2002).

Purpose and Scope of the Air and Space Basic Course

When the Air and Space Basic Course (ASBC) was opened as a test course in July, 1998, the commander of Air Training Command, then General Lloyd W. Newton, stated: "Over the past decade, we've lost the knowledge of what it means to be an airman" ("Launches Course," 1998, p. 13). Consequently, the ASBC was created to, ". . . bring all of our newly commissioned officers together and create a common understanding of how all the elements of our force fit together. It will help move us away from being Air Force specialists and move us much closer to being war-fighting strategists" ("Launches Course," 1998, p. 13). The official purpose of this course is:

> To inspire new USAF officers to comprehend their roles as airmen; one who understands and lives by USAF core values, articulates and demonstrates USAF core competencies, and who dedicates oneself as a

warrior in the world's most respected air force. (ASBC Mission Statement, 2002)

The ASBC has also articulated a mission specifically for students which states that students should strive to, "Become a corps of professional airmen who can articulate air and space doctrine and develop a common bond with fellow war fighters" (ASBC Mission Statement, 2002). The school endeavors to prepare junior Air Force officers and selected civilians to, ". . . comprehend their role as airmen" (Fact Sheet, 2002).

The Air and Space Basic Course Curriculum

The Air and Space Basic Course, ". . . curriculum stresses aersopace power and functions, theory, doctrine, strategy as well as . . . leadership and teamwork, which are essential tools for the developing Air Force officers" (Squadron Officer College, 2001). The ASBC, ". . . curriculum focuses on developing airmen through the application of aerospace doctrine and maintaining the airman's perspective of what the airman brings to the fight. To do this . . . [the] course is divided into five areas" (Squadron Officer College, 2001, p. 3). The core areas are as follows: (1) Profession of Arms, (2) Leadership/Management, (3) Military Studies, (4) Communications, and (5) International Studies. (Squadron Officer College, 2001 p. 3).

Area 1000: Profession of Arms

Warfighting is the central focus of the Profession of Arms area of the ASBC curriculum (DCP Curriculum, 2002). This includes, ". . . knowing the strategies, tactics, and doctrinal underpinnings of how best to achieve victory over the enemy...[the profession of arms] also embraces officership, core values, roles and responsibilities,

discipline, morals and ethics…[etc]" (DCP Curriculum, 2002). The profession of arms is an extensive area of the ASBC curriculum, identified as A1000 (area 1000), that consists of 86 and one-half hours of instruction. The A1000 area objective is to, "Apply aerospace power capabilities and officership principles to warfighting" (Squadron Officer College, 2001 p. 10). In order to achieve this objective, the A1000 curriculum is divided into nine phases.

Phase one is a two hour section (A1100) regarding, "... how the Air Force perspective on aerospace power enhances warfighting" (Squadron Officer College, 2001 p. 10). The second phase (A1200) is an eight and one-half hour section regarding, "... how the proper employment of aerospace systems enhances warfighting" (Squadron Officer College, 2001 p. 12). Phase three (A1300) focuses on comprehension of, "... how the Air Force Core Competencies [which include Air and Space Superiority, Information Superiority, Rapid Global Mobility, Global Attack, Agile Combat Support, and Precision Engagement] enhance warfighting" (Squadron Officer College, 2001 p. 12). This phase is 13 hours in duration. Phase four (A1400), is a 10 hour section on, "... how Joint operations are planned and executed at the strategic and theater/operational levels" (Squadron Officer College, 2001 p. 22). Phase five (A1500) consists of a four hour block of instruction that covers, "... how aerospace power employment techniques enhance warfighting" (Squadron Officer College, 2001 p. 27). Phase six (A1600) spans five hours. It is devoted to, "... how Joint aerospace operations are planned and executed at the theater/operational and tactical levels" (Squadron Officer College, 2001 p. 29). Phase seven (A1700) is a 27 hour section that challenges students to apply theory to practice by using, "... Joint aerospace operations planning and execution tools

effectively to complete the Blue Thunder wargame" (Squadron Officer College, 2001 p. 33). Phase eight (A1800) is 10 hours in duration and it focuses on the underlying foundation of, ". . . officership principles and heritage" (Squadron Officer College, 2001 p. 36). The final phase, phase nine (A1900) of A1000 is seven hours and one-half hours. It concentrates on the value of, ". . . military heritage" (Squadron Officer College, 2001 p. 38).

Area 2000: Leadership/Management

The Leadership and Management area is that, ". . . portion of the curriculum designed to develop an understanding and appreciation of the professional, organizational, and interpersonal dimensions of influencing and directing people and other resources to accomplish the mission" (DCL Curriculum, 2002). This is a broad area of the ASBC curriculum, identified as A2000 (area 2000), that consists of 20 and one-half hours of instruction. The A2000 area objective is to, "Apply leadership skills to influence and direct people and resources to accomplish the mission" (Squadron Officer College, 2001 p. 40). In order to achieve this objective, the A2000 curriculum is divided into five phases.

The first phase of the leadership and management area is a two and one-half hour section (A2100) regarding the application of, ". . . personal wellness skills" (Squadron Officer College, 2001 p. 40). The second phase (A2200) is a nine and one-half hour section regarding application of, ". . . effective teambuilding and problem solving skills" (Squadron Officer College, 2001 p. 41). The third phase (A2500) focuses on peer feedback. It, ". . . gives the flight commander an opportunity to provide performance feedback to each student . . . [and gives students] an opportunity to provide performance

feedback to their fellow flight members" (Squadron Officer College, 2001 p. 43). This phase is a three and one-half hour session. The forth phase (A2600) is a two hour and twenty minute section that gives new officers an insight into the, "Value [of] Senior Noncommissioned Officers' and Senior Officers' views on the military and their expectations of newly commissioned company grade officers" (Squadron Officer College, 2001 p. 44). The fifth and final phase of this area of curriculum (A2700) consists of a three hour distinguished speaker series that exposes students to military leadership principles as espoused by an experienced senior air force or civilian official (Squadron Officer College, 2001 p. 44).

Area 3000: Military Studies

The Military Studies portion of the curriculum, ". . . embraces general military history, history of the Air Force and aerospace power, military theory, doctrine, strategy, and civil-military relations...[this area] uses the lens of history to focus understanding of the present and illuminate the future" (DCM Curriculum, 2002). This segment of the ASBC curriculum is identified as A3000 (area 3000) and it consists of 11 hours of instruction. The A3000 area objective is to, "Comprehend the significance of aerospace history and doctrine to modern warfare" (Squadron Officer College, 2001 p. 43). The A3000 curriculum includes instruction that is focused on the historical underpinnings of, ". . . Theory, Doctrine, Objectives, and Strategy" (Squadron Officer College, 2001 p. 44). Its lessons expose students to a series of topics ranging from the origin and theory of airpower to recent applications of airpower theory in Operations DESERT STORM (the Gulf War) and ALLIED FORCE (Kosovo). This area also covers pivotal historical figures and their role in the development of today's Air Force and employs inspirational

speakers to explain significant events in aerospace history (Squadron Officer College, 2001 pp. 44-50).

Area 4000: Communications

A thorough understanding of communications and possession of communication skills are considered to be critical to the effectiveness of an airman leader. Therefore, the Communications area was,

> . . . designed to develop an understanding and appreciation of effective speaking, listening, writing, research, and non-verbal communications. Interpersonal, small-group, and organizational dynamics and the attendant processes and networks for communication also comprise a significant portion . . . as does cross-cultural communications. (DCI Curriculum, 2002)

This area of the curriculum also entails relations with the modern media and examines the nuances of persuasion, rhetoric, and propaganda. "Additionally, the impact of technology on the communication process . . . [is] addressed in this core area" (DCI Curriculum, 2002). The communications area of the ASBC curriculum is identified as A4000 (area 4000) and it is a critical portion of the 139 and one-half hours of instruction within the ASBC.

Area 5000: International Studies

The International Studies curriculum, ". . . encompasses the nature and functioning of the international system and strategic environment" (DCI Curriculum, 2002). It frames international relationships by emphasizing the importance of, ". . .

nonmilitary instruments of power—diplomatic, economic, political, informational—and how those instruments relate to military factors and affect global, regional, and national security conditions, problems, and issues" (DCI Curriculum, 2002). This portion of the ASBC curriculum is identified as A5000 (area 5000). It consists of 1 and one-half hours of instruction. The A5000 area objective is to, "Comprehend the relationships between geopolitical issues, conflict, and US Instruments of National Power" (Squadron Officer College, 2001 p. 50). The A5000 curriculum is not subdivided into phases and is comprised of one lesson that deals with the spectrum of conflict (Squadron Officer College, 2001 p. 50).

Additional Curriculum

In addition to the five core areas of the curriculum, 20 hours of course time are devoted to student orientation and administration. This area (A9000) also includes student review periods, administration of examinations and course critique time (Squadron Officer College, 2001 p. 10).

Faculty Preparation for Teaching the Curriculum

In order to prepare ASBC instructors to execute the curriculum effectively, faculty members must complete several basic requirements. Those requirements include, "Initial Faculty Training, In-Service Training, and the Faculty Professional Development (PD) Program" (Squadron Officer College, 2001 p. 5).

Initial Faculty Training is conducted by Academic Instructor School (AIS) which is located at Maxwell Air Force Base near Montgomery, Alabama. The AIS is a military teachers' college that educates and trains, ". . . Air Force faculties how to be instructors

by providing a wide range of classes in educational theory and foundations along with supervised practice of several carefully defined methods of instruction" (Dike, 2001, p. 12). Also, instructors must complete the Faculty Orientation Course (FOC) as part of initial faculty training. The FOC, ". . . is a two-week program that includes lesson plan review, multi-media usage, flight commander responsibilities . . . management techniques, wargame and simulation execution" (Squadron Officer College, 2001 p. 5). In addition, each new instructor must attend all curriculum activities for the duration of a full four-week class session, "New faculty are required to shadow a veteran flight commander for one . . . class . . ." (Squadron Officer College, 2001 p. 5).

Instructor in-service training is conducted prior to each class. The in-service consists of training on all areas of the curriculum. While the ASBC is in session, and as part of this training, flight commanders and other instructors attend regularly scheduled training sessions that allow the faculty to discuss and exchange information about how the current class is responding to the curriculum. It also allows for mid-course corrections and serves to reinforce curriculum and ensure that continuity of curriculum is being maintained across the 42 to 44 flights of students (Squadron Officer College, 2001 p. 6).

The Faculty Professional Development (PD) Program helps keep instructors attuned to their own roles as leaders of airmen. This program requires faculty to make frequent visits to operational units to observe the airpower mission of the Air Force being performed. It also includes faculty trips to historical sites and faculty visits with military and civilian leaders and other noteworthy figures of historical significance in order, ". . .

to enhance . . . [the faculty's] knowledge of military history, Air Force operations and equipment" (Squadron Officer College, 2001 p. 6).

The Air and Space Basic Course Curriculum Evaluation

Evaluation is a key element in the effort to keep the ASBC curriculum viable so that the school's mission is accomplished successfully. "The roots of evaluation can be traced back to the early nineteenth century and the Industrial Revolution. This period in American society was marked by attempts to reform education . . ." (Roth, 1996, p. 18). One of the earliest formal attempts to evaluate the performance of schools in the United States was carried out in Boston in 1845. During the later half of the 1800s, acceptance of the evaluation process grew. As the twentieth century dawned, educational theorists and practitioners had developed data collection methods, based on standardized tests, that allowed courses, classes, and/or whole schools to be compared to one another to assess the effectiveness of each (Madaus, Stufflebeam, and Scriven, 1983, pp. 5-8). Even with advances in educational theory and application, "Educational program evaluation in the 1960s [still] looked much like it did in the early part of the century . . . What changed by the . . . 1960s, however, was the scope of evaluations" (Roth, 1996, p. 19). The impetus for resurgence in educational evaluation with specific focus on curriculum effectiveness came because of the perception that America was losing the space race. After the Soviet launching of Sputnik in 1957, it was perceived that American curriculum was not properly preparing students in hardcore subjects such as mathematics and science and this was why the Soviets had beaten the U.S. in the race to outer space (Gerstner, 1994, p. 48). Subsequently, America enacted the, ". . . National Defense Education Act of 1958, [and] large scale curriculum evaluation efforts were underway . . . The evaluators of the

1960s were responding to a national need to evaluate new curricula" (Roth, 1996, pp. 19-20). Since the 1960s, there has been a steadily increasing focus on the accountability of curricula to produce the outcomes for which it was designed. Designers of the Air and Space Basic Course have also maintained a focus on evaluation to ensure its curriculum produces the outcomes for which it is designed—that is,

> To inspire new USAF officers to comprehend their roles as airmen; one who understands and lives by USAF core values, articulates and demonstrates USAF core competencies, and who dedicates oneself as a warrior in the world's most respected air force. (ASBC Mission Statement, 2002)

The ASBC evaluation program is constructed to: "(1) provide students with feedback about the quality of their work; (2) to inform students of their strengths and weaknesses; (3) to assess the effectiveness of instruction; and (4) to improve curriculum content" (Squadron Officer College, 2001 p. 52). The ASBC curriculum is targeted specifically for in-house evaluation through seven internal methods: (1) student curriculum evaluations, (2) student exit survey, (3) faculty lecture monitors, (4) seminar evaluation program, (5) flight commander curriculum evaluations, (6) open comments email forum, and (7) area studies (Squadron Officer College, 2001 p. 52-53). The ASBC curriculum is also subject to external evaluation methods which includes gaining feedback from field commanders and supervisors.

Student Curriculum Evaluation (SCE)

A key component in the school's internal evaluation program known as the Student Curriculum Evaluation (SCE) instrument is available on flight room computers via the ASBC local area network. The instrument solicits open comments and provides statistical data that are analyzed so curriculum area managers can adjust the curriculum as needed. At the end of each week, all students in each flight are encouraged to complete an electronic SCE instrument in order to critique the curriculum taught during that week. Also, about 20 percent of the students (normally three students) within each flight are selected as mandatory respondents to the electronic critique each week. Although the responses to the SCE instrument are not traceable to a particular respondent the, ". . . flight commander is responsible for ensuring selected individuals complete a SCE for every lesson taught during the course periods each week" (Squadron Officer College, 2001 p. 52).

Student Exit Survey

A critical part of the internal evaluation program is the student exit survey. Each student is required to complete an exit survey, known as an end-of-course survey, prior to graduation from the ASBC. Curriculum changes for upcoming classes are often made as a result of data gained from this survey. This survey is made available to each student via electronic means immediately prior to graduation. The survey includes items scored on a Likert-type scale, multiple response sets, and open-ended questions. "In contrast to the SCEs which focus on particular periods, the exit survey provides feedback about their overall experience, each of the . . . areas of the curriculum, quality of life issues, and the faculty" (Squadron Officer College, 2001 p. 52).

Faculty Lecture Monitors

Faculty lecture monitors are vital components of the internal evaluation program. Although the ASBC employs a variety of instructional methods, special attention is given to lecture. "Each lecture has an assigned faculty monitor who ensures objectives and samples of behavior are covered. In addition, the monitor critiques the quality of the presentation including delivery and visual aids" (Squadron Officer College, 2001 p. 52).

Seminar Evaluation Program

The seminar evaluation program provides significant information during the internal evaluation process. During each class, the squadron commanders, along with other senior leadership, monitor the progress of the program. The monitors focus specifically on how the curriculum is conducted within each of the flights (seminars) and they, ". . . ensure the . . . objectives are met. The monitors also critique the flight commanders on their presentations, with each flight commander evaluated at least once every three classes" (Squadron Officer College, 2001 p. 52).

Flight Commander Curriculum Evaluation (FCE)

Another important area of the internal evaluation system is the flight commander curriculum evaluation. The FCE process is designed to evaluate the effectiveness of revisions to the curriculum. A sample of flight commanders is periodically selected to, ". . . complete a computer generated survey on all new or revised lesson plans and on other seminar lesson plans . . ." (Squadron Officer College, 2001 p. 53). The data are used to make further corrections to the curriculum and to verify the effectiveness of previous changes.

Open Comments Forum

A significant element of the ASBC internal evaluation program is the open comments forum. Students' feedback and opinions are key considerations in refining the curriculum. Therefore, each student is encouraged to, ". . . submit general comments or questions about any aspect of the course via email" (Squadron Officer College, 2001 p. 53).

Area Studies

Area studies evaluation is a focused and critical part of the internal evaluation program at the Air and Space Basic Course. Curriculum developers at all levels of the ASBC are required to conduct in-depth reviews regularly of each of the curriculum areas (area studies). "This review includes an examination of all learning objectives and samples of behavior in relation to objectives and goals of the particular area. Each lecture and seminar presented during the course is monitored (Squadron Officer College, 2001 p. 53). Recommendations for improvement are compiled and promptly and meticulously reviewed by the instructors and other curriculum developers so that appropriate changes can be incorporated into the curriculum quickly. Area studies and the other four methods of curriculum evaluation rely on appropriate and candid feedback in order to be effective. The evaluations help, ". . . provide a starting point for further improvements" (Squadron Officer College, 2001 p. 5).

External Evaluation

In addition to a reliance of faculty expertise and internal feedback as key components of keeping the curriculum viable, the ASBC curriculum development

process is influenced by external factors. Since members of the Air Force at large have a vested interest in the success of the ASBC, opinions of field commanders and supervisors are often solicited and considered when curriculum is revised. This external evaluation is conducted in a variety of ways including face-to-face sessions and surveys. "External evaluations focus on what field commanders and supervisors believe new second lieutenants should understand. Data from the evaluations are fed into the [Instructional System Development] ISD process to help define the curriculum development process" (Squadron Officer College, 2001 p. 5).

The Air and Space Basic Course and the Instructional Systems Development Model

Constant evaluation of the Air and Space Basic Course (ASBC) curriculum is crucial to the continuous process of refinement and improvement of the course. Furthermore, all curriculum evaluation at the ASBC is performed in accordance with a proven systematic, ". . . deliberate and orderly, but flexible process for planning, developing, implementing, and managing instructional systems" (AFM 36-2234, 1993, p. 5). This system is based on the Instructional Systems Development Model (Figure 2) which is, ". . . the official Air Force process for curriculum planning . . ." (AFM 36-2236, 1994, p. 1). "The Instructional System[s] Development (ISD) process is an organized process for analyzing, designing, developing, and implementing instructional systems used by the U.S. Air Force" (Miller and Miller, 2002, p. 292). When internal or external evaluation of the existing ASBC curriculum alerts course developers that revision is necessary, course developers use the ISD model to make the needed changes. In assessing a course for changes and making change, the ISD model gives course developers have the flexibility to enter the model at the appropriate phase of development

rather than starting all over at the beginning. "Entry or reentry into a particular stage of the process is determined by the nature and scope of the development, update or revision activity" (AFM 36-2234, 1993, p. 11).

