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SPECIALIZED ACCREDITATION IN COLLEGIATE AVIATION:
AN ANALYSIS OF THE PERCEIVED VALUE
OF SPECIALIZED ACCREDITATION
BY THE AVIATION ACCREDITATION BOARD INTERNATIONAL

By

Charles Daniel Prather

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Philosophy

Major: Educational Studies
(Educational Leadership and Higher Education)

Under the Supervision of Professor Brent Bowen

Lincoln, Nebraska

December, 2007

SPECIALIZED ACCREDITATION IN COLLEGIATE AVIATION:
AN ANALYSIS OF THE PERCEIVED VALUE OF
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Charles Daniel Prather, Ph.D.
University of Nebraska, 2007

Advisor: Brent D. Bowen

The Council on Aviation Accreditation (CAA) was established in 1988 in response to the need for formal, specialized accreditation of aviation academic programs. The first aviation programs were accredited by the CAA in 1992, and as of November 2007, the newly renamed Aviation Accreditation Board International (AABI) recognized a total 78 accredited programs at 26 institutions worldwide. Although the number of aviation academic programs accredited by the AABI has steadily grown, there are currently only 26 percent of UAA member institutions with AABI accredited programs.

In an effort to understand the current status of specialized accreditation in collegiate aviation and the reasons why so few aviation programs are accredited by the AABI, this study attempts to determine the perceived value of AABI accreditation from the perspective of four groups: administrators of both AABI accredited and non-AABI accredited aviation programs, aviation program students, and aviation industry employers. Eleven specific research questions were formulated for this research effort.

This study utilized a non-experimental, mixed method research design, with quantitative and qualitative attributes. Descriptive research and cross-sectional surveys were tools used to gather data. Data analysis was conducted via frequency distributions, content analysis, chi-square, Mann-Whitney *U*-test, Kruskal-Wallis test, and ANOVA.

Specific recommendations include: (a) AABI should seek enhanced collaboration with industry; (b) AABI should explore the intrinsic merits of accreditation to determine how beneficial AABI accreditation is and the degree to which AABI is fulfilling its original purpose; and (c) AABI accredited collegiate aviation programs should market

their AABI accreditation status and the benefits of attending an AABI accredited program to potential students.

DEDICATION

This Dissertation is dedicated to my beautiful wife, Grace E. Prather and my wonderful daughter Savannah. During what was a very stressful time for us as a family, which involved me making a career change by accepting a new position in another state, the birth of our daughter, and the building of a new house (just to name a few), my wife stood by my side and understood, as best she could, the sacrifices I was making to complete this degree. Savannah, in her precious two-year old way, would still sing me songs at night and cherish the time she had with her daddy, even though a laptop computer always seemed nearby. I thank our awesome God for both of you and the joy you bring me daily.

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Likewise, the support of my committee members was invaluable as I neared completion of my degree. I would like to thank Dr. Miles Bryant for taking the time to write a text entitled, “The Portable Dissertation Advisor.” Ironically, even though he sat on my committee, the advice provided in this text enabled him to assist in guiding me through the dissertation process without too many additional emails or phone calls. I would also like to thank Dr. Donald Uerling. By working with Dr. Bowen from the start of my program, he was able to structure a doctoral program which enabled me to focus on higher education, while at the same time placing great emphasis on aviation through the Aviation Institute at UNO. This inter-disciplinary degree, pursued through both the Omaha and Lincoln campus, perfectly suited my educational goals and areas of interest. Finally, I would like to thank Dr. Massoum Moussavi for his help in the work of my committee and in pushing me toward more solid quantitative analysis of the data.

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List of Acronyms

AAAE. American Association of Airport Executives, which represents thousands of airport management personnel at public-use airports nationwide.

AABI. The Aviation Accreditation Board International, which is the only specialized accrediting organization responsible for formally accrediting non-engineering aviation academic programs.

AACSB. American Assembly of Collegiate Schools of Business.

ABET. Accreditation Board of Engineering and Technology.

ACBSP. Association of Collegiate Business Schools and Programs.

ATA. Air Transport Association, which is the only trade organization representing the principal U.S. airlines.

CAA. Council on Aviation Accreditation. (Former name of the current Aviation Accreditation Board International.)

CHEA. Council for Higher Education Accreditation.

COA. Commission on Accreditation within the Council on Social Work Education.

CSWE. Council on Social Work Education.

EM. Engineering Management Programs.

FAA. Federal Aviation Administration.

IACBE. International Assembly for Collegiate Business Education.

NATA. National Air Transportation Association is the national association of aviation business service providers.

NBAA. National Business Aviation Association, which represents more than 7,700 companies that own or operate general aviation aircraft as an aid to the conduct of their business, or are involved with some other aspect of business aviation.

NRPA. National Recreation and Park Association.

UAA. The University Aviation Association, which represents collegiate aviation education to its members, the industry, government, and the general public.

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C. Daniel Prather

CHAPTER ONE

INTRODUCTION

The institutions comprising the system of higher education in the United States, although quite diverse, endeavor toward a common goal of educational excellence. These institutions, in their journey toward excellence, seek to ensure quality of academic programs, receipt of federal funds, ease of student transfer among institutions, and employer confidence in their future graduates (Eaton, 2000). A historically American manner in which institutions achieve these goals, has been to seek accreditation.

Accreditation, which has been defined as the “status granted to an educational institution or program that has been found by its peers, including professional and public representatives, to meet stated criteria,” can be granted to an institution by national and regional accrediting associations, and to a specific program or school by specialized and professional accrediting associations (Daniel, 1985, p. 49). The voluntary nature of accreditation in higher education is a distinctly American invention (Wellman, 2003). Although governmental agencies in other nations establish, approve, and monitor educational institutions, the United States, through a process of peer- and self-review, maintains a high quality system of higher education with little federal or state interference. Indeed, Young (as cited in Gropper, 1986) states, “higher educational

institutions [in the United States] have, for many years, carried out a successful and proud history of self-regulation” (p. 4).

History of Accreditation

Accreditation in American higher education, which traces its beginnings to the late 19th and early 20th centuries, was initially created in response to the need to establish common admission standards for college. Prior to the late 19th century, postsecondary education in the United States and the Colonies was largely conducted at institutions that were primarily religious in nature and consisted of classes in Latin, Greek, Hebrew, logic, and natural philosophy. With no oversight of curricula by an intercollegiate or governmental agency, however, a diversity of educational types, students, and academic quality resulted. As the nineteenth century came to a close, educational institutions in America were changing from a state of near homogeneity to one of wide variability. As a result, around 1890, a movement to “accredit” institutions meeting minimal standards was begun (Alstete, 2004).

Although this movement gained momentum after 1901, it turned into a national phenomenon in 1906. In August of that year, the National Association of State Universities, Association of Land-Grant Colleges, and others interested in establishing educational standards met at Williamstown, Massachusetts. With the goal of creating a common understanding of the admission standards and the administration of those standards, this meeting resulted in various recommendations that were agreed to by the attendees. Specifically, attendees agreed to recommend that regional associations have their member colleges accept certificates from accredited schools in other regions. Additionally, they recommended the creation of a college entrance certification board or

a commission for accrediting schools. In essence, these early efforts could be categorized as what is known today as postsecondary accreditation (Alstete, 2004; Kniess, 1986).

More than 100 years earlier, the first organization to exert some form of external control over an educational institution was the Board of Regents of the University of the State of New York in 1787. Responsible for visiting every college in the state of New York on an annual basis, the Board of Regents reported findings to the state legislature. Regional accreditation in this country then began in 1885, as the New England Association of Colleges and Schools was founded. As Seldon (as cited in Kniess, 1986) explains, the purpose of regional associations in lieu of national associations was due to the existence of noticeable variations among regions. Specialized accreditation then began in this nation with the American Medical Association Council on Medical Education initiating improvements in medical education in 1904 (Alstete, 2004; Kniess, 1986).

Building upon the Council on Medical Education's ratings of existing medical schools, the American Medical Association joined with the Carnegie Commission in an attempt to improve medical education via a neutral foundation. The outcome of this effort was the Flexner Report, published in 1910. By evaluating programs on their objectives and policies, organization and administration, physical and clinical facilities, teaching personnel, and education programs, the Flexner Report resulted in poor quality schools closing, while higher quality schools improved. The Flexner Report, although not considered accreditation as defined today, propelled the idea of professional accreditation to the forefront. Indeed, by 1920, the idea of professional accreditation was widely accepted by professional organizations. By 1945, many occupational disciplines,

including architecture, chemistry, forestry, music, optometry, and social work, had accrediting programs in effect (Litwack, 1986).

Types of Accreditation

Today, three types of accreditation exist. First, the eight regional accreditation agencies in six regions together accredit approximately 3,000 institutions enrolling close to 14 million students. National accreditation is usually sought by trade, business, and technical schools in the for-profit sector. Eleven national agencies collectively accredit approximately 3,500 institutions enrolling 4.75 million students. The third type of accreditation is specialized. The specialized agencies accredit individual schools or programs within larger colleges and universities. This form of accreditation has today grown into 48 specialized accrediting organizations recognized by the Council for Higher Education Accreditation (Council for Higher Education Accreditation [CHEA], 2007). Generally, specialized accreditors require the program or school to be part of a regionally or nationally accredited institution. In that sense, specialized accreditation of specific academic programs serves as an added sense of prestige for an already accredited institution (CHEA, 2006; Wellman, 2003).

The field of specialized accreditation in the U.S. is quite diverse. For instance, the Council for Higher Education Accreditation recognizes 48 specialized accrediting organizations that accredit programs in at least 43 different academic fields, including audiology, aviation, computer science, forestry, nursing, social work education, and veterinary medicine (see Appendix A). Interestingly, although most of these academic fields only have one specialized accrediting organization (similar to aviation), several fields (such as business, nursing, and teacher education) are covered by two

organizations. This may be understandable, as these academic fields are quite popular and contain the number of programs that can support additional specialized accrediting organizations (CHEA, 2006).

A quick overview of the industry is possible by reviewing specialized accrediting organizations currently recognized by the CHEA. A random sample of 11 (out of 48) of these organizations reveals the average organizational age to be 65 years (resulting in an average year of establishment of 1940). The oldest of these sampled organizations was founded in 1864 (American Veterinary Medical Association), with the youngest having been established in 1978 (American Association for Marriage and Family Therapy). Thus, it appears that the average specialized accrediting organization is much older than the Aviation Accreditation Board International (AABI), which is a young 19 years. The average number of institutions being accredited by each of these organizations is 221. Obviously, this number is greater than the approximately 120 institutions offering non-engineering aviation academic programs. However, when looking at percentages, approximately 59 percent of institutions with eligible programs are accredited by each of these organizations in their respective academic fields, much more than the approximately 20 percent accredited by the AABI (CHEA, 2007; K. Moynahan, R. Coscarelli, D. Pierce, T. Clark, P. Jenness, D. Simmons, & J. Knych, personal communication, July 5, 6, 11, 2005).

History of the AABI

Since the birth of aviation on December 17, 1903, there has been an increasing need to educate and train pilots, mechanics, airport managers, and air traffic controllers. Although several training programs existed prior to World War II, the majority of today's

collegiate aviation programs were an outgrowth of the Civil Pilot Training Program, which was established in 1939 in an effort to prepare America for the war, and from wartime training of military pilots at campuses nationwide. Following World War II, Reserve Officer Training Corps (ROTC) programs were popular among students desiring orientation to flight. Later in the 1960s, the introduction of jet aircraft led to the development of programs that addressed the challenges presented by this new generation of aircraft. In fact, more aviation programs leading to a baccalaureate degree were established in one year, 1968, than in all years combined since 1950 (Prather, 1998). Although programs such as flight, maintenance, avionics, and management proved popular, their varied standards and requirements created confusion among these early collegiate aviators (Kiteley, n.d.).

Decades earlier, in July 1947, the National Association of University Administrators of Aviation Education (NAUAAE) had been established. With the name changed to the University Aviation Association (UAA) in 1949, the association promoted collegiate aviation and partnered with industry to improve the academic quality of aviation academic programs. It wasn't until 1974, in an effort to address the wide disparity among aviation programs, that an Academic Standards Committee was created in the UAA. This Committee was later divided into two subcommittees, the first concerned with standards and articulation, and the other with accreditation (Council on Aviation Accreditation [CAA], 2003a).

The Accreditation Subcommittee conducted a survey in 1974 of institutions with aviation programs to identify current practices and the potential need for curricula accreditation. This survey discovered (a) there is no recognized or professional

accrediting organization for non-engineering aviation programs, (b) existing accreditation of aviation programs is done either under the auspices of the institution or as a limited type accreditation from specialized programs, (c) few schools consider that certification by the FAA constitutes accreditation in the professional sense, (d) a majority of the schools indicated a definite or possible need for some type of aviation program accreditation, (e) no organization has indicated an interest in professional accreditation of aviation programs, (f) nearly all schools indicating the need for accreditation would support the development of such an agency and would apply for accreditation once established, and (g) those in favor of accreditation see it as a further step in the continuing effort to increase the level of academic respectability of aviation programs (University Aviation Association [UAA], 1976).

A report prepared by the Accreditation Subcommittee in April 1975 highlighting the results of this study, led to the formation of a Task Force to develop an Academic Standards Manual. The “College Aviation Accreditation Guidelines” (also known as the Green Book) was developed in October 1976. Serving as the first standards manual for associate, baccalaureate, and graduate aviation programs, the Green Book was intended to be utilized (a) as a basic reference which could be used for the organization and establishment of new programs or the expansion of existing programs, (b) as a set of recommended guidelines for institutional accreditation visiting teams charged with evaluating collegiate aviation programs, and (c) as a foundation document for a set of subsequent accreditation standards in the event a specialized aviation accrediting organization was established. Several institutions volunteered for program evaluation under the new Guidelines, which became adopted as a recommended standard for

aviation curricula. To oversee review of programs in light of these guidelines, an Executive Director of the UAA was hired in 1977 (CAA, 2003a; Kiteley, 2001; UAA, 1976).

The move toward aviation accreditation received another boost as a result of the 1981 strike by Federal Aviation Administration (FAA) air traffic controllers and the subsequent firing of 11,350 of these striking controllers by President Reagan. The UAA offered to assist the FAA in staffing its technical positions with college graduates. To accomplish this, a UAA Task Force was created to develop a special curriculum targeted toward five FAA occupational specialties. Once the curriculum was developed, the FAA first contracted with the UAA in 1983 to evaluate proposed curricula from institutions desiring to be recognized under the FAA Airway Science Program. By 1985, the UAA was conducting on-site campus evaluations of facilities, administration, faculty, and students of institutions applying for FAA Airway Science Program recognition. These activities were carried out by a UAA Airway Science Curriculum Committee comprised of professional educators who served as both a review and evaluation board for curricula and on-site evaluations. From 1983 to 1988, the UAA gained extensive experience in the review and evaluation of nearly 30 aviation programs throughout the country (CAA, 2003a).

In September 1987, the UAA appointed a Professional Accreditation Task Force to further evaluate the feasibility of formal aviation program accreditation and gauge the level of interest in such a specialized accrediting organization. A survey of UAA institutional members in the spring of 1988 showed general support for the establishment of a formal accrediting organization for aviation academic programs. The Task Force

concluded that there was indeed sufficient interest in such an organization and a general consensus of need, considering that there was no existing accrediting organization with the appropriate statement of purpose and experience to conduct specialized accreditation of non-engineering aviation academic programs. As a result of these findings, in July 1988 the Task Force expanded the previously created “College Aviation Accreditation Guidelines” into an initial draft of what would serve as the foundation of an accreditation standards manual (CAA, 2003a; Connolly, 1991).

In October of that same year, the Council on Aviation Accreditation (CAA) was established at the UAA Annual Meeting in Dallas. Although the CAA initially functioned as a subsidiary of the UAA for administrative support, the CAA was an autonomous, legally chartered entity with directors and officers elected from within the organization. At its first meeting on January 10, 1989, the CAA adopted the following three goals of collegiate aviation accreditation: (a) stimulate collegiate aviation program excellence and self-improvement; (b) establish uniform minimum educational quality standards; and (c) increase the credibility, integrity, and acceptance of collegiate aviation programs. The CAA subsequently formulated bylaws which both governed the organization and embraced the concepts and principles of the Council on Postsecondary Accreditation standards (CAA, 2003a).

Initially, during the first four years of operation, the CAA did not accredit any programs. However, in 1992, programs at Embry-Riddle Aeronautical University, Florida Institute of Technology, Middle Tennessee State University, and the University of North Dakota, became the first to be granted CAA accreditation (CAA, 2005). Since that time, the number of institutions with accredited programs has grown fairly

consistently each year. From a mere 4 institutions with accredited programs in 1992, there are now 26 institutions with AABI accredited programs throughout the world (see Appendix B).

In keeping with the aim to accredit international aviation programs and the possible confusion of the CAA name with various countries' Civil Aeronautics Authorities, the CAA adopted a formal name change in 2006. Now known as the Aviation Accreditation Board International (AABI), the organization has recently granted accreditation to the first international aviation programs, located in Canada and South Korea.

AABI Accreditation

Accreditation, according to the AABI, assures students and prospective employers that an educational degree program has met "stringent industry standards of quality" (CAA, n.d.b., para. 1). Further, it ensures that graduates have received quality training and are indeed capable of performing a broad range of professional responsibilities. From the AABI perspective, accreditation serves two fundamental purposes: (a) to ensure the quality of the institution or programs, and (b) to assist in the improvement of the institution or program. In that regard, the goals of the AABI are "to stimulate aviation program excellence and self-improvement; establish uniform minimum educational quality standards; and increase the credibility, integrity and acceptance of collegiate aviation programs within institutions of higher education and all aspects of the aviation community, to include industry and government" (CAA, n.d.a., para. 1). These goals are accomplished through the adherence by accredited programs to the AABI Criteria.

As with many specialized accreditors, the CAA utilized content-based standards for many years. In this way, standardization was ensured for all programs adhering to the standards. However, many accrediting organizations now favor outcomes-based standards. In this way, the focus is on learning outcomes and the manner in which curricula enable students to achieve these learning outcomes. Likewise, AABI adopted new outcomes-based criteria on July 20, 2007. As this study was conducted during the summer 2007 time period when programs were aware of both standards, both the old and new criteria have been included in Appendix C and D, respectively.

The content-based standards are much more detailed than the outcomes-based criteria (CAA, 2003a). In essence, the standards shown in Appendix C contain many “must” statements that programs once pursuing CAA accreditation must comply with. These statements address many areas including curriculum, financial and learning resources, faculty qualifications, facilities and equipment, transfer students. Additionally, the following core areas of concentration are addressed: (a) aviation management, (b) aviation maintenance, (c) aviation electronics, (d) aviation studies, and (e) flight education.

In contrast, the outcomes-based criteria (in Appendix D) are much more brief and flexible (AABI, 2007). For instance, although the same five core concentrations are addressed, the criteria speak in terms of outcomes and evidence. Rather than requiring a calculus course, the outcomes-criteria simply require a combination of college level mathematics and basic sciences appropriate to the program. Rather than require specific courses, programs must clearly spell out learning outcomes and provide evidence to ensure those learning outcomes have been achieved.

The specific purposes of the AABI are to (a) engage in accrediting programs of aviation at the associate, baccalaureate, and graduate levels offered by colleges and universities in the U.S. and throughout the world; (b) maintain procedures consistent with the recognition requirements of the U.S. Department of Education and other recognized accreditation sanctioning bodies; (c) publish current information concerning criteria and standards adopted by the AABI for accrediting aviation programs; (d) report the results of its activities; (e) provide advisory services to colleges and universities offering or planning programs in aviation; (f) maintain a list of the colleges and universities with accredited programs of study in aviation; and (g) review at regular intervals the criteria and standards which AABI has adopted to evaluate programs in aviation. Although the AABI does not currently claim any accredited graduate programs, they have accredited two associate degree programs with three more in candidate status. Additionally, AABI has not accredited any distance learning programs, even though the number of aviation programs offering distance options is increasing (Aviation Accreditation Board International [AABI], n.d.; CAA, 2003b; CAA, 2003a; Scarpellini & Bowen, 2001).

One way in which AABI stays in touch with industry to ensure that AABI accreditation standards address industry concerns is through the Industry/Educator Forum. Held each winter and summer, this forum allows industry and educators to interact for the purpose of learning from each other. Specifically, each summer a group of industry representatives are invited to attend the Summer AABI meeting to speak on various topics previously decided upon by AABI. At this forum, a panel of educators is also present to hear industry concerns. During the following winter meeting, the educator panel then responds to the industry challenge by addressing ways in which collegiate

aviation programs may alter their programs to better meet the needs of industry. The outcomes of these I/E Forums also serve as a solid foundation for revisions to the AABI accreditation criteria.

For institutions seeking AABI accreditation, it may appear, at least on the surface, to be a simple four-step process – application, self-study, accreditation team visit, and subsequent review and action by the AABI Board. In reality, according to Ceci Hogencamp, AABI accreditation and meeting services manager, the process is “rigorous . . . taking two years from the time of submission” (Knauer, 2005, p. 28). Indeed, the AABI lists no less than 29 steps to accreditation (see Appendix E).

Concerns about Accreditation

Obviously, the rigorous process of obtaining accreditation is a concern for many programs. The necessary sacrifice of time and energy for the required self-study, for instance, is one hurdle that some programs simply can't afford to climb. Accreditation requires financial resources, as well. Institutions must first join the AABI, and then apply for accreditation. Reimbursement for visiting team expenses is also a financial consideration. In a study conducted by Sherman (2006), 29.4 percent of responding institutions had spent between \$5,000 and \$6,000 seeking AABI accreditation.

Selden et al. (as cited in Litwack, 1986, pp. 33-36) identified seven general criticisms of specialized accrediting agencies. First, there are too many accrediting agencies. With regional, national, and specialized accreditation, many institutions have several accrediting relationships, with duplication of effort and little attempt made at coordination. Second, specialized accreditors invade the rights of institutions. Universities are regularly asked to “open their doors” and allow investigation by

accreditors. Third, accreditation tends more toward regulatory, versus voluntary. To maintain enrollments and federal funding, institutions are, in essence, forced to comply with accrediting standards. Fourth, the costs of accreditation are excessive. In addition to the financial costs involved, the time, energy, and commitment of faculty and administrative staff must be considered. Fifth, there is too much duplication. As specific academic programs complete self-studies, data that are generated tend to be redundant from the institutional accreditation self study. Sixth, specialized accreditors sometimes stray from the specific academic field into matters of human rights, public accountability, and consumer protection. Lastly, the standards promulgated by specialized accreditors may be outdated. Assuring that specific academic programs are meeting objectives that are reflective of society's needs requires specialized accreditors to stay abreast of changes within the professions, as well as society. These concerns can be summarized in a statement by Porter (as cited in Kniess, 1986, p. 24): “ ‘Accreditation has just become an extremely burdensome, cumbersome, and relatively expensive process demanding enormous amounts of time.’”

As a result of a 1965 study on accreditation in teacher education, John Mayor (as cited in Rosenbaum, 1984) suggested three schools of thought regarding specialized accreditation. Some educators theorize that specialized accreditation is not currently and never has been a constructive force in higher education. Others theorize that specialized accreditation may have been important in the past, but its future usefulness is questionable. The third group acknowledges the past constructive influence of accreditation and firmly believe that it will remain an important manner in which to ensure quality in American higher education in the future. Regardless of the theory to

which most educators subscribe, it seems clear that although specialized accreditation has enjoyed over a century of presence in American higher education, it remains a controversial aspect of American higher education as well.

Regardless of the controversy, accreditation is very popular in this country and continues to be viewed as the major method by which educational institutions and academic programs can assure the community of a quality education. Prospective students and philanthropists don't intend to simply take an institution's word for their quality. By possessing accreditation, institutions and academic programs are able to assure various stakeholders that they have met certain standards of quality. Obtaining accreditation, explains Hooker (as cited in Litwack, 1986, p. 15) "is viewed as the hallmark of the institution's successful compliance with established criteria which signify a basis for quality education." It would seem, therefore, that if specialized program accreditation exists, every program would attempt to achieve this accreditation. At least in the field of collegiate aviation, however, this doesn't seem to be the case. Is it possible that those programs not possessing AABI accreditation are of such low quality that they would be unable to achieve AABI standards? On the surface, this seems unlikely. Yet in the absence of accreditation, the public has no assurance that the program is a quality program. Although it is entirely possible that a program has not sought specialized accreditation for a variety of reasons unrelated to quality, these reasons should be explored.

Problem Statement

The Aviation Accreditation Board International (AABI) was initially established as the Council on Aviation Accreditation in 1988 for the purpose of establishing formal

specialized accreditation for non-engineering aviation programs. Although a 1988 UAA member survey revealed general support for the establishment of a formal accrediting organization for aviation programs, and an admirable goal of the AABI is to “stimulate collegiate aviation program excellence and self-improvement,” there currently exist only 26 institutions with AABI accredited aviation programs and 5 additional institutions with aviation programs in candidate status (CAA, 2007). This amounts to only approximately 26 percent of UAA member institutions with aviation programs that are accredited by the AABI. In that regard, the main purpose for conducting this research was to determine why so few aviation programs are accredited by the AABI and to measure the perceived value of AABI accreditation among aviation program administrators, collegiate aviation students, and aviation industry employers.

Research Questions

The current status of specialized accreditation in collegiate aviation suggests that there is some concern among collegiate aviation programs as to the value of obtaining AABI accreditation. The following 11 research questions were formulated for this research effort:

1. Why are AABI accredited aviation programs currently accredited?
2. Are administrators of AABI accredited aviation programs motivated to maintain existing AABI accreditation?
3. Why are non-AABI accredited aviation programs currently not accredited?
4. Are administrators of non-AABI accredited aviation programs motivated to seek initial AABI accreditation?
5. Is there a relationship between administrators of AABI accredited programs and non-AABI accredited programs regarding their views of AABI and the benefits of AABI accreditation?

6. Among administrators of AABI accredited programs, what beliefs most influenced the decision to seek and attain AABI accreditation?
7. Among administrators of non-AABI accredited programs, what beliefs most influenced the decision not to seek AABI accreditation?
8. Does a preference exist among students regarding the factors considered influential on a student's decision as to which institution and aviation program to attend?
9. Among aviation industry employers, what beliefs are most widely held regarding AABI accreditation?
10. Is there a relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI?
11. Is there a significant difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value of AABI accreditation?

Limitations

As stated by Creswell (2003), all research strategies and statistical procedures have limitations and delimitations. Clearly, this study is no different. Specifically, limitations are those factors generally beyond the researcher's control. The limitations of this study are associated with sampling effects and measurement error. Due to the small sample size of collegiate aviation students and aviation industry employers, conclusions drawn from these two groups may not be generalizable beyond the specific population from which the sample was drawn. Additionally, responding aviation students represent a disproportionate number of graduate students (51.5 %), seniors (39.4%), and male (77.1%); thus, student findings may not accurately reflect perceptions of freshman, sophomores, juniors, and female students. Responding industry employers were mostly from smaller companies (58% with less than 100 employees) and did not include any

airports, MRO organizations, and few aircraft manufactures or airlines; thus, conclusions drawn from this group may not be generalizable beyond the specific populations from which the sample was drawn. Regarding measurement error, results might not accurately reflect the opinions of all members of the included populations due to the failure of some sample respondents to answer all open-ended questions and respond with candor.

Delimitations

Delimitations are those factors over which the researcher has some degree of control. The delimitations associated with this study involve the research design, the statistical procedures used, the sample sizes, and various close-ended questionnaire items. This study utilized a non-experimental, mixed method research design, with both quantitative and qualitative attributes. This use of a non-experimental design did not allow for the manipulation of independent variables or the understanding of causal relationships. In fact, this descriptive study simply describes the perceptions among four groups regarding AABI accreditation in collegiate aviation. By adopting a non-experimental, mixed method research design, with both quantitative and qualitative attributes, the research questions devised for this study will not be answered definitively. In fact, the research design chosen for this study (to be discussed more fully in chapter three), only allows for the description of a phenomenon, rather than the manipulation of factors that may influence subjects (McMillan, 2004). Furthermore, this descriptive study will allow only limited relationship conclusions to be drawn.

In addition to delimitations regarding the research design, delimitations as a result of the statistical procedures utilized in data analysis also warrant discussion. Of the four questionnaires designed for this study, only one item on each questionnaire collected

interval data. The vast majority of questionnaire items asked respondents to rank their level of agreement or disagreement on a Likert five-point scale. Due to the problems in measuring noncognitive traits, such as attitudes and preferences, and in the different manner in which respondents may define “strongly agree” and “agree”, for example, the data collected on these Likert items is categorized as ordinal. A number of other items only collected nominal data. As a result, standard statistical methods such as means, *t* tests, or analysis of variance were inappropriate for the majority of questionnaire items. By relying on non-parametric tests, such as the chi square goodness of fit, Mann-Whitney *U*-test, and the Kruskal-Wallis test, there are limitations to any conclusions that may be drawn.

Additionally, although the study investigated current administrators of AABI accredited collegiate aviation programs, current administrators of non-AABI accredited collegiate aviation programs, current collegiate aviation students, and aviation industry employers, limited resources and the large population size of collegiate aviation students and aviation industry employers allowed only a simple random sample of aviation students and industry employers to be included in the study.

Lastly, to allow for easier data analysis, close-ended items were developed for the questionnaires. However, non-AABI administrators disagreed with the majority of items used to gauge reasons why programs had not sought AABI accreditation. Thus, their level of disagreement does not provide a true representation of their beliefs on this topic.

Importance of the Research

To date, little research has been conducted on the Council on Aviation Accreditation or the Aviation Accreditation Board International. In fact, only one other

author (in addition to the author of this study) appears to have conducted research on the AABI self-study process and the manner in which collegiate aviation programs view aviation-specific accreditation (Sherman, 2006). In conducting previous research on this topic, Prather (2006b) examined the reasons why AABI accreditation is not more popular among collegiate aviation programs. However, a number of other studies in various academic fields (Brennan & Austin, 2003; Farr & Bowman, 1999; Gropper, 1986; Litwack, 1986; Roller, Andrews, & Bovee, 2003; and Rosenbaum, 1984) have focused on the value of specialized accreditation. With only two studies previously completed on this topic, a void exists in the aviation literature examining the perceived value of AABI accreditation and the reasons why some programs seek accreditation and others do not. This study aims to fill that void by contributing nonexperimental research data (in the form of stakeholder perceptions) to the existing knowledge base.

This study should be useful to educators in college aviation, accreditation organizations (specifically the AABI), and to professional associations representing both collegiate aviation educators and those employed in the aviation industry. By detailing the perceived value of AABI accreditation among collegiate aviation administrators, students, and industry employers, the AABI will better understand how their efforts are viewed among their constituency. Additionally, current non-AABI accredited programs will have a greater sense of the role AABI accreditation plays in student decisions as to which institution to attend, as well as aviation industry hiring decisions. The findings of the study may serve as an impetus for more aviation programs to apply for AABI accreditation. Likewise, the findings may serve to motivate the AABI in evaluating the current role and purposes of the organization in light of the issues revealed in the study.

Organization of the Dissertation

This dissertation is organized into five chapters. Chapter one introduces the topic of specialized accreditation, presents a brief overview of the history of accreditation in the U.S., and details the research questions forming the foundation of the study. Chapter two includes a comprehensive literature review of previous studies which have examined specialized accreditation. Due to the dearth of aviation literature on this topic, chapter two includes a review of studies previously conducted in other academic disciplines. Chapter three presents a detailed discussion of the research methodology utilized in this study. A discussion of the study results are included in chapter four. Chapter five presents conclusions and recommendations which may be drawn from the study. Finally, Appendices A-Z contain supplemental material appropriate to the topic.

Summary

Although formal specialized accreditation has been in existence in the U.S. for over 100 years, specialized accreditation in the field of collegiate aviation is a relatively recent phenomenon. Since the first four non-engineering aviation programs were accredited by the CAA in 1992, a larger number of aviation programs have sought and obtained specialized accreditation through the newly renamed Aviation Accreditation Board International. However, even though there are currently 78 AABI accredited programs at 26 institutions of higher learning, only 26 percent of UAA member institutions have AABI accredited programs. Considering that there are at least 13 non-engineering collegiate aviation programs in the U.S. that are not institutional members of

the UAA and many more worldwide, the actual percentage of institutions worldwide with AABI accredited programs is less than 26 percent.

This study has been designed to better understand this apparent lack of interest in AABI accreditation among the population of collegiate aviation programs and determine the perceived value of AABI accreditation among four groups of stakeholders. By surveying the administrators of both AABI and non-AABI accredited collegiate aviation programs, current collegiate aviation students, and aviation industry employers, a better understanding of the perceived value of AABI accreditation among these groups is possible. Understanding the level of perceived value among these four groups will likely assist the Aviation Accreditation Board International in strategically planning for the future by implementing measures to better meet the needs of collegiate aviation programs worldwide.

CHAPTER TWO

LITERATURE REVIEW

An exhaustive search of the literature uncovered only one previously conducted case study of the AABI (Prather, 2006a), and only two studies addressing views of AABI accreditation among collegiate aviation programs (Prather, 2006b; Sherman, 2006). Thus, in addition to the field of aviation, other academic fields were reviewed during this project to locate comparable studies which may prove beneficial in understanding the current issues being faced by the AABI.

While involved with the AABI initial and reaffirmation process of aviation programs at Central Missouri State University, Sherman (2006) experienced the many questions and objections that faculty and administrators often voice about the commitment necessary to conduct the required AABI self-study. As a result, Sherman investigated the reasons programs have for seeking accreditation, the time required to complete the various phases of the accreditation process, the costs of accreditation, and the use of faculty and staff to complete the self-study. His qualitative study garnered an overall response rate of 25.6 percent. In his findings, it is clear that AABI accredited programs believe strongly in AABI accreditation and point to the many benefits AABI accreditation provides (including higher quality, rigorous self-review, outside guidance, etc.). It is also clear that non-AABI accredited programs see very few benefits and point to why they are not accredited (including lack of student and industry awareness, the expense involved, standards which are applicable only to larger programs, etc.) Although the study concludes by summarizing the findings, no recommendations are offered to improve the AABI accreditation process or assist AABI in more fully developing AABI

into a worldwide accrediting organization. Interestingly, Sherman (2006) recommended a future study that examines student perception of AABI accreditation and what role, if any, such accreditation played on student decisions as to which institution to attend. As noted, the current study is designed to address that issue, among others.

Although the Accreditation Board of Engineering and Technology (ABET) currently accredits programs at approximately 550 institutions, only approximately 3 percent of engineering management (EM) programs specifically, are accredited by ABET in the U.S. A study by Farr & Bowman (1999) examined EM programs to determine the causes for so few ABET accredited EM programs and the potential for increased efforts at accreditation as a result of recently revised ABET accreditation standards. Their survey of a sample of all undergraduate and graduate EM programs revealed that ABET accreditation is simply not a goal of the majority of EM programs. Ironically, however, the authors discovered that ABET accreditation is important to most of the institutions surveyed. In trying to understand this surprising disconnect, the researchers discovered that the most frequently cited reason for not seeking accreditation is the ABET accreditation criteria (with some schools apparently lacking the required depth of engineering in their curriculum and student backgrounds). An additional reason for not seeking accreditation is insufficient resources (possibly referring to the time and personnel required to complete a necessary self-study). Although the 1999 survey revealed that five programs planned to seek accreditation within the next few years, the authors are quick to conclude that “the challenge [in increasing the number of ABET accredited programs] will be to convince EM program directors that the payoff outweighs

the significant investment in resources required for accreditation” (Farr & Bowman, 1999, p. 11). That could be true, quite possibly, for aviation programs as well.

The accreditation of business schools has also been studied (Roller, et. al., 2003; Brennan & Austin, 2003), and although there currently exists three specialized accrediting organizations in that field, these studies reveal interesting findings that are applicable to this study. Roller, et al. (2003) point out that there had not previously been any systematic comparison of the perceived costs and benefits of, and motivations for, specialized accreditation across the three business school accrediting associations (American Assembly of Collegiate Schools of Business [AACSB], Association of Collegiate Business Schools and Programs [ACBSP], and the International Assembly for Collegiate Business Education [IACBE]). As such, these authors (similar to the author of this study) desired to determine the value of accreditation and the reasons why some programs had chosen to seek accreditation while others had not. Utilizing a researcher-developed questionnaire, they gathered demographic and attitudinal information from a random sample of the business deans of both accredited (either AACSB, ACBSP, or IACBE) and non-accredited programs, resulting in 122 responses. The research effort discovered that 24 percent of these programs did not have specialized business accreditation, and of those, 30 percent were not currently in some stage of the accreditation process. In determining the perceived value of specialized accreditation, the respondents rated the following five variables as beneficial (in order of decreasing benefit): (a) accountability for program improvements, (b) opportunities to share techniques/successes/challenges with other institutions facing similar issues, (c) marketing advantages, (d) faculty recruitment advantages, and (e) recognition as a

superior institution. Of most significance to this research effort were the reasons provided by non-accredited programs for not seeking accreditation. Various reasons included expense and effort necessary for accreditation, feeling no pressure from current stakeholders, not currently able to meet accreditation standards, and no time available for the self-study. Overall, non-accredited programs viewed accreditation as less important for ensuring program competitiveness and the quality of student learning than did accredited programs. Interestingly, the researchers found very little difference in program goals among accredited and non-accredited programs. The authors summarize the conclusion of this finding by stating that “the decision to seek accreditation is not caused by differences in program goals but rather by the institution’s perception that accreditation will help its business school attain those goals” (Roller et al., 2003, p. 203). Further research comparing the success at achieving program goals among accredited and non-accredited programs would provide additional insight in this area.

Brennan and Austin (2003) apply a qualitative design to perform a case study of one business school that sought AACSB accreditation. Their study recognizes the oftentimes strong organizational inertia that must be overcome in implementing the improvements necessary to ensure a successful accreditation effort. In addition, other obstacles must be confronted and successfully dealt with. The obstacles include necessary structural changes, workload increases, accountability, consistency, adherence, and project control.

Rather than examining the perceived value of specialized accreditation in social work education, Mabrey (1998) performed a qualitative analysis by examining accreditation decisions made by the Council on Social Work Education’s (CSWE)

Commission on Accreditation (COA) from 1985 to 1992. Similar to the AABI in the aviation discipline, the CSWE is the only specialized accrediting organization in the social work discipline. In researching the literature for this topic, Mabrey noted that her study was unique in that there had been no previous empirical analysis of the COA's decisions over a substantial period of time. Further, she discovered that social work was not alone, and indeed, many disciplines are lacking longitudinal analyses of decisions made by their respective accrediting organizations. This, however, is understandable as this information is usually confidentially maintained by the accrediting organization. The methodology chosen for this study (which required the permission of the CSWE Division of Standards and Accreditation) included the review of all COA letters of decision for the seven year time period. Mabrey determined that 66 percent of programs received initial accreditation with no further review, and 51 percent of programs were found in full compliance upon review for reaffirmation of accredited status. Mabrey further found that the evaluative standard of curriculum proved to be the most difficult to meet on first attempts. Overall, her findings suggest that the vast majority of social work education programs are successful in obtaining either initial accreditation or reaffirmation of accreditation from the COA. Further, less than five percent of all programs ultimately failed to achieve the accreditation status for which they had applied. These findings should prove encouraging for social work education programs (Mabrey, 1998).

Knies' (1986) study focused on accreditation by the National Recreation and Park Association (NRPA). Specifically, he examined why some recreation and park programs seek NRPA accreditation and others do not. His survey of chief academic officers and department heads revealed a significant difference in the manner in which

chief academic officers and department heads perceived the NRPA accreditation process. Further, some of the respondents to his survey indicated that specialized accreditation in recreation was not important since graduation from an accredited program is not a prerequisite for employment. As one respondent explained (Kniess, 1986, p. 119), “our alumni are successful without accreditation; can we justify the expense for accreditation from something we are already doing?” Chief academic officers, in general, felt the specialized accreditation process was not worth the time and effort.

Specialized accreditation in baccalaureate nursing programs was a focus of Litwack’s (1986) study. Specifically, Litwack endeavored to explore the attitudes of program and institutional administrators towards specialized accreditation and its impacts on nursing education programs. With a usable response rate of 77 percent from Program Directors and 59 percent from Academic Vice-Presidents, Litwack gathered additional reasons for seeking accreditation, as well as benefits of accreditation. Interestingly, Program Directors consistently rated the benefits of accreditation of higher importance than did Academic Vice-Presidents. Litwack’s findings led her to initially recommend that specialized accreditation be eliminated altogether due to costs, questioned purpose, duplication of effort, and alternative quality assurance tools. However, in reality, she explains, this is not likely to occur and is, in fact, not recommended because (a) institutional accreditation, as it exists today, is not prepared to handle the quality issues of specialized accreditation; (b) specialized accreditation is still serving a vital role in the identification of programs for funding, for graduate school admissions, and for institutional support; and (c) while many professional programs have alternative quality assurance tools available, other general education departments do not (Litwack, 1998).

Nursing education programs were the focus of Gropper's (1986) study. Specifically, she conducted a study comparing 14 accredited nursing programs with 14 similar non accredited nursing programs on selected indices of quality, attempting to determine, in essence, if accredited programs were, in fact, of higher quality than non-accredited programs. Additionally, interviews were conducted with each of the program administrators to determine why they either sought or did not seek specialized accreditation. Interestingly, Gropper found no differences between accredited and non-accredited programs in terms of program goals and objectives, distributions of curriculum hours, and student performance on licensing exams. Only small differences (favoring accredited programs) were discovered in faculty preparation at the doctoral level and number of graduates working outside the field of nursing. Reasons for not seeking specialized accreditation included costs and uncertainty regarding the validity of the specialized accreditation criteria. Reasons for seeking specialized accreditation included status, prestige, increased self-confidence of faculty, and maintaining options for students in their future work (Gropper, 1986).

In a study of counselor education programs, Rosenbaum (1984) purposed to determine why some counselor educators seek specialized program accreditation, while others do not. Interestingly, at the time of Rosenbaum's study, there were five national specialized accreditation agencies in counselor education. Rosenbaum discovered that economic and status reasons are of higher importance in seeking accreditation than those relating to quality assurance and program improvement. Additionally, respondents indicated that accreditation had a positive effect on an institution's program in areas such

as recruiting faculty and students, helping graduates meet licensing requirements, and encouraging program evaluation.

In addition to these studies from academic fields other than aviation, and the studies completed by Prather (2006b) and Sherman (2006), previous studies (Kuhns, 1994; Lindseth, 1996, 1998, and 1999) have been conducted on quality in aviation education (albeit to the exclusion of AABI's role). Kuhns (1994) attempted to establish a series of national norms of quality in aviation education by surveying aviation program administrators. His study revealed that the number one indicator of a high quality aviation program was high quality faculty. Linking this finding to the AABI and professional credentials, Johnson & Lehrer (1995, p. 252) mention that the CAA "will be more willing to professionally accredit institutions that employ faculty members with a doctorate" The respondents to Kuhns' study felt that the University of North Dakota was the best four-year program in the U.S. and Embry-Riddle Aeronautical University was the best Master's degree program. Interestingly, both of these institutions, at the time of Kuhns' study, had (and continue to have) AABI accredited programs.

In response to the fact that the majority of non-engineering aviation programs are not AABI accredited, Lindseth (1998) endeavored to determine the quality of four-year aviation programs in the U.S. (using criteria other than AABI accreditation standards). He notes that the accreditation criteria mainly address input variables (such as resources, facilities, and faculty), whereas, in determining program quality, we must also measure the outcomes of those programs. Interestingly, although this was not the case at the time of Lindseth's study, AABI has recently transitioned to outcomes-based criteria. Lindseth's survey of 130 experts resulted in the creation of a model of program quality

for baccalaureate aviation programs. This model includes the following ten categories:

(a) curriculum, (b) students, (c) faculty, (d) program activities, (e) equipment, (f) facilities, (g) leadership, (h) resources, (i) reputation, and (j) value.

Summary

The studies previously reviewed, although most are not specific to collegiate aviation, provide a solid foundation for further understanding specialized accreditation and the issues associated with the acceptance of specialized accreditation as a means to ensure quality in specific academic programs. Regardless of the popularity of a particular specialized accrediting organization, these studies reveal that many academic fields seem to have both proponents and opponents of specialized accreditation. As the value of specialized accreditation is being questioned by critics, it appears that specialized accreditation is here to stay. In that regard, the next chapter of this dissertation details the methodology selected for this study to investigate the perceived value of specialized accreditation in the field of collegiate aviation.

CHAPTER THREE

RESEARCH METHODOLOGY

As the aviation industry continues to grow increasingly complex, the need for knowledgeable and properly trained aviation professionals is imperative. Undergraduate and graduate aviation programs throughout the U.S. have been responding to this need for decades, and yet, as programs seek to continue improving quality and strive for educational excellence, only a small percentage of non-engineering aviation programs are accredited by the Aviation Accreditation Board International. This study was designed to investigate this phenomenon. This chapter details the research methodology applied to this study.

Research Design

Following expert advice of Berg (2004), Creswell (2003), and McMillan (2004), a unique research design was created for this study. The research design developed for this study is graphically shown in Figure 1 and explained in the following sections.

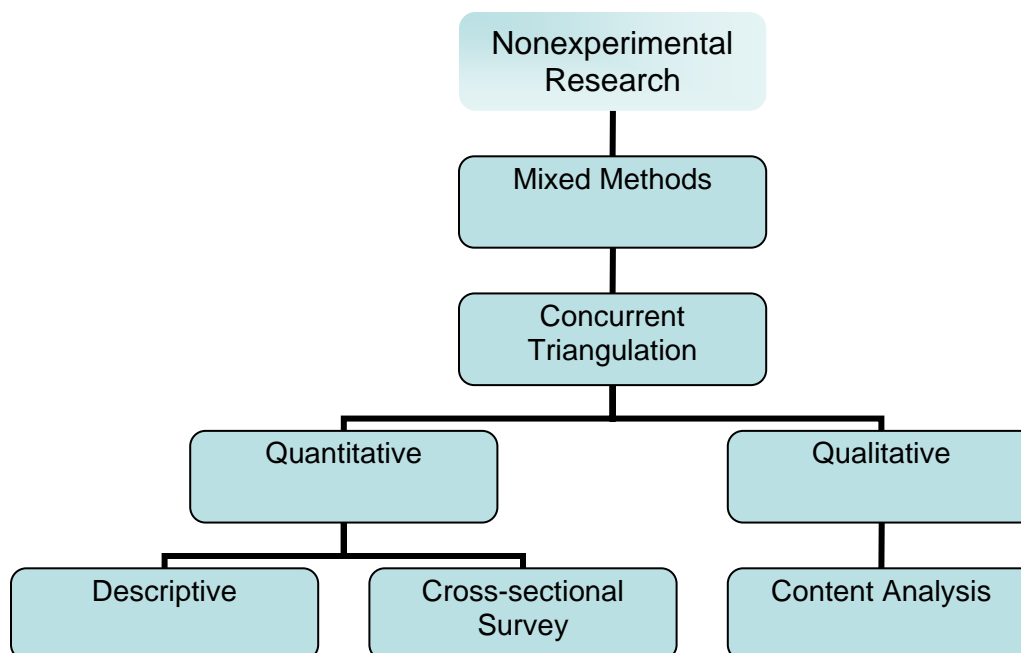


Figure 1. Research Design

This study utilized a non-experimental, mixed method research design, with both quantitative and qualitative attributes (Figure 1). As contrasted to experimental research, nonexperimental research is used to “describe existing phenomena without changing some condition to affect subjects’ responses” (McMillan, 2004, p. 176). Further, nonexperimental research, as in this study, does not allow the manipulation of an independent variable. In simple terms, nonexperimental design allows the researcher to investigate the current status of something and report on the way things are (McMillan, 2004). As the objective of this study was to investigate the current attitudes of AABI and AABI accreditation among four groups of stakeholders, a nonexperimental research design was deemed most appropriate.