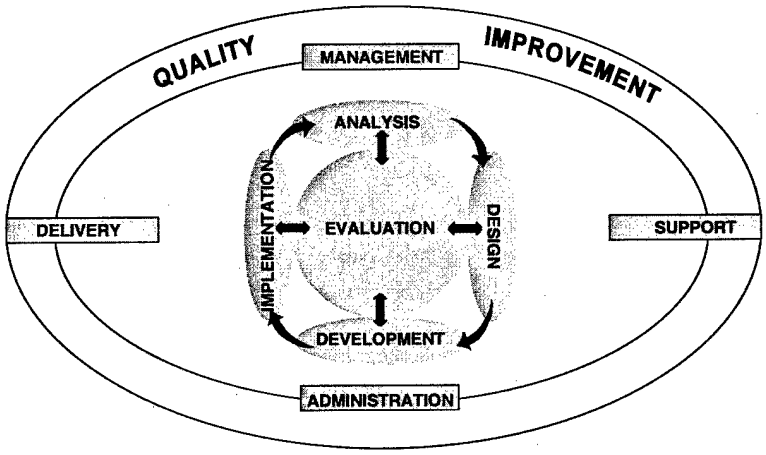

Figure 2. Model of the Instructional System Development (ISD) Process

From "Instructional Systems Development," Air Force Manual (AFM) 36-2234 (1993). Department of the Air Force (p. 14).

The concepts used in the Air Force ISD process are adapted from a systems engineering process of developing, implementing and evaluating instruction. "The ISD process . . . [also includes concepts from] behavioral and cognitive psychology, and instructional technology to ensure that Air Force personnel are taught the knowledge, skills, and attitudes essential for successful job performance in a cost-efficient way" (Miller and Miller, 2002, p. 292). Since 1965 when the Air Force employed its first version of the ISD model, application of the process has provided continuous and consistent improvement of Air Force curriculum.

Quality Improvement

Instructional Systems Development (ISD), ". . . is a quality improvement (QI) process. The processes and products of the phases are continuously assessed for quality with emphasis on how well they meet the user's needs" (AFM 36-2234, 1993, p. 7). The current ISD model (shown in figure 2) was implemented in 1993. The model is simplistic and flexible so that instructional systems developers with varying levels of expertise can use the model to develop effective, efficient instructional systems. The model has a perpetual nature as shown by its continuous outer circle which signifies that quality improvement is the result of constant feedback and revision of the instructional system.

Systems Functions

Instructional Systems Development is a systems approach; therefore, developers must consider the system functions that support the curriculum under development or revision. The continuous inner circle shown in Figure 2 identifies the top-level functions of the instructional system as (1) management, (2) support, (3) administration, (4) delivery, and (5) evaluation. Each of these functions plays a pivotal role in curriculum development and/or revision (AFM 36-2234, 1993, p. 11).

Management is the function of directing or controlling the curriculum development/revision process. An individual or a team must have the responsibility and the authority to develop/revise the curriculum. Support is the function of maintaining the system of instruction. Support is realized through appropriate budget and other resources that must be available to sustain the instructional system throughout its lifecycle. Administration is also an important function because it entails the day-to-day processing of feedback and record keeping. The delivery function is the act of instructing the

students. The entire system of instruction must be assessed to ensure its desired outcomes are being produced, and this is done through the evaluation function: ". . . the function of gathering feedback data through formative, summative, and operational evaluations to assess system and student performance" (AFM 36-2234, 1993, p. 11).

Phases of the Instructional Systems Development Process

As shown in Figure 3, there are five phases inherent in the Instructional Systems Development (ISD) process. These phases are at the heart of the systems process. They include (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. Evaluation activities are, ". . . integrated into each [of the other] phase[s] of the process . . . [and] is shown as the central feedback 'network' for the total system" (AFM 36-2234, 1993, p. 12).

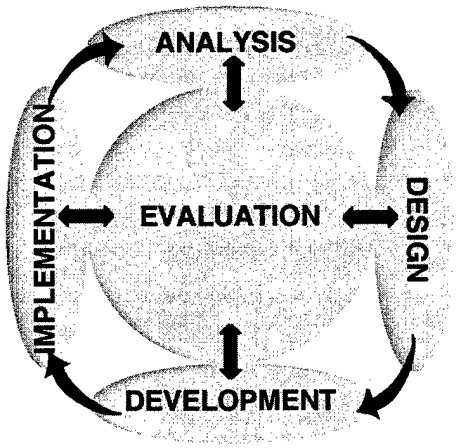

Figure 3. Phases of the Instructional System Development (ISD) Process

From "Instructional Systems Development," Air Force Manual (AFM) 36-2234 (1993). Department of the Air Force (p. 14).

Analysis

The analysis phase, ". . . calls for instructional developers to analyze and determine what instruction is needed" (AFM 36-2234, 1993, p. 14). The analysis phase is entered after a needs assessment or some other portion of the evaluation phase reveals a need for some form of instruction or a revision to the existing instructional system. "During this phase, instructional developers conduct various forms of analyses" (AFM 36-2234, 1993, p. 31). The product of the analysis phase is documentation that identifies exact requirements that can be solved by implementing or revising an instructional system.

Design

The design phase, ". . . calls for instructional developers to design instruction to meet the need" (AFM 36-2234, 1993, p. 14) that was identified in the analysis phase. This is the start of physical curriculum development or revision. The first activity is to develop objectives for the tasks, knowledge, or attitudes that were identified as requiring instruction.

> An objective is a precise statement of the learned capability— skills, knowledge or attitudes (SKA)— a student is expected to be able to demonstrate, the condition under which the SKA is to be exhibited and the minimum standard of acceptable performance. (AFM 36-2234, 1993, p. 45)

For example, an objective dealing with Joint Force military operations in OPERATION DESERT STORM may be worded to say, "Given a list of potential problems, identify the ten actual problems encountered during Operation DESERT STORM in employing the

Joint Air Tasking Order concept, with 80 percent accuracy." As one can ascertain from this objective, it is absolutely clear what the student must do to illustrate that he or she has gained the appropriate knowledge in this area. The second task of the design phase is designing student measurements (tests). The second phase dovetails logically from creating objectives.

> To ensure that tests adequately measure the objectives they support, the performance required in the test should match the performance required in the objective. A good way to develop tests that measure the objectives is to prepare them immediately after the objective is written. (AFM 36-2234, 1993, p. 52)

In addition to construction of objectives and tests, several other key tasks should be completed in the design phase. These tasks include a review of materials to determine if existing materials or modified materials are available to support the objectives. The next key task is to design the instruction. This step is called designing the instructional plan. Developers should select the appropriate instructional method, media, and identify appropriate instructional strategies. "The purpose of instructional strategy is to outline how instructional activities will relate to achievement of the objectives" (AFM 36-2234, 1993, p. 69). Therefore, a major task in the design phase is to design instructional activities. "Design of the activity depends largely on two factors, sequence of instruction and size of the instructional unit" (AFM 36-2234, 1993, p. 71).

An implementation plan for the instructional system is developed after the instructional system has been designed and prior to beginning the development phase. The implementation plan is important for management and control purposes, since this

plan documents all associated tasks that must be performed to implement the instructional system. Also, an instructional information management system must be designed to manage information effectively and efficiently:

> There are always records to be updated, students to be scheduled, equipment to be tracked, and budgets to be met. Regardless of whether the task is accomplished using pencil and paper or computers, it is a task that should be done well. (AFM 36-2234, 1993, p. 73)

The design phase is not complete until developers have an up-to-date ISD Evaluation Plan.

> The emphasis of the evaluation plan is to ensure total quality in the instructional system, the instructional development process, and the products of that process. To ensure that the ISD evaluation is effective throughout the life cycle of the project, the plan may need to be updated periodically. (AFM 36-2234, 1993, p. 75)

Once the design phase is complete, the plans for managing the instructional system will likely need updating. "During the design phase, if changes are made that impact management strategies, the plan may again need to be updated to reflect the current information" (AFM 36-2234, 1993, p. 75-76).

Development

By this point, objectives have been specified, tests have been developed, training strategies and activities have been planned, and developers should now be ready to move to the development phase. This phase, ". . . calls for instructional developers to develop

instructional materials to support system requirements. . . . Some of the tasks . . . in this phase include developing plans of instruction [or syllabi], writing lessons, producing instructional materials, and developing interactive courseware" (AFM 36-2234, 1993, pp. 14, 77). Also, since the ISD model focuses on quality improvement, an instructional information management system must be put in place and the ISD evaluation plan and management plan must be revisited and updated as appropriate. At this point in the instructional development process, ". . . there is no assurance the instruction will be effective. Therefore, the instruction should undergo validation to prove that the instruction provides graduates with skills, knowledge, and attitudes to meet job performance requirements" (AFM 36-2234, 1993, p. 84). Validation is performed through, ". . . internal reviews, individual tryouts, and small-group tryouts which are conducted as a part of formative evaluation and operational (field) tryouts which make up summative evaluation" (AFM 36-2234, 1993, p. 84). Furthermore, a validation plan must be developed to provide instructional developers and instructors with a road map for validating instruction. A validation plan will include information, ". . . such as the validation schedule, number of individual tryouts, and number of [small-group and operational (field)] tryouts to be conducted" (AFMAN 36-2234, 1993, p. 84). This finalization effort is prescribed by the ISD model in order to ensure that the materials are accurate and complete (AFM 36-2234, 1993, p. 92).

Implementation

Once instruction has been validated, it is appropriate to implement the instructional system. After the system, ". . . becomes operational, it will require continuous support, maintenance, and evaluation to ensure that it operates effectively and

cost-efficiently and produces" (AFM 36-2234, 1993, p. 94). At this time, The system functions of management, support, administration, and delivery should be in place and working if the instructional system is to operate effectively and cost-efficiently. Therefore, course personnel now do what is as the heart of implementation, they conduct instruction. After implementation begins, the instructional system,

> . . . should continue to operate until there is no longer a need for the course, or the course is revised to the point that it is given a new identification. Throughout this time there are ongoing activities that ensure system integrity. (AFM 36-2234, 1993, pp. 100-101)

Once the course begins producing graduates, system integrity is maintained through the conduct of operational evaluation. "Operational evaluation is a continuous process that assesses how well course graduates are meeting the established job performance requirements" (AFM 36-2234, 1993, p. 101). Activities involved in operational evaluation include both internal evaluation and external evaluation (AFM 36-2234, 1993, p. 102). The data from operational evaluation are collected and analyzed so that revisions can be made.

> If revisions can be made to correct identified problems, they should be made in a timely manner in order to receive the greatest benefit from the changes. Revisions resulting from the analysis may require reentry into an earlier phase of the ISD process to correct the problem(s). (AFM 36-2234, 1993, p. 107)

Evaluation

The evaluation phase of the Instructional Systems Development process is integrated throughout each activity of the process. It begins, ". . . in the planning stage with development of an evaluation plan and continues for the life-cycle of the training system. The focus of evaluation is continuous improvement in instructional system quality" (AFM 36-2234, 1993, p. 118). "Evaluation is a central function that takes place in every phase [of the ISD process]" (AUI 36-2306, 2002, p. 12). The evaluation process includes formative, summative, and operational evaluations. Formative evaluation collects data and information that is used to improve the activities and products of the instructional system, ". . . while the system is still being developed. Formative evaluation is also used when the design or development phases are re-entered in order to revise or update the system" (AFM 36-2234, 1993, p. 119). Summative evaluation is used, ". . . to collect data and information during the operational (field) tryouts in order to determine the 'summed' effect of the instruction under operational conditions and to make any changes or revisions to the system prior to becoming operational" (AFM 36-2234, 1993, p. 121). Summative evaluations must also be conducted when major revisions or updates have been made. Once the instructional system is implemented, operational evaluation begins and continues as long as the system is operational. Operational evaluation includes internal and external evaluation. "It is a form of evaluation designed to gather and analyze internal and external feedback data to ensure that the system continues to effectively and cost-efficiently produce graduates who meet established training requirements" (AFM 36-2234, 1993, p. 121).

Table 1

ISD Continuous Evaluation Process

Form	Period	Purpose
Formative	From initial ISD planning through small-group tryout	Checks design of individual components of the instructional system for integration (accomplished periodically - is focused on the components -high data collection - make changes when it is least expensive to revise)
Summative	Operational tryout (normally 2 or 3 classes) - real student throughput, full instructional system operation	Checks full system integration and its components (intense -high data collection - short-term - first time everything is working together)
Operational	From completion of the operational tryout continuing for the life cycle of the instructional system	Checks day-to-day system integration and its components (periodic, less data collection, life of system - continuous improvement)

Note: Adapted from "Instructional Systems Development," Air Force Manual (AFM) 36-2234 (1993). Department of the Air Force (p. 94).

Summary

The need for the professional military officer corps to be trained and educated in the art of warfare has long been recognized as pivotal to a nation's defense. A highly professional, corporately bound, and altruistic officer corps,

> . . . has always been more effective than a mass of individuals collected temporarily for the purpose of conducting a war. Even in the modern age . . . a highly cohesive officer corps . . . [is crucial because it is their

> responsibility] to hold the troops together and motivate them to make the ultimate sacrifice. (Ullman, 1990, p. 30)

It is important for the officer to be both well trained in operating battle equipment and conducting maneuvers as well as educated in the theory of warfighting and the art of leading others into war. Among the services, Air Force officers have long been recognized as well trained in using their arsenal of high tech weaponry but not necessarily well educated on their service-wide theory and doctrine of airpower and spacepower employment. They were highly proficient in their Air Force Specialties (navigator, nurse, finance officer, etc.) but they were seen as lacking in fulfilling their fundamental roles as leaders of airmen. Senior Air Force leaders recognized this problem and understood the solution to the careerist attitude that had begun to replace the professionalism and altruistic manner of a once highly cohesive officer corps. Realizing that Professional Military Education had been critical for investigation into airpower theory, building cohesiveness, and in fostering a service before self attitude, Air Force leaders postulated that the PME experience could be used as a forum for shaping the next generation of Air Force officers to fulfill their roles as leaders of airmen. Therefore, the Chief of Staff of the Air Force instituted a revision to the continuum of PME. He did so in an effort to infuse the officer corps with a renewal of professionalism, to renew each officer's sense of responsibility to society and unify all officers under their corporate purpose of leading airmen to do the airpower mission. Hence, the Air and Space Basic Course was implemented to bring all,

> . . . newly commissioned officers together and create a common understanding of how all the elements of our force fit together . . . [and to]

> move us away from being Air Force specialists and move us much closer to being war-fighting strategists. ("Launches Course," 1998, p. 13)

The Air and Space Basic Course curriculum was developed with a focus on, ". . . aersopace power and functions, theory, doctrine, strategy as well as . . . leadership and teamwork, which are essential tools for the developing Air Force officers" (Squadron Officer College, 2001). The curriculum was designed to develop, ". . . airmen through the application of aerospace doctrine and maintaining the airman's perspective of what the airman brings to the fight. To do this . . . [the course was] divided into five areas" (Squadron Officer College, 2001, p. 3). The five core areas included, Profession of Arms, Leadership/Management, Military Studies, Communications, and International Studies. (Squadron Officer College, 2001 p. 3).

The ASBC curriculum is not static and is constantly being evaluated and updated in a continuous process that keeps the ASBC curriculum viable. All ASBC curriculum evaluation is performed in accordance with a systematic, ". . . deliberate and orderly, but flexible process for planning, developing, implementing, and managing instructional systems" (AFM 36-2234, 1993, p. 5). This system is called the Instructional Systems Development Model and it is, ". . . the official Air Force process for curriculum planning . . ." (AFM 36-2236, 1994, p. 1). The model is flexible and allows course developers, ". . . to enter or reenter the various stages of the process as necessary . . . [and perform] development, update or revision . . ." (AFM 36-2234, 1993, p. 11). At the heart of the model is a process of internal and external evaluation. Evaluation is integrated throughout each activity of the process and it begins, ". . . in the planning stage with development of an evaluation plan and continues for the life-cycle of the . . . system. The focus of

evaluation is continuous improvement in instructional system quality" (AFM 36-2234, 1993, p. 118).

CHAPTER III.

METHODS AND PROCEDURES

The purpose of this study was to ascertain the differences in perceptions of new graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the Air and Space Basic Course (ASBC). Specifically, this investigation was designed to (a) provide information related to the demographic characteristics [(gender, ethnicity, service component (Line of the Air Force, non-line, civilian, and guard/reserve), rating, marital status, class standing or years of supervisory experience, and age group)] of participants in this study, (b) investigate the extent to which each content area of the ASBC program was perceived by the ASBC graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation, (c) investigate the extent to which each content area of the ASBC program was perceived by the ASBC graduates' immediate supervisors to be relevant to the graduates' roles as airmen leaders at their first duty assignment after graduation, (d) ascertain the extent to which there were differences in perceptions of graduates and their supervisors regarding the relevance of the Air and Space Basic Course curriculum content to the role of airmen leaders, (e) ascertain the extent to which a difference in perceptions existed between graduates who were rated and non-rated regarding the relevance of the ASBC curriculum content to the role of airmen leaders (f) acquire specific suggestions from the graduates and their supervisors regarding content changes in the Air and Space Basic Course.

Sources of Data and Collection Procedures

Sources of Data

The sources of data for this study included the entire graduating body from Class 02D (i.e. the fourth graduating class of 2002) of the Air and Space Basic Course (ASBC) and their immediate supervisors. The population included 567 ASBC graduates and their supervisors (potentially as many as 567 supervisors). The graduates began the course on March 4, 2002, and were graduated on March 29, 2002. After commencement, the graduates were assigned to various worldwide locations to fulfill a variety of leadership positions within the United States Air Force.

Data Collection Procedures

Data collection was conducted by employing one Web-based survey instrument for graduates and a second, nearly identical, Web-based survey instrument for their supervisors. The survey instruments were written in hypertext markup language (HTML) and composed using Microsoft FrontPage software in order for them to be electronically available to potential respondents. Therefore, each instrument was electronically posted to an Auburn University Webpage server so that each potential respondent could access the page with any common Web browser, complete the survey electronically, and submit the survey in anonymity. When a respondent elected to submit his or her responses, an e-mail containing the responses was generated from the Auburn University Webpage server. This e-mail was sent from the Auburn University server to the researcher's Auburn University WebMail e-mail account. Therefore, none of the responses could be traced back to any particular participant. This ensured that participation in the study was voluntary and anonymous. Steps for the survey procedure were as follows:

Step 1. The researcher obtained the military/duty or personal e-mail address of each member of the total population through coordination with the Air and Space Basic Course personnel.

Step 2. The researcher sent a personal pre-notice e-mail cover letter to potential respondents alerting them to the forthcoming survey form and the relevance of the survey.