The research design is a “mixed method” design in that both qualitative and quantitative data were gathered. As stated by Creswell (2003, p. 4), it is not so much quantitative versus qualitative, but rather “how research practice lies somewhere on a continuum between the two.” Whereas quantitative research results in numeric data, which can be statistically analyzed, qualitative research results in textual data which, although more time consuming to analyze, can yield rich data that not only enhances, but provides personal perspective to the qualitative data. In this way, the data from the study is more complete than if either approach had been used alone.

Regarding quantitative data collection as it relates to this study, two types of nonexperimental research designs were chosen. First, as there is very little existing data on the field of specialized accreditation in collegiate aviation and the impact of AABI accreditation, this study is considered a descriptive study. Plainly, a “descriptive study simply describes a phenomenon” (McMillan (2004, p. 176). Although the terms “nonexperimental” and “descriptive” research have been used interchangeably in the past, McMillan (2004, p. 176) suggests that “to understand research design . . . it is better to think about different types of quantitative nonexperimental research, with descriptive being one type.” This is an important aspect of this study, as one aim is to simply better understand various aspects of AABI accreditation and its impact on collegiate aviation. Second, the study utilized cross-sectional surveys to collect information from four populations at one time. This is in contrast, for example, to longitudinal surveys, which survey subjects over time. Whether descriptive research or survey research, both were adopted for this study to collect quantitative data in a nonexperimental fashion that would allow analysis using statistical procedures appropriate to the level of data collected.

This study adopted a qualitative approach via the use of open-ended items on each of the four questionnaires. As Berg (2004, p. 3) explains, qualitative research “refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things.” It is this rich data mining technique that was made part of this research design to provide further meaning to the quantitative data collected. Although the qualitative aspects of this study could have been further strengthened by the use of personal interviews with survey participants, lack of resources prevented this approach. Nonetheless, respondents generally were quite responsive to the open-ended questions they were presented and freely offered comments as a result.

To effectively apply a mixed method approach, the concept of “concurrent triangulation” was also adopted. Triangulation simply refers to the collection of data from multiple sources aimed at corroborating the same fact or phenomenon (Yin, 2003). More specifically, the strategy of concurrent triangulation, as defined by Creswell (2003), refers to the use of two different methods, such as qualitative and quantitative, during the same data collection period in an attempt to confirm or corroborate findings. This strategy was chosen, as Creswell (2003) recommends, in an effort to “offset the weaknesses inherent with one method with the strengths of the other method” (p. 217). Thus, rather than collecting quantitative data and qualitative data and analyzing these data in isolation, the data were analyzed to find themes of similarity and divergence between the two.

In addition to the mixed method approach (quantitative and qualitative), the research design also included a mixed mode design. Modes included the use of a written, paper questionnaire and an electronic link to an on-line questionnaire. As Dillman (2000,

p. 240) explains, “evidence exists that people prefer certain modes, and if such preferences are significant it stands to reason that people who have not responded to one mode because they dislike it may be receptive to a change in approach.” Further, as a result of adopting Dillman’s Tailored Design Method, a mixed mode approach became a necessity. As Dillman (2000) states, “the time when population access and response could usually be achieved by one mode is past” (p. 223).

Instrument Design

This research study utilized four distinct researcher-developed questionnaires. These questionnaires were developed for the purpose of surveying the following four groups on the perceived value of AABI accreditation: (a) administrators of AABI accredited collegiate aviation programs, (b) administrators of non-AABI accredited collegiate aviation programs, (c) collegiate aviation students, and (d) aviation industry employers.

Survey of Administrators of AABI Accredited Programs

The questionnaire entitled “Survey of Administrators of AABI Accredited Programs” was developed to solicit opinions regarding AABI accreditation from the administrators or department chairs of AABI accredited programs (Appendix F). The 19 item questionnaire was designed to take less than 5 minutes to complete and was created, as were all four questionnaires, by applying Dillman’s (2000) principles to create four user-friendly and interesting questionnaires that would garner a high response rate and produce useful data. Specifically, the questionnaire contained 17 closed-ended items and two open-ended items. Thirteen items contained Likert-scales, one item was dichotomous, one item was a ten-point scale, and two items contained numerical

categories from which to choose. To further understand why programs sought and attained AABI accreditation, nine items (4-12) were adapted from Rosenbaum's (1984) study on specialized accreditation of counselor education programs. As her study sought answers similar to this study, these nine items were very appropriate to this research.

Survey of Administrators of Non-AABI Accredited Programs

The questionnaire entitled "Survey of Administrators of Non-AABI Accredited Programs" was developed to gain insight into why these programs were not AABI accredited (Appendix G). The 18 item questionnaire, which was designed to take less than 5 minutes to complete, contained 16 closed-ended items and two open-ended items. Twelve items contained Likert-scales, one item was dichotomous, one item was a ten-point scale, and two items contained numerical categories from which to choose. To further understand why these programs were not accredited by AABI, eight items (4-11) were adapted from Rosenbaum's (1984) study on specialized accreditation of counselor education programs. As her study also examined non-accredited programs, these eight items were very appropriate to this research.

Survey of Aviation Program Students on AABI Issues

To understand the role AABI accreditation plays in decisions made by students regarding the institution they choose to attend and in their general awareness of AABI, a questionnaire entitled "Survey of Aviation Program Students on AABI Issues" was developed (Appendix H). This questionnaire was quite brief, only containing 10 items. The first item contained a checklist with 12 categories. Four items contained Likert scales, three items had several categories from which to choose, one item was a ten-point scale, and one was open-ended.

Survey of Aviation Industry Employers on AABI Issues

This fourth questionnaire, entitled “Survey of Aviation Industry Employers on AABI Issues,” was designed to gather perceptions from aviation industry employers on their level of awareness of AABI and the manner of emphasis they place on hiring graduates of AABI accredited programs (Appendix I). The brief questionnaire contained nine items, of which five were Likert-scale items, one was a 10 point scale, two had several categories from which to choose, and one was open-ended.

Validity and Reliability of Measurement

In an effort to reduce measurement error in conducting this survey research effort, accurate instruments that produced valid and reliable data were necessary. This was accomplished by (a) complying with various survey research principles to ensure valid and reliable questionnaires, and (b) conducting a pilot study to further refine the questionnaires.

As explained by Alreck and Settle (1995, p. 58), “a measurement of any kind is valid to the degree it measures all of that and only that which it’s supposed to measure.” In an effort to ensure the validity of the four questionnaires originally designed for this research project, several methods were utilized. First, face validity was enhanced by informally allowing persons not involved in the study to review the questionnaires for accuracy and ease of completion. Additionally, the researcher’s dissertation supervisory committee had the opportunity to review the questionnaires and provide comments as to how accurately each addresses the specific research questions proposed for the study. Refinement of the questionnaires resulted from this exercise. Next, content validity was enhanced by allowing a group of experts to review each of the questionnaires (Gay and

Airasian, 2000). This group of experts consisted of one member of the University Aviation Association (UAA), one member of the Aviation Accreditation Board International (AABI), and the researcher's supervisory committee chair. This jury was presented with an overview of the study and the purpose of the questionnaires. In adapting Litwack's (1986) method, each juror was asked to rate each question on a three-point scale of importance: 1-important; 2-important, but requires revision; 3-not important. Items rated by two out of three jurors as important or important, but requires revision, were included in the questionnaire. In addition to the ranking of items on a scale of importance, constructive comments were also received. For instance, one juror suggested that to avoid a possible double-barreled question, reference to "and its purposes" be removed from the following item: "Prior to receiving this survey, I was unaware of the AABI and its purposes." Suggested revisions were incorporated and the questionnaires were further refined as a result of this effort.

In addition to a focus on validity, reliability was also addressed. Reliability, as explained by Alreck and Settle (1995, p. 58), means "freedom from random error." A fundamental test of reliability is that of repeatability (Alreck and Settle, 1995). This survey was administered only once, as lack of resources and time did not allow for extensive test-retest methodology. However, McMillan (2004) explains that reliability of an instrument can be measured in terms of internal consistency via the Cronbach alpha, appropriate for instruments in which there is no right or wrong answer to each item. As seen in Figure 2, the Cronbach's reliability coefficients for each group ranged from 0.479 to 0.855. As McMillan (2004) states, reliability coefficients of 0.65 are acceptable for measuring noncognitive traits, whereas studies of groups can tolerate a lower reliability,

sometimes as low as 0.50 in exploratory research. Although the “Survey of Aviation Program Students on AABI Issues” has the lowest reliability coefficient of 0.479, it is very close to the 0.50 threshold suggested by McMillan (2004). Further, as suggested by McMillan, additional efforts were implemented to minimize the lower than desired internal consistency of this questionnaire. First, with each of these questionnaires, there were standard conditions of data collection, in which each of the four groups were provided the same directions. Also, the instruments were appropriate in reading level and language of the subjects. Lastly, the questionnaires were brief, thus not experiencing the problems associated with lengthy questionnaires.

Table 1. Questionnaire Reliability

Instrument	Cronbach Alpha
Survey of Administrators of AABI Accredited Programs	0.750
Survey of Administrators of Non-AABI Accredited Programs	0.546
Survey of Aviation Program Students on AABI Issues	0.479
Survey of Aviation Industry Employers on AABI Issues	0.855

In addition to the previously discussed reliability and validity issues, McMillan (2004) notes there are two sources of error associated with measuring noncognitive traits. First, “response set” refers to the tendency of the subject to respond in the same way, regardless of the content of the items. For example, a respondent may answer “neutral” to all items. This is usually due to peer pressure or the tendency to respond in ways that are socially acceptable. An effort was made to minimize this tendency by ensuring

anonymity and attempting to motivate the subjects to respond truthfully by expressing the importance of the study. Another area of concern is known as “faking.” This occurs when subjects give deliberately inaccurate perceptions of their attitudes. This may occur if the respondent feels certain results will have positive consequences, if they perceive important personal consequences, or if they wish to provide a more negative picture than actually exists. An effort was made to minimize the tendency for faking by establishing a good rapport with subjects via the pre-notice letter.

In a final effort to address issues of validity and reliability, as well as pre-test the operation of each questionnaire, a pilot study was conducted. A main goal of this pilot study was to determine if the questionnaires were easily understood and could be completed within a reasonable time period. The pilot study consisted of five members randomly selected from each of the sample populations. Responses received from each group closely matched responses collected from each group during the full study.

Study Populations, Sample Frame, and Sampling Plan

As this survey research effort required the collection of data from four distinct groups, four unique questionnaires were designed for this project. Although each group received a unique questionnaire, the methods adopted for the study were similar for each group. Specifically, Dillman’s (2000) Tailored Design Method guided the researcher in not only designing the questionnaires, but also in the manner in which the participants were contacted. As discussed in the following sections, various methods were utilized to survey entire populations and samples of populations, as well as minimize coverage and sampling errors.

Administrators of AABI and Non-AABI Accredited Programs

Two questionnaires were designed to gauge the opinions of the department administrators of both AABI and non-AABI accredited programs. The survey population consisted of one department administrator (or chair) from each of the non-engineering aviation academic program departments that are located at the 23 institutions nationwide with AABI accredited programs (at the time of this study), as well as 76 institutions nationwide with non-AABI accredited programs (utilizing the University Aviation Association institutional member list at the time of this study). The University Aviation Association is a nationwide organization representing collegiate aviation, and contains those programs both accredited by AABI and not accredited by AABI (UAA, n.d.). Rather than sampling the survey population, enumeration was utilized to survey the entire population of accredited and non-accredited institutions. Coverage error was nonexistent for both groups because every unit in each population was included in the survey, thus having a known, non-zero chance of being included in the study. For administrators of AABI accredited programs, sampling error was +/- 6.3 percent at the 95 percent confidence level, calculated from a 91.3 percent response rate from a population size of 23. For administrators of non-AABI accredited programs, sampling error was +/- 11.8 percent at the 95 percent confidence level, calculated from a 47.36 percent response rate from a population size of 76.

Aviation Program Students

The questionnaire aimed at aviation students was designed to determine, specifically, what effect AABI accreditation had on the decision made by the student as

to which aviation program and institution to attend. The survey population for this questionnaire consisted of the total number of aviation students enrolled at all of the 112 institutions offering non-engineering aviation academic programs nationwide (UAA, 2003). Determining the sample frame for this large survey population was not very feasible. The sample frame, therefore, consisted of the student membership list of the UAA, and the sample included each of these 98 students. Due to the broad aviation focus of this organization, the membership list contains students from many of the institutions with aviation programs and contains a good cross-section of various aviation majors. Although it cannot be precisely specified, coverage error, unfortunately, was relatively high with this approach. Due to the size of the population and the lack of a comprehensive list which included each of the population units, there was little way to provide for each unit in the population of having a known, non-zero chance of being included in the sample. That said, however, coverage error was reduced by ensuring that the UAA student membership list did not contain non-members of the population. Per UAA guidelines and objectives, only current aviation students join the organization as a student member. Further, the decision was made that an amount of coverage error was acceptable, as no feasible alternatives for surveying this population existed. Lastly, sampling error was also high due to the ability to only collect information from the subset of aviation students who are also UAA student members. Although all UAA student members were surveyed, this was only a small fraction of current aviation students nationwide. As the total population size of collegiate aviation students is unknown, the actual sampling error could not be calculated with any precision. Any sampling error

was minimized due to the broad cross-section of students and institutions represented by the UAA student membership list.

Aviation Industry Employers

A fourth questionnaire was designed to survey aviation industry employers and determine what role, if any, AABI accreditation plays in the hiring of recent graduates. This is another extremely large survey population. The various segments of the aviation industry hiring recent aviation graduates include national and regional airlines, cargo carriers, government agencies, airports, fixed base operators, and consulting firms. Surveying the entire survey population would have been prohibitive. Thus, the sample frame consisted of the membership lists of the following aviation industry trade groups: American Association of Airport Executives (720 airport members and 591 corporate members), Air Transport Association (18 airline members), National Air Transportation Association (2,000 associate members), and the National Business Aviation Association (6,000 corporate and associate members). A simple random sample of members from each of these groups was contacted. Although a suggested sample size for each of these groups would normally range from 20 to 907 (depending on the membership size), limited resources prevented the selection of such a large sample size. Further, it was decided not to use a modified stratified sampling approach, as the percentage of members of these organizations do not necessarily represent a higher percentage of companies hiring aviation graduates. Thus, a simpler method involved randomly selecting 40 corporate members from each of these four organizations (with the exception of the entire 18 Air Transportation Association members), resulting in a total sample size of 138 industry employers. The questionnaire was then directed to the Director of Human

Resources (or central hiring office) of each organization. Although it cannot be precisely specified, coverage error was high with this approach, simply because of the large size of the survey population. However, a cross-section of groups representing the major aspects of the aviation industry was sampled, thus minimizing coverage error to the extent possible. As with any survey in which a subset of the population is surveyed, sampling error also resulted with this survey of aviation industry employers. However, as the total size of the population is not known, sampling error could not be precisely specified. Yet, efforts such as selecting a range of aviation industry trade groups and use of random sampling from each of these groups was used to minimize sampling error to the extent possible.

IRB Approval

Standard for all research involving human subjects, approval from an Institutional Review Board (IRB) was necessary prior to beginning this research. As the researcher was a doctoral student and faculty member of two institutions at the time of this study, IRB approval was sought and received from both Middle Tennessee State University (Appendix J) and the University of Nebraska-Lincoln (Appendix K).

Survey Procedures

The implementation of the four questionnaires designed for this survey project closely adhered to Dillman's (2000) Tailored Design Method. Specifically, three contacts were made via first-class mail, while the fourth and fifth contacts were made via e-mail and fax, respectively. Each of these five contacts were utilized for the purpose of increasing survey response rate. As Dillman (2000, p. 149) explains, "Multiple contacts have been shown to be more effective than any other technique for increasing response to

surveys by mail.” The reader is directed toward Appendices F-I, which contain the questionnaires, and Appendix L, which contains all communication with the participants in this study.

First contact: Prenotice letter

With the first contact, a letter on University of Nebraska-Lincoln (UNL) College of Education and Human Sciences letterhead and identifying the researcher as a doctoral candidate was sent a few days prior to the questionnaire being sent. This letter, mailed on June 22, 2007, was intended to inform those selected to participate in the study of the reason for the survey, the importance of their views, and to expect a questionnaire to follow in the mail in a few days.

Second contact: Questionnaire mailing

The second contact, mailed on June 27, 2007, included the actual questionnaire. The questionnaire was prefaced with a detailed cover letter (serving as the informed consent form) indicating the reason for the study, the importance of the study, the usefulness of the study, the manner in which the recipients were selected, and a statement ensuring confidentiality and the voluntary nature of the project. This mailing also included a self-addressed stamped envelope to allow for an inexpensive and easy way for participants to return the completed questionnaire.

Third contact: Thank you/reminder letter

The next contact made with those selected to participate in the study was made in the form of a thank you/reminder letter. The main purpose of this letter was to thank those who had already participated and seek participation from all non-respondents. It

also encouraged those who needed a replacement questionnaire to contact the researcher. The letter was mailed on July 5, 2007.

Fourth contact: On-line replacement questionnaire

Following Dillman's (2000) advice, several weeks transpired before the fourth contact was made with participants. This fourth contact, which applied only to non-respondents, was sent via email and included a link to an on-line version of the appropriate questionnaire (hosted on the Survey Monkey website). This contact was made via U.S. mail if an email address was unavailable. The mailing included a paper replacement questionnaire with self-addressed stamped envelope.

Fifth contact: Final "special" contact

Finally, a fifth contact was made with non-respondents on July 30, 2007. This "special" contact was in the form of a fax. For those without fax numbers, contact was made via email, or if an email address was unavailable, via U.S. mail with delivery confirmation. As Dillman (2000, p. 151) states, "The *different mode* of contact distinguishes each type of final contact from regular mail delivery." Research has shown that a "special" contact improves response rates to mail surveys. This fax was sent as a final reminder to non-respondents and highlighted the importance of hearing from every single person selected to participate in this study.

Table 2. Implementation Schedule

Implementation Schedule		
Action	Time frame	Date
First contact: Prenotice Letter		June 22, 2007
Second contact: Questionnaire mailing	2-3 days after first contact	June 27, 2007
Third contact: Thank you letter	4-5 days after second contact	July 5, 2007
Fourth contact: Replacement questionnaire	2-4 weeks after third contact	July 23, 2007
Fifth contact: Final fax/mail contact	1 week after fourth contact	July 30, 2007

Data Analysis

Both quantitative and qualitative data were collected as a result of implementing this nonexperimental mixed method research design. The majority of quantitative data collected during this research study involved nominal and ordinal data. As Gravetter and Wallnau (2004, p. 20) state, “measurements on a nominal scale label and categorize observations, but do not make any quantitative distinctions between observations.” Nominal data was collected with dichotomous items (Yes/No) and checklist items. Regarding ordinal data, Gravetter and Wallnau (2004) explain that although ordinal scales allow a determination of differences and direction of differences, they do not allow the researcher to determine the magnitude of difference. Ordinal data was collected during this research study through the liberal use of Likert-scale items on all four questionnaires. As Ravid (1994, p. 8) explains, Likert scale items do not fit the rules for interval data, as “one may question whether the interval or distance between ‘strongly agree’ and ‘agree’ is the same as the interval between ‘neutral’ and ‘disagree’.” As a result, non-parametric statistical analyses were heavily relied upon in analyzing this

quantitative data. SPSS version 15.0 and Microsoft Excel were the statistical analysis software used to analyze quantitative data collected during this study. Specifically, the chi-square test for goodness of fit was utilized to analyze nominal data. The general goal of the chi-square test for goodness of fit is to compare the data with the null hypothesis to determine how well the data fit the distribution specified in the null hypothesis. The Likert-scale ordinal data were analyzed using the Mann-Whitney U test, the Kruskal-Wallis test, or simple frequency distributions. When examining data from only one population (collegiate aviation students, for example), frequency distributions were used to express ideas and beliefs most widely held among respondents. When analyzing data from two populations (administrators of AABI and non-AABI accredited programs, for instance), the Mann-Whitney U -test was utilized to evaluate relationships between these two groups on various issues. When analyzing data from all four populations in the study, the Kruskal-Wallis test was utilized. Both the Mann-Whitney U test and the Kruskal-Wallis test are appropriate for testing hypotheses with ordinal data (Gravetter and Wallnau, 2004).

In addition to the nominal and ordinal data collected, one item on each of the questionnaires, the AABI perceived value scale, collected data on an interval scale, thus allowing for parametric data analysis. For this data, an analysis of variance (ANOVA) was used to determine if a statistically significant mean exists among the four groups. However, the F-ratio produced by the ANOVA only indicates if a significant difference exists. It does not indicate which means are significantly different and which are not. Therefore, a *Scheffe* post-hoc test was also conducted to reduce the risk of Type I error and determine which means are significantly different (Gravetter and Wallnau, 2004).

To analyze the qualitative data collected during this study, content analysis via a manual coding effort was employed. As Berg (2004, p. 288) explains, “[content analysis] is helpful in many types of exploratory or descriptive studies.” Specifically, comments to the six open-ended items among the four questionnaires were printed out and separated with scissors so that each respondent’s comment was on a separate piece of paper. For some comments that contained several themes, further data reduction was necessary by using scissors to separate these specific comments. For example, if one respondent commented using several sentences, these several sentences may have touched upon several different themes, thus requiring further separation. This was done to allow grouping of comments into general theme categories. After comments were separated into the theme categories based on their general intent, the number of responses in each theme category was then counted numerically to allow general conclusions to be drawn from the qualitative data. Additionally, this qualitative data was used to enhance the quantitative data analyzed for this study.

Lastly, where possible, data is presented in a tabular and graphical format using frequency distributions and various charts. This is intended to allow easier digestion of the data and provide for quick summaries of the various data.

CHAPTER FOUR

RESULTS AND ANALYSIS

This chapter presents the findings of the study and the results of the data analysis as they apply to the study's research questions. The raw data collected during this study are shown in Appendices N-Q. Appendices R-V contain qualitative findings in the form of actual respondent comments. Appendices W-Z contain quantitative findings designed to supplement the findings presented in this chapter. For ease in digesting the data, the chapter is organized according to the following summary outline:

A) Study Timeline and Response Rate

B) Research Questions

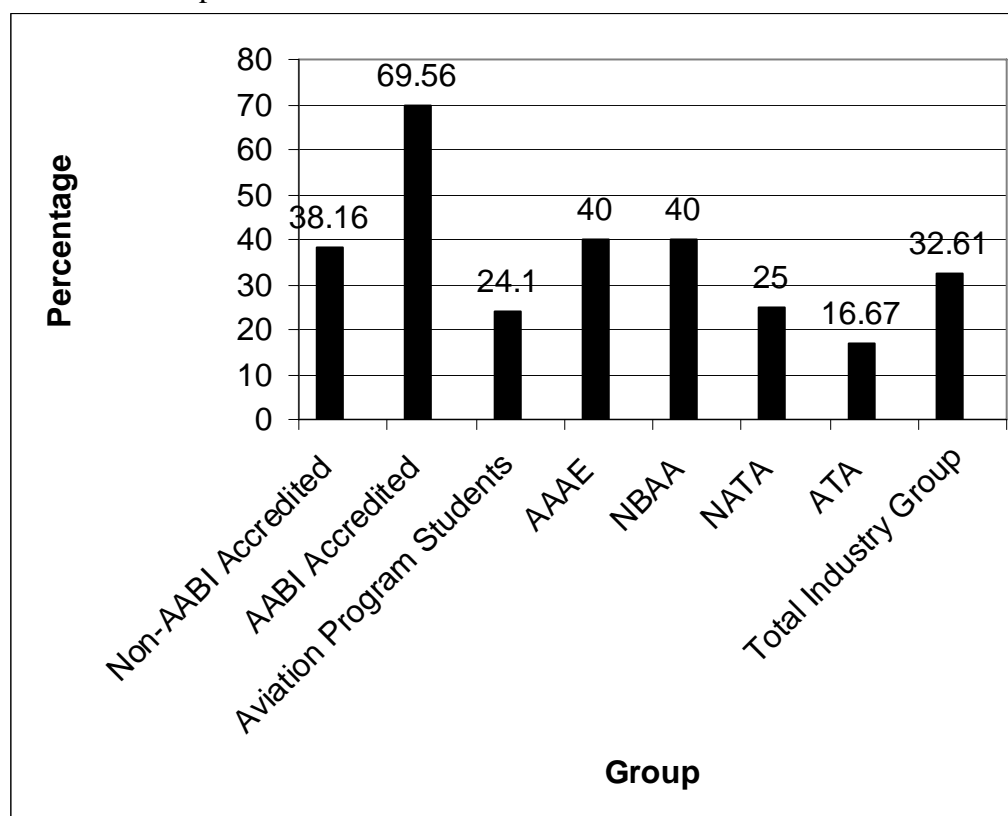
1. Why are AABI accredited aviation programs currently accredited?
2. Are administrators of AABI accredited aviation programs motivated to maintain existing AABI accreditation?
3. Why are non-AABI accredited aviation programs currently not accredited?
4. Are administrators of non-AABI accredited aviation programs motivated to seek initial AABI accreditation?
5. Is there a relationship between administrators of AABI accredited programs and non-AABI accredited programs regarding their views of AABI and the benefits of AABI accreditation?
6. Among administrators of AABI accredited programs, what beliefs most influenced the decision to seek and attain AABI accreditation?
7. Among administrators of non-AABI accredited programs, what beliefs most influenced the decision not to seek AABI accreditation?
8. Does a preference exist among students regarding the factors considered influential on a student's decision as to which institution and aviation program to attend?

9. Among aviation industry employers, what beliefs are most widely held regarding AABI accreditation?
 10. Is there a relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI?
 11. Is there a significant difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value of AABI accreditation?
- C) Additional Findings
- D) Summary

Study Timeline and Response Rate

This study was undertaken during the summer of 2007. Specifically, the project began on June 22, 2007 with the mailing of a pre-notice letter to 320 total survey participants. This included administrators of 76 non-AABI accredited collegiate aviation programs, administrators of 23 AABI accredited collegiate aviation programs, 83 collegiate aviation students (composed of University Aviation Association student members), and 138 industry employers (composed of 40 AAAE members, 40 NBAA members, 40 NATA members, and 18 ATA members). On June 27, 2007, a second mailing to all survey participants included the questionnaire, consent letter, and a self-addressed stamped envelope. As of July 5, the response rate for each group was as shown in Figure 2.

Figure 2. Initial Response Rate



Rather than simply aim for the highest response rate possible, it was necessary to determine how much sampling error could be tolerated and the confidence desired in the estimates made from the sample for the entire population. Although this is rather simple to define when the population size is known (such as for AABI accredited and non-AABI accredited programs), it is difficult, if not impossible, to determine if the population size is not known (as for aviation students and industry employers). To compromise, the complete sample size necessary was computed for AABI and non-AABI accredited programs, using Dillman's (2000, p. 206) guidance and the following formula:

$$N_s = \frac{(N_p)(p)(1-p)}{(N_p-1)(B/C)^2 + (p)(1-p)}$$

Where N_s = completed sample size needed for desired level of precision

N_p = size of population

P = proportion of population expected to choose one of the two response categories

B = acceptable amount of sampling error

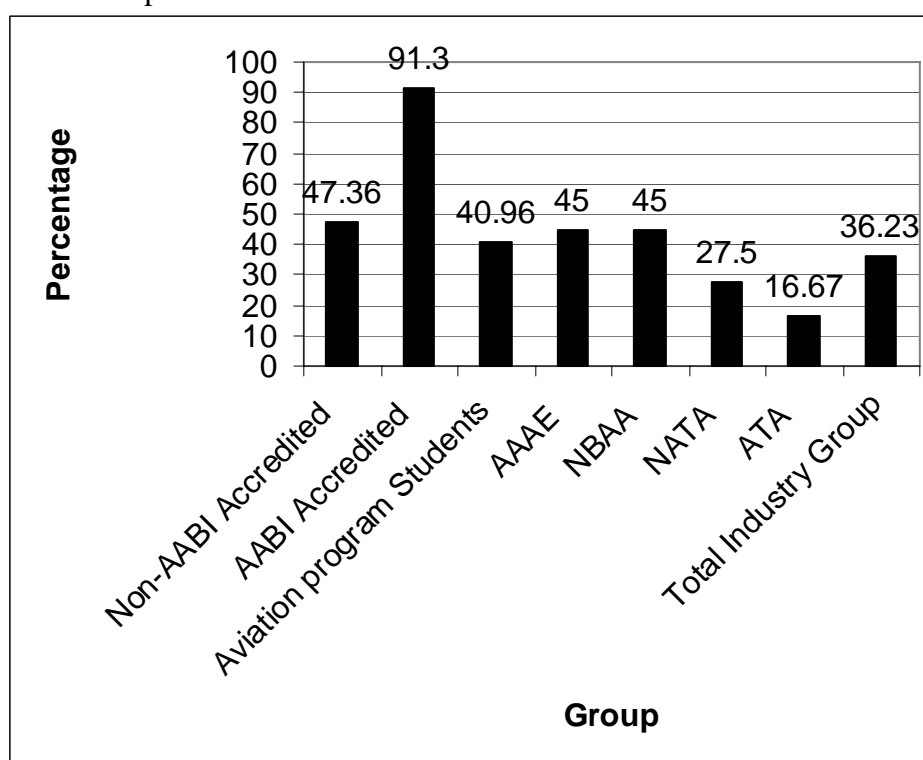
C = Z statistic associated with the confidence level

Specifically, with a +/- 5 percent sampling error, at the 95 percent confidence level, a completed sample size of 21 was needed from administrators of AABI accredited programs. With a +/- 10 percent sampling error, at the 95 percent confidence level, a completed sample size of 34 was needed from administrators of non-AABI accredited programs. Thus, it was apparent by July 5, that response rates from all groups were insufficient. In an effort to secure higher response rates, and in keeping with the methodology for this study, successive contacts ensued.

On July 5, 2007, a thank-you letter was sent to all 320 survey participants (to include both respondents and non-respondents). This letter was designed to thank those who had responded and encourage those who had not yet responded to do so. On July 23, a replacement questionnaire was sent via an email containing an electronic link to the on-line version of each questionnaire. As discussed in chapter three, this mixed-mode attribute was adopted to entice non-respondents to respond using a mode they may feel more comfortable with or simply enjoy due to the ease of convenience. The final contact with survey recipients was made on July 30, 2007. This final contact, which included a copy or link to the questionnaire, was via fax to those with fax numbers, and email to those for which valid fax numbers were unavailable. As noted by Dillman (2000), this fax contact was considered “special” and adopted to enhance response rates versus a

traditional mail survey. Although the majority of those selected to participate in this study had valid postal addresses, email address, and fax numbers, those for which the researcher had an invalid address, email address, or fax number were ultimately contacted via one of these three means, thus proving another benefit to a mixed mode design. Final response rates after these five contacts are graphically portrayed in Figure 3.

Figure 3. Final Response Rates



As can be seen from by comparing Figures 2 and 3 (and Appendix M), response rates improved (in some cases dramatically) by following Dillman's (2000) Tailored Design Method. The minimum number of responses from AABI accredited and non-AABI accredited programs (as noted earlier) was also achieved. Specifically, response rates improved from a minimum of 2.5 percentage points (NATA group) to 21.74 percentage points (AABI accredited group). Final response rates for each of the four

groups were as follows: Administrators of non-AABI accredited programs (47.36%), Administrators of AABI accredited programs (91.3%), aviation program students (40.96%), and aviation industry employers (36.23%). Subsequently, sampling error for administrators of AABI accredited programs was +/- 6.3 percent at the 95 percent confidence level. While sampling error for administrators of non-AABI accredited programs was +/- 11.8 percent at the 95 percent confidence level. Essentially, by implementing a mixed mode design and allowing for five total contacts, the quantity of responses greatly improved, positively contributing to the validity of the study results.

Research Question 1: Why are AABI accredited aviation programs currently accredited?

To answer this research question, administrators of AABI accredited programs were asked to explain why the aviation program(s) at their institution initially decided to seek AABI accreditation. This open-ended item yielded responses from 22 participants (seen in Appendix R). Content analysis (as described by Berg, 2004) was implemented to discover themes in the responses. Upon reviewing the comments for themes, it became apparent that a comment by a single participant may contain several themes; therefore, the comments were printed out and cut with scissors to reduce the comments to themes. This resulted in a total of 38 responses in 8 theme categories (see Table 3).

Table 3. Themes Related to Why AABI Accredited Programs are Currently Accredited

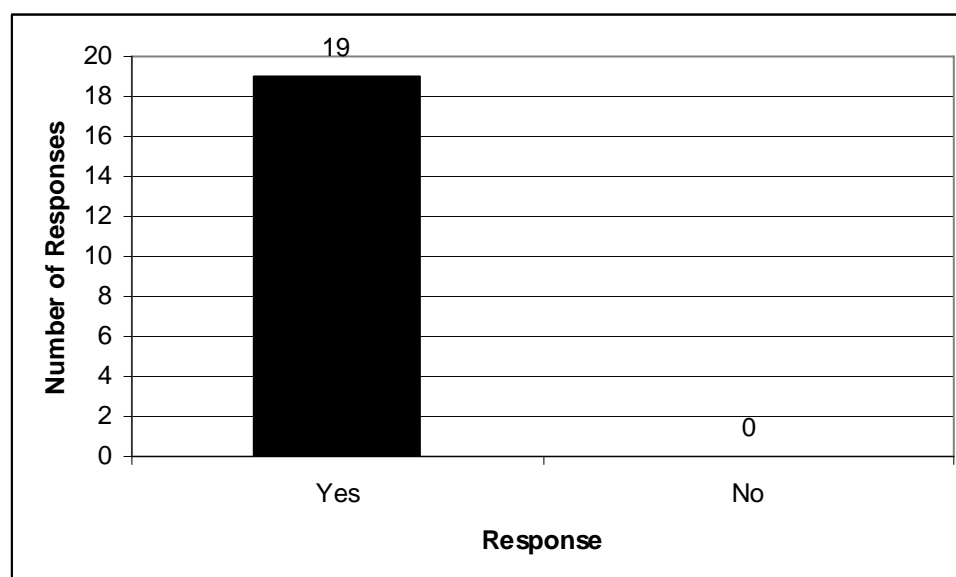
Theme	Number of Responses
Status/prestige	11
Standards	6
Recruiting mechanism	6
External peer review	5
Program improvement	4
Required	2
Industry relations/benefits	2
Leverage	2

Clearly, as evidenced by this content analysis, the majority of responses by participants center around the status and prestige that AABI accreditation affords. As one participant expressed, “We wanted to be in step with the best aviation programs in the USA.” Likewise, one program desired “to maintain our role as the leader in aviation education.” Other popular reasons for seeking AABI accreditation include standardization, recruiting, peer review, program improvement, requirement, industry relations, and leverage. Regarding this last theme, one respondent simply exclaimed, “To protect us!”

Research Question 2: Are administrators of AABI accredited aviation programs motivated to maintain existing AABI accreditation?

In an effort to answer this research question, administrators of AABI accredited programs were simply asked, “Does your program(s) have plans to maintain existing AABI accreditation?” This dichotomous question allowed only a “Yes” or “No” response. Although the research design involved a Chi-square goodness of fit test for this item, the chi-square goodness of fit test could not be performed with a constant variable. In other words, 100 percent of the responses to this question were “Yes” (Figure 4). Thus, it appears that, of the responding administrators of AABI accredited programs, each does have plans to maintain existing AABI accreditation.

Figure 4. Motivation to Maintain AABI Accreditation



Research Question 3: Why are non-AABI accredited aviation programs currently not accredited?

To answer this question, an open-ended item was included on the “Survey of Administrators of Non-AABI Accredited Programs.” Specifically, participants were

asked to explain “why the aviation programs at your institution are not currently AABI accredited.” This item yielded responses from 34 participants (seen in Appendix S). As with research question one, content analysis (as described by Berg, 2004) was implemented to discover themes in the responses. Unlike the responses gathered to answer research question one, however, respondents to this item generally offered one main reason for not pursuing AABI accreditation. Therefore, the 35 responses could easily be categorized into 7 theme categories (Table 4).

Table 4. Reasons for Lack of AABI Accreditation

Theme	Number of Responses
Time/expense/effort versus benefits	14
Currently pursuing AABI accreditation	7
Curriculum requirements/standards	5
Smaller program	4
Similar accreditation	2
Lack of awareness	2
Currently successful	1

Just as there are multiple reasons why a program seeks accreditation, there are also multiple reasons why a program chooses not to seek AABI accreditation. Generally, the majority of these reasons center around the cost/benefit equation. As one respondent stated, “Cost and time to complete the accreditation process. What is the benefit to our institution for obtaining this accreditation?” Similarly, another respondent mentioned that “Cost concerns are the primary reasons we have not sought AABI accreditation.”

Surprisingly, the theme category gathering the second most number of responses related to current efforts by programs pursuing AABI accreditation. As one respondent stated, “We are currently pursuing accreditation. Self studies have been conducted in the past but have not been acted upon.” Other reasons provided by participants for not currently being AABI accredited include curriculum requirements, having a smaller program not in line with AABI, possessing similar accreditation, lack of awareness of AABI, and being currently successful without AABI.

Research Question 4: Are administrators of non-AABI accredited aviation programs motivated to seek initial AABI accreditation?

Understanding why non-AABI accredited aviation programs are not currently accredited only provides a partial picture to the concern about lack of AABI accredited programs. Research question four endeavored to determine if administrators of these programs were motivated to seek initial AABI accreditation. Research question four was addressed with the use of both quantitative and qualitative data. Quantitatively, research question four was addressed by presenting participants with the following question: “Does your program have plans to pursue AABI accreditation at some point in the future?” The research design called for data from this dichotomous item to be analyzed using the Chi-square goodness of fit test.

The chi-square goodness of fit test uses sample data to “test hypotheses about the shape or proportions of a population distribution” (Gravetter & Wallnau, 2004, p. 580). In essence, the test determines how well the sample proportions fit the population proportions specified by the null hypothesis. For this research question, the null hypothesis (Table 5) indicates that administrators of non-AABI accredited programs are

divided equally (no preference) about plans to pursue AABI accreditation at some point in the future.

Table 5. Non-AABI Alternate Hypothesis and Chi Square Data

H₀:

YES	NO
50%	50%

	YES	NO
Observed frequencies	23	12
Expected frequencies	17.5	17.5

For this data, $\chi^2(1, n=35) = 3.457, p > 0.05$. With a critical region beginning at $\chi^2 = 3.84$ at the 95 percent confidence interval, the decision was made to fail to reject H₀. Therefore, at the 0.05 level of significance, the data do not provide sufficient evidence to conclude that there is a significant difference among administrators of non-AABI accredited programs regarding their plans to pursue AABI accreditation at some point in the future.

Qualitatively, research question four was also addressed by presenting participants with the following open-ended question: "If your program(s) is planning on seeking AABI accreditation, please explain what motivated this decision." This item yielded responses from 24 participants (seen in Appendix T). As with research questions one and three, content analysis (as described by Berg, 2004) was implemented to

discover themes in the responses. The 24 responses were categorized into 7 themed categories, which were similar to the categories highlight in research question one (Table 6).

Table 6. Reasons for Seeking AABI Accreditation

Theme	Number of Responses
Prestige	8
Required	5
Improvement	3
Standards	3
Marketing	2
Leverage and external review	2

Research Question 5: Is there a relationship between administrators of AABI accredited programs and non-AABI accredited programs regarding their views of AABI and the benefits of AABI accreditation?

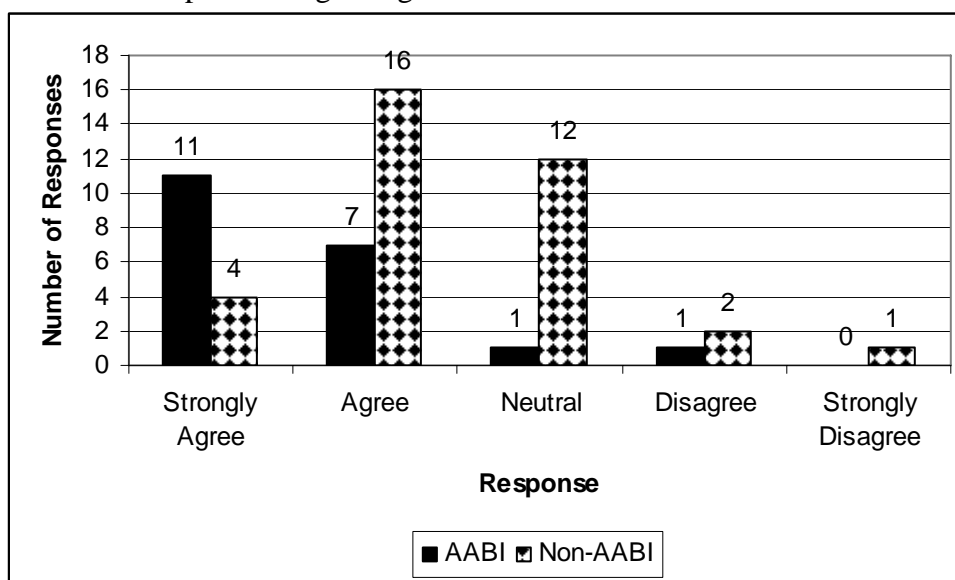
The answer to this research question is multi-faceted, in that a total of four items on both the questionnaire provided to administrators of AABI accredited programs and non-AABI accredited programs were developed to address this question. As these responses were on a Likert scale, the data gathered is ordinal. This non-parametric data among these two populations justified the use of the Mann-Whitney *U*-test.

The first item analyzed for this research question asked participants to indicate their level of agreement with the following: “AABI accreditation is beneficial to the AABI accredited program.” The null hypothesis was as follows:

H₀: There is no difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “AABI accreditation is beneficial to the AABI accredited program.”

The Mann-Whitney *U*-test was used to compare the responses for the $n = 20$ AABI administrators and $n = 35$ non-AABI administrators. The results indicate a significant difference between these two groups, $U = 165$, $p < .001$, with the sum of the ranks equal to 375 for AABI administrators and 1,165 for non-AABI administrators. Thus, the decision was made to reject H₀. These data do provide sufficient evidence to conclude that there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “AABI accreditation is beneficial to the AABI accredited program.” The number of responses among the two groups are graphically portrayed in Figure 5.

Figure 5. Number of Responses Regarding Benefits of AABI Accreditation



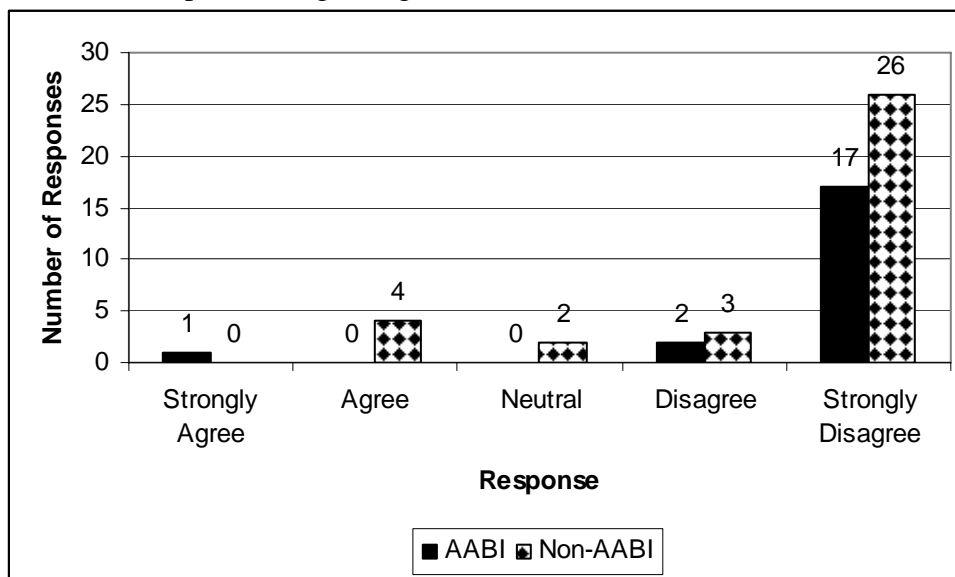
The next item analyzed for this research question asked participants to indicate their level of agreement with the following: “Prior to receiving this survey I was unaware of the Aviation Accreditation Board International.” The null hypothesis was as follows:

H₀: There is no difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “Prior to receiving this survey I was unaware of the Aviation Accreditation Board International.”

The Mann-Whitney *U*-test was used to compare the responses for the $n = 20$ AABI administrators and $n = 35$ non-AABI administrators. The results do not indicate a significant difference between these two groups, $U = 311$, $p > 0.05$, with the sum of the ranks equal to 599 for AABI administrators and 941 for non-AABI administrators. Thus,

the decision was made to fail to reject H_0 . These data do not provide sufficient evidence to conclude that there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “Prior to receiving this survey I was unaware of the Aviation Accreditation Board International.” The number of responses among the two groups are graphically portrayed in Figure 6.