Step 3. The researcher sent a brief cover letter e-mail. The cover letter contained a password to allow respondent logon and an electronic link to the survey login page. The survey login page allowed the potential respondent to input the appropriate password and then make one of three hyperlinked choices. One choice contained the statement, "I do NOT wish to participate in this survey." Individuals who clicked on this choice were linked with a "Thank You" page and exited the survey Web site. Graduates were offered a hyperlinked choice that contained the statement, "I agree to take the ASBC graduates' survey." Graduates who clicked on this choice, after inputting the appropriate password, were hyperlinked to the appropriate form. Supervisors were offered a hyperlinked choice that contained the statement, "I agree to take the ASBC graduates supervisors' survey." Supervisors who clicked on this choice, after inputting the appropriate password, were hyperlinked to the appropriate form.

Step 4. Once the respondents were linked with the appropriate instrument, they were instructed on how to fill out and submit the questionnaire on-line. When respondents selected the "submit" button at the bottom of the form, an e-mail was sent from the website to the researcher's Auburn e-mail account. Since the e-mail was sent

from the questionnaire website instead of the respondents' e-mail accounts, their responses were completely anonymous and untraceable back to participants.

Step 5. The researcher conducted the first follow-up after a two-week period by sending an e-mail message to all respondents. Each follow-up e-mail contained a link to the login to the survey form for graduates and supervisors. A second follow-up following the same procedures as the first was conducted one week after the first follow-up.

Instrumentation

Instrument Construction

Due to the unique nature of the Air and Space Basic Course and the focus of this study, no existing survey instruments were available; therefore, the researcher developed two survey instruments for use in this study. The two instruments were nearly identical. One instrument was specific to the Air and Space Basic Course graduates only, while the other was exclusive for the graduates' supervisors. Specifically, the graduates' survey included a question regarding their class standing (bottom third, middle third, or top third) at time of graduation; however, since this did not apply to supervisors, this item did not appear on their survey instrument. Likewise, the supervisors' survey instrument incorporated an item that requested total years of supervisory experience; however, since this was not germane to graduates, this item did not appear on the graduates' survey. Also, items regarding course content were worded specifically for graduates on the graduates' instrument and specifically for supervisors on the supervisors' instrument. Both instruments requested participants to respond to selected items for each of the five core ASBC content areas (Profession of Arms, Leadership and Management, Military Studies, Communications, and International Studies) in terms of assessing how important

each of the areas was in preparing graduates for their post-graduate positions as leaders of airmen in the United States Air Force. Each instrument included fifty-one total items: nine demographic items, one open-ended item, and forty-one items on a Likert-type scale.

Responses on 40 of the scaled items (items 10 through 49) addressed curriculum content. These responses denoted the importance of each specific area of content to the graduates' post-graduate duties. Responses ranged from "critical" information for job performance to "not necessary" for job performance. Responses on the scale for these items were valued as follows: (a) critical = 4, (b) important = 3, (c) useful = 2, and (d) not necessary = 1. Therefore, the total score of each of these 40 items indicated the magnitude of respondents' perceptions of relevance of that curriculum item to preparing ASBC graduates for their initial post-graduation duty assignment. Responses on one of the scaled items (item 51) rated the overall effectiveness of the Air and Space Basic Course at achieving its stated mission. The responses for this question were on a five-point Likert-type scale and ranged from "outstanding" to "unsatisfactory" in accomplishing the mission. Responses on the scale for item 51 were valued as follows: (a) outstanding = 5, (b) excellent = 4, (c) satisfactory = 3, (d) marginal = 2, and (e) unsatisfactory = 1. Statements on the instruments were written in hypertext markup language (HTML) using Microsoft FrontPage software in order to allow electronic submission. Figure 4 shows a sample of the instrument for graduates and a sample of the instrument for supervisors. As depicted in Figure 4, item wording was tailored for either graduates or supervisors.

GRADUATES' INSTRUMENT

How critical to your present duties as a leader of Airmen is it to:						
Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
20. Comprehend the purpose of Joint staff divisions?	O	O	O	O	-	20.
21. Understand the sister services' views of aerospace power?	O	O	O	O	-	21.
22. Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	O	O	O	O	-	22.
23. Understand the relationship between the Deliberate Planning and Crisis Planning?	O	O	O	O	-	23
24. Comprehend aerospace power employment?	O	O	O	O	-	24.
25. Comprehend the how the Air Operations Center (AOC) divisions work together to create the Air Tasking Order (ATO)?	O	O	O	O	-	25.

SUPERVISORS' INSTRUMENT

How critical to the present duties of your subordinate is it for him or her to:						
Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
20. Comprehend the purpose of Joint staff divisions?	O	O	O	O	-	20.
21. Understand the sister services' views of aerospace power?	O	O	O	O	-	21.
22. Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	O	O	O	O	-	22.
23. Understand the relationship between the Deliberate Planning and Crisis Planning?	O	O	O	O	-	23.
24. Comprehend aerospace power employment?	O	O	O	O	-	24.
25. Comprehend the how the Air Operations Center (AOC) divisions work together to create the Air	O	O	O	O	-	25.

Figure 4. Items 20 through 25 from graduates' and supervisors' survey instrument.

Respondents were instructed to supply their responses to each of the items by positioning the cursor over the desired circle (called a radio button) and clicking to select

the desired response. Therefore, respondents were able to select electronically the level of importance for each survey item of this type. Respondents could select one of the four responses: critical, important, useful, or not necessary in preparing the ASBC graduate for his or her postgraduate duties. Since the four potential responses for each item (critical, important, useful, or not necessary) were coded into HTML as a response-form set, respondents did not have the ability to accidentally or purposefully select more than one response for each item of this type. If individuals desired to change a response (level of importance), they were instructed to simply click on a different desired radio button in order to render a different response from their original selection.

Both instruments included identical open-ended items that requested suggestions for improvements to the Air and Space Basic Course curriculum content (Figure 5).

GRADUATES' AND SUPERVISORS' INSTRUMENTS

50. What suggestion or suggestions could you offer that may improve the content of the core courses at the Air and Space Basic Course?

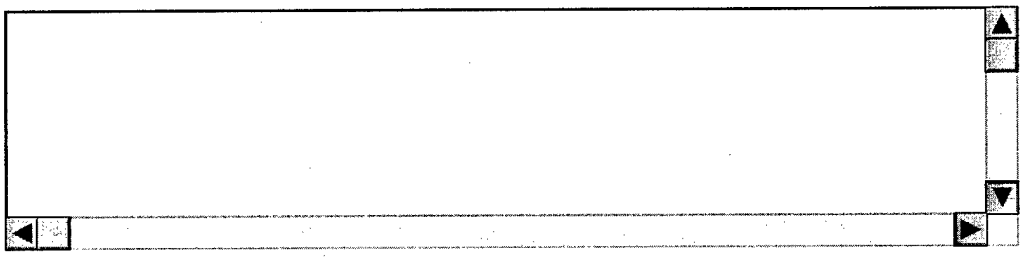

Figure 5. Open-ended item from both electronic survey instruments.

In order to respond to the open-ended items, respondents were instructed to select the response box by positioning their cursor within the desired box and clicking or to tab to the box with the Tab key. Furthermore, directions for the open-ended items instructed

respondents to provide "free-text" comments to specify what was good about the course and/or what needed to be improved. As was the case with all other items, the open-ended questions were written in HTML using Microsoft FrontPage software in order to allow for electronic submission.

In addition to rating the content, respondents were asked to provide a rating of the overall effectiveness of the ASBC (Figure 6). Specifically, respondents were requested to rate how well the Air and Space Basic Course performed at achieving its stated mission, which was:

> To inspire new USAF officers to comprehend their roles as airmen; one who understands and lives by USAF core values, articulates and demonstrates USAF core competencies, and who dedicates oneself as a warrior in the world's most respected air force. (ASBC Mission Statement, 2002)

QUESTION 51 FOR SUPERVISORS

51. Overall, given the mission statement above, how well do you believe the mission was accomplished for the ASBC graduate(s) that you supervise?

0 Outstanding
0 Excellent
0 Satisfactory
0 Marginal
0 Unsatisfactory

Figure 6. Item requesting overall rating of the ASBC from supervisors' instrument.

Question number 51 was worded specifically for either a graduate or a graduate's supervisor. The question for graduates was: "Overall, given the mission statement above,

how well do you believe the mission was accomplished?" whereas, the question for supervisors was: "Overall, given the mission statement above, how well do you believe the mission was accomplished for the ASBC graduate(s) that you supervise?" Responses for this question were on a five-point Likert-type scale that ranged from "outstanding" to "unsatisfactory" in accomplishing the mission. Responses on the scale were valued as follows: (a) outstanding = 5, (b) excellent = 4, (c) satisfactory = 3, (d) marginal = 2, and (e) unsatisfactory = 1. All items were written in HTML using Microsoft FrontPage software in order to allow electronic submission and were in the form as shown in Figure 6.

Respondents were instructed to supply their responses to this item by positioning the cursor over the radio button and clicking to select the response. Since the five potential responses for this item (outstanding, excellent, satisfactory, marginal or unsatisfactory) were coded into HTML as a response-form set, respondents did not have the capability to accidentally or purposefully select more than one response for this item. To change a response, respondents were instructed to simply click on a different desired radio button for a different response from the original selection.

Respondents were instructed to select the submit button at the end of the instrument in order to complete the survey (Figure 7). This action transmitted the respondent's selections from the Auburn University FrontPage Website server to the researcher's Auburn University Webmail account via e-mail. Therefore, none of the responses could be traced back to any particular participant. This ensured participation in the study was anonymous. Copies of the surveys are in Appendices C and D.

GRADUATES' AND SUPERVISORS' INSTRUMENTS

THANK YOU FOR YOUR INPUT ON THIS SURVEY!

Note: YOU ARE NOT FINISHED Until You Select the Submit Button: SUBMIT

Figure 7. Submit button as depicted in the ASBC electronic survey instruments.

Instrument Development

The instruments were developed based on an analysis of the five major content areas for the ASBC core curriculum: (1) Profession of Arms, (2) Leadership and Management, (3) Military Studies, (4) Communications, and (5) International Studies. The panel of seven expert judges was integral to instrument development. Their expertise qualified them to confirm content and construct validity of both the instruments and to propose revisions and changes. Also, the judges assessed the directions on the instruments for clarity and understanding and proposed appropriate revisions and changes. After revisions based on two rounds of input by the panel of judges, a pilot study of each instrument and scoring procedures was conducted. Final revisions to the instruments were made based on results of the pilot study. Overall considerations for survey construction were based on procedures for Web-based surveys recommended by

Dillman (2000). Specific steps the researcher followed in developing the research instruments were as follows:

Step 1. Developed the demographic section for each instrument

Step 2. Analyzed the Air and Space Basic Course curriculum and identified the major topics in each of the five core areas

Step 3. Compiled a list of the major topics for each core area

Step 4. Formulated survey items based on major topics

Step 5. Numbered items on each survey instrument beginning with number 1 and ending with number 51

Step 6. Developed detailed directions to include the purpose and importance of the study

Step 7. Developed a cover letter to solicit participation, assure participant anonymity, and describe the procedures for responding to the questionnaire

Step 8. Mailed copies of the instruments to a panel of expert judges (two ASBC instructors, two supervisors, one graduate, the researcher and a research specialist). The panel of judges was asked to review each item on the instruments and select one of three options relative to each item: (a) delete this item, (b) revise and keep this item, or (c) keep this item as it is. Also, judges were asked to make recommendations for those items selected as (b) revise and keep this item. In addition to assessing the items, judges were asked to review directions on the instruments for clarity and understanding

Step 9. Made revisions based on the judges' recommendations

Step 10. Resubmitted the instruments to the panel for a second review as was performed previously in Step 8

Step 11. Made revisions based on the panel of judges' input from their second review

Step 12. Submitted the questionnaire to the Institutional Review Board (IRB) at Auburn University for permission to pursue the study

Step 13. Secured IRB approval

Step 14. Conducted a pilot study of the instruments that included 60 graduates for the graduates' survey instrument (from an ASBC class other than 02D) and 60 supervisors for the supervisors' survey instrument

Step 15. Made revisions based on the pilot study

Step 16. Calculated the Cronbach alpha reliability coefficient for both instruments

Step 17. Prepared the revised instruments in final form using Microsoft FrontPage designing software in order to allow electronic submission

Step 18. Posted survey forms to an appropriate Auburn Webpage server that was password protected for increased security.

Validity

The validity of an instrument refers to its accuracy of measuring what it is intended to measure. "Stated differently, a measuring instrument is valid to the extent that it measures what it purports to measure" (Huck, 2000, p. 100). Therefore, validity for the two instruments developed for this study indicates how well they measured perceptions of graduates and their supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the Air and Space Basic Course. In order to gauge how well these instruments measured what they were intended to measure, the researcher resubmitted the final instruments to the panel of expert judges. The judges reviewed each

item for its content and construct validity on both of the instruments and offered suggestions for revisions and changes to the instruments. The panel judged content validity based on their analysis of curriculum content. In addition to assessing the items for clarity, completeness, representativeness of curriculum content, and relevance, judges were asked to review directions on the instruments for clarity and understanding. After the validity check, a pilot study of both instruments and scoring procedures was conducted. Revisions to the instruments were made based on results of the pilot study.

Reliability

The reliability of an instrument refers to its consistency of results. In other words, instrument reliability, ". . . is the extent to which a measuring device is consistent in measuring whatever it measures" (Ary, Jacobs, and Razavieh, 1996, p. 262). For example, if one used a standard 12 inch ruler to measure the width of a computer floppy disk and determined that it measured 3.5 inches in width, repeated measures of the disk must yield about 3.5 inches consistently. Since these instruments were intended for only one administration, rather than repeated measures, each of the two instruments was examined for its internal consistency. Internal consistency is a key measure of the reliability of an instrument, ". . . and may be the only measure possible for a single administration of an instrument. The most basic way of estimating the internal consistency of . . . [a] questionnaire is [by using the] Cronbach's alpha . . ." (Black, 1999, p. 278). The Cronbach alpha reliability coefficient provides an assessment, ". . . of internal consistency [that] focus[es] on the degree to which the same characteristic is being measured" (Huck, 2000, p. 92).

The Cronbach alpha reliability coefficient was calculated on the responses of the 40 scaled items (items 10 through 49) that addressed curriculum content on each instrument. The Cronbach alpha reliability coefficient yielded .96 for the graduates' instrument. The Cronbach alpha yielded .98 for the supervisors' instrument.
Items 13 through 35 were representative of Area 1000, Profession of Arms. The Cronbach alpha reliability coefficient was .95 for the graduates' instrument and .97 for the supervisors' instrument for these 23 items. Items 10, 11, and 36 through 40 were representative of Area 2000, Leadership and Management. The Cronbach alpha reliability coefficient was .79 for the graduates' instrument and .87 for the supervisors' instrument for these 7 items. Items 41 through 46 were representative of Area 3000, Military Studies. The Cronbach alpha reliability coefficient was .95 for the graduates' instrument and .97 for the supervisors' instrument for these 6 items. Items 12 and 49 were representative of Area 4000, Communications. The Cronbach alpha reliability coefficient was .61 for the graduates' instrument and .71 for the supervisors' instrument for these 2 items. Items 47 and 48 were representative of Area 5000, International Studies. The Cronbach alpha reliability coefficient was .90 for the graduates' instrument and .92 for the supervisors' instrument for these 2 items.

The amount of instructional hours devoted to each area of core content varied. Therefore, the number of items devoted to each core content area on the survey instruments varied proportionally. Each of the five core areas (Profession of Arms, Leadership and Management, Military Studies, Communications, and International Studies) was represented by several items on each instrument. Area 1000, Profession of Arms, included 23 items (items 13 through 35). Area 2000, Leadership and Management,

included 7 items (items 10, 11, and 36 through 40). Area 3000, Military Studies, included 6 items (items 41 through 46). Area 4000, Communications, was represented by 2 items (item 12 and 49). Area 5000, International Studies, included 2 items (items 47 and 48).

Procedures for Data Analysis

The Statistical Package for the Social Sciences (SPSS) software was used to analyze the data for research questions 1 through 5 and $H_{01\ (a\text{-}e)}$ and $H_{02\ (a\text{-}e)}$. ATLAS.ti was used to analyze data pertaining to research questions 6 and 7. Demographic data from the survey were analyzed and reported by number and percent for each group as follows: males and females, ethic groups, service component category (line, non-line, civilian, or Air National Guard/Air Force Reserve), rating (rated versus non-rated), marital status, class standings of graduates, years of experience of supervisors, and age group. The mean score and standard deviation for each survey item were reported for graduates and supervisors.

Null hypotheses $H_{01\ (a\text{-}e)}$ were tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of graduates and their immediate supervisor related to the relevance of each of the five content areas in the ASBC program in preparing graduates for their roles as airmen leaders. Null hypotheses $H_{02\ (a\text{-}e)}$ were tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of rated and non-rated graduates related to the relevance of each of the five core content areas in the ASBC program. Open-ended items on each instrument were analyzed for common themes.

Summary

This study was conducted in order to ascertain the differences in perceptions of new graduates of the Air and Space Basic Course (ASBC) and their immediate supervisors concerning the graduates' preparation for their post-graduate roles as airmen leaders. The researcher made a Web-based survey available to all 567 graduates from ASBC Class 02D and their immediate supervisors. The researcher developed two nearly identical instruments, one for the graduates and one for their supervisors to collect data for the study. The development of the instruments was the result of a thorough review and analysis of the major content areas in each of the five ASBC core areas, (1) Profession of Arms, (2) Leadership and Management, (3) Military Studies, (4) Communications, and (5) International Studies. The instruments were written in hypertext markup language (HTML) and composed using Microsoft FrontPage software in order for them to be accessed and completed by respondents electronically. In order to refine the survey instruments and verify content and construct validity, the instruments were subjected to two reviews by an expert panel of seven judges. The revised instruments were used in a pilot study. In addition, a Cronbach alpha reliability coefficient was computed to establish internal reliability. The finalized instruments were posted to an Auburn University Webpage server. Respondents accessed the instruments, completed the surveys, and submitted their responses anonymously. The resulting data were analyzed to provide demographic information and statistically significant difference in the way in which graduates and their supervisors perceived the usefulness and relevance of the curriculum content in preparing graduates. Responses to open-ended items on each instrument were analyzed for common themes.

CHAPTER IV

ANALYSIS OF DATA AND RESULTS

The purpose of this study was to ascertain the differences in perceptions of new graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the Air and Space Basic Course (ASBC). The first chapter of this study introduced and provided a context for this study, stated the problem, need and purpose of the study, defined terms, listed limitations and assumptions of the study, methods and procedures, and the significance of the study. The second chapter presented a review of literature regarding the history and need for Professional Military Education (PME) in the Air Force. It exposed the underlying theory expressed by senior leaders that a problem existed in the Air Force that necessitated the addition of the ASBC to the continuum of Air Force PME already in existence. Furthermore, literature pertaining to the purpose and scope of ASBC and its curriculum and assessment was examined. Finally, the Instructional Systems Development (ISD) model was presented as the basis for course development and/or revision of the ASBC. The third chapter presented the methods and procedures undertaken to produce the survey instruments, conduct the study, and analyze the data.

This chapter presents the results of the data analysis regarding the perceptions of the Air and Space Basic Course (ASBC) graduates and their immediate supervisors related to the importance of the curriculum content in preparing graduates to perform their roles as airmen leaders. Data were collected in order to (a) provide information

related to the demographic characteristics [(gender, ethnicity, service component (Line of the Air Force, non-line, civilian, and guard/reserve), rating, marital status, class standing or years of supervisory experience, and age group)] of participants in this study, (b) investigate the extent to which each content area of the ASBC program was perceived by the ASBC graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation, (c) investigate the extent to which each content area of the ASBC program was perceived by the ASBC graduates' immediate supervisors to be relevant to the graduates' roles as airmen leaders at their first duty assignment after graduation, (d) ascertain the extent to which there were differences in perceptions of graduates and their supervisors regarding the relevance of the Air and Space Basic Course curriculum content to the role of airmen leaders, (e) ascertain the extent to which a difference in perceptions existed between graduates who were rated and non-rated regarding the relevance of the ASBC curriculum content to the role of airmen leaders (f) acquire specific suggestions from the graduates and their supervisors regarding content changes in the Air and Space Basic Course.

Seven research questions and two null hypotheses were formulated for this study. The research questions were as follows.

1. What are the demographic characteristics (gender, ethnicity, service component, rating, marital status, class standing or years of supervisory experience, and age group) of (a) graduates of the ASBC and (b) their supervisors?
2. To what extent is each content area perceived by graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation?

3. To what extent is each content area perceived by graduates' immediate supervisors to be relevant to graduates' roles as airmen leaders at their first duty assignment after graduation?
4. To what extent is there a difference in the perceptions of graduates and their supervisors related to the relevance of the content in the ASBC program?
5. To what extent is there a difference between the perceptions of graduates who are rated and those who are non-rated regarding the relevance of the content in the ASBC program?
6. What specific program content changes do graduates suggest?
7. What specific program content changes do graduates' immediate supervisors suggest?

The hypotheses were as follows:

1. $H_{01\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of graduates and their immediate supervisor related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.
2. $H_{02\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International

Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

The results of the data analysis are arranged around the research questions and null hypotheses.

The Statistical Package for the Social Sciences (SPSS) software was used to analyze the data for research questions 1 through 5 and hypotheses $H_{01\ (a\text{-}e)}$ and $H_{02\ (a\text{-}e)}$. ATLAS.ti was used to analyze data pertaining to research questions 6 and 7. The researcher surveyed the total population. The population was comprised of the 567 graduates of the Air and Space Basic Course and their immediate supervisors (potentially 567 supervisors). The 567 graduates began the course on March 4, 2002, and were graduated on March 29, 2002. After commencement, the graduates were assigned to various worldwide locations to fulfill a variety of leadership positions within the United States Air Force. The survey instruments were constructed electronically in hypertext markup language (HTML) using Microsoft FrontPage authoring software. The instruments were posted to an Auburn University FrontPage server and made available electronically to graduates and their supervisors via the Worldwide Web. There was a total of 390 respondents (221 graduates and 169 supervisors).

Characteristics and Perceptions

The first research question was: What are the demographic characteristics (gender, ethnicity, service component, rating, marital status, class standing or years of supervisory experience, and age group) of graduates of the ASBC and their supervisors? Two hundred and twenty-one of the 567 graduates responded to the graduates' survey. This was a 38.9 percent return rate for the ASBC graduates. One hundred and sixty-nine

of the (potential) 567 supervisors responded to the survey. This was a 29.8 percent return rate for the ASBC supervisors. Demographic data for graduates and supervisors are displayed in Table 2.

Table 2

Demographics

Respondents by Gender

Respondents	Gender	Number	Percent	Total
Graduates	Males	168	76.0 %	221
	Females	53	24.0 %	
Supervisors	Males	139	82.2 %	169
	Females	30	17.8 %	

Respondents by Ethnicity

Respondents	Ethnicity	Number	Percent	Total
Graduates	African Amer.	26	11.8 %	221
	Asian American	7	3.2 %	
	Caucasians	154	69.7 %	
	Hispanics Amer.	21	9.5 %	
	Native American	1	0.5 %	
	Other	11	5.0 %	
	Undeclared	1	0.5 %	
Supervisors	African Amer.	15	8.9 %	169
	Asian American	7	4.1 %	
	Caucasians	141	83.4 %	
	Hispanics Amer.	4	2.4 %	
	Native American	2	1.2 %	

Table 2 (continued)

Demographics

Respondents by Service Component

Respondents	Component	Number	Percent	Total
Graduates	Line Officers	144	65.2 %	221
	Non-Line Officers	67	30.3 %	
	Civilians	6	2.7 %	
	ANG/AFRES	3	1.4 %	
	Unspecified	1	0.5 %	
Supervisors	Line Officers	140	82.8 %	169
	Non-Line Officers	13	7.7 %	
	Civilians	16	9.5 %	
	ANG/AFRES	0	0.0 %	

Respondents by Aeronautical Rating

Respondents	Rating	Number	Percent	Total
Graduates	Rated	24	10.9 %	221
	Non-Rated	197	89.1 %	
Supervisors	Rated	18	10.7 %	169
	Non-Rated	149	88.2 %	
	Unspecified	2	1.2 %	

Table 2 (continued)

Demographics

Respondents by Marital Status

Respondents	Marital Status	Number	Percent	Total
Graduates	Married	115	52.0 %	221
	Unmarried	106	48.0 %	
Supervisors	Married	125	74.0 %	169
	Unmarried	43	25.4 %	
	Unspecified	1	0.6 %	

Respondents by Class Standing

Respondents	Standing	Number	Percent	Total
Graduates	Top Third	142	64.3 %	221
	Middle Third	65	29.4 %	
	Bottom Third	6	2.7 %	
	Unspecified	8	3.6 %	
Supervisors		N/A	N/A	N/A

Supervisory Experience of Respondents

Respondents	Years of Experience	Number	Percent	Total
Graduates	N/A	N/A	N/A	N/A
Supervisors	Less than 1 year	10	5.9 %	169
	1 - 5 years	39	23.1 %	
	6 -10 years	77	45.6 %	
	11 -15 years	24	14.2 %	
	More than 15 years	19	11.2 %	

Table 2 (continued)

Demographics

Respondents by Age Group

Respondents	Age Group	Number	Percent	Total
Graduates	Less than 30 years-old	121	54.8 %	221
	30-33 years-old	62	28.1 %	
	34-37 years-old	37	16.7 %	
	38-41 years-old	1	0.5 %	
	Over 41 years-old	0	0.0 %	
Supervisors	Less than 30 years-old	40	23.7 %	169
	30-33 years-old	47	27.8 %	
	34-37 years-old	33	19.5 %	
	38-41 years-old	18	10.7 %	
	Over 41 years-old	31	18.3 %	

The second research question was: To what extent is each content area perceived by graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation? The graduates' perceptions about the relevance of the curriculum content were assessed based on their response to each of the 40 content-related survey items (items 10 through 49). Responses to these items were valued as follows: (a) critical = 4, (b) important = 3, (c) useful = 2, and (d) not necessary = 1. Means and standard deviations for each item and the number and percent of each response category are reported in Table 3. Results of the responses for each item revealed that graduates rated all items as useful or important. Items 14, 15, and 32-40 were rated as important. All other items were rated as useful.

Table 3

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical do you believe the Air and Space Basic Course was in:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
10	Inspiring you to comprehend your role as an Airman?	39 17.6%	100 45.2%	52 23.5%	30 13.6%	221	2.66	.9217
11	Inspiring you to understand and live by USAF core values?	29 13.1%	90 40.7%	54 24.4%	48 21.7%	221	2.45	.9741
12	Inspiring you to articulate and demonstrate USAF core competencies?	47 21.3%	100 45.2%	55 24.9%	19 8.6%	221	2.79	.8750
13	Inspiring you to be dedicated as a warrior?	39 17.6%	84 38.0%	64 29.0%	34 15.4%	221	2.57	.9531

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
14	Understand how aerospace power enhances warfighting?	74 33.5%	94 42.5%	36 16.3%	16 7.2%	220	3.02	.8909
15	Understand how the proper employment of aerospace systems enhances airpower?	78 35.3%	87 39.4%	37 16.7%	18 8.1%	220	3.02	.9238
16	Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	71 32.1%	78 35.3%	42 21.7%	23 10.4%	220	2.89	.9760

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
17	Have a working understanding of the Air Force core competencies?	56 25.3%	107 48.4%	46 20.8%	12 5.4%	221	2.93	.8233
18	Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	64 29.0%	65 29.4%	57 25.8%	35 15.8%	221	2.71	1.051
19	Comprehend the implications of the Goldwater-Nichols Act of 1986?	33 14.9%	65 29.4%	80 36.2%	43 19.5%	221	2.39	.9652
20	Comprehend the purpose of Joint staff divisions?	33 14.9%	73 33.0%	70 31.7%	44 19.9%	220	2.43	.9745
21	Understand the sister services' views of aerospace power?	42 19.0%	80 36.2%	69 31.2%	28 12.7%	219	2.62	.9374
22	Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	48 21.7%	71 32.1%	62 28.1%	37 16.7%	219	2.73	2.229
23	Understand the relationship between the Deliberate Planning and Crisis Planning processes?	42 19.0%	77 34.8%	71 32.1%	29 13.1%	219	2.60	.9444

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
24	Comprehend aerospace power employment?	48 21.7%	87 39.4%	64 29.0%	21 9.5%	220	2.73	.9084
25	Comprehend how the Air Operations Center (AOC) divisions work together to create the Air Tasking Order (ATO)?	46 20.8%	66 29.9%	64 29.0%	44 19.9%	220	2.51	1.035
26	Understand how "Information Operations" can enhance Air Force operations?	55 24.9%	92 41.6%	60 27.1%	14 6.3%	221	2.85	.8688
27	Understand the "Total Force" concept of the Reserve mobilization policy?	37 16.7%	92 41.6%	74 33.5%	18 8.1%	221	2.66	.8498
28	Comprehend Joint aerospace operations planning and execution at the theater/operational and tactical levels?	31 14.0%	87 39.4%	70 31.7%	33 14.9%	220	2.52	.9123
29	Understand the methods of targeting, e.g. the process of identifying Centers of Gravity (COGs)/effects-based targeting?	46 20.8%	71 32.7%	63 28.5%	41 18.6%	221	2.55	1.019

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
30	Understand the five stages of the Joint Air Operations Plan (JAOP)?	27 12.2%	63 28.5%	72 32.6%	59 26.7%	221	2.26	9881
31	Comprehend Joint aerospace oper-ations planning and execution tools?	24 10.9%	71 32.1%	74 33.5%	52 23.5%	221	2.30	.9503
32	Know the value of officership principles and heritage?	90 40.7%	96 43.4%	27 12.2%	7 3.2%	220	3.22	.7825
33	Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	78 35.3%	87 39.4%	42 19.0%	14 6.3%	221	3.03	.8937
34	Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	78 35.3%	93 42.1%	40 18.1%	10 4.5%	221	3.08	.8435
35	Know the value of military heritage?	74 33.5%	101 45.7%	38 17.2%	8 3.6%	221	3.09	.8039

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
36	Know the application of personal wellness skills?	73 33.0%	99 44.8%	33 14.9%	12 5.4%	217	3.07	.8411
37	Have effective team building and problem solving skills?	113 51.1%	75 33.9%	25 11.3%	5 2.3%	218	3.35	.7743
38	Value the views of senior non-commissioned officers about their expectations of newly commissioned company grade officers?	107 48.4%	69 31.2%	32 14.5%	11 5.0%	219	3.24	.8835
39	Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	100 45.2%	76 34.4%	34 15.4%	7 3.2%	217	3.23	.8321
40	Be exposed to a senior non-commissioned officer speaking from his or her own personal experience about leadership issues?	86 38.9%	87 39.4%	34 15.4%	12 5.4%	219	3.12	.8685
41	Comprehend the significance of aerospace history and doctrine to modern warfare?	52 23.5%	90 40.7%	55 24.9%	21 9.5%	218	2.79	.9151

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
42	Comprehend the evolution of airpower and airpower theory and doctrine from its origins to the beginning of World War II?	32 14.5%	87 39.4%	68 30.8%	32 14.5%	219	2.54	.9146
43	Comprehend the evolution of airpower and airpower theory and doctrine during World War II?	28 12.7%	87 39.4%	74 33.5%	28 12.7%	217	2.53	.8768
44	Comprehend the evolution of airpower and airpower theory and doctrine from the Korean War in the 1950s through the Vietnam War in the 1960s to the early 1970s?	26 11.8%	85 38.5%	77 34.8%	32 14.5%	220	2.47	.8833
45	Understand the employment of the Air Force Core Competencies during the campaign Operation Desert Storm?	39 17.6%	103 46.6%	55 24.9%	22 10.0%	219	2.72	.8715

Table 3 (continued)

Graduates' Perceptions of Relevance of Content (items 10 through 49)

How critical to your present duties as a leader of airmen is it to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
46	Understand the employment of air and space power in Operation Allied Force?	39 17.6%	94 42.5%	61 27.6%	25 11.3%	219	2.67	.8994
47	Comprehend the relationships between geopolitical issues, conflict, and US instruments of national power?	58 26.2%	87 39.4%	56 25.3%	17 7.7%	218	2.85	.9039
48	Comprehend the importance of well defined end-states to conflict resolution?	53 24.0%	88 39.8%	57 25.8%	20 9.0%	218	2.79	.9136
49	Possess a thorough understanding of communications and communications skills?	62 28.1%	97 43.9%	47 21.3%	10 4.5%	216	2.97	.8322

The third research question was: To what extent is each content area perceived by graduates' immediate supervisors to be relevant to graduates' roles as airmen leaders at their first duty assignment after graduation? The supervisors' perceptions about the relevance of the curriculum content were assessed based on their responses to each of the 40 content-related survey items (items 10 through 49). Responses to these items were

valued as follows: (a) critical = 4, (b) important = 3, (c) useful = 2, and (d) not necessary = 1. Means and standard deviations for each item and the number and percent of each response category are reported in Table 4. Results of the responses for each item revealed that supervisors rated all items as useful or important. Items 10-17, 22, 24, 26, and 32-49 were rated as important. All other items were rated as useful.

Table 4

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical do you believe the Air and Space Basic Course was in:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
10	Inspiring your subordinate to comprehend his/her role as an Airman?	55 32.5%	93 55%	17 10.1%	4 2.4%	169	3.17	.7015
11	Inspiring your subordinate to understand and live by USAF core values?	64 37.9%	78 46.2%	21 12.4%	6 3.6%	169	3.18	.7842
12	Inspiring your subordinate to articulate and demonstrate USAF core competencies?	65 38.5%	79 46.7%	18 10.7%	7 4.1%	169	3.19	.7889
13	Inspiring your subordinate to be dedicated as a warrior?	61 36.1%	84 49.7%	20 11.8%	4 2.4%	169	3.19	.7342

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
14	Understand how aerospace power enhances warfighting?	80 47.3%	70 41.4%	17 10.1%	2 1.2%	169	3.34	.7088
15	Understand how the proper employment of aerospace systems enhances airpower?	82 48.5%	63 37.3%	19 11.2%	3 1.8%	167	3.34	.7507
16	Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	77 45.6%	61 36.1%	25 14.8%	5 3.0%	168	3.25	.8171
17	Have a working understanding of the Air Force core competencies?	96 56.8%	54 32.0%	18 10.7%	1 0.6%	169	3.44	.7064
18	Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	56 33.1%	54 32.0%	47 27.8%	12 7.1%	169	2.91	.9439

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
19	Comprehend the implications of the Goldwater-Nichols Act of 1986?	31 18.3%	44 26.0%	57 33.7%	35 20.7%	167	2.42	1.020
20	Comprehend the purpose of Joint staff divisions?	39 23.1%	42 24.9%	58 34.3%	30 17.8%	169	2.53	1.035
21	Understand the sister services' views of aerospace power?	46 27.2%	49 29.0%	60 35.5%	14 8.3%	169	2.75	.9498
22	Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	67 39.6%	54 32.0%	42 24.9%	6 3.6%	169	3.07	.8864
23	Understand the relationship between the Deliberate Planning and Crisis Planning processes?	44 26.0%	39 23.1%	62 36.7%	24 14.2%	169	2.60	1.024
24	Comprehend aerospace power employment?	82 48.5%	56 33.1%	25 14.8%	5 3.0%	168	3.27	.8257

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
25	Comprehend how the Air Operations Center (AOC) divisions work together to create the Air Tasking Order (ATO)?	44 26.0%	41 24.3%	54 32.0%	30 17.8%	169	2.58	1.0607
26	Understand how "Information Operations" can enhance Air Force operations?	58 34.3%	67 39.6%	39 23.1%	5 3.0%	169	3.05	.8328
27	Understand the "Total Force" concept of the Reserve mobilization policy?	42 24.9%	54 32.0%	54 32.0%	18 10.7%	168	2.71	.9612
28	Comprehend Joint aerospace operations planning and execution at the theater/operational and tactical levels?	47 27.8%	43 25.4%	66 39.1%	12 7.1%	168	2.74	.9477

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
29	Understand the methods of targeting, e.g. the process of identifying Centers of Gravity (COGs)/effects-based targeting?	55 32.5%	47 27.8%	49 29.0%	18 10.7%	169	2.82	1.007
30	Understand the five stages of the Joint Air Operations Plan (JAOP)?	24 14.2%	32 18.9%	57 33.7%	56 33.1%	169	2.14	1.036
31	Comprehend Joint aerospace oper-ations planning and execution tools?	25 14.8%	37 21.9%	57 33.7%	49 29.0%	168	2.22	1.030
32	Know the value of officership principles and heritage?	81 47.9%	79 46.7%	8 4.7%	1 0.6%	169	3.42	.6132
33	Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	76 45.0%	52 30.8%	34 20.1%	7 4.1%	169	3.16	.8910

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
34	Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	84 49.7%	74 43.8%	11 6.5%	0 0.0%	169	3.43	.6146
35	Know the value of military heritage?	70 41.4%	85 50.3%	13 7.7%	1 0.6%	169	3.32	.6413
36	Know the application of personal wellness skills?	115 68.0%	40 23.7%	13 7.7%	1 0.6%	169	3.59	.6584
37	Have effective team building and problem solving skills?	134 79.3%	28 16.6%	7 4.1%	0 0.0%	169	3.75	.5208
38	Value the views of senior non-commissioned officers about their expectations of newly commissioned company grade officers?	103 60.9%	58 34.3%	8 4.7%	0 0.0%	169	3.56	.5855
39	Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	103 60.9%	59 34.9%	7 4.1%	0 0.0%	169	3.56	.5746

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
40	Be exposed to a senior non-commissioned officer speaking from his or her own personal experience about leadership issues?	94 55.6%	67 39.6%	8 4.7%	0 0.0%	169	3.50	.5888
41	Comprehend the significance of aerospace history and doctrine to modern warfare?	68 40.2%	67 39.6%	30 17.8%	3 1.8%	168	3.19	.7888
42	Comprehend the evolution of airpower and airpower theory and doctrine from its origins to the beginning of World War II?	59 34.9%	66 39.1%	36 21.3%	8 4.7%	169	3.04	.8685
43	Comprehend the evolution of airpower and airpower theory and doctrine during World War II?	60 35.5%	64 37.9%	38 22.5%	7 4.1%	169	3.04	.8647
44	Comprehend the evolution of airpower and airpower theory and doctrine from the Korean War in the 1950s through the Vietnam War in the 1960s to the early 1970s?	58 35.5%	67 37.3%	39 22.5%	5 4.7%	169	3.03	.8789

Table 4 (continued)

Supervisors' Perceptions of Relevance of Content (items 10 through 49)

How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Critical	Important	Useful	Not Necessary	N	Mean	SD
45	Understand the employment of the Air Force Core Competencies during the campaign Operation Desert Storm?	69 40.8%	74 43.8%	24 14.2%	2 14.2%	169	3.24	.7362
46	Understand the employment of air and space power in Operation Allied Force?	68 40.2%	74 43.8%	24 14.2%	3 1.8%	169	3.22	.7538
47	Comprehend the relationships between geopolitical issues, conflict, and US instruments of national power?	68 40.2%	69 40.8%	28 16.6%	4 2.4%	169	3.18	.7941
48	Comprehend the importance of well defined end-states to conflict resolution?	69 40.8%	71 42.0%	25 14.8%	4 2.4%	169	3.21	.7805
49	Possess a thorough understanding of communications and communications skills?	84 49.7%	67 39.6%	18 10.7%	0 0.0%	169	3.39	.6736

The forth research question was: To what extent is there a difference in the perceptions of graduates and their supervisors related to the relevance of the content in the ASBC program? In order to answer the research question, the following null hypotheses were formulated:

> $H_{01\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of graduates and their immediate supervisor related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Null hypotheses $H_{01\ (a\text{-}e)}$ were tested using the T-Test for Independent Samples to ascertain statistically significant differences in the perceptions of graduates and their immediate supervisor related to the relevance of each content area in the ASBC program in preparing graduates for their roles as airmen leaders. The perceptions about content areas were assessed in each instrument by 40 scaled items (items 10 through 49) that addressed specific curriculum content. Since the amount of instructional hours devoted to each area of core content varied, the number of items devoted to each core content area on the survey instruments also varied proportionally. Each of the five core areas (Profession of Arms, Leadership and Management, Military Studies, Communications, and International Studies) was represented by several items on the instruments. Items 13 through 35 were representative of Area 1000, Profession of Arms. Items 10, 11, and 36 through 40 were representative of Area 2000, Leadership and Management. Items 41 through 46 were representative of Area 3000, Military Studies. Items 12 and 49 were

representative of Area 4000, Communications. Items 47 and 48 were representative of Area 5000, International Studies.