Figure 6. Number of Responses Regarding Awareness of AABI

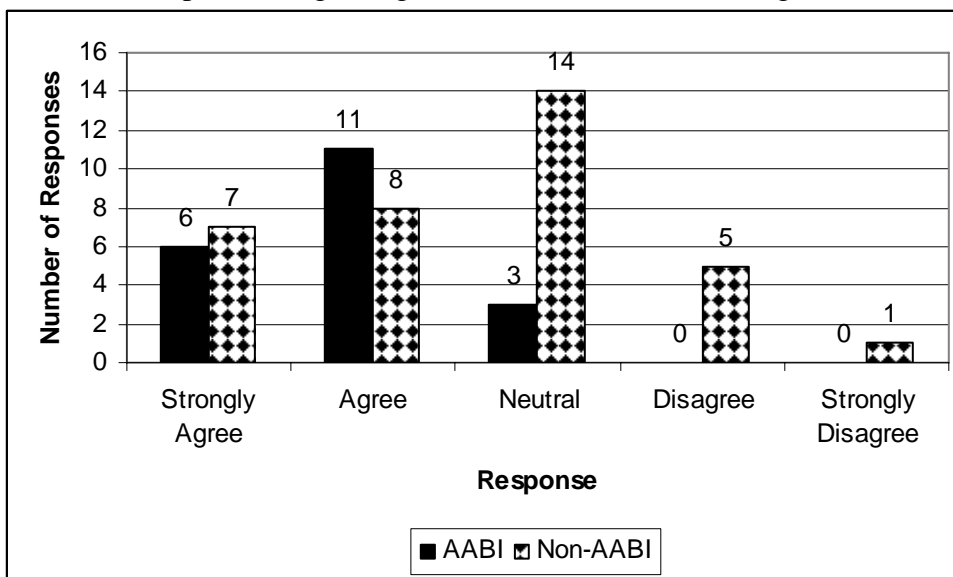


The next item analyzed for this research question asked participants to indicate their level of agreement with the following: “It would be beneficial if more aviation programs were accredited by the AABI.” The null hypothesis was as follows:

H0: There is no difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “It would be beneficial if more aviation programs were accredited by the AABI.”

The Mann-Whitney U -test was used to compare the responses for the $n = 20$ AABI administrators and $n = 35$ non-AABI administrators. The results indicate a significant difference between these two groups, $U = 208$, $p < 0.05$, with the sum of the ranks equal to 418 for AABI administrators and 1,122 for non-AABI administrators. Thus, the decision was made to reject H_0 . These data provide sufficient evidence to conclude that there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “It would be beneficial if more aviation programs were accredited by the AABI.” The number of responses among the two groups are graphically portrayed in Figure 7.

Figure 7. Number of Responses Regarding Benefits of More AABI Programs

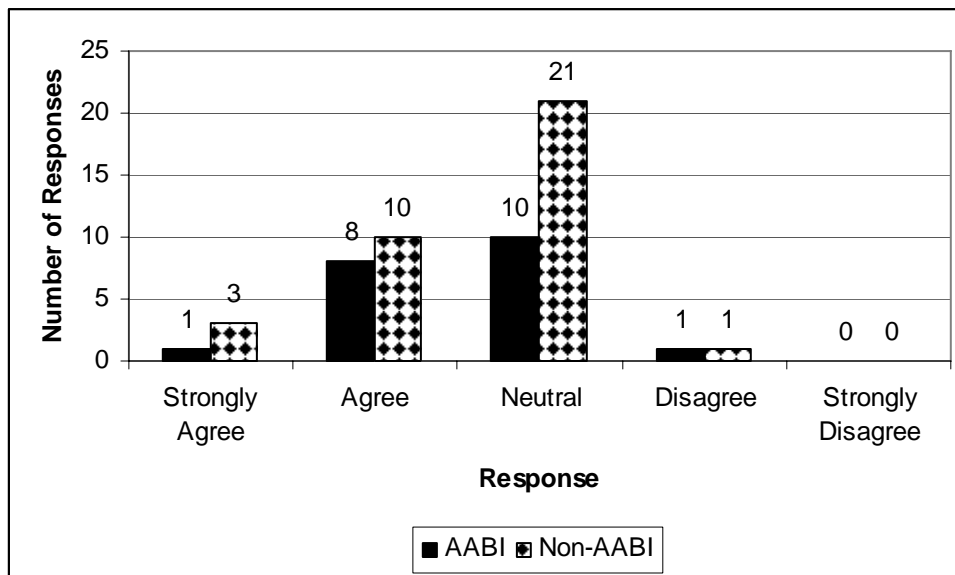


The final item analyzed for this research question asked participants to indicate their level of agreement with the following: “The AABI should better market itself to collegiate aviation programs.” The null hypothesis was as follows:

H₀: There is no difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “The AABI should better market itself to collegiate aviation programs.”

The Mann-Whitney *U*-test was used to compare the responses for the $n = 20$ AABI administrators and $n = 35$ non-AABI administrators. The results do not indicate a significant difference between these two groups, $U = 335$, $p > 0.05$, with the sum of the ranks equal to 545 for AABI administrators and 995 for non-AABI administrators. Thus, the decision was made to fail to reject H_0 . These data do not provide sufficient evidence to conclude that there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following statement: “The AABI should better market itself to collegiate aviation programs.” The number of responses among the two groups are graphically portrayed in Figure 8.

Figure 8. Number of Responses Regarding Better Marketing

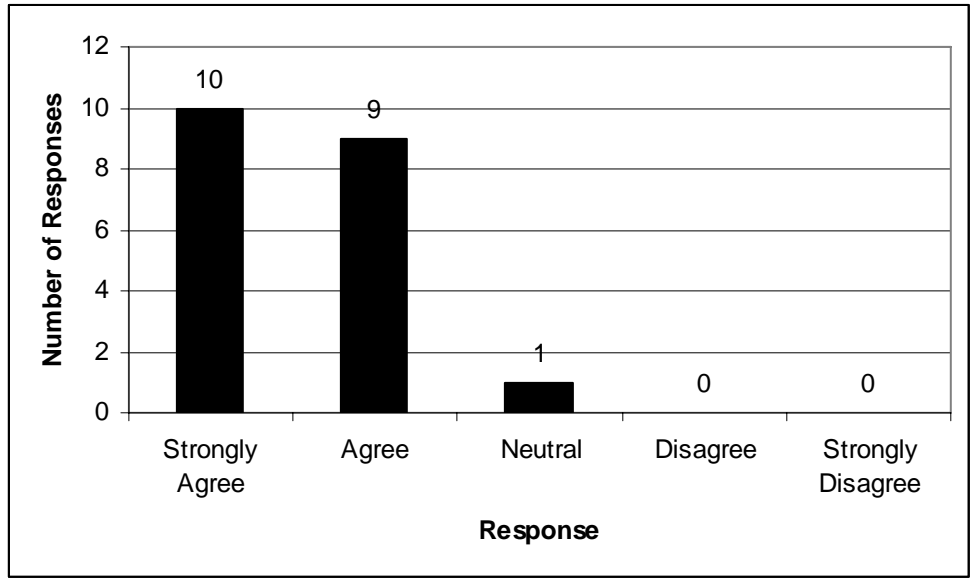


Research Question 6: Among administrators of AABI accredited programs, which beliefs most influenced the decision to seek and attain AABI accreditation?

To provide insight into the beliefs which most strongly influenced the decision made by administrators of AABI accredited programs to seek and attain AABI accreditation, a total of nine items were developed and included on the questionnaire provided to administrators of AABI accredited programs. Although the data was collected on a Likert scale, it is ordinal, and because chi-square is used to analyze nominal data, it was not appropriate for these items. Further, the remaining non-parametric tests are most appropriate for measuring inter-group differences. A simple analysis of the number of responses was deemed most appropriate in this instance.

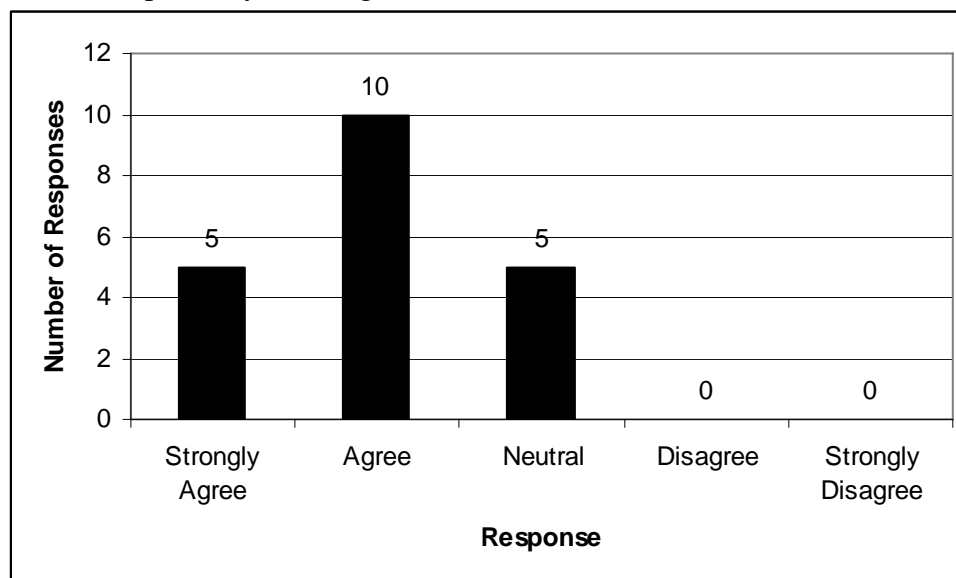
On these nine items, participants were asked to “Explain how strongly the following statements reflect your beliefs as to why your program sought and attained AABI accreditation.”

Figure 9. To Ensure that the Program Meets Standards Established by the Profession



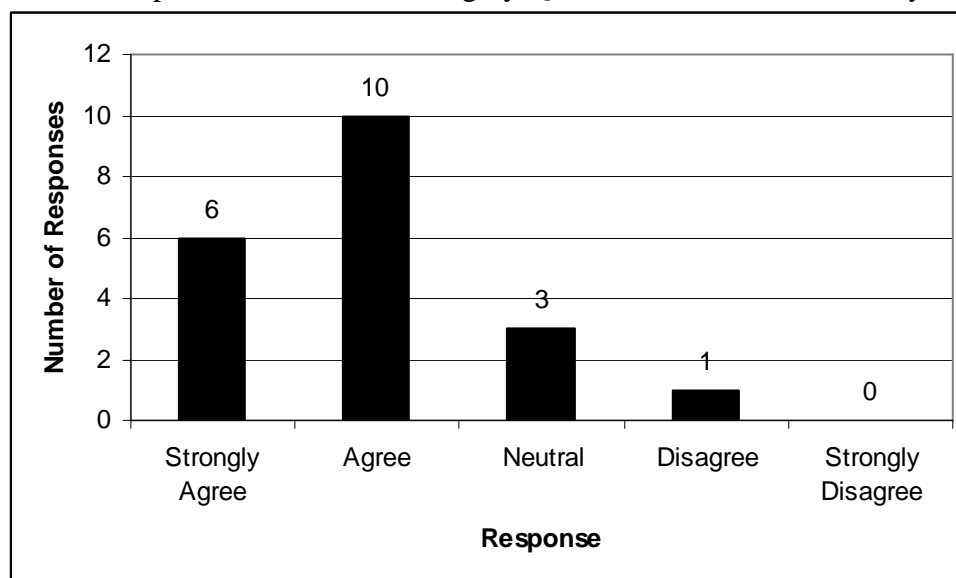
As indicated above, the majority of respondents agreed with this statement. In fact, none of the respondents disagreed with the statement.

Figure 10. To Help Clarify the Program's Mission and Future Direction



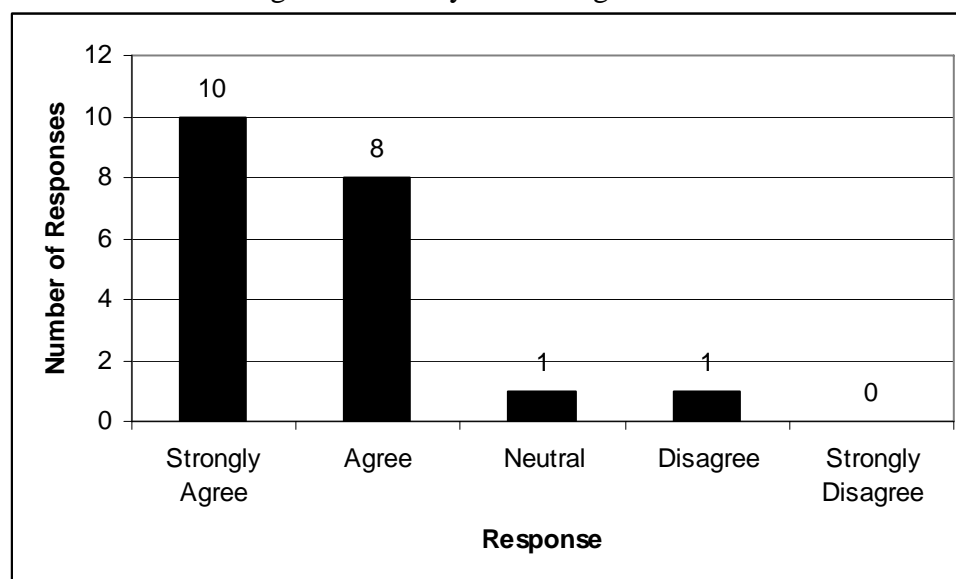
Although the overall responses to this statement were generally in agreement, there were five respondents indicating neutrality on this statement. Nonetheless, no respondents disagreed with this statement.

Figure 11. To Help Attract and Recruit Highly Qualified Students and Faculty



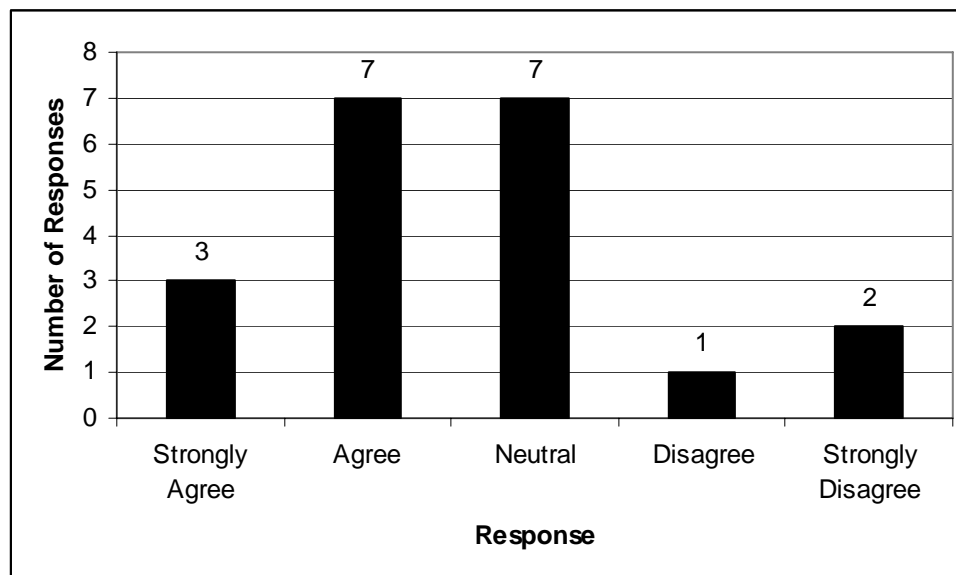
Although 80 percent of responses to this item were in agreement, there was one respondent who disagreed that attracting and recruiting qualified students and faculty was a reason why their program sought and attained AABI accreditation. Additionally, three respondents indicated neutrality with this statement.

Figure 12. To Enhance Program Visibility and Recognition



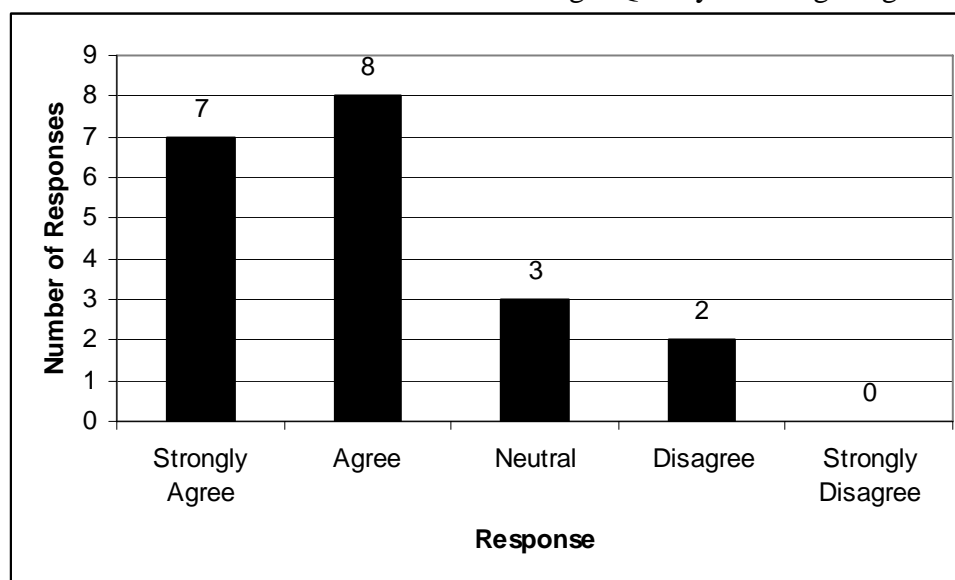
This item garnered a high level of agreement among respondents. Specifically, 90 percent of respondents agreed that enhancing program visibility and recognition was a reason for seeking and attaining AABI accreditation.

Figure 13. To Protect Programs from Internal Budgetary Constriction in Periods of Curtailed Enrollment



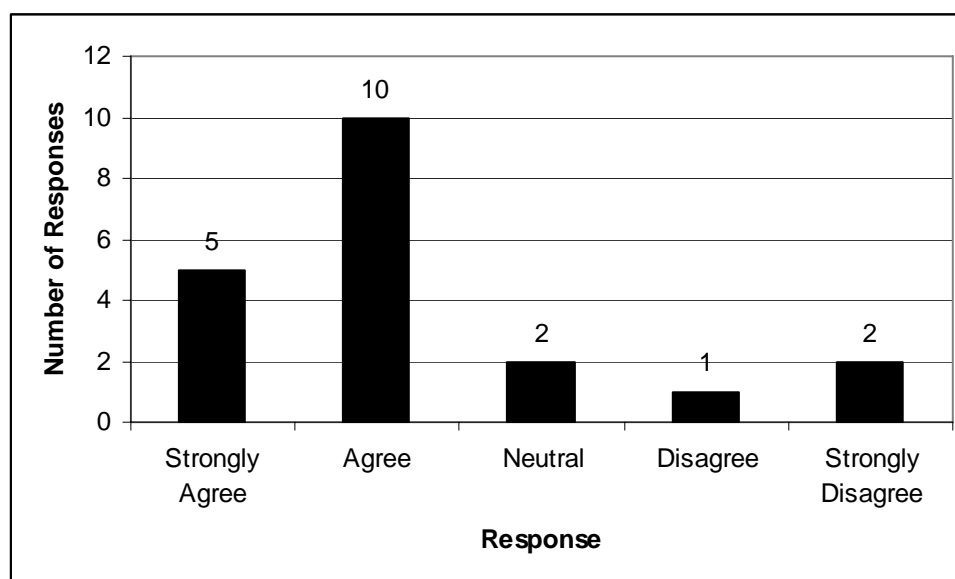
Although ten respondents agreed that their program sought and attained AABI accreditation to protect their program from internal budgetary constriction in periods of curtailed enrollment, a total of ten respondents were also neutral or in disagreement with this statement. Without regard for those indicating positions of neutrality, 50 percent agreed with the statement and 15 percent disagreed.

Figure 14. To Assist Potential Students in Selecting a Quality Training Program



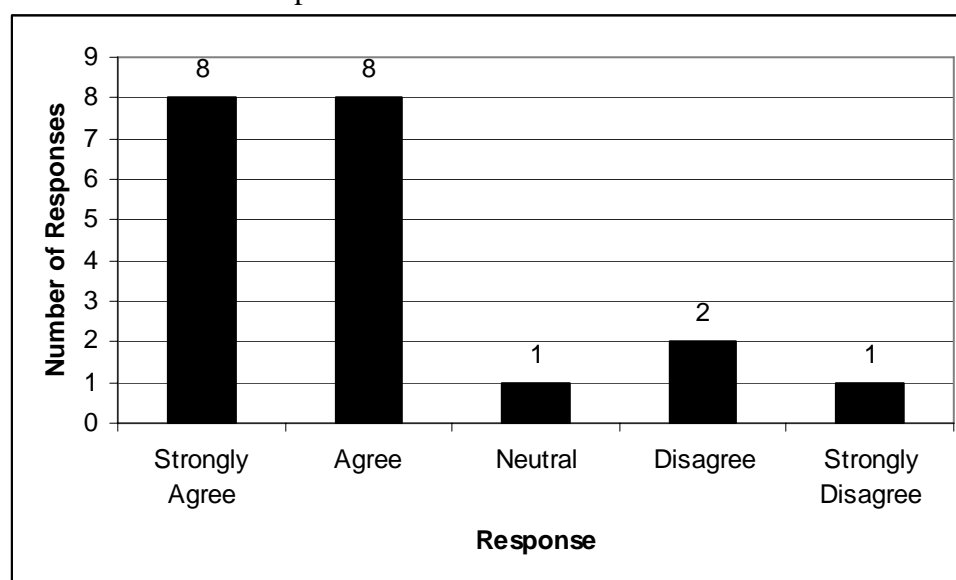
A full three-quarters of those responding to this item agreed that the decision to seek and attain AABI accreditation was to assist potential students in selecting a quality training program. However, 10 percent disagreed and 15 percent were neutral.

Figure 15. To Facilitate the Participation of Students and Faculty in an Intensive Program Evaluation



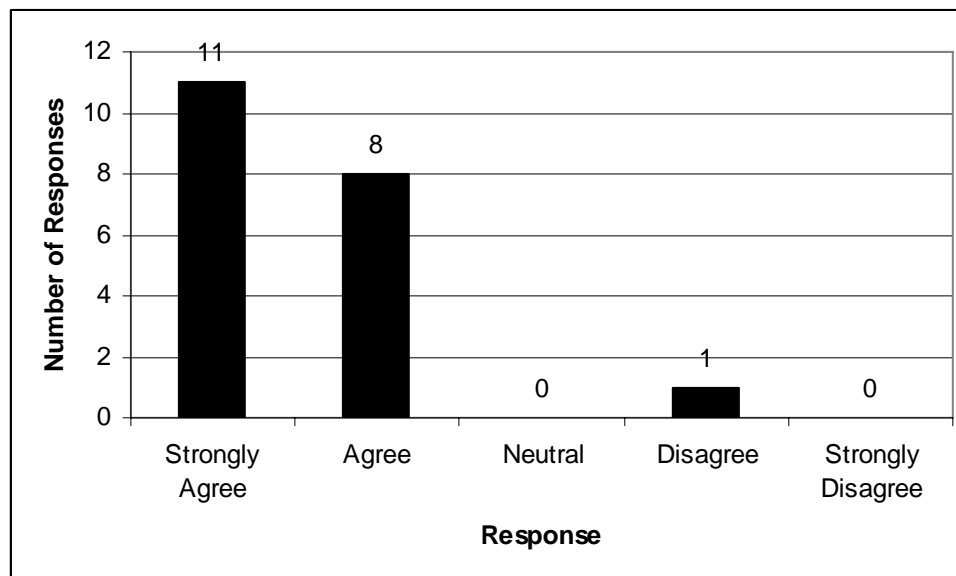
As previously discussed, the Self Study is an important component of the AABI accreditation process. This item sought to determine if the motivation needed to facilitate students and faculty in performing such an evaluation was one reason for having sought AABI accreditation. As indicated above, 75 percent of respondents agreed that this was an important reason.

Figure 16. To Identify for Employers Those Programs Which Have Successfully Met the Profession's Standards of Preparation



When presented with a statement concerning industry standards, 80 percent of respondents agreed that seeking AABI accreditation was the result of desiring to meet the industry's standards of preparation. Fifteen percent of respondents disagreed with this statement.

Figure 17. To Gain the Confidence of the Educational Community, Related Professions, and the Public

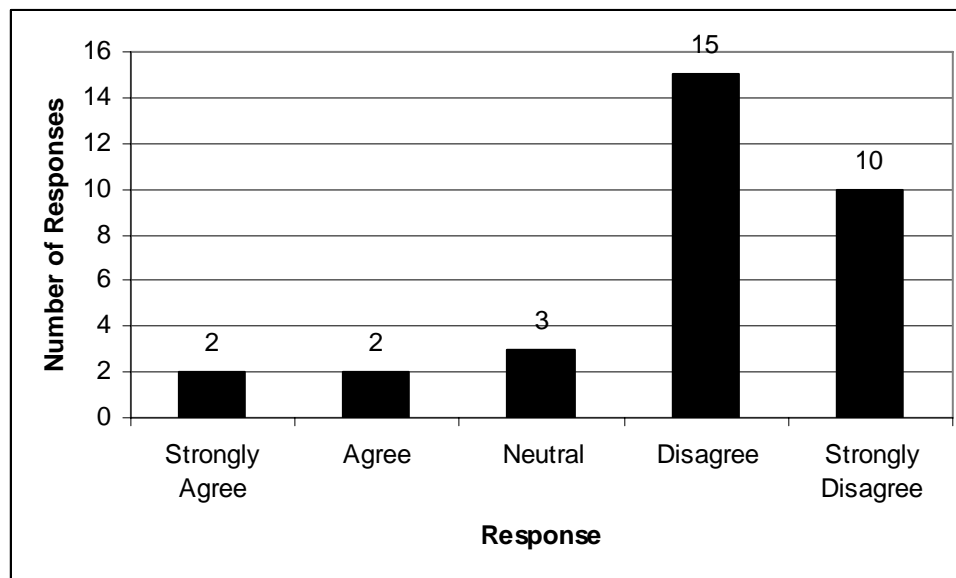


Strong agreement was indicated with this item. Indeed, a full 95 percent of respondents sought and attained AABI accreditation to gain the confidence of the educational community, related professions, and the public.

Research Question 7: Among administrators of non-AABI accredited programs, which beliefs most influenced the decision not to seek AABI accreditation?

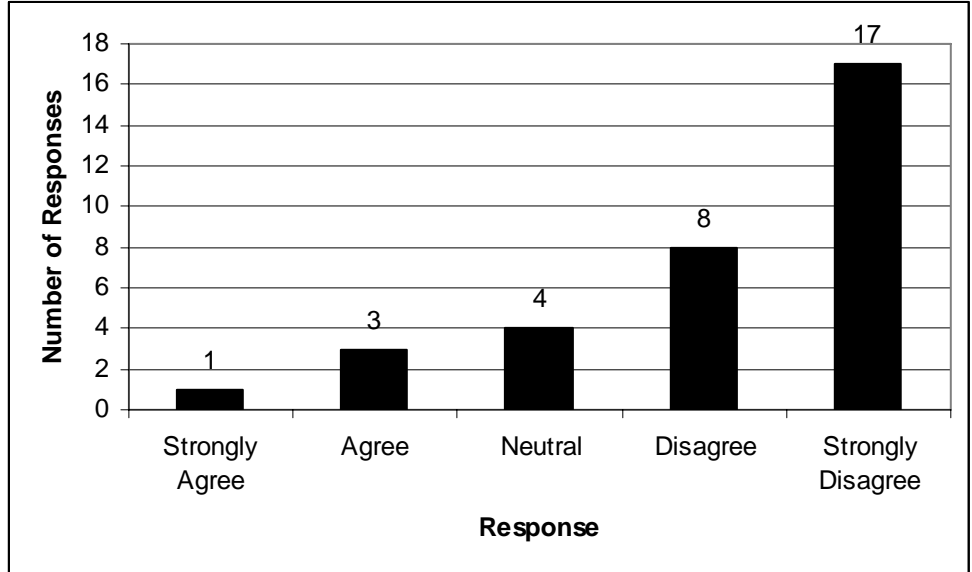
As in research question six, the data collected pertaining to this research question was on a Likert scale, resulting in ordinal data. Therefore, the most appropriate analysis involved examining the number of responses to each item. Administrators of non-AABI accredited programs were asked to indicate “how strongly the following statements reflect your beliefs as to why your program has not sought AABI accreditation.”

Figure 18. Our Program is too New to Seek Accreditation



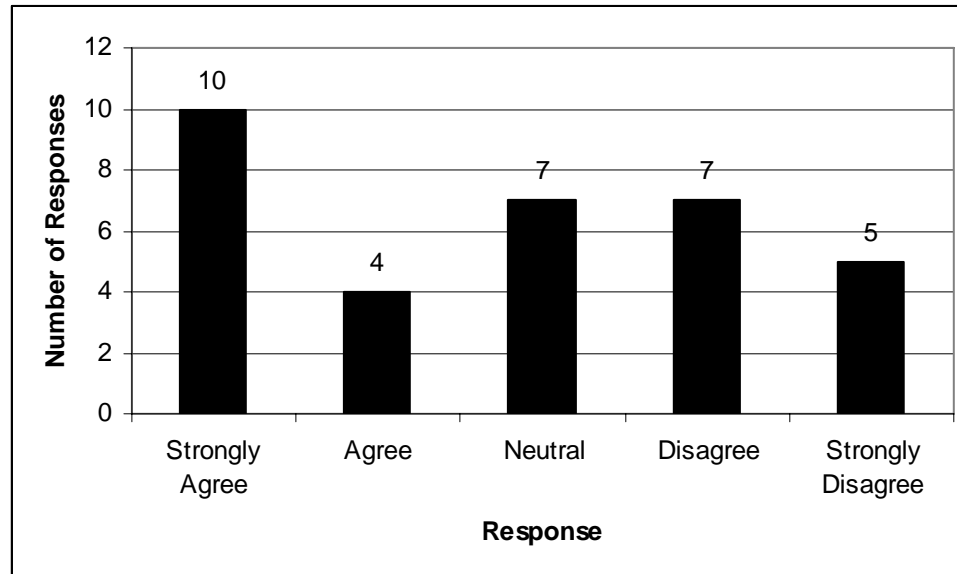
Overall, respondents indicated disagreement with this statement. In fact, over 78 percent of respondents disagreed that their program was too new to seek accreditation.

Figure 19. We Cannot get Approval from Dean and/or President to Seek AABI Accreditation



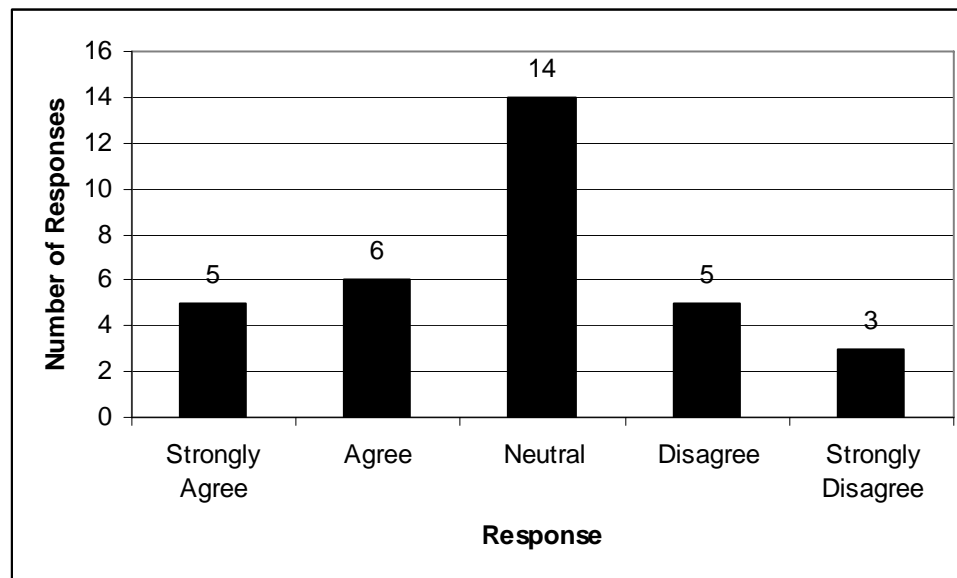
Similarly, the majority of administrators of non-AABI accredited programs do not indicate that obtaining approval from the dean and/or president is an obstacle in seeking AABI accreditation. Specifically, over 75 percent disagreed with this statement.

Figure 20. The Faculty in our Department do not Feel There are Adequate Benefits for the Cost and Time Involved



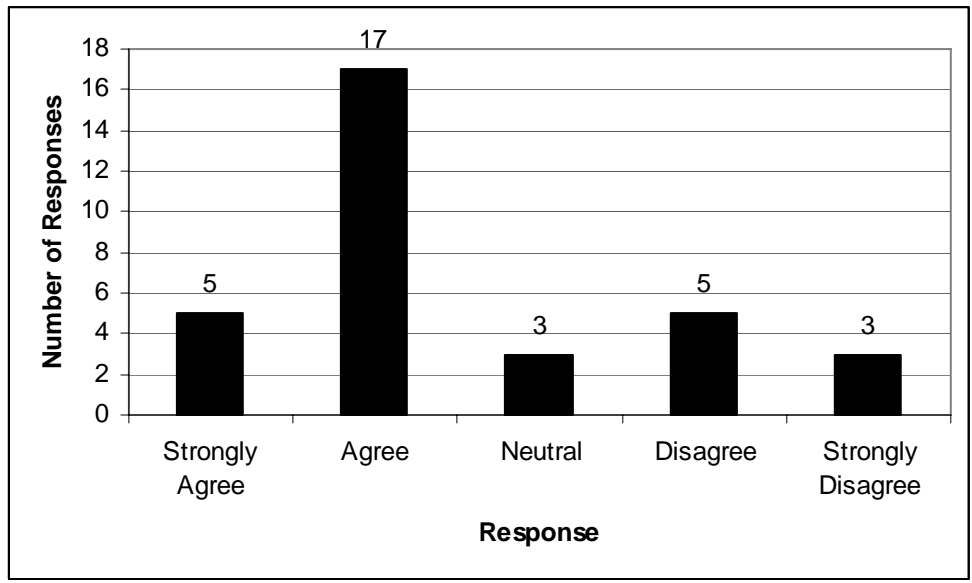
This particular item garnered a higher level of agreement than the two items previously discussed. According to the respondents, there are some faculty that do not feel there are adequate benefits for the cost and time involved in seeking AABI accreditation.

Figure 21. It is too Costly to Seek Accreditation



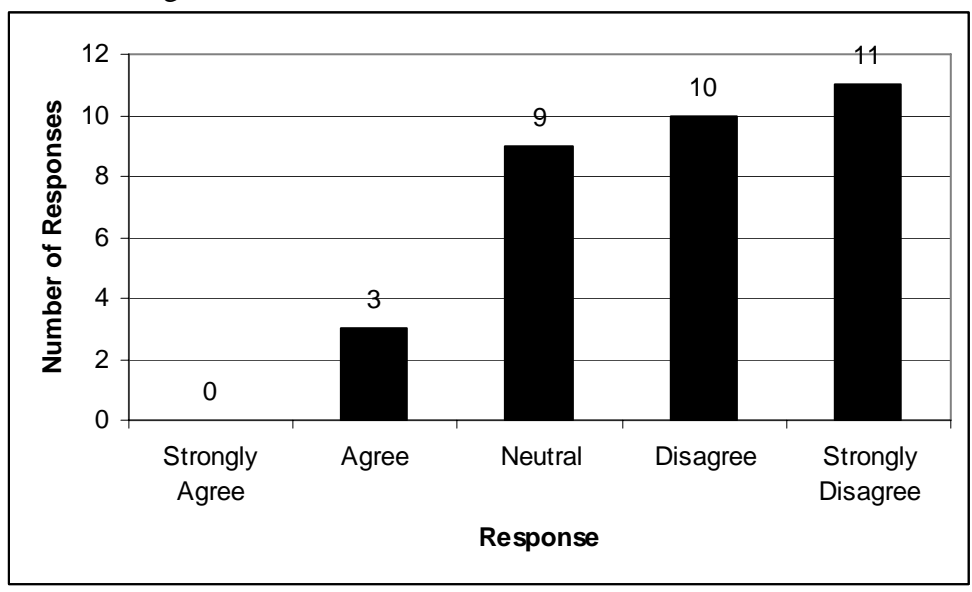
When asked if the price of seeking AABI accreditation was a reason why non-AABI accredited programs have not sought AABI accreditation, 42.4 percent were neutral. However, over 33 percent agreed with this statement. In contrast, almost 25 percent disagreed that the cost of seeking AABI accreditation played a role in their not having sought AABI accreditation.

Figure 22. The Preparation of the Required Self-Study is too Time Consuming



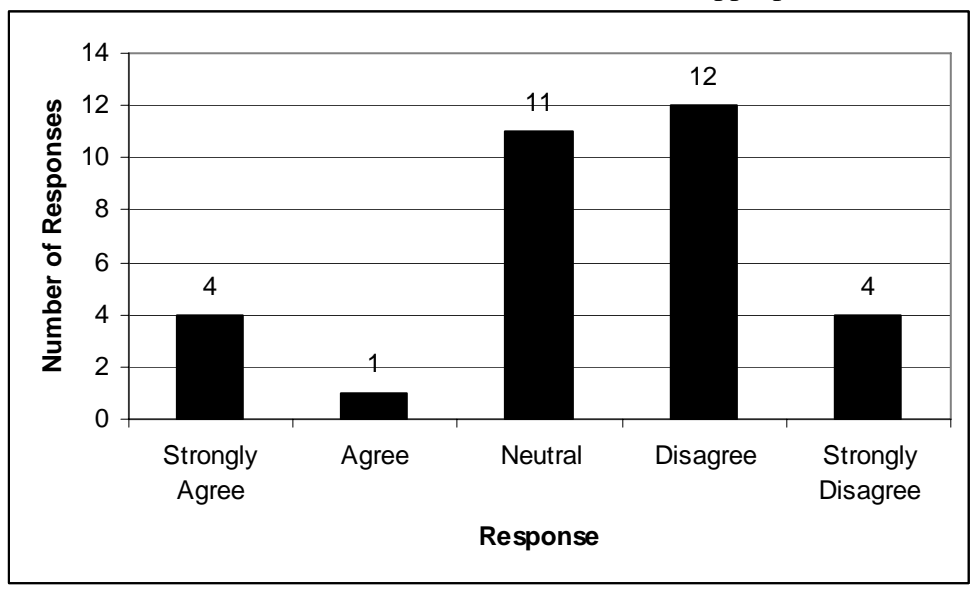
Although administrators of AABI accredited programs pointed to some benefits associated with the required self-study, this item sought to determine if this requirement was an obstacle in pursuing AABI accreditation among non-AABI accredited programs. According to the majority of those responding to this item, the preparation of the required self-study is indeed too time consuming. Specifically, almost 70 percent agreed that the required self study was a reason for not yet having pursued AABI accreditation.

Figure 23. Our Programs do not Meet AABI Standards



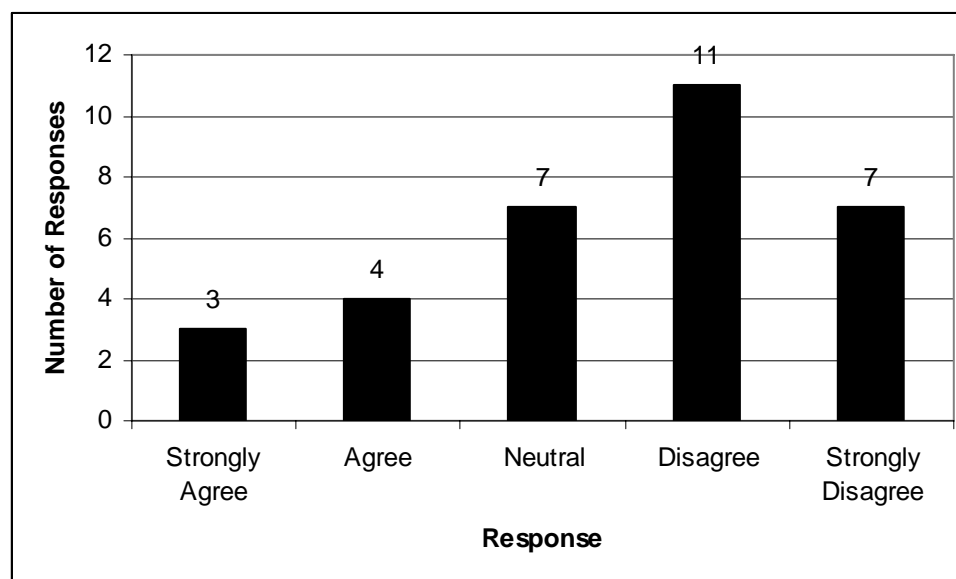
When presented with this statement concerning AABI standards, the majority of respondents disagreed with the idea that their programs do not meet AABI standards. In fact, only three respondents agreed with this statement.

Figure 24. We Feel the AABI Accreditation Standards are Inappropriate



While 15.6 percent of responding administrators agreed that AABI accreditation standards are inappropriate, many disagreed with this statement. In fact, 50 percent of respondents disagreed, while 34.4 percent were neutral.

Figure 25. We do not have Sufficient Information to Decide



When asked if programs had not pursued AABI accreditation due to lack of information, over 56 percent disagreed with this. However, 21.9 percent agreed that insufficient information has played a part in their decision not to pursue AABI accreditation.

Research Question 8: Does a preference exist among students regarding the factors considered influential on a student's decision as to which institution and aviation program to attend?

To collect data associated with this research question, a 12-item categorical scale was developed and incorporated into the "Survey of Aviation Program Students on AABI

Issues.” The scale resulted in nominal data being collected. Therefore, the chi-square goodness of fit test was appropriate in analyzing if preferences existed among students regarding the factors considered influential as to which institution and aviation program to attend. The null hypothesis was stated as follows:

H_0 : No preference exists among students regarding the factors considered influential on a student’s decision as to which institution and aviation program to attend.

Upon analysis of the data, the students showed significant preferences among the 12 items when selecting which institution and aviation program to attend, $\chi^2 (10, n = 149) = 58.819, p < 0.05$. With a critical region beginning at 18.31 at the 95 percent confidence interval, the decision was made to reject H_0 . Therefore, at the 0.05 level of significance, the data provide sufficient evidence to conclude that there is a significant preference among students regarding the items they considered when selecting which institution and aviation program to attend. It should be noted that although 35 students answered the question, they could select as many of the 12 categories as they desired, thus the total observed $n = 149$.

Table 7. Chi square Frequency Data

	Observed frequencies	Expected frequencies
Aviation training facilities	20	13.5
AABI accreditation status	3	13.5
Cost	22	13.5
Family member's alma mater	1	13.5
Financial aid/scholarships	20	13.5
Friends attending	6	13.5
Institutional accreditation status	15	13.5
Location	23	13.5
Particular professor	1	13.5
Reputation of institution or aviation program	21	13.5
Specific academic program	17	13.5

Additionally, qualitative data that addressed this research question was collected by presenting students with the following open-ended item: "Please share any further thoughts you may have on the AABI and the role of AABI accreditation in your education and future career opportunities. A total of 15 responses were received, which were analyzed using content analysis (see Appendix U). This resulted in the responses being categorized into five theme categories (see Table 8).

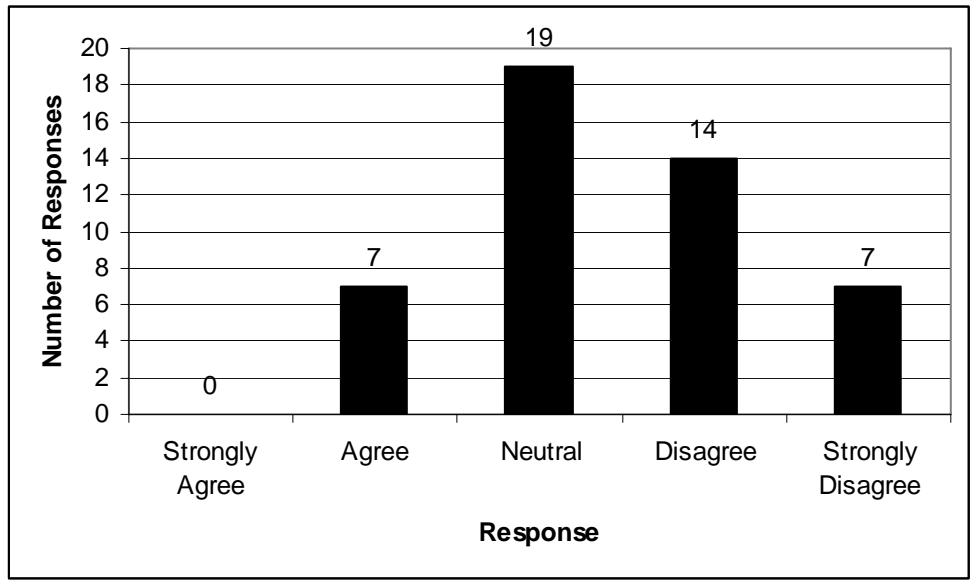
Table 8. Number of Responses by Students

Theme	Number of Responses
Lack of awareness	7
Appreciative of higher standards	4
Positive effect on career opportunities	2
No effect on career opportunities	2
Higher quality program	2

Research Question 9: Among aviation industry employers, what beliefs are most widely held regarding AABI accreditation?

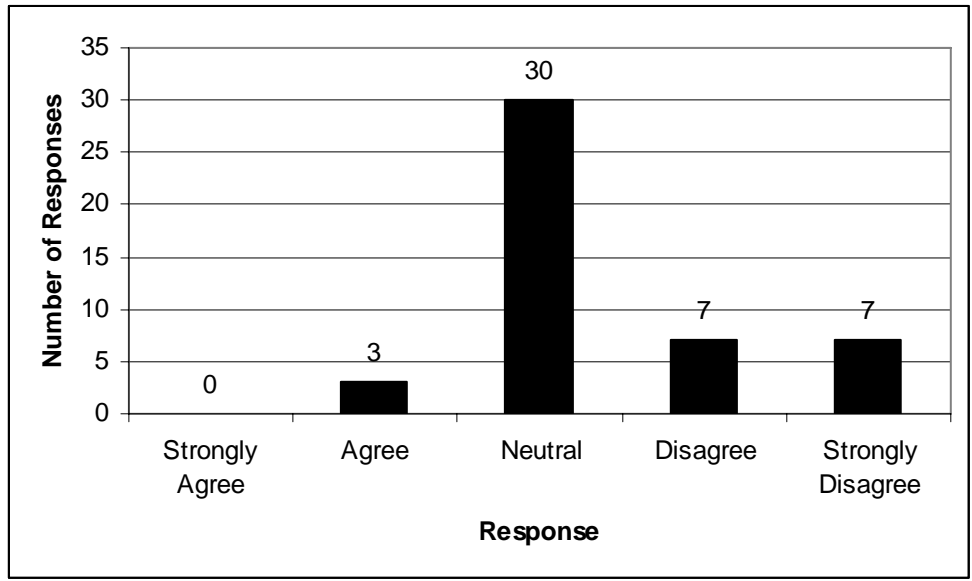
In an effort to answer this research question, four closed-ended items and one open-ended item were developed and included on the “Survey of Aviation Industry Employers on AABI Issues.” As the four Likert-scale items obtained ordinal data from one group, the number of responses was analyzed. Participants were asked to indicate their level of agreement or disagreement with each of the four following statements.