An Independent Samples T-Test was performed in order to test $H_{01\ (a)}$ to ascertain differences in perceptions of graduates and their supervisors related to the relevance of the Area 1000, Profession of Arms. Results revealed a statistically significant difference in perceptions of graduates and their supervisors. The mean score for the graduates was 2.7315 and the standard deviation was .6578. The mean score for the supervisors was 2.9474 and the standard deviation was .6893. The two-tailed t-test with 388 degrees of freedom indicated that the difference in graduates and supervisors was statistically significant at the .05 level. In this case (Table 5) the p value was .002. This indicated that the probability of differences between the two groups could occur by chance less than 3 times in 1000. The observed t value of -3.145 was greater than the critical t value of 1.973; therefore, null hypothesis $H_{01\ (a)}$ was rejected.

Table 5

Independent Samples T-Test for Graduate Versus Supervisor on Profession of Arms (items 13 through 35)

	Mean	Standard Deviation
Graduates (N=221)	2.7315	.6578
Supervisors (N=169)	2.9474	.6893

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-3.145	388	.002	-.2159	.0686

An Independent Samples T-Test was performed in order to test $H_{01\ (b)}$ to ascertain differences in perceptions of graduates and their supervisors related to the relevance of

the Area 2000, Leadership and Management. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 3.0189 and the standard deviation was .5907. The mean score for supervisors was 3.4776 and the standard deviation was .4733. The two-tailed t-test with 388 degrees of freedom indicated that the difference between graduates and supervisors was statistically significant at the .05 level. In this case (Table 6) the p value was .000. This indicated that the probability of differences between the two groups could occur by chance less than 1 time in 1000. The observed t value of -8.266 was greater than the critical t value of 1.973; therefore, null hypothesis $H_{01\ (b)}$ was rejected.

Table 6

Independent Samples T-Test for Graduates Versus Supervisors on Leadership and Management (items 10, 11, and 36 through 40)

	Mean	Standard Deviation
Graduates (N=221)	3.0189	.5907
Supervisors (N=169)	3.4776	.4733

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-8.266	388	.000	-.4587	.0554

An Independent Samples T-Test was performed to test $H_{01\ (c)}$ to ascertain differences in perceptions of graduates and their supervisors related to the relevance of the Area 3000, Military Studies. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 2.6172 and the standard deviation was .8067. The mean score for supervisors was 3.1300 and the standard deviation was .7672. The two-tailed t-test with 388 degrees of freedom

indicated that the difference in graduates and supervisors was statistically significant at the .05 level. In this case (Table 7) the p value was .000. This indicated that the probability of differences between the two groups could occur by chance less than 1 time in 1000. The observed t value of -6.348 was greater than the critical t value of 1.973; therefore, null hypothesis $H_{01\ (c)}$ was rejected.

Table 7

Independent Samples T-Test for Graduates Versus Supervisors on Military Studies (items 41 through 46)

	Mean	Standard Deviation
Graduates (N=221)	2.6172	.8067
Supervisors (N=169)	3.1300	.7672

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-6.348	388	.000	-.5128	.0807

An Independent Samples T-Test was performed in order to test $H_{01\ (d)}$ to ascertain differences in the perceptions of graduates and their supervisors related to the relevance of the Area 4000, Communications. Results revealed no statistically significant difference between perceptions of graduates and supervisors. The mean score for the graduates was 2.9932 and the standard deviation was .7111. The mean score for the supervisors was 3.0710 and the standard deviation was .8596. The two-tailed t test with 388 degrees of freedom indicated that the difference in graduates and supervisors was not statistically significant at the .05 level. In this case (Table 8) the p value was .341. This indicated that the probability of the differences between the two groups could occur by chance more

than 34 times in 100. The observed t value of -.953 was less than the critical t value of 1.973. Therefore, null hypothesis $H_{01\ (d)}$ was not rejected.

Table 8

Independent Samples T-Test for Graduates Versus Supervisors on Communications (items 12 and 49)

	Mean	Standard Deviation
Graduates (N=221)	2.9932	.7111
Supervisors (N=169)	3.0710	.8596

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-.953	388	.341	-.0777	.0795

An Independent Samples T-Test was performed in order to test $H_{01\ (e)}$ to ascertain differences in perceptions of graduates and their supervisors related to the relevance of the Area 5000, International Studies. Results revealed a statistically significant difference between perceptions of graduates and supervisors. The mean score for graduates was 2.8273 and the standard deviation was .8652. The mean score for supervisors was 3.2012 and the standard deviation was .7605. The two-tailed t-test with 388 degrees of freedom indicated that the difference in graduates and supervisors was statistically significant at the .05 level. In this case (Table 9) the p value was .000. This indicated that the probability of differences between the two groups could occur by chance less than 1 time in 1000. The observed t of -4.450 was greater than the critical t of 1.973; therefore, null hypothesis $H_{01\ (e)}$ was rejected.

Table 9

Independent Samples T-Test for Graduates Versus Supervisors on International Studies (items 47 and 48)

	Mean	Standard Deviation
Graduates (N=221)	2.8273	.8652
Supervisors (N=169)	3.2012	.7605

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-4.450	388	.000	-.3739	.0840

Following is a summary of the findings regarding perceptions of graduates versus supervisors. Data analysis revealed no statistically significant difference in graduates' and supervisors' perceptions regarding one area: Communications ($H_{01\ (d)}$). A statistically significant difference was found in all other areas: Profession of Arms ($H_{01\ (a)}$), Leadership and Management ($H_{01\ (b)}$), Military Studies ($H_{01\ (c)}$), and International Studies ($H_{01\ (e)}$). Therefore, null hypothesis $H_{01\ (d)}$ was not rejected and hypotheses $H_{01\ (a, b, c, \text{and } e)}$ were rejected.

The fifth research question was: To what extent is there a difference between the perceptions of graduates who held an aeronautical rating and those who did not regarding the relevance of the content in the ASBC program? In order to answer the research question, the following null hypotheses were formulated:

> $H_{02\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and

Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Null hypotheses $H_{02\ (a\text{-}e)}$ were tested using the t-test for independent samples to ascertain statistically significant differences in the perceptions of graduates who were rated and those who were non-rated related to the relevance of each content area in the ASBC program in preparing graduates for their roles as airmen leaders. The perceptions about content areas were assessed in each instrument by 40 scaled items (items 10 through 49) that addressed specific curriculum content. Since the amount of instructional hours devoted to each area of core content varied, the number of items devoted to each core content area on the survey instruments varied proportionally. Each of the five core areas (Profession of Arms, Leadership and Management, Military Studies, Communications, and International Studies) was represented by several items on the instruments. Items 13 through 35 were representative of Area 1000, Profession of Arms. Items 10, 11, and 36 through 40 were representative of Area 2000, Leadership and Management. Items 41 through 46 were representative of Area 3000, Military Studies. Items 12 and 49 were representative of Area 4000, Communications. Items 47 and 48 were representative of Area 5000, International Studies.

An Independent Samples T-Test was performed in order to test $H_{02\ (a)}$ to ascertain the differences in perceptions of graduates who were rated and those who were non-rated related to the relevance of the Area 1000, Profession of Arms. Results revealed a statistically significant difference between perceptions of rated and non-rated graduates. The mean score for the graduates who were rated was 2.9692 and the standard deviation

was .6537. The mean score for graduates who were non-rated was 2.6866 and the standard deviation was .6478. The two-tailed t-test with 219 degrees of freedom indicated that the difference in rated and non-rated graduates was statistically significant at the .05 level. In this case (Table 10) the p value was .045. This indicated that the probability of differences between the two groups could occur by chance less than 5 times in 100. The observed t value of 2.015 was greater than the critical t value of 1.977; therefore, null hypothesis $H_{02\,(a)}$ was rejected.

Table 10

Independent Samples T-Test for Rated Versus Non-Rated Graduates on Profession of Arms (items 13 through 35)

	Mean	Standard Deviation
Rated (N=24)	2.9692	.6537
Non-Rated (N=197)	2.6866	.6478

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
2.015	219	.045	.2826	.1402

An Independent Samples T-Test was performed in order to test $H_{02\,(b)}$ to ascertain the differences in perceptions of graduates who were rated and graduates who were non-rated related to the relevance of the Area 2000, Leadership and Management. Results revealed no statistically significant differences between perceptions of graduates who were rated and graduates who were non-rated. The mean score for the graduates who were rated was 2.9712 and the standard deviation was .6014. The mean score for the graduates who were non-rated was 3.0248 and the standard deviation was .5907. The two-tailed t test with 219 degrees of freedom indicated that the difference in rated and

non-rated graduates was not statistically significant at the .05 level. In this case (Table 11) the p value was .676. This indicated that the probability of the differences between the two groups could occur by chance over 67 times in 100. The observed t value of -.418 was less than the critical t value of 1.977. Therefore, null hypothesis $H_{02\,(b)}$ was not rejected.

Table 11

Independent Samples T-Test for Rated Versus Non-Rated on Leadership and Management (items 10, 11, and 36 through 40)

	Mean	Standard Deviation
Rated (N=24)	2.9712	.6014
Non-Rated (N=197)	3.0248	.5907

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-.418	219	.676	-.0535	.1279

An Independent Samples T-Test was performed in order to test $H_{02\,(c)}$ to ascertain the differences in perceptions of graduates who were rated and graduates who were non-rated related to the relevance of the Area 3000, Military Studies. Results revealed no statistically significant differences between perceptions of rated and non-rated graduates. The mean score for the graduates who were rated was 2.6087 and the standard deviation was .7258. The mean score for the graduates who were non-rated was 2.6182 and the standard deviation was.8173. The two-tailed t test with 219 degrees of freedom indicated that the difference in rated and non-rated graduates was not significant at the .05 level. In this case (Table 12) the p value was .958. This indicated that the probability of the differences between the two groups could occur by chance as much as 95 times in 100.

The observed t value of -.053 was less than the critical t value of 1.977. Therefore, null hypothesis $H_{02\,(c)}$ was not rejected.

Table 12

Independent Samples T-Test for Rated Versus Non-Rated on Military Studies (items 41 through 46)

	Mean	Standard Deviation
Rated (N=24)	2.6087	.7258
Non-Rated (N=197)	2.6182	.8173

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
-.053	219	.958	.0949	.1782

An Independent Samples T-Test was performed in order to test $H_{02\,(d)}$ to ascertain the differences in perceptions of graduates who were rated and graduates who were non-rated related to the relevance of the Area 4000, Communications. Results revealed no statistically significant differences between perceptions of rated and non-rated graduates. The mean score for the graduates who were rated was 2.9375 and the standard deviation was .6135. The mean score for the graduates who were non-rated was 2.8782 and the standard deviation was .7322. The two-tailed t test with 219 degrees of freedom indicated that the difference in rated and non-rated graduates was not significant at the .05 level. In this case (Table 13) the p value was .704. This indicated that the probability of the differences between the two groups could occur by chance more than 70 times in 100. The observed t value of .381 was less than the critical t value of 1.977. Therefore, null hypothesis $H_{02\,(d)}$ was not rejected.

Table 13

Independent Samples T-Test for Rated Versus Non-Rated on Communications (items 12 and 49)

	Mean	Standard Deviation
Rated (N=24)	2.9375	.6135
Non-Rated (N=197)	2.8782	.7322

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
.381	219	.704	.0593	.1558

An Independent Samples T-Test was performed in order to test $H_{02\,(e)}$ to ascertain the differences in perceptions of graduates who were rated and graduates who were non-rated related to the relevance of the Area 5000, International Studies. This analysis revealed no statistically significant differences between perceptions of rated and non-rated graduates. The mean score for the graduates who were rated was 2.8696 and the standard deviation of .7719. The mean score for the graduates who were non-rated was 2.8223 and the standard deviation was .8771. The two-tailed t test with 219 degrees of freedom indicated that the difference in rated and non-rated graduates was not significant at the .05 level. In this case (Table 14) the p value was .805. This indicated that the probability of the differences between the two groups could occur by chance as much as 80 times in 100. The observed t value of .247 was less than the critical t value of 1.977. Therefore, null hypothesis $H_{02\,(e)}$ was not rejected.

Table 14

Independent Samples T-Test for Rated Versus Non-Rated on International Studies (items 47 and 48)

	Mean	Standard Deviation
Rated (N=24)	2.8696	.7719
Non-Rated (N=197)	2.8223	.8771

t-test for Equality of Means				
t	df	Significance (2-tailed)	Mean Difference	Standard Error Difference
.247	219	.805	-.0472	.1911

The following is a summary of the findings regarding responses of rated versus non-rated graduates. The data analysis revealed no significant difference between rated and non-rated graduates' perceptions regarding four areas: Leadership and Management ($H_{02\ (b)}$), Military Studies ($H_{02\ (c)}$), Communications ($H_{02\ (d)}$), and International Studies ($H_{02\ (e)}$). A statistically significant difference was found in one area: Profession of Arms ($H_{02\ (a)}$). Therefore, null hypotheses $H_{02\ (b, c, d, \text{and } e)}$ were not rejected and hypothesis $H_{02\ (a)}$ was rejected.

Graduates' Common Themes and Suggestions

The sixth research question was: What specific program content changes do graduates suggest? Therefore, graduates were asked to provide free-text comments about the ASBC program. Specifically, the survey asked graduates: What suggestions could you offer that may improve the content of the core courses at the Air and Space Basic Course? Ninety-nine out of the 221 graduates who responded to the survey included free-text comments. The ATLAS.ti software was used to identify primary patterns in the

comments. The patterns noted by the researcher fell into two major categories, themes and suggestions.

Graduates' Common Themes

Data were analyzed to ascertain common themes. Themes were compiled from graduates' statements about their observations, not recommendations for changes. Comments were judged as belonging to a theme when two or more individuals provided comments concerning the same topic. Three themes emerged from graduates' comments: 1) focus on career field, 2) praise for the course, and 3) redundant material.

Focus on Career Field

Graduates observed that much of the Air and Space Basic Course focused heavily on areas that were directly related to rated career fields. For instance, Area 1000, Profession of Arms, was geared toward planning for, executing, and leading the Air Force in warfighting. While the warfighting mission has a direct connection to the job of an Air Force aviator (rated officer), it is only indirectly related to the job of a non-rated support office such as an attorney or a meteorologist. Therefore, graduates who did not hold aeronautical ratings expressed concern about their observations. One commented that, ". . . Being able to produce a JAOP [Joint Air Operations Plan] and employ packaging isn't of much use for non-rated officers." Another non-rated graduate noted that, ". . . we are more concerned with what affects our current job [rather than what affects rated officers]." Another graduate observed that the course did not give him a view of where his non-rated, ". . . career field fits into the scheme of airpower."

Praise for the Course

Most graduates were impressed with the quality and content of the ASBC program. Some representative comments were as follows: "Excellent!"; "Great Course!"; "The ASBC course was great."; "Great job!"; ". . . heading in the right direction."; "This was an excellent course." Out of the 99 graduates who wrote comments, only one individual expressed displeasure with the course. This student stated that, ". . . this course was a waste of time."

Redundant Material

One emerging theme that was echoed by several of the graduates was that some of the material taught in the ASBC was a repeat of the material taught in commissioning programs such as Officers' Training School (OTS), the Reserve Officers Training Corps (ROTC), and the U.S. Air Force Academy (USAFA). Some representative comments regarding this theme included the following: "Most of this information is redundant."; "A good portion of the class was exactly like OTS—same briefings and same slides . . ."; "ASBC was a 'rehash' of OTS."; "I felt that this course was a good summary for everything I learned at USAFA. I did not learn anything new at ASBC."

Graduates' Suggestions

Data were analyzed to identify graduates' suggestions. Suggestions were compiled from graduates' recommendations were sorted into five areas. The five suggestion areas that emerged were: 1) add material to the course, 2) lengthen the course, 3) present fewer lectures, 4) do not change the course, and 5) eliminate material from the course.

Add Material to the Course

Eleven of the 99 graduates who submitted comments suggested that additional materials should be added to the course. Some graduates recommended adding instruction on how to write annual evaluations on their subordinates. Also, several graduates requested adding instruction on how to write award packages as a means of recognizing the contributions of their subordinates. Another popular suggestion was that more physical fitness be added to the program.