Figure 26. The AABI Should Better Market Itself to our Industry



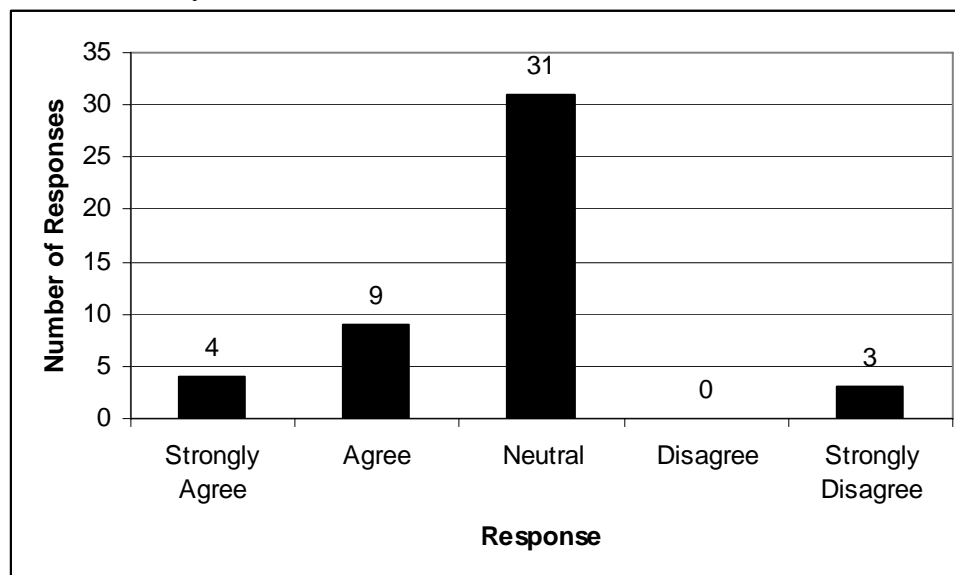
As indicated, respondents tended to disagree with this statement. Although 14.9 percent agreed with the statement, 40.4 percent were neutral.

Figure 27. Our Organization Prefers to Hire Graduates of AABI Accredited Programs



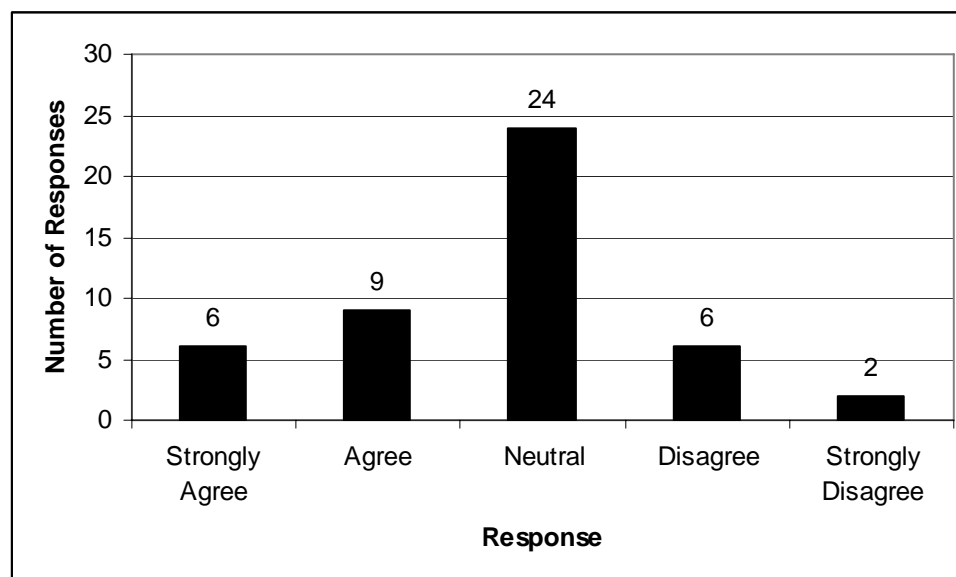
When presented with the statement, “Our organization prefers to hire graduates of AABI accredited programs,” 63.8 percent of respondents were neutral, indicating neither agreement nor disagreement. Almost 30 percent disagreed with this statement.

Figure 28. It Would be Beneficial to our Industry if more Collegiate Aviation Programs Became Accredited by the AABI



Similar to the item above, this item also garnered a high proportion of neutral responses. Indeed, 66 percent of respondents indicated a position of neutrality on this statement. However, almost 30 percent tended to agree that it would be beneficial if more collegiate aviation programs became accredited by the AABI.

Figure 29. Our Industry does not Realize any Direct or Indirect Benefits from the AABI and its Efforts



This last item aimed at discovering whether industry perceived any benefits from the AABI and its efforts. As with the items previously discussed, the majority of responses to this item were neutral. However, there was also some agreement (32 percent) and disagreement (17.1 percent) with this statement.

Additionally, employers were invited to respond to the following statement: “Please share any additional thoughts you may have on AABI accreditation and the hiring of recent college graduates by the aviation industry.” A total of 17 responses were received, which were then analyzed using content analysis (Appendix V). These responses were then categorized into five general themes. The number of responses in each of the theme categories is shown in Table 9.

Table 9. Number of Responses by Industry

Theme	Number of Responses
Lack of awareness	8
No benefits to industry	2
Positive benefits to industry	1
More industry contact needed	1
Better marketing needed	1

Research Question 10: Is there a relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI?

This research question was designed to determine the level of awareness among the four groups of stakeholders included in this study. Specifically, each of the four questionnaires contained the following identical item: “Prior to receiving this survey, I was unaware of the Aviation Accreditation Board International (AABI).” Participants were asked to rate their level of agreement with this statement on a five-point Likert scale. Because this item gathered ordinal data from four groups, the Kruskal-Wallis test was used to determine if a relationship exists among the four groups regarding their level of awareness of the AABI. As noted by Gravetter and Wallnau (2004, p. 650), “The Mann-Whitney test is limited to comparing only two treatments (or populations), whereas the Kruskal-Wallis test is used to compare three or more treatments (or populations).”

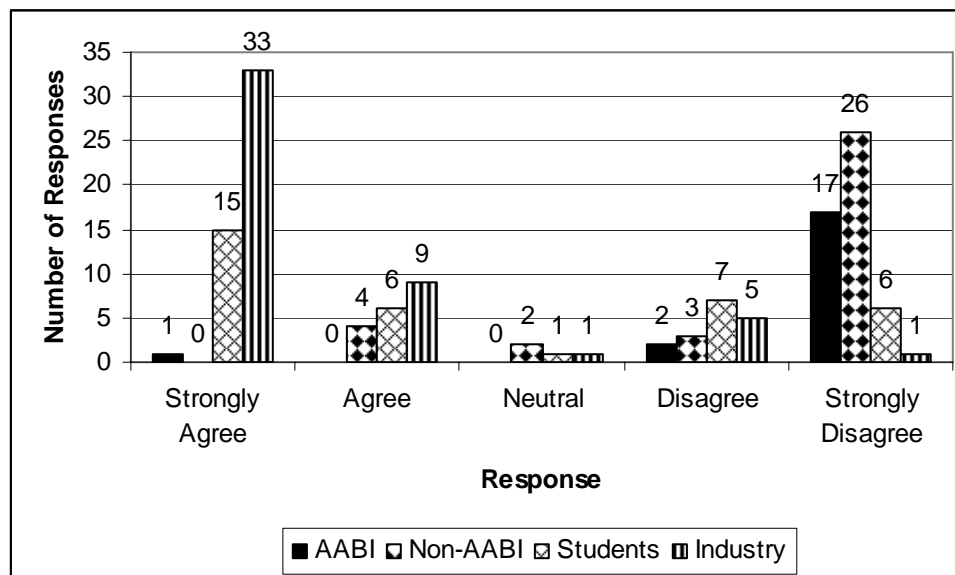
The null hypothesis of this test is similar to others previously presented in this study. In essence, there is no relationship among the groups on their level of awareness.

H₀: There is no relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI.

The outcome of the Kruskal-Wallis test indicated significant differences among the four groups regarding their level of awareness of AABI, $H = 77.602$ (3, $N = 139$), $p < 0.05$. With a critical region beginning at 7.81 at the 95 percent confidence interval, the decision was made to reject H₀. Therefore, at the 0.05 level of significance, the data provide sufficient evidence to conclude that there is a significant difference among administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI.

The number of responses by each of these groups is graphically portrayed in Figure 30.

Figure 30. Level of AABI Awareness



Research Question 11: Is there a significant difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value of AABI accreditation?

As the reader will recall, the main focus of this research effort was to determine why so few collegiate aviation programs are accredited by AABI. To answer this question, the perceived value of AABI was measured for each of the groups (administrators of AABI accredited programs, administrators of non-AABI accredited programs, collegiate aviation students, and industry employers). In essence, each of the four researcher-designed questionnaires included an item containing a 10 point scale that instructed participants to indicate, on a scale of 1 to 10, how valuable they feel AABI accreditation is to collegiate aviation, students, or industry (depending on the population being surveyed). This item collected interval data and allowed for the only use of a

parametric test during this study. The test chosen to analyze this data was the analysis of variance (ANOVA). The ANOVA was chosen because of its appropriateness to evaluate mean differences between two or more populations. For the purpose of this test, the following null hypothesis was developed:

H_0 : There is no difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value of AABI accreditation.

To evaluate mean differences, the mean of each group on the 10 point scale had to be determined. These means and standard deviations are shown in Table 10.

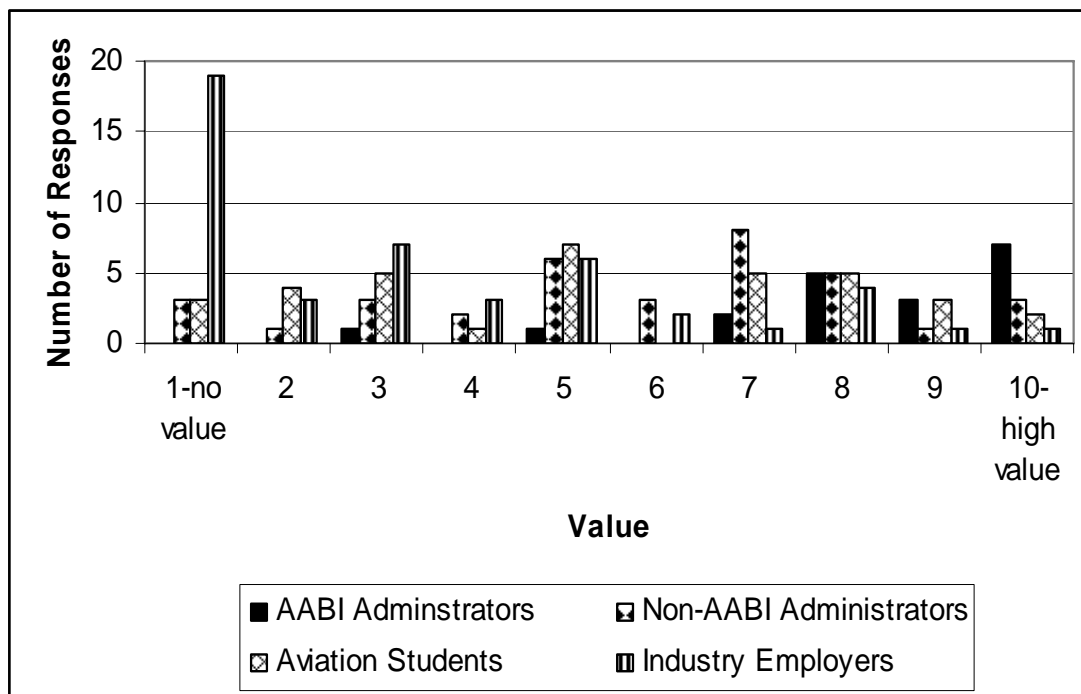
Table 10. Mean and Standard Deviation of Perceived Values of AABI Accreditation

Group	<i>M</i>	<i>s</i>
AABI	8.3684	1.8918
Non-AABI	5.8571	2.5221
Students	5.3428	2.7859
Industry	3.3617	2.6327

Note: 1 equates to no value, while 10 equates to high value.
M=mean; *s*=standard deviation.

Figure 31 is a graphical representation of the frequency of responses to this scale.

Figure 31. Perceived Value of AABI Accreditation



Note: Columns represent the actual number of responses among each survey group for each of the ten levels of perceived value.

As seen in Figure 31, it would appear that industry employers generally perceive no (or very little) in AABI accreditation; administrators of non-AABI accredited programs and collegiate aviation students perceive some value in AABI accreditation, while administrators of AABI accredited programs perceive high value in AABI accreditation. However, are these differences statistically significant? To determine this, a parametric test with an independent-measures design was necessary. Thus, a single-factor ANOVA was chosen to determine whether the observed sample mean differences are larger than expected by chance (Gravetter and Wallnau, 2004).

The analysis of variance revealed a significant difference, $F(3, 132) = 18.619$, $p < 0.05$, $r^2 = 0.297$. Thus, H_0 is rejected (See Table 11). However, since we are comparing four group means, this result only indicates that there is at least one mean difference greater than would be expected by chance. To better understand which mean differences are significant and which are not, a Scheffe post hoc test was also performed on the data. The Scheffe test was chosen because as Gravetter & Wallnau (2004, p. 428) explain, "Because it uses an extremely cautious method for reducing the risk of a Type I error, the Scheffe test has the distinction of being one of the safest of all possible post hoc tests." The Scheffe posttest indicates a significant difference exists between all groups, with the exception of between non-AABI administrators and students.

Table 11. ANOVA Summary Table

<i>SOURCE</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between groups	365.373	3	121.791	18.619
Within groups	863.444	132	6.541	
Total	1228.816	135		

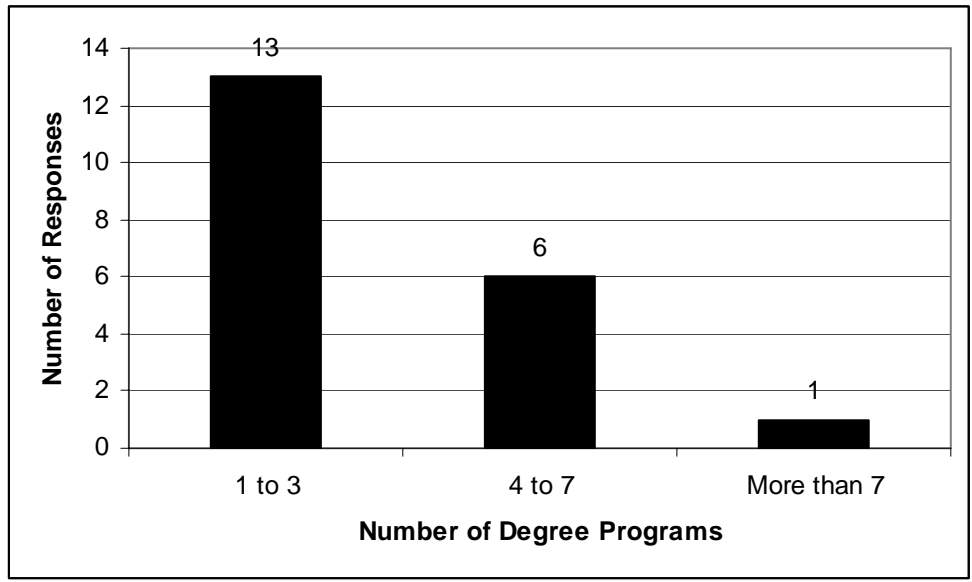
Additional findings

In addition to providing data to answer the 11 research questions, the questionnaires also collected some data, such as demographics, that were not directly necessary in answering the research questions. Nonetheless, in an effort to present the entire data set collected during this research effort, this section will present that data, organized by each of the four groups surveyed.

Administrators of AABI Accredited Programs

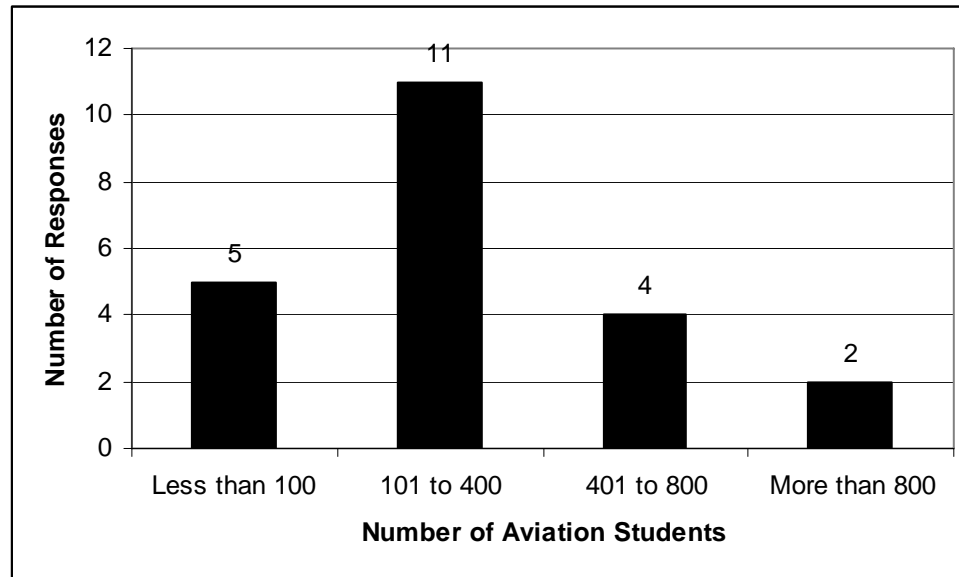
When asked how many aviation degree programs a responding institution currently provides, responses were obtained as shown in Figure 32.

Figure 32. Number of Aviation Degree Programs Among AABI Institutions



When asked about the total number of aviation degree-seeking students at a responding institution, responses were provided as shown in Figure 33.

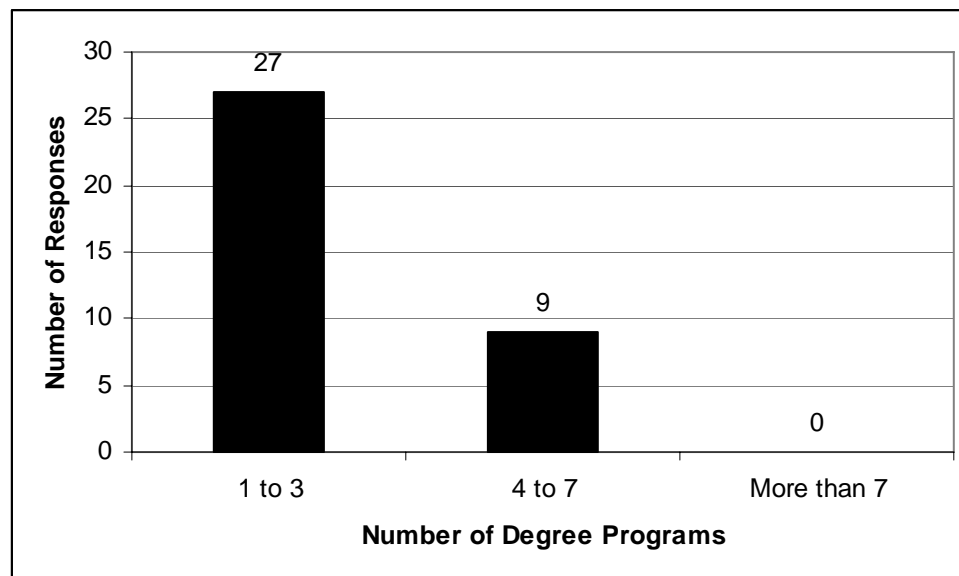
Figure 33. Number of Aviation Students Among AABI Institutions



Administrators of Non-AABI Accredited Programs

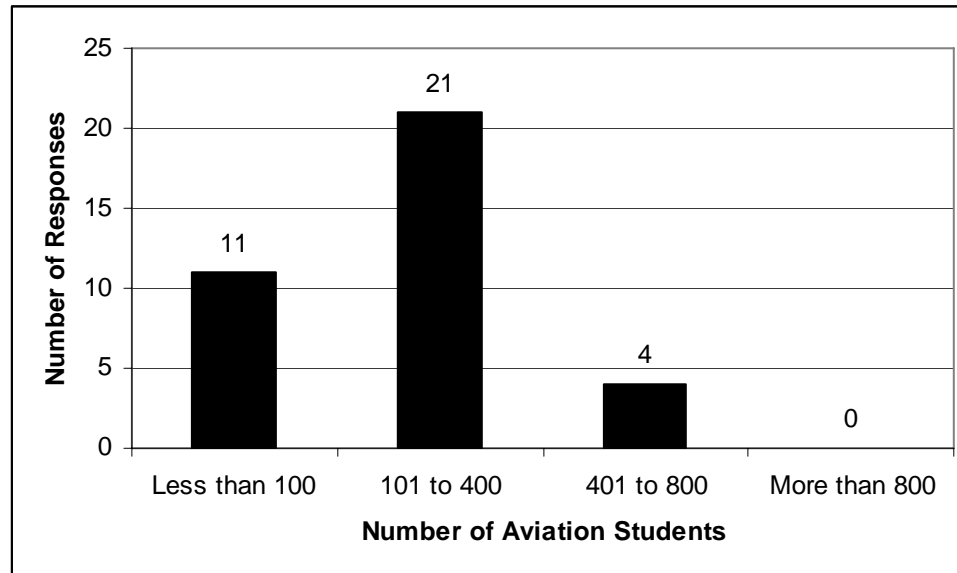
When asked how many aviation degree programs a responding institution currently provides, responses were obtained as shown in Figure 34.

Figure 34. Number of Aviation Degree Programs Among Non-AABI Institutions



When asked about the total number of aviation degree-seeking students at a responding institution, responses were provided as shown in Figure 35.