Lengthen the Course

Three of the 99 graduates who submitted comments recommended that the Air and Space Basic Course be lengthened to allow a more thorough study of the material presented. The following comment was representative of graduates who suggested the ASBC program be lengthened: "Rather than push people through . . . lengthen the course to really give students the opportunity to learn. Students get firehosed with joint warfighting info and aren't given ample time to truly understand."

Present Fewer Lectures

Five of the 99 graduates who submitted comments recommended that less time be devoted to auditorium lectures. The following comment was representative of graduates who suggested the ASBC reduce time devoted to lectures: "One day my class spent almost the entire day in Polifka [auditorium] listening to different briefings and lecturers. Being lectured . . . [too much] can be tedious and sometimes can lead to a loss of awareness."

Do Not Change the Course

Sixteen of the 99 graduates who submitted comments who conveyed a high degree of satisfaction with the ASBC. The following comment was representative of graduates who suggested the ASBC curriculum be preserved and conducted without changes to the program: "I was pleased with the course as it was taught."

Eliminate Material from the Course

Five of the 99 graduates who submitted comments recommended that portions of the curriculum be eliminated from the course. Two individuals recommended the elimination of the Air Force Core Values from the course. One noted that, "The school should not be teaching the Air Force Core Values. We should have been living them as soon as we signed up and went through boot camp or OTS." Two individuals recommended elements of the physical fitness be reduced. One commented that, "Reduce the PC (run) from 3 miles to 2 miles." One individual recommended that any material that was redundant (material that was taught in a commissioning program or that will be taught in later professional military education courses) be eliminated. She commented that, "The classroom portion could have been condensed due to the fact that such a large portion of info is repeated . . ."

Supervisors' Common Themes and Suggestions

The seventh research question was: What specific program content changes do graduates' immediate supervisors suggest? Therefore, supervisors were asked to provide free-text comments about the ASBC program. Specifically, the survey asked supervisors: What suggestions could you offer that may improve the content of the core courses at the Air and Space Basic Course? Sixteen of the 169 supervisors who responded to the survey included free-text comments. The ATLAS.ti software was used to identify primary

patterns in the comments. The patterns noted by the researcher fell into two major categories, themes and suggestions.

Supervisors' Common Themes

Data were analyzed to determine common themes. Themes were compiled from supervisors' statements about their observations, not recommendations for changes. Comments were judged as belonging to a theme when two or more individuals provided comments concerning the same topic. However, only one theme emerged from supervisors' comments: praise for the course.

Praise for the Course

Six of the 16 supervisors who submitted comments, were impressed with the quality and content of the ASBC program. The following comment was representative of supervisors who praised the course: "What is taught at ABSC is important for every position held by officers in the Air Force and a great foundation for PME and joint operations." Out of the 16 supervisors who wrote comments, only one individual expressed displeasure with the course. This supervisor stated that, "I don't believe that ASBC is necessary. My supervisee missed out on valuable professional training by going to ASBC for those weeks."

Supervisors' Suggestions

Data were reviewed to identify supervisors' suggestions. Suggestions were compiled from supervisors' recommendations and sorted into two areas. The two suggestion areas that emerged were: 1) add material to the course, and 2) teach this material elsewhere.

Add Material to the Course

Five of the 16 supervisors who submitted comments, suggested that additional materials should be added to the course. Some supervisors recommended adding instruction on how to write annual evaluations on subordinates. Another popular suggestion was that more time be spent teaching about the challenges of supervision and leadership.

Teach this Material Elsewhere

One emerging theme that was echoed by several of the supervisors was that while the material taught in the ASBC was crucial for new lieutenants to know, the ASBC should not be the forum to teach it. These supervisors recommended that the curriculum presented at ASBC should have been taught in commissioning programs such as Officers' Training School (OTS), the Reserve Officers Training Corps (ROTC), and the U.S. Air Force Academy (USAFA). A representative comment regarding this recommendation was as follows: "My fundamental thoughts are that the ASBC concepts are crucial, but these should be imparted through our accession programs and not in a separate [ASBC] school."

Summary of Results and Findings

Graduates Versus Supervisors

The Air and Space Basic Course graduates' responses to each of the 40 content-related survey items were analyzed to determine to what extent each item of content area was perceived by the graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation. Items 10 through 49 of the survey were curriculum-content related. These items were valued as follows: (a) critical = 4, (b) important = 3, (c)

useful = 2, and (d) not necessary = 1. The resulting mean scores allowed responses about the curriculum content to be categorized in two categories, useful and important. Items with overall mean scores of 2.00 to 2.99 were classified as useful. Items with mean scores of 3.00 to 3.99 were classified as important. No items were rated as critical or not necessary. Under these criteria, items 14, 15, and 32 through 40 were rated as important and all other items were rated as useful. Items 14, 15, and 32 through 40 are displayed in Table 15.

Table 15

Items Rated as Important by Graduates (items 14, 15, and 32 through 40)

How critical to the present duties of your subordinate is it for him or her to:			
Item	**Question**	**Mean**	**SD**
14	Understand how aerospace power enhances warfighting?	3.02	.8909
15	Understand how the proper employment of aerospace systems enhances airpower?	3.02	.9238
32	Know the value of officership principles and heritage?	3.22	.7825
33	Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	3.03	.8937
34	Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	3.08	.8435
35	Know the value of military heritage?	3.09	.8039
36	Know the application of personal wellness skills?	3.07	.8411
37	Have effective team building and problem solving skills?	3.35	.7743
38	Value the views of senior non-commissioned officers about their expectations of newly commissioned company grade officers?	3.24	.8835
39	Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	3.23	.8321
40	Be exposed to a senior non-commissioned officer speaking from his or her own personal experience about leadership issues?	3.12	.8685

Responses of graduates' supervisors to each of the 40 content-related survey items were analyzed to determine to what extent each item of content area was perceived by the supervisors to be relevant to the ASBC graduates' roles as airmen leaders at their first duty assignment after graduation. Items 10 through 49 of the survey were

curriculum-content related. These items were valued as follows: (a) critical = 4, (b) important = 3, (c) useful = 2, and (d) not necessary = 1. The resulting mean scores allowed responses about the curriculum content to be categorized in two categories, useful and important. Items with overall mean scores of 2.00 to 2.99 were classified as useful. Items with mean scores of 3.00 to 3.99 were classified as important. No items were rated as critical or not necessary. Under these criteria, items 10-17, 22, 24, 26, and 32 through 49 were rated as important. All other items were rated as useful. Items 10-17, 22, 24, 26, and 32 through 49 are displayed in Table 16.

Table 16

Items Rated as Important by Supervisors (items 10 through 17, 22, 24, 26, and 32 through 49)

Items 10 through 13
How critical do you believe the Air and Space Basic Course was in:

Item	Question	Mean	SD
10	Inspiring your subordinate to comprehend his/her role as an Airman?	3.17	.7015
11	Inspiring your subordinate to understand and live by USAF core values?	3.18	.7842
12	Inspiring your subordinate to articulate and demonstrate USAF core competencies?	3.19	.7889
13	Inspiring your subordinate to be dedicated as a warrior?	3.19	.7342

Items 17, 22, 24, 26, and 32 through 49
How critical to the present duties of your subordinate is it for him or her to:

Item	Question	Mean	SD
17	Have a working understanding of the Air Force core competencies?	3.44	.7064
22	Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	3.07	.8864
24	Comprehend aerospace power employment?	3.27	.8257
26	Understand how "Information Operations" can enhance Air Force operations?	3.05	.8328
32	Know the value of officership principles and heritage?	3.42	.6132

Table 16 (Continued)

Items Rated as Important by Supervisors (items 10 through 17, 22, 24, 26, and 32 through 49)

How critical to the present duties of your subordinate is it for him or her to:			
Item	**Question**	**Mean**	**SD**
33	Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	3.16	.8910
34	Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	3.43	.6146
35	Know the value of military heritage?	3.32	.6413
36	Know the application of personal wellness skills?	3.59	.6584
37	Have effective team building and problem solving skills?	3.75	.5208
38	Value the views of senior non-commissioned officers about their expectations of newly commissioned company grade officers?	3.56	.5855
39	Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	3.56	.5746
40	Be exposed to a senior non-commissioned officer speaking from his or her own personal experience about leadership issues?	3.50	.5888
41	Comprehend the significance of aerospace history and doctrine to modern warfare?	3.19	.7888
42	Comprehend the evolution of airpower and airpower theory and doctrine from its origins to the beginning of World War II?	3.04	.8685
43	Comprehend the evolution of airpower and airpower theory and doctrine during World War II?	3.04	.8647
44	Comprehend the evolution of airpower and airpower theory and doctrine from the Korean War in the 1950s through the Vietnam War in the 1960s to the early 1970s?	3.03	.8789
45	Understand the employment of the Air Force Core Competencies during the campaign Operation Desert Storm?	3.24	.7362
46	Understand the employment of air and space power in Operation Allied Force?	3.22	.7538
47	Comprehend the relationships between geopolitical issues, conflict, and US instruments of national power?	3.18	.7941
48	Comprehend the importance of well defined end-states to conflict resolution?	3.21	.7805
49	Possess a thorough understanding of communications and communications skills?	3.39	.6736

The following null hypothesis was formulated to test for differences in perceptions between graduates and their supervisors related to the relevance of core

content areas in the ASBC program in preparing graduates for their roles as airmen leaders:

> $H_{01\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of graduates and their immediate supervisor related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Each portion of the null hypothesis $H_{01\ (a\text{-}e)}$ was tested using the t-test for independent samples in order to ascertain whether or not a statistically significant difference existed in the perceptions of content relevance between graduates and their supervisors for each of the five core content areas: 1) Profession of Arms, 2) Leadership and Management, 3) Military Studies, 4) Communications, and 5) International Studies. While the analysis revealed no significant difference between graduates' and supervisors' perceptions regarding one area, Communications ($H_{01\ (d)}$), a significant difference was found in all other areas, Profession of Arms ($H_{01\ (a)}$), Leadership and Management ($H_{01\ (b)}$), Military Studies ($H_{01\ (c)}$), and International Studies ($H_{01\ (e)}$). Therefore, null hypothesis $H_{01\ (d)}$ was not rejected whereas hypotheses $H_{01\ (a,\ b,\ c,\ \text{and}\ e)}$ were rejected.

Rated Versus Non-Rated

The following null hypothesis was formulated to test for differences in perceptions between graduates who held an aeronautical rating (rated) and those who did not (non-rated) regarding the relevance of the Air and Space Basic Course curriculum content:

$H_{02\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Each portion of the null hypothesis $H_{01\ (a\text{-}e)}$ was treated as a separate hypothesis and tested using the t-test for independent samples in order to ascertain whether or not a difference existed in the perceptions of content relevance between graduates who were rated and graduates who were non-rated for each of the five core content areas: 1) Profession of Arms, 2) Leadership and Management, 3) Military Studies, 4) Communications, and 5) International Studies. While the analysis revealed no significant difference between graduates' and supervisors' perceptions regarding four areas, Leadership and Management ($H_{02\ (b)}$), Military Studies ($H_{02\ (c)}$), Communications ($H_{02\ (d)}$), and International Studies ($H_{02\ (e)}$), a significant difference was found in one area, Profession of Arms ($H_{02\ (a)}$). Therefore, null hypotheses $H_{02\ (b,\ c,\ d,\ and\ e)}$ were not rejected whereas hypothesis $H_{02\ (a)}$ was rejected.

Common Themes and Suggestions

Graduates and their supervisors were asked to provide free-text comments about the ASBC program. An analysis of the comments was conducted to identify primary patterns in the data. The primary patterns fell into two major categories, themes and suggestions. There were three themes that emerged from graduates' comments: 1) focus

on career field, 2) praise for the course, and 3) redundant material. However, only one theme emerged from supervisors' comments: praise for the course.

Suggestions were compiled from graduates' recommendations and sorted into five areas. The five suggestion areas that emerged were: 1) add material to the course, 2) lengthen the course, 3) present fewer lectures, 4) do not change the course, and 5) eliminate material from the course. Suggestions were compiled from supervisors' recommendations and sorted into two areas. The two suggestion areas that emerged were: 1) add material to the course, and 2) teach this material elsewhere.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

The first four chapters provided the rationale, structure, and context of this study. Specifically, the first chapter included the problem statement, need and purpose of the study, definition of terms, limitations and assumptions of the study, methods and procedures, and the significance of the study. The second chapter provided a review of literature regarding the history and need for Professional Military Education (PME) in the Air Force. It presented the underlying theory expressed by senior leaders that a problem existed in the Air Force that necessitated the addition of the Air and Space Basic Course (ASBC) to the Air Force PME already in existence. Furthermore, literature pertaining to the purpose and scope of the ASBC and its curriculum and assessment was examined. Finally, the Instructional Systems Development (ISD) model was presented as the basis for course development and/or revision of the ASBC. The third chapter presented the methods and procedures undertaken to produce the survey instruments, conduct the study, and analyze the data. The fourth chapter presented the results of the data analysis regarding the perceptions of the ASBC graduates and their immediate supervisors related to the importance of the ASBC curriculum in preparing graduates to perform in their roles as airmen leaders.

Summary of the Study

The purpose of this study was to ascertain the differences in perceptions of new graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of the Air and Space Basic Course (ASBC). Specifically, this investigation was designed to (a) provide information related to the demographic characteristics [(gender, ethnicity, service component (Line of the Air Force, non-line, civilian, and guard/reserve), rating, marital status, class standing or years of supervisory experience, and age group)] of participants in this study, (b) investigate the extent to which each content area of the ASBC curriculum was perceived by the ASBC graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation, (c) investigate the extent to which each content area of the ASBC curriculum was perceived by the ASBC graduates' immediate supervisors to be relevant to the graduates' roles as airmen leaders at their first duty assignment after graduation, (d) ascertain the extent to which there were differences in perceptions of graduates and their supervisors regarding the relevance of the Air and Space Basic Course curriculum to the role of airmen leaders, (e) ascertain the extent to which a difference in perceptions existed between graduates who were rated and non-rated regarding the relevance of the ASBC curriculum to the role of airmen leaders (f) acquire specific suggestions from the graduates and their supervisors regarding content changes in the Air and Space Basic Course.

Three hundred and ninety subjects participated in the study. Two hundred and twenty-one of the subjects were from the graduating class 02D (i.e. the fourth graduating class of 2002) of the Air and Space Basic Course. The graduates began the course on

March 4, 2002, and were graduated on March 29, 2002. After commencement, the graduates were assigned to various worldwide locations to fulfill a variety of leadership positions within the United States Air Force. One hundred and sixty-nine of the subjects were the immediate supervisors of the graduates from the ASBC Class 02D. As was the case with the graduates, the supervisors were at various locations from field units to multinational headquarters around the globe.

Due to the unique nature of the Air and Space Basic Course and the focus of this study, no existing survey instruments were available; therefore, the researcher developed two nearly identical survey instruments for use in this study. One instrument was specific to the graduates of the Air and Space Basic Course, while the other was exclusive for the graduates' supervisors. The survey instruments were written in hypertext markup language (HTML) and composed using Microsoft FrontPage software in order for them to be electronically available to potential respondents. Therefore, each instrument was electronically posted to an Auburn University Webpage server so that each potential respondent could access the page with any common Web browser, complete the survey electronically, and submit the survey in anonymity. When a respondent elected to submit his or her responses, an e-mail containing the responses was generated from the Auburn University Webpage server. This e-mail was sent from the Auburn University server to the researcher's Auburn University WebMail e-mail account. Therefore, none of the responses could be traced back to any particular participant. This ensured that participation in the study was voluntary and anonymous.

The survey instruments solicited responses from graduates and supervisors related to their perceptions about each of the five core curriculum content areas of the ASBC

curriculum to the relevance of each area to the role of airmen leaders. The five core curriculum content areas were Profession of Arms, Leadership and Management, Military Studies, Communications, and International Studies. Each of the five core areas was represented by several items on the instruments. Perceptions were assessed based on responses to each of the 40 content-related survey items (items 10 through 49). Responses to these items were valued as follows: critical = 4, important = 3, useful = 2, and not necessary = 1.

The validity of the instruments developed for this study was established by a panel of expert judges. The judges reviewed each item on both instruments for content and construct validity and offered suggestions for revisions and changes to the instruments. The panel judged content validity based on their analysis of curriculum content. In addition to assessing the items for clarity, completeness, representativeness, and relevance, judges were asked to review directions on the instrument for clarity and understanding. After the validity check, a pilot study of the entire instrument and scoring procedures was conducted. Revisions to the instruments were made based on results of the pilot study.

Each of the instruments was examined for its internal consistency. Internal consistency is a key measure of the reliability of an instrument. The Cronbach alpha reliability coefficient was calculated on the responses of the 40 scaled items (items 10 through 49) that addressed curriculum content on each instrument. The Cronbach alpha reliability coefficient yielded .96 for the graduates' instrument and .98 for the supervisors' instrument. In addition to calculating the overall reliability, a Cronbach

alpha coefficient was determined for items pertaining to each of the five core content areas for each of the two instruments.

Items 13 through 35 were representative of Area 1000, Profession of Arms. The Cronbach alpha reliability coefficient was .95 for the graduates' instrument and .97 for the supervisors' instrument for these 23 items. Items 10, 11, and 36 through 40 were representative of Area 2000, Leadership and Management. The Cronbach alpha reliability coefficient was .79 for the graduates' instrument and .87 for the supervisors' instrument for these 7 items. Items 41 through 46 were representative of Area 3000, Military Studies. The Cronbach alpha reliability coefficient was .95 for the graduates' instrument and .97 for the supervisors' instrument for these 6 items. Items 12 and 49 were representative of Area 4000, Communications. The Cronbach alpha reliability coefficient was .61 for the graduates' instrument and .71 for the supervisors' instrument for these 2 items. Items 47 and 48 were representative of Area 5000, International Studies. The Cronbach alpha reliability coefficient was .90 for the graduates' instrument and .92 for the supervisors' instrument for these 2 items.

The researcher gained approval from the Auburn University Institutional Review Board (IRB), Human Subjects Office (HSO), to conduct the study. Also, permission was obtained from Headquarters, Air Force Personnel Center and Headquarters (Randolph Air Force Base (AFB), Texas, and Headquarters, Air University (Maxwell AFB, Alabama), to administer the survey. The letter requesting permission from the United States Air Force to conduct the study is at Appendix A. The letter granting approval from the United State to conduct the study is at Appendix B.

Summary of Results

Graduates Versus Supervisors

The Air and Space Basic Course graduates' responses to each of the 40 content-related survey items were analyzed to ascertain the extent to which each item of content area was perceived by the graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation. Results of the responses for each item revealed that graduates rated all items as useful or important. Items 14, 15, and 32 through 40 were rated as important. All other items were rated as useful.

Responses of graduates' supervisors to each of the 40 content-related survey items were analyzed to ascertain the extent to which each item of content area was perceived by the supervisors to be relevant to the ASBC graduates' roles as airmen leaders at their first duty assignment after graduation. Results of the responses for each item revealed that supervisors rated all items as useful or important. Items 10-17, 22, 24, 26, and 32 through 49 were rated as important. All other items were rated as useful.

The following null hypotheses were formulated to test for differences in perceptions in graduates and their supervisors related to the relevance of core content areas in the ASBC curriculum in preparing graduates for their roles as airmen leaders:

> $H_{01\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of graduates and their immediate supervisor related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications,

and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Each null hypothesis $H_{01\ (a\text{-}e)}$ was tested using the T-Test for Independent Samples in order to ascertain whether or not a difference existed in the perceptions of graduates and their supervisors for each of the five core content areas. The analysis revealed no statistically significant difference between graduates' and supervisors' perceptions regarding one area, Communications ($H_{01\ (d)}$). A statistically significant difference was found in all other areas, Profession of Arms ($H_{01\ (a)}$), Leadership and Management ($H_{01\ (b)}$), Military Studies ($H_{01\ (c)}$), and International Studies ($H_{01\ (e)}$). Therefore, null hypothesis $H_{01\ (d)}$ was not rejected and hypotheses $H_{01\ (a,\ b,\ c,\ \text{and}\ e)}$ were rejected.

Rated Versus Non-Rated

The following null hypotheses were formulated to test for differences in perceptions in graduates who held an aeronautical rating (rated) and those who did not (non-rated) related to the relevance of core content areas in the ASBC curriculum in preparing graduates for their roles as airmen leaders::

$H_{02\ (a\text{-}e)}$: There is no statistically significant difference in the perceptions of rated and non-rated graduates related to the relevance of each core content area in the ASBC program [(a)Profession of Arms, (b) Leadership and Management, (c) Military Studies, (d) Communications, and (e) International Studies] in preparing graduates for their roles as airmen leaders at their first duty assignment after graduation.

Each null hypothesis $H_{01\ (a\text{-}e)}$ was tested using the T-Test for Independent Samples in order to ascertain whether or not a difference existed in the perceptions of graduates who were rated and graduates who were non-rated for each of the five core content areas. The analysis revealed no statistically significant difference between graduates' and supervisors' perceptions regarding Leadership and Management ($H_{02\ (b)}$), Military Studies ($H_{02\ (c)}$), Communications ($H_{02\ (d)}$), and International Studies ($H_{02\ (e)}$). A statistically significant difference was found for Profession of Arms ($H_{02\ (a)}$). Therefore, null hypotheses $H_{02\ (b,\ c,\ d,\ \text{and}\ e)}$ were not rejected and hypothesis $H_{02\ (a)}$ was rejected.

Common Themes and Suggestions

Graduates and their supervisors were asked to provide comments about the ASBC program. An analysis of the comments was conducted to identify primary patterns in the data. The primary patterns fell into two major categories, themes and suggestions. There were three themes that emerged from graduates' comments: 1) focus on career field, 2) praise for the course, and 3) redundant material. However, only one theme emerged from supervisors' comments: praise for the course. Suggestions were compiled from graduates' recommendations and sorted into five areas. The five suggestion areas that emerged were: 1) add material to the course, 2) lengthen the course, 3) present fewer lectures, 4) do not change the course, and 5) eliminate material from the course. Suggestions were compiled from supervisors' recommendations and sorted into two areas. The two suggestion areas that emerged were: 1) add material to the course, and 2) teach this material elsewhere.

Discussion

Differences Between Graduates and Supervisors

A statistically significant difference was found between the Air and Space Basic Course (ASBC) graduates and their supervisors regarding their perceptions of content relevance in four of the five core content areas. The content areas were Profession of Arms, Leadership and Management, Military Studies, and International Studies. There was no statistically significant difference found between graduates and supervisor in the content area of Communications.

Profession of Arms

A statistically significant difference was found between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of Profession of Arms. Warfighting was the central focus of the Profession of Arms area of the ASBC curriculum.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. Perhaps the statistically significant difference may be attributed to the years of experience supervisors had making day-to-day decisions relative to the warfighting mission of the Air Force. Employing aerospace power to conduct warfighting is the ultimate mission of the Air Force and this is evidenced by the official Air Force mission statement: "The mission of the U.S. Air Force is to defend the United States and protect its interests through aerospace power" (Air Force Fact Sheet, 2003). Therefore, this finding suggested that since supervisors typically have had several years of experience in training for, supporting, or performing warfighting duties, they perceived instruction related to the Profession of Arms as an important and relevant part

of the ASBC curriculum content. In contrast to supervisors' perceptions, this finding suggested that graduates, who have had little or no experience at training for, supporting, or performing warfighting, had not yet come to realize the high degree of relevance that the Profession of Arms had or will have to their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of supervisors: "All airmen should understand the basic tenets of airpower and its employment . . ." The following comment from the open-ended questions is representative of graduates: "I felt [the course was] too focused too much on the warfighting [specifically the Air Operations Center] AOC and [the Joint Force Air Component Commander] JFAC operations."

Leadership and Management

A statistically significant difference was found between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of Leadership and Management. The Leadership and Management curriculum focused on the professional, organizational, and interpersonal aspects of influencing and directing people and other resources to carry out the mission successfully.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. This finding suggested that since supervisors typically have had several years of experience serving in leadership and management positions, they perceived instruction related to the Leadership and Management as an important and relevant part of the ASBC curriculum content. In contrast to supervisors' perceptions, this finding suggested that graduates, who have had little experience at

leading and managing others, had not yet realized the high degree of relevance that the Leadership and Management had or will have to their roles as airmen leaders.

The following comment from the open-ended questions is representative of supervisors: "Spend more time on supervisory type issues. They need to understand how to interact with [senior non-commissioned officers] SNCOs [whom the new officers lead and manage] and how to 'run' things." The following comment from the open-ended questions is representative of graduates: "Many of the issues and lessons at ASBC are directed towards . . . leadership and policy makers . . . I just don't think that we will be using them on a consistent basis at first."

Military Studies

A statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of Military Studies. The Military Studies portion of the curriculum focused on military and airpower history and frames military theory, doctrine, strategy, and civil-military relations through the lens of history.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. Perhaps the statistically significant difference may be partially attributed to the fact that since 1987 supervisors in the Air Force have been continually reminded of how important military history is to the professional development of military leaders. In 1987 the Air Force chief of staff created an officer professional development working group. The working group heralded the importance of military history and stated that, ". . . the basis of officership lies with values and traditions established in military history, embodied in military leaders of the past, and forged in

war" (Ullman, 1990, p. 17). Also, this finding suggested that since it is likely that supervisors have made decisions about current military operations while using historical examples and historically-grounded theory, doctrine, and strategy as a basis for their decisions, they perceived instruction related to the Military Studies as an important and relevant part of the ASBC curriculum. In contrast to supervisors' perceptions, this finding suggested that graduates, most of whom have not yet made decisions about how to conduct current military operations, have not yet had to reflect on historical examples as a basis for their decisions; therefore, these recent graduates had not yet come to realize the high degree of relevance that the Military Studies had or will have to their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of supervisors: "I feel that any lesson that can be tied to a historical example is the best for helping them internalize the information as well as develop their warfighting mentality." The following comment from the open-ended questions is representative of graduates: ". . . it's great to learn about all the historic things, but I think it would be more beneficial to learn those things that we can actually use if need be."

Communications

No statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of Communications. The Communications portion of the curriculum focused on speaking, listening, writing, research, non-verbal signals, small-group and organizational dynamics, networking, cross-cultural dialogue, media relations, and the impact of technology.

Both graduates and their supervisors perceived this area as equally relevant in preparing graduates for their roles as airmen leaders after completion of the ASBC. This finding suggested that both graduates and their supervisors recognized that new graduates must rely on their ability to effectively communicate, especially in writing, immediately upon graduation from the ASBC and assumption of their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of supervisors: "ASBC should concentrate more on . . . writing . . . (Talking/Bullet Background Papers, Official Memos/Memo for Records, [Staff Summary Sheets] SSS)." The following comment from the open-ended questions is representative of graduates: "Overall I think the course is valuable, but I think maybe more time could be spent on . . . writing."

International Studies

A statistically significant difference existed between the ASBC graduates and their supervisors regarding perceptions of content relevance in the area of International Studies. The International Studies curriculum focused on international relationships within the strategic environment and it emphases the importance of nonmilitary instruments of power (diplomatic, economic, political, informational) and their relationship to military factors and their affect on world security.

Supervisors perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did graduates. Perhaps many Air Force supervisors are influenced by the famous Prussian strategist and leader Carl von Clausewitz (1976, p 75) who stated that, "War is thus an act of force to compel our enemy to do our will."

However, according to the American civil authority and military tradition, using the military instrument of power (IOP) to conduct war can only be justified as a last resort (No Peace, 2003, p. 15). Therefore USAF supervisors adhere to the guiding principle that their senior civilian leadership will attempt to compel any potential adversary to act by using diplomatic, economic, political, and/or informational IOPs before employing the last resort, military force. Supervisors draw an integrative relationship among the various IOPs and, as Clausewitz noted (1976, p. 69), they generally accept that when the other IOPs do not compel the enemy, then, "War is . . . the continuation of policy with other means." Also, this finding suggested that since it is likely that supervisors have had to consider how the military IOP supports and integrates with diplomatic, economic, political, and informational IOPs, they perceived instruction related to International Studies as an important and relevant part of the ASBC curriculum content. In contrast to supervisors' perceptions, this finding suggested that graduates, most of whom have not yet made high-level decisions about how to conduct current military operations in light of how they may integrate with and support the other IOPs, had not yet come to realize the high degree of relevance that the International Studies had or will have to their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of supervisors: "These officers leave with a good understanding of the geopolitical climate, how the military [Instrument of Power] IOP augments, supports, or is used in lieu of other IOPs—they are armed to become decision-makers." The following comment from the open-ended questions is representative of graduates: "International Studies just aren't that important to the duties I perform."

Differences Between Rated and Non-Rated Graduates

A statistically significant difference was found between the Air and Space Basic Course (ASBC) graduates who held an aeronautical rating and graduates who did not hold an aeronautical rating regarding their perceptions of content relevance in one of the five core content areas. The content area was Profession of Arms. There were no statistically significant differences found between rated and non-rated graduates in the other four core content areas.

Profession of Arms

A statistically significant difference existed between the ASBC graduates who were rated and graduates who were non-rated regarding perceptions of content relevance in the area of Profession of Arms. Warfighting was the central focus of the Profession of Arms area of the ASBC curriculum. When addressing the subject of how warfighting was vital to the profession of arms, General Douglas MacArthur (1962) noted that, "Everything else in . . . [one's] professional career is but corollary to this vital dedication."

Rated graduates perceived this area of curriculum as more relevant to the graduates' roles as airmen leaders than did non-rated graduates. Perhaps this is because Profession of Arms is closely related to the specific duties performed by officers who hold an aeronautical rating. Specifically, the frontline warfighters in the Air Force are rated—they are aviators who pilot the planes or perform other airborne duties that directly lead to weapons employment against hostile forces and in support friendly forces.

This finding suggested that since rated graduates typically perform duties directly related to aerospace warfighting, they perceived instruction related to the Profession of Arms as an important and relevant part of the ASBC curriculum content. In contrast to perceptions of graduates who held an aeronautical rating, this finding suggested that graduates who did not hold an aeronautical rating did not realize the high degree of relevance that the Profession of Arms had or will have to their support of rated officers who perform warfighting as part of their primary duties.

The following comment from the open-ended questions is representative of graduates who held an aeronautical rating (rated): ". . . my Job required me to know everything [regarding Profession of Arms] that your course teaches . . . but for [non-rated officers] it did a very good job of teaching them that we are all warriors." The following comment from the open-ended questions is representative of graduates who did not hold an aeronautical rating (non-rated): "The course is structured too much toward pilots. . . being able to produce a [Joint Air Operations Plan] JAOP and employ packaging isn't of much use for non-rated officers . . ."

Leadership and Management

No statistically significant difference existed between the ASBC graduates who were rated and graduates who were non-rated regarding perceptions of content relevance in the area of Leadership and Management. The Leadership and Management curriculum focused on the professional, organizational, and interpersonal aspects of influencing and directing people and other resources to carry out the mission successfully.

This finding suggested that both graduates who were rated and graduates who were non-rated recognized the high degree of relevance that the Leadership and

Management had or will have to their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of graduates who held an aeronautical rating (rated): "I do find the characteristics of leaders and leadership qualities useful on a daily basis." The following comment from the open-ended questions is representative of graduates who did not hold an aeronautical rating (non-rated): "This course should be focused 100% on developing leadership . . ."

Military Studies

No statistically significant difference existed between the ASBC graduates who were rated and graduates who were non-rated regarding perceptions of content relevance in the area of Military Studies. The Military Studies portion of the curriculum focused on military and airpower history and frames military theory, doctrine, strategy, and civil-military relations through the lens of history.

This finding suggested that both graduates who were rated and graduates who were non-rated recognized the high degree of relevance that the Military Studies area had or will have to their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of graduates who held an aeronautical rating (rated): "I gained a good understanding of airpower history and now I understand how the ideas of the early airpower theorists have a direct bearing on my job as a rated officer." The following comment from the open-ended questions is representative of graduates who did not hold an aeronautical rating (non-rated): "Understanding . . . history and the concept of air operations is important at this level . . ."

Communications

No statistically significant difference existed between the ASBC graduates who were rated and graduates who were non-rated regarding perceptions of content relevance in the area of Communications. The Communications portion of the curriculum focused on speaking, listening, writing, research, non-verbal signals, small-group and organizational dynamics, networking, cross-cultural dialogue, media relations, and the impact of technology.

This finding suggested that both graduates who were rated and graduates who were non-rated recognized that new graduates must rely on their ability to effectively communicate, especially in writing, immediately upon graduation from the ASBC and assumption of their roles as airmen leaders at their first duty assignment after graduation.

The following comment from the open-ended questions is representative of graduates who held an aeronautical rating (rated): "A good portion of this course . . . should . . . [be devoted to] how to write and communicate . . . This is vital to everyone's career . . . [Communication] is equally as important as knowledge about aircraft and how to fight wars." The following comment from the open-ended questions is representative of graduates who did not hold an aeronautical rating (non-rated): "The best part of the course was the networking and communications aspect."

International Studies

No statistically significant difference existed between the ASBC graduates who were rated and graduates who were non-rated regarding perceptions of content relevance in the area of International Studies. The International Studies curriculum focused on international relationships within the strategic environment and it emphases the

importance of nonmilitary instruments of power (diplomatic, economic, political, informational) and their relationship to military factors and affect world security.

This finding suggested that both graduates who were rated and graduates who were non-rated recognized that new graduates must consider how the military instrument of power (IOP) supports and integrates with diplomatic, economic, political, and informational IOPs; therefore, they perceived instruction related to International Studies as a relevant part of the ASBC curriculum content.

Although graduates who held an aeronautical rating (rated) generally believed the International Studies portion of the ASBC curriculum to be useful to them, no rated graduates commented about International Studies on the open-ended questions. The following comment from the open-ended questions is representative of graduates who did not hold an aeronautical rating (non-rated): "I believe the most important feature of ASBC and the one most rarely emphasized in general, is the International Issues Section. I would happily attend a four week course on that alone."

Recommendations

This research focused on the Air and Space Basic Course (ASBC) Professional Military Education (PME) program by investigating the perceptions of graduates and their supervisors related to the relevance of the course content in preparing graduates to perform their roles as airmen leaders (Fact Sheet, 2002). The following recommendations are made based on the research and its results.

The first recommendation is to employ a graduate and supervisor questionnaire, such as the one used in this study, as part of a permanent evaluation system in order to gain feedback for maintaining and improving the ASBC curriculum content for current

and future students. The Air and Space Basic Course staff solicits feedback from field commanders and supervisors; however, they do not currently use any type of graduate and/or graduate supervisor evaluation system. Therefore, the ASBC has no mechanism in place to guarantee feedback about how the course curriculum content has or has not prepared its graduates to function as airman-leaders.

The second recommendation is to add instruction on how to write annual evaluations and other assessments, award packages, and/or corrective/disciplinary-action documentation on subordinates. Both graduates and supervisors recommended adding this instruction to the curriculum content. Since these newly commissioned officers and select civilians are destined to become leaders of airmen, it is critical that they possess the skills necessary to assess, commend, and/or correct their subordinates' performance.

The third recommendation is to conduct further study in order to identify redundant material presented in both officer commissioning programs and the Air and Space Basic Course. Graduates noted that some of the material taught in the ASBC was a repeat of the material taught in the commissioning programs they had attended, e.g. Officers' Training School (OTS), the Reserve Officers Training Corps (ROTC), and the U.S. Air Force Academy (USAFA). Although several graduates stated that this repetition was a waste of valuable time and resources, further study is needed to identify each redundant item and to assess whether or not it is important to repeat some of the material in the ASBC that was already taught in a commissioning program. It is important to note that an analysis of the data shows that both graduates, whether rated or non-rated, and their supervisors perceived each area of the core curriculum to be relevant to the ASBC graduates' post-graduate roles as leaders of airmen. Therefore, is recommended to

maintain the current course curriculum content without deleting any material from it until and unless further study yields ample reasoning that a specific item or area should not be taught as part of the ASBC. One should also not preclude the possibility that some of the redundant material, if deletion is required, may need to be deleted from commissioning programs rather than from the Air and Space Basic Course.

The above recommendations are presented based on the research conducted regarding perceptions of ASBC graduates and their supervisors regarding the relevance of the Air and Space Basic Course to graduates' roles as airmen leaders. Finally, in order to provide ASBC students with adequate preparation for their post-graduation roles as airmen leaders, it is recommended that course personnel review this dissertation report in its entirety prior to implementing any major changes in ASBC curriculum content.

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APPENDIXES

APPENDIX A

LETTER REQUESTING PERMISSION TO CONDUCT STUDY

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)

MEMORANDUM FOR HQ AU/CFA 12 June 2002

FROM: Lt Col Terry R. Bentley, Auburn University

SUBJECT: Survey Approval Request

1. Request approval of the "Perceptions of Graduates and their Supervisors Related to the Air and Space Basic Course, Graduates' Survey and Supervisors' Survey." IAW AFI 36-2601 and AU Supplement 1 dated 20 April 1999 the following information is provided for your consideration:

a. PURPOSE AND JUSTIFICATION OF PROPOSED SURVEY. The purpose of this study is to identify perceptions of new graduates and their immediate supervisors related to the graduates' preparation for their roles as airmen leaders after completion of ASBC. The ASBC does not currently have a mechanism in place to guarantee feedback about how the course has or has not prepared its graduates to function as airman-leaders. Therefore, this study is needed to give timely feedback for effective changes that may help to improve the ASBC curriculum content and instructional practices for current and future students. The sponsor is Terry R. Bentley in collaboration with the Air and Space Basic Course staff.

b. USE OF SURVEY RESULTS. Survey results will be used to enhance and improve course curriculum and content. The ASBC does a tremendous job of incorporating student feedback but does not employ a formal graduate and/or graduate supervisor feedback system; this survey program will be the vehicle for this feedback.

c. SAMPLE POPULATION. The population to be surveyed includes the total population of ASBC Class 02D, approximately 600 graduates and their supervisors (potentially 600 supervisors. One hundred percent of graduates and supervisors will be surveyed 3-6 months after graduation. The graduates' inputs are essential because they graduated from the course and completed the course curriculum. The supervisors' inputs are essential because they are the observers of graduates' performance before and/or after course completion. The size of the population will vary accordingly.

d. DATA-COLLECTION PROCESS. In order to collect the data, survey instruments will be posted to an Auburn University server (no firewall) so that respondents can access the page with any common Web browser, complete the survey electronically, and submit the survey in anonymity.

e. RELEASE OF DATA. IAW AFI 36-2601, I will comply with the USAF policy for release of surveys and subsequent data.

2. The POC for this survey is Lt Col Bentley, AFIT Student at Auburn University, 334-332-1304 or e-mail at bentltr@auburn.edu.

TERRY R. BENTLEY, Lt Col, USAF
AFIT Doctoral Student
Auburn University

Attachments:
1. Graduate and Supervisor Field Survey Cover Letter
2. ASBC Graduate Survey
3. ASBC Supervisor Survey

APPENDIX B

E-MAIL GRANTING PERMISSION TO CONDUCT STUDY

WebMail - Approval of ASBC Graduate/Supervisor Survey

Date Sent: Monday, August 05, 2002 6:41 AM

From: Dasinger Hank GS-13 SOC/XP <Hank.Dasinger2@MAXWELL.AF.MIL> [Add to Address Book]

To: bentltr <bentltr@auburn.edu>

Subject: Approval of ASBC Graduate/Supervisor Survey

Status

Survey approved...see attached e-mail that contains survey control number...

HD
----- Forwarded Message -----

From: Harris Stephen GS-13 AUHQ/CFA <Stephen.Harris@MAXWELL.AF.MIL>
To: "Dasinger Hank GS-13 SOC/XP" <Hank.Dasinger2@MAXWELL.AF.MIL>
Sent: Friday, August 02, 2002 5:17 PM

Subject: FWD: Lt. Col Bentley -SOC

Hank: Here is the AF SCN for Lt Col Bentley's survey. Please have him place this number on the survey.
Thanks and have a great weekend.

v/r:
Steve Harris
>-----Original Message-----
>From: Hamilton Charles H Civ AFPC/DPSAS
>[Charles.Hamilton@RANDOLPH.AF.MIL]
>To: Harris Stephen GS-13 AUHQ/CFA <Stephen.Harris@MAXWELL.AF.MIL>
>Sent: Friday, August 02, 2002 3:33 PM
>
>Subject: RE: Lt. Col Bentley -SOC
>
>Steve
>Here's another one! This is the ASBC grad/super survey and it's OK to go. Not sure what kind of response Lt Col Bentley will get from supervisors as >we've experienced very low response rates when we ask members to forward surveys to supervisors or send us their email address so we can send a >survey. Would be interested in his response rate for supervisors. We wish him success.
>
>The survey control number assigned to this project is USAF SCN 02-079 and will expire on 31 Dec 02.
>
>Charlie

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APPENDIX C

HARDCOPY OF GRADUATES' ELECTRONIC SURVEY

USAF SCN 02-079

PERCEPTIONS OF GRADUATES AND THEIR SUPERVISORS RELATED TO THE AIR AND SPACE BASIC COURSE (ASBC)

ASBC GRADUATE SURVEY

Purpose of the Study

The purpose of this survey is to identify perceptions of graduates and their immediate supervisors related to the preparation of graduates through the ASBC for their roles as airmen leaders.

Research Questions For Graduates

Specifically, this study will address the following research questions regarding graduates:

1. **To what extent the course curriculum perceived by graduates to be relevant to their roles as airmen leaders at their first duty assignment after graduation?**

2. **To what extent have students perceptions changed several months after graduation as compared to their perceptions as measured by the ASBC end of course survey relative to how well the ASBC accomplished its mission and the overall effectiveness of the flight commander, the curriculum, and instructional methods.**

3. **What specific program content changes will graduates suggest?**

Section I - Demographic Information about the ASBC Graduate

Directions (items 1-6): Please select the response that best describes you for questions 1 through 6. You may select the response by positioning your cursor over the desired button and clicking. If you need to change your answer, simply click on a different response.

1. What is your gender?

0 Male

0 Female

2. In which ethnic group would you most likely classify yourself?

0 African-American

0 Asian

0 Caucasian

0 Hispanic

0 Native-American

0 Other

3. Which of the following best describes your status?

0 Line Officer

0 Non-Line Officer

0 Civilian

0 ANG/AFRES

4. Which of the following best describes you?

0 Rated

0 Non-Rated

5. What is your marital status?

0 Married

0 Single

6. What was your approximate class standing at the ASBC?

0 N/A, I am the supervisor

0 Top third of my class

0 Middle third of my class

0 Bottom third of my class

7. What is your age group?

0 Younger Than 30

0 30 to 33

0 34-37

0 38-41

0 Older Than 41

Directions (items 8-9): Please type in the response that best describes you for questions 7 through 9. You may select the response box by positioning your cursor within the desired box and clicking or Tab to the box with the Tab key. If you need to change your answer, simply type over or delete the old answer and retype the new one.

8. If you are a military officer, what is your primary AFSC?

9. What is your current duty position?

Section II - Graduate Survey Regarding ASBC Curriculum

Directions: Please select only one response that best describes your opinion for questions 10 through 49. You may select the response by positioning your cursor over the desired button and clicking. If you need to change your response, simply click on a different response.

For questions 10 through 13, please refer to the ASBC Mission Statement.

The ASBC Mission Statement

Note: The ASBC Mission is to inspire new USAF officers to comprehend their roles as Airmen who understand and live by USAF core values, can articulate and demonstrate USAF core competencies, and are dedicated as warriors in the world's most respected Air and Space Force.

How critical do you believe the Air and Space Basic Course was in:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
10. Inspiring you to comprehend your role as an Airman?	0	0	0	0	-	10.
11. Inspiring you to understand and live by USAF core values?	0	0	0	0	-	11.
12. Inspiring you to articulate and demonstrate USAF core competencies?	0	0	0	0	-	12.
13. Inspiring you to dedicate yourself as a warrior?	0	0	0	0	-	13

Questions 14 through 49 are related to the focus of the course content in the ASBC. To help ensure the focus is relevant, please answer the following question about your current duties.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
14. Understand how aerospace power enhances warfighting?	0	0	0	0	-	14..
15. Understand how the proper employment of aerospace systems enhances airpower?	0	0	0	0	-	15.
16. Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	0	0	0	0	-	16.
17. Have a working understanding of the Air Force core competencies?	0	0	0	0	-	17
18. Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	0	0	0	0	-	18.
19. Comprehend the implications of the Goldwater-Nichols Act of 1986?	0	0	0	0	-	19.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
20. Comprehend the purpose of Joint staff divisions?	0	0	0	0	-	20.
21. Understand the sister services' views of aerospace power?	0	0	0	0	-	21.
22. Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	0	0	0	0	-	22.
23. Understand the relationship between the Deliberate Planning and Crisis Planning processes?	0	0	0	0	-	23.
24. Comprehend aerospace power employment?	0	0	0	0	-	24.
25. Comprehend the how the Air Operations Center (AOC) divisions work together to create the Air Tasking Order (ATO)?	0	0	0	0	-	25.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
26. Understand how "Information Operations" can enhance Air Force operations?	0	0	0	0	-	26.
27. Understand the "Total Force" concept of the Reserve mobilization policy?	0	0	0	0	-	27.
28. Comprehend Joint aerospace operations planning and execution at the theater/operational and tactical levels?	0	0	0	0	-	28.
29. Understand the methods of targeting, e.g. the process of identifying Centers of Gravity (COGs)/effects-based targeting?	0	0	0	0	-	29.
30. Understand the five stages of the Joint Air Operations Plan (JAOP)?	0	0	0	0	-	30.
31. Comprehend Joint aerospace operations planning and execution tools?	0	0	0	0	-	31.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
32. Know the value of officership principles and heritage?	0	0	0	0	-	32.
33. Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	0	0	0	0	-	33.
34. Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	0	0	0	0	-	34.
35. Know the value of military heritage?	0	0	0	0	-	35.
36. Know the application of personal wellness skills?	0	0	0	0	-	36.
37. Have effective team building and problem solving skills?	0	0	0	0	-	37.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
38. Value the views of senior noncommissioned officers about their expectations of newly commissioned company grade officers?	0	0	0	0	-	38.
39. Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	0	0	0	0	-	39.
40. Be exposed to a senior noncommissioned officer speaking from his or her own personal experience about leadership issues?	0	0	0	0	-	40.
41. Comprehend the significance of aerospace history and doctrine to modern warfare?	0	0	0	0	-	41.
42. Comprehend the evolution of airpower and airpower theory and doctrine from its origins to the beginning of World War II?	0	0	0	0	-	42.
43. Comprehend the evolution of airpower and airpower theory and doctrine during World War II?	0	0	0	0	-	43.

How critical to your present duties as a leader of Airmen is it to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
44. Comprehend the evolution of airpower and airpower theory and doctrine from the Korean War in the 1950s through the Vietnam War in the 1960s to the early 1970s?	0	0	0	0	-	44.
45. Understand the employment of the Air Force Core Competencies during the campaign Operation Desert Storm?	0	0	0	0	-	45.
46. Understand the employment of air and space power in Operation Allied Force?	0	0	0	0	-	46.
47. Comprehend the relationships between geopolitical issues, conflict, and US instruments of national power?	0	0	0	0	-	47.
48. Comprehend the importance of well defined end-states to conflict resolution?	0	0	0	0	-	48.
49. Possess a thorough understanding of communications and communication skills?	0	0	0	0	-	49.

Note: Question 50 pertains to All or any Areas of the ASBC curricula and is your chance to give "free-text" specific comments that tell us what we are doing right and what we need to improve regarding the ASBC.

50. What suggestion or suggestions could you offer that may improve the content of the core courses at the Air and Space Basic Course?

Directions for item 51: rate how well ASBC accomplished its mission:
The ASBC mission is to inspire new USAF officers to comprehend their roles as Airmen who understand and live by USAF core values, can articulate and demonstrate USAF core competencies, and are dedicated as warriors in the world's most respected Air and Space Force.

51. Overall, given the mission statement above, how well do you believe the mission was accomplished?

0 Outstanding

0 Excellent

0 Satisfactory

0 Marginal

0 Unsatisfactory

THANK YOU FOR YOUR INPUT ON THIS SURVEY!

Note: YOU ARE NOT FINISHED
Until You Select the Submit Button: SUBMIT

APPENDIX D

HARDCOPY OF SUPERVISORS' ELECTRONIC SURVEY

USAF SCN 02-079

PERCEPTIONS OF GRADUATES AND THEIR SUPERVISORS RELATED TO THE AIR AND SPACE BASIC COURSE (ASBC)

ASBC SUPERVISORS' SURVEY

Purpose of the Study

The purpose of this survey is to identify perceptions of graduates and their immediate supervisors related to the preparation of graduates through the ASBC for their roles as airmen leaders.

Research Questions For Graduates

Specifically, this study will address the following research questions regarding graduates' supervisors:

1. **To what extent is course curriculum perceived by graduates' immediate supervisors to be important to graduates' roles as airmen leaders?**

2. **What specific content changes will graduates' immediate supervisors suggest?**

Section I - Demographic Information about the ASBC Graduate's Supervisor

Directions (items 1-6): Please select the response that best describes you for questions 1 through 6. You may select the response by positioning your cursor over the desired button and clicking. If you need to change your answer, simply click on a different response.

1. What is your gender?

0 Male

0 Female

2. In which ethnic group would you most likely classify yourself?

0 African-American

0 Asian

0 Caucasian

0 Hispanic

0 Native-American

0 Other

3. Which of the following best describes your status?

0 Line Officer

0 Non-Line Officer

0 Civilian

0 ANG/AFRES

4. Which of the following best describes you?

0 Rated

0 Non-Rated

5. What is your marital status?

0 Married

0 Single

6. How many total years of supervisory experience do you have?

0 N/A, I am the graduate, not the supervisor

0 Less than one year

0 Between 1 to 5 years

0 Between 5 to 10 years

0 Between 10 to 15 years

0 More than 15 years

7. What is your age group?

0 Younger Than 30

0 30 to 33

0 34-37

0 38-41

0 Older Than 41

Directions (items 8-9): Please type in the response that best describes you for questions 7 through 9. You may select the response box by positioning your cursor within the desired box and clicking or Tab to the box with the Tab key. If you need to change your answer, simply type over or delete the old answer and retype the new one.

8. If you are a military officer, what is your primary AFSC?

9. What is your current duty position?

Section II - Graduate Survey Regarding ASBC Curriculum

Directions: Please select only one response that best describes your opinion for questions 10 through 49. You may select the response by positioning your cursor over the desired button and clicking. If you need to change your response, simply click on a different response.

For questions 10 through 13, please refer to the ASBC Mission Statement.

The ASBC Mission Statement

Note: The ASBC Mission is to inspire new USAF officers to comprehend their roles as Airmen who understand and live by USAF core values, can articulate and demonstrate USAF core competencies, and are dedicated as warriors in the world's most respected Air and Space Force.

How critical do you believe the Air and Space Basic Course was in:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
10. Inspiring your subordinate to comprehend his/her role as an Airman?	0	0	0	0	-	10.
11. Inspiring your subordinate to understand and live by USAF core values?	0	0	0	0	-	11.
12. Inspiring your subordinate to articulate and demonstrate USAF core competencies?	0	0	0	0	-	12.
13. Inspiring your subordinate to be dedicated as a warrior?	0	0	0	0	-	13

Questions 14 through 49 are related to the focus of the course content in the ASBC. To help ensure the focus is relevant, please answer the following question about your subordinate's current duties.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
14. Understand how aerospace power enhances warfighting?	0	0	0	0	-	14..
15. Understand how the proper employment of aerospace systems enhances airpower?	0	0	0	0	-	15.
16. Understand "Force Packaging," the interdependence of air and space systems that are employed together to achieve desired results?	0	0	0	0	-	16.
17. Have a working understanding of the Air Force core competencies?	0	0	0	0	-	17
18. Comprehend Joint Operations planning and execution at the strategic and theater/operational levels?	0	0	0	0	-	18.
19. Comprehend the implications of the Goldwater-Nichols Act of 1986?	0	0	0	0	-	19.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
20. Comprehend the purpose of Joint staff divisions?	0	0	0	0	-	20.
21. Understand the sister services' views of aerospace power?	0	0	0	0	-	21.
22. Understand the concept of centralized control of aerospace forces as embodied by the Joint Force Air Component Commander (JFACC)?	0	0	0	0	-	22.
23. Understand the relationship between the Deliberate Planning and Crisis Planning processes?	0	0	0	0	-	23.
24. Comprehend aerospace power employment?	0	0	0	0	-	24.
25. Comprehend the how the Air Operations Center (AOC) divisions work together to create the Air Tasking Order (ATO)?	0	0	0	0	-	25.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
26. Understand how "Information Operations" can enhance Air Force operations?	0	0	0	0	-	26.
27. Understand the "Total Force" concept of the Reserve mobilization policy?	0	0	0	0	-	27.
28. Comprehend Joint aerospace operations planning and execution at the theater/operational and tactical levels?	0	0	0	0	-	28.
29. Understand the methods of targeting, e.g. the process of identifying Centers of Gravity (COGs)/effects-based targeting?	0	0	0	0	-	29.
30. Understand the five stages of the Joint Air Operations Plan (JAOP)?	0	0	0	0	-	30.
31. Comprehend Joint aerospace operations planning and execution tools?	0	0	0	0	-	31.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
32. Know the value of officership principles and heritage?	0	0	0	0	-	32.
33. Know the architecture and ideas embodied in America's founding documents (the Declaration of Independence, the US Constitution, and the Bill of Rights)?	0	0	0	0	-	33.
34. Be afforded an opportunity to interact with distinguished guest lecturers who provide real-life examples of officership in action?	0	0	0	0	-	34.
35. Know the value of military heritage?	0	0	0	0	-	35.
36. Know the application of personal wellness skills?	0	0	0	0	-	36.
37. Have effective team building and problem solving skills?	0	0	0	0	-	37.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
38. Value the views of senior noncommissioned officers about their expectations of newly commissioned company grade officers?	0	0	0	0	-	38.
39. Value the views of senior commissioned officers about their expectations of newly commissioned company grade officers?	0	0	0	0	-	39.
40. Be exposed to a senior noncommissioned officer speaking from his or her own personal experience about leadership issues?	0	0	0	0	-	40.
41. Comprehend the significance of aerospace history and doctrine to modern warfare?	0	0	0	0	-	41.
42. Comprehend the evolution of airpower and airpower theory and doctrine from its origins to the beginning of World War II?	0	0	0	0	-	42.
43. Comprehend the evolution of airpower and airpower theory and doctrine during World War II?	0	0	0	0	-	43.

How critical to the present duties of your subordinate is it for him or her to:

Rate each of the following items according to the scale on the right.	Critical	Important	Useful	Not Necessary		
44. Comprehend the evolution of airpower and airpower theory and doctrine from the Korean War in the 1950s through the Vietnam War in the 1960s to the early 1970s?	0	0	0	0	-	44.
45. Understand the employment of the Air Force Core Competencies during the campaign Operation Desert Storm?	0	0	0	0	-	45.
46. Understand the employment of air and space power in Operation Allied Force?	0	0	0	0	-	46.
47. Comprehend the relationships between geopolitical issues, conflict, and US instruments of national power?	0	0	0	0	-	47.
48. Comprehend the importance of well defined end-states to conflict resolution?	0	0	0	0	-	48.
49. Possess a thorough understanding of communications and communication skills?	0	0	0	0	-	49.

Note: Question 50 pertains to All or any Areas of the ASBC curricula and is your chance to give "free-text" specific comments that tell us what we are doing right and what we need to improve regarding the ASBC.

50. What suggestion or suggestions could you offer that may improve the content of the core courses at the Air and Space Basic Course?

Directions for item 51: rate how well ASBC accomplished its mission:
The ASBC mission is to inspire new USAF officers to comprehend their roles as Airmen who understand and live by USAF core values, can articulate and demonstrate USAF core competencies, and are dedicated as warriors in the world's most respected Air and Space Force.

51. Overall, given the mission statement above, how well do you believe the mission was accomplished for the ASBC graduate(s) that you supervise?

0 Outstanding

0 Excellent

0 Satisfactory

0 Marginal

0 Unsatisfactory

THANK YOU FOR YOUR INPUT ON THIS SURVEY!

Note: YOU ARE NOT FINISHED
Until You Select the Submit Button: SUBMIT