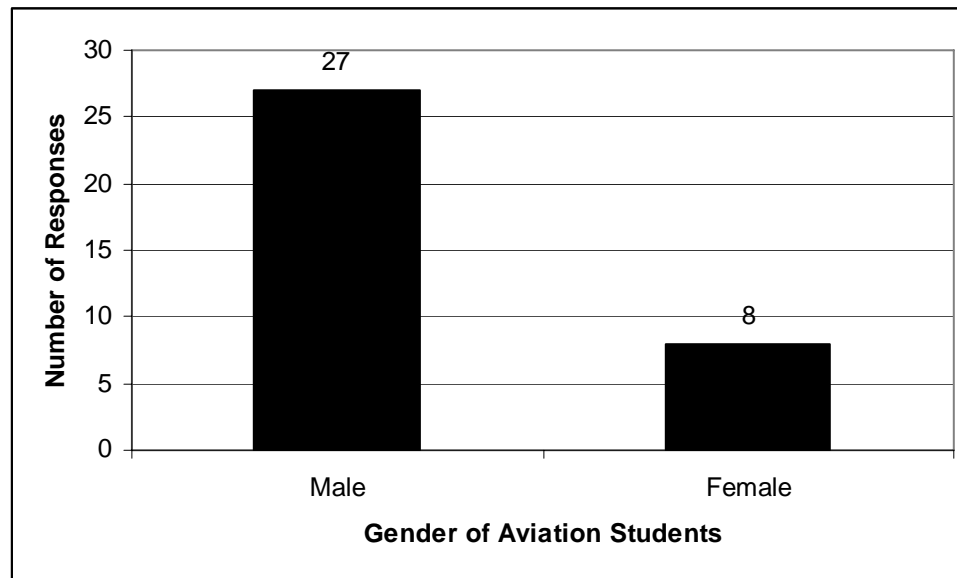
Figure 35. Number of Aviation Students Among Non-AABI Institutions



Aviation Program Students

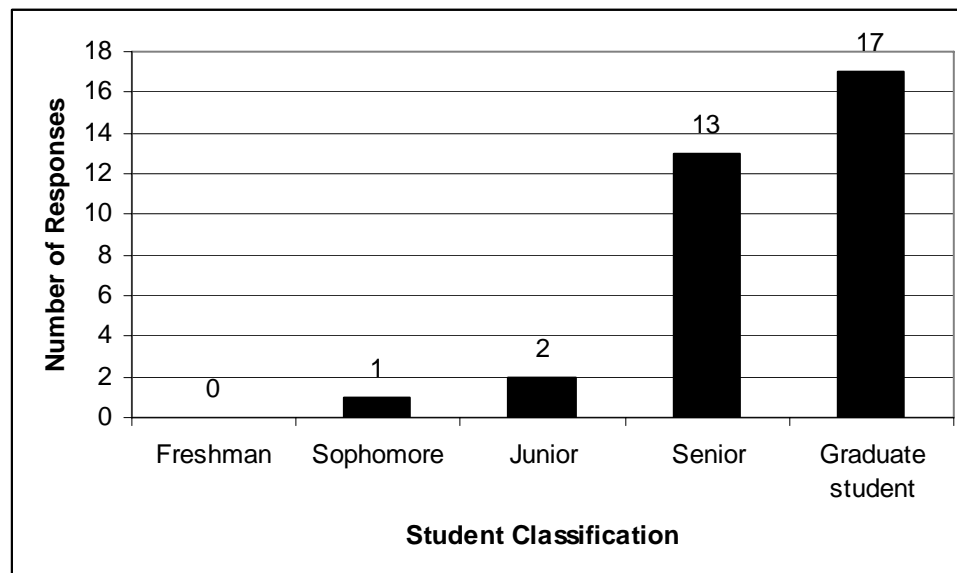
Responding students indicated their gender as shown in Figure 36.

Figure 36. Gender of Aviation Students



When asked about their year in school, students responded as shown in Figure 37.

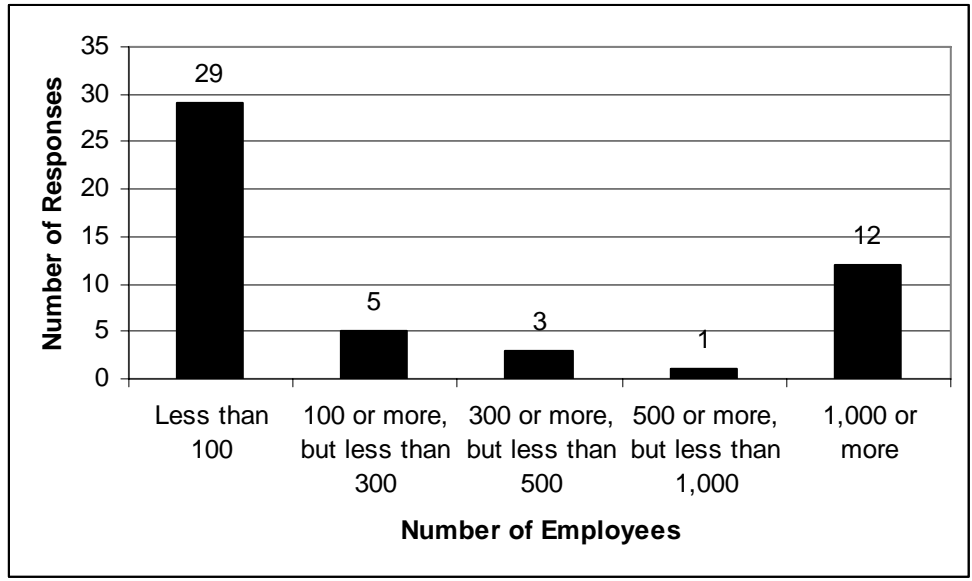
Figure 37. Student Classification



Aviation Industry Employers

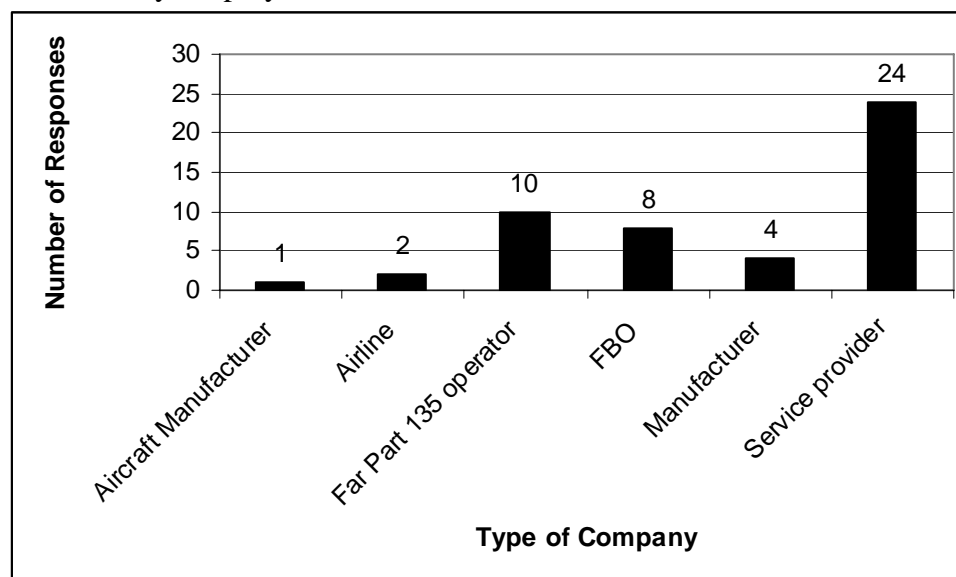
To determine the size of those industry employers responding to the survey, each was asked, “How many individuals are currently employed by your company?” Results are shown in Figure 38.

Figure 38. Aviation Industry Employer Size



Responding employers were also asked to characterize their company. Results are shown in Figure 39.

Figure 39. Industry Employer Classification



Summary

Although chapter four presented the results of an analysis of the data collected by this research effort, chapter 5 will draw conclusions from the data and present recommendations. Prior to continuing to chapter 5, however, it may be helpful to review a summary of the highlights of chapter 4, as they relate to the 11 research questions that guided this research effort.

1. Why are AABI accredited aviation programs currently accredited?

Although this specific question was not asked of participants, administrators of AABI accredited programs were asked to explain why the aviation program(s) at their institution initially decided to seek AABI accreditation. A content analysis of these qualitative responses resulted in all of the responses being categorized into the following eight general themes (in declining number of responses): (a) status/prestige, (b) standards, (c) recruiting

mechanism, (d) external peer review, (e) program improvement, (f) required, (g) industry relations/benefits, and (h) leverage.

2. Are administrators of AABI accredited aviation programs motivated to maintain existing AABI accreditation?

Fully 100 percent of responding administrators from AABI accredited programs explained their program does have plans to maintain existing AABI accreditation.

3. Why are non-AABI accredited aviation programs currently not accredited?

Participants were invited to respond to the following question in an open-ended manner: “Explain why the aviation programs at your institution are not currently AABI accredited.” All of the responses were categorized into the following seven general themes (in declining number of responses): (a) time/expense/effort versus benefits, (b) currently pursuing AABI accreditation, (c) curriculum requirements/standards, (d) smaller program, (e) similar accreditation, (f) lack of awareness, and (g) currently successful.

4. Are administrators of non-AABI accredited aviation programs motivated to seek initial AABI accreditation?

Although over 65 percent of respondents from non-AABI accredited programs have plans to pursue AABI accreditation at some point in the future, a chi-square goodness of fit test did not allow a rejection of the null hypothesis. In essence, the data do not provide sufficient evidence to conclude that there is a significant difference among administrators of non-AABI accredited programs regarding their plans to pursue AABI accreditation at some point in the future.

5. Is there a relationship between administrators of AABI accredited programs and non-AABI accredited programs regarding their views of AABI and the benefits of AABI accreditation?

Four items were measured to provide insight into the relationship highlighted in this research question. Specifically, the Mann-Whitney *U*-test found sufficient evidence to support a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with two statements: (a) “AABI accreditation is beneficial to the AABI accredited program,” and (b) “It would be beneficial if more aviation programs were accredited by the AABI.” On the other hand, the data do not provide sufficient evidence to conclude there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following two statements: “Prior to receiving this survey I was unaware of the Aviation Accreditation Board International,” and (b) “The AABI should better market itself to collegiate aviation programs.”

6. Among administrators of AABI accredited programs, which beliefs most influenced the decision to seek and attain AABI accreditation?

Nine items were developed to address this research question. Based on the frequency of responses, eight of the nine items were agreed to by a minimum of 75 percent of respondents. The following item was agreed to by only 50 percent of respondents: “To protect programs from internal budgetary constriction in periods of curtailed enrollment.”

7. Among administrators of non-AABI accredited programs, which beliefs most influenced the decision not to seek AABI accreditation?

Eight items were developed to address this research question. Based on frequency of responses, the following four items were disagreed with by the majority of respondents: (a) “Our program is too new to seek accreditation,” (b) “We cannot get approval from dean and/or president to seek AABI accreditation,” (c) “Our programs do not meet AABI standards,” and (d) “We feel the AABI accreditation standards are inappropriate.” The majority of respondents only agreed to the following item: “The preparation of the required self-study is too time consuming.” Lastly, the following two items gathered a fairly even response of agreement and disagreement: (a) “The faculty in our department do not feel there are adequate benefits for the cost and time involved,” and (b) “It is too costly to seek accreditation.”

8. Does a preference exist among students regarding the factors considered influential on a student’s decisions as to which institution and aviation program to attend?

Based on an analysis of the data using the chi square goodness of fit test, the data provided sufficient evidence to conclude there is a significant preference among students regarding the items they considered when selecting which institution and aviation program to attend. Based on frequency of responses, students most considered location, cost, reputation of institution or aviation program, financial aid/scholarships, and aviation training facilities.

9. Among aviation industry employers, what beliefs are most widely held regarding AABI accreditation?

Four items were developed to address this research question. The majority of respondents were neutral with regard to three of these four items. Although they also indicated strong neutrality, 44.7 percent disagreed with the following statement: “The AABI should better market itself to our industry.”

10. Is there a relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI?

In an effort to address this research question, each participant within the four groups was asked about their level of awareness of AABI. A Kruskal-Wallis test revealed a significant difference among the four groups regarding their level of awareness of the AABI.

11. Is there a significant difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value AABI accreditation?

By utilizing a ten-point interval scale, an ANOVA combined with a Scheffe post hoc test were used to determine whether there was a difference among the four groups regarding their level of perceived value of AABI accreditation. These tests discovered that a significant difference in perceived value exists among and between all groups (with the exception of between non-AABI administrators and students).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

The final chapter of this dissertation attempts to draw conclusions from the data presented in chapter four. In essence, this chapter contains a review of the purpose of the study, conclusions arrived at as a result of the study, discussion of the results, contributions of the study, recommendations, and areas for further research.

Purpose

The main objective of this study was to explore the reasons why so few collegiate aviation programs are accredited by the only specialized accrediting organization in collegiate aviation: the Aviation Accreditation Board International (AABI). Based on that objective, the study had several purposes: (a) to discover why AABI accredited programs are currently accredited and their reasons for maintaining that accreditation; (b) to discover why non-AABI accredited programs are not accredited and if there are motivations for pursuing AABI accreditation; (c) to discover if collegiate aviation students made decisions as to which institution to attend based on AABI accreditation status; (d) to discover if aviation industry employers prefer to hire graduates of AABI accredited programs; (e) to determine the level of awareness of AABI among aviation program administrators, aviation students, and aviation industry employers; and (f) to measure the perceived value of AABI accreditation among collegiate aviation program administrators, collegiate aviation students, and aviation industry employers.

To properly achieve these objectives, four groups were surveyed as part of this research study: (a) administrators of AABI accredited programs, (b) administrators of

non-AABI accredited programs, (c) collegiate aviation students, and (d) aviation industry employers. The study utilized a non-experimental, mixed method research design, with both quantitative and qualitative attributes. Quantitatively, the research study utilized descriptive research and cross-sectional survey research. In this sense, the study endeavored to “investigate the current status” of AABI accreditation, by seeking the perceptions of the four groups of stakeholders included in the study (McMillan, 2004). Additionally, the study exhibited qualitative attributes by collecting written responses from participants concerning their views of AABI accreditation.

As this study yielded both quantitative and qualitative data, various data analysis techniques were used. Non-parametric quantitative data was analyzed using chi-square, Mann Whitney *U*, and Kruskal-Wallis tests. Parametric quantitative data was analyzed using analysis of variance. Qualitative data was analyzed using content analysis. In every possible instance, effort was made to triangulate the data so that research questions were addressed using both quantitative and qualitative data. In this way, findings were enhanced than if only one type of data had been collected.

Conclusions

A major finding of the literature review was that very few studies have been conducted on the topic of specialized accreditation in collegiate aviation. Whether referring to the Council on Aviation Accreditation, or more recently, the Aviation Accreditation Board International, only one study (other than Prather, 2006a and 2006b) could be located on this topic (Sherman, 2006). Sherman’s (2006) study investigated the reasons programs have for seeking AABI accreditation, the time required to complete the various phases of the self-study process, the costs of accreditation, and the use of faculty

and staff to complete the self-study. The findings of this research effort seem to corroborate Sherman's findings, insofar as AABI accredited programs believe in AABI accreditation and point to the many benefits of AABI accreditation (such as higher quality, benefits of external peer review, prestige, etc.). His findings as to why non-AABI accredited programs are not accredited were also similar to those uncovered during this research effort (including lack of awareness among students and industry, expense involved, and standards which are only applicable to larger programs).

In addition to Sherman's (2006) study on specialized accreditation in collegiate aviation, studies in other fields were also reviewed to gain insight into the specialized accreditation process and the perceived benefits in those fields. Specifically, a total of eight studies were reviewed in the fields of engineering and technology, business, social work, recreation and parks, nursing, and counselor education. Although these studies were conducted in fields other than aviation, their findings are very similar to those obtained in this study. Specifically, some of the reasons these programs did not pursue specialized accreditation include issues with accreditation criteria and lack of resources (Farr & Bowman, 1999); expense and effort, no pressure from current stakeholders, not able to meet standards and lack of time to conduct the self study (Roller, et al., 2003); graduation from an accredited program not required for employment (Kniess, 1986); and costs and uncertainty regarding the validity of the accreditation criteria (Gropper, 1986). In contrast, some of the reasons for pursuing specialized accreditation include accountability for program improvements, opportunities to share success with peer institutions, marketing advantages, faculty recruitment advantages, prestige (Roller, et al., 2003); recommendation by administration (Litwack, 1986); status, prestige, increased

self-confidence of faculty, student career benefits (Gropper, 1986); and economic and status reasons (Rosenbaum, 1984). Although the many of these studies are over 20 years old, their findings were similar to those obtained in this current research effort.

Conclusions drawn from this study are varied, and best reviewed in light of each of the 11 research questions that guided this study.

1. Why are AABI accredited aviation programs currently accredited?

The answer to this question may be summed up with a brief statement: “Because they believe in it.” More specifically, administrators of AABI accredited programs are committed to the specialized accreditation process and AABI accreditation in particular. Many of these administrators play an active role in AABI, chairing committees and playing an integral role in matters such as revising the accreditation standards. They enjoy the prestige of being in a select group of AABI accredited programs. They appreciate being held to higher standards, and the benefits realized by reaching these higher standards. They use their AABI accreditation status as a recruiting mechanism, for both students and new faculty. They also benefit from having a rigorous external review of their programs. Accreditation seems to create a culture of continuous program improvement, which then leads to better career opportunities for students and stronger relations with industry. As one respondent adequately summarized, “We wanted to be in step with the best aviation programs in the USA.”

2. Are administrators of AABI accredited aviation programs motivated to maintain existing AABI accreditation?

Of those responding to the survey, the answer is clearly, “Yes.” In fact, 100 percent of responding administrators of AABI accredited programs are motivated to maintain existing AABI accreditation. Thus, it seems that although obtaining AABI

accreditation is not without sacrifice, once it has been obtained, the benefits are real, and it is in the program's best interest to maintain this accreditation.

3. Why are non-AABI accredited aviation programs currently not accredited?

The data tends to suggest that these non-AABI accredited programs are not accredited due mainly to the costs involved and the perceived lack of related benefits. Additional reasons include the inappropriate standards, the apparent tailoring of AABI standards to larger programs, lack of awareness, and currently successful without AABI accreditation. Interestingly, seven comments by respondents pointed to their current efforts to pursue AABI accreditation.

4. Are administrators of non-AABI accredited aviation programs motivated to seek initial AABI accreditation?

Although 65.7 percent of responding administrators stated that their programs do have plans to pursue AABI accreditation at some point in the future, the data, as a result of a chi-square analysis at the 0.05 level of significance, do not provide sufficient evidence to conclude that there is a significant difference among administrators of non-AABI accredited programs regarding their plans to pursue AABI accreditation at some point in the future.

To support this quantitative data, qualitative data was also collected to explore why some non-AABI accredited programs made the decision to begin pursuing AABI accreditation. Of these seven themes uncovered in this data, two themes were most widely held among respondents: (a) prestige/credibility, and (b) required by the university. So, on the one hand, it is a voluntary motivation for a higher level of prestige and credibility, and on the other, a mandate from administration. This would lead one to believe that the source of motivation is just as important as the level of motivation

expressed by administrators of non-AABI accredited programs. Indeed, a mandate for accreditation would likely lead to a reluctant pursuit of AABI accreditation with little buy-in and inadequate understanding of the benefits of such accreditation.

5. Is there a relationship between administrators of AABI accredited programs and non-AABI accredited programs regarding their views of AABI and the benefits of AABI accreditation?

To answer this question, four items were developed and appeared on the questionnaire for both administrators of AABI accredited programs and non-AABI accredited programs. A Mann-Whitney *U*-test found sufficient evidence to support a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with two statements: (a) “AABI accreditation is beneficial to the AABI accredited program,” and (b) “It would be beneficial if more aviation programs were accredited by the AABI.” The first statement garnered 90 percent agreement by administrators of AABI accredited programs and 57.1 percent agreement by administrators of non-AABI accredited programs. The second statement garnered 85 percent agreement by administrators of AABI accredited programs and only 42.9 percent agreement from administrators of non-AABI accredited programs.

On the other hand, the data do not provide sufficient evidence to conclude there is a significant difference among administrators of AABI accredited and non-AABI accredited programs regarding their level of agreement with the following two statements: “Prior to receiving this survey I was unaware of the Aviation Accreditation Board International,” and (b) “The AABI should better market itself to collegiate aviation programs.” The first statement garnered 95 percent disagreement by administrators of AABI accredited programs and 82.9 percent disagreement by administrators of non-

AABI accredited programs. The second statement garnered 45 percent agreement by administrators of AABI accredited programs and 37.2 percent agreement by administrators of non-AABI accredited programs.

Clearly, these two groups of administrators significantly differ with respect to their belief of the benefits of AABI accreditation to the AABI accredited program and the need for more programs to be AABI accredited. Generally, administrators of existing AABI accredited programs are pro-AABI, while those chairing programs not accredited by AABI tend to be opponents, or at least willing to question the proposed benefits. There are however, some areas of agreement, or at least areas lacking a significant difference among these two groups. First, both groups tend to be aware of AABI. Second, both administrators of AABI accredited programs and administrators of non-AABI accredited programs tended toward neutrality (50 percent and 60 percent, respectively) with regard to whether the AABI should better market itself to collegiate aviation programs. This finding would make sense, as both groups are aware of AABI, but also likely aware of programs not aware of AABI; thus the tendency to stay the middle ground with this item.

6. Among administrators of AABI accredited programs, what beliefs most influenced the decision to seek and attain AABI accreditation?

The nine items developed to gain insight into this research question were generally agreed to by a minimum of 75 percent of respondents. However, one item was agreed to by only 50 percent of respondents: “To protect programs from internal budgetary constriction during periods of curtailed enrollment.” Therefore, the beliefs that most widely influenced the decision to seek and attain AABI accreditation, among administrators of AABI accredited programs, are as follows: (a) “To ensure that he

program meets standards established by the profession,” (b) “To help clarify the program’s mission and future direction,” (c) “To help attract and recruit highly qualified students and faculty,” (d) “To enhance program visibility and recognition,” (e) “To assist potential students in selecting a quality training program,” (f) “To facilitate the participation of students and faculty in an intensive program evaluation,” (g) “To identify for employers those programs which have successfully met the professions; standards of preparation,” and (h) “To gain the confidence of the educational community, related professions and the public.” When compared to qualitative responses collected during this study, these findings are expected and in line with respondent comments.

7. Among administrators of non-AABI accredited programs, what beliefs most influenced the decision not to seek AABI accreditation?

Eight items were included on the “Survey of Administrators of Non-AABI Accredited Programs” to address this research question. Based on frequency of responses, the following four items were disagreed with by the majority of respondents: (a) “Our program is too new to seek accreditation,” (b) “We cannot get approval from dean and/or president to seek AABI accreditation,” (c) “Our programs do not meet AABI standards,” and (d) “We feel the AABI accreditation standards are inappropriate.” The majority of respondents only agreed to the following item: “The preparation of the required self-study is too time consuming.” Lastly, the following two items gathered a fairly even response of agreement and disagreement: (a) “The faculty in our department do not feel there are adequate benefits for the cost and time involved,” and (b) “It is too costly to seek accreditation.”

These findings are similar to those discovered in other studies (Farr & Bowman, 1999; Gropper, 1986; Kniess, 1986; Liwack, 1986; Roller, et. al, 2003; Rosenbaum,

1984; & Sherman, 2006). In fact, many previous studies have found that most non-accredited programs question the resources necessary to pursue specialized accreditation, especially in the form of the voluminous self-study that must be prepared. Possibly best summarized by Farr & Bowman (1999, p. 11), “the challenge [for specialized accreditors in increasing the number of specialized accredited programs] will be to convince . . . program directors that the payoff outweighs the significant investment in resources required for accreditation.”

8. Does a preference exist among students regarding the factors considered influential on a student’s decision as to which institution and aviation program to attend?

Students were presented with a 12 item checklist and asked to mark any and all factors they considered when selecting which institution and aviation program to attend. Based on an analysis of the data using the chi square goodness of fit test, the data provided sufficient evidence to conclude there is a significant preference among students regarding the items they considered when selecting which institution and aviation program to attend. Based on frequency of responses, students most considered location (65.7 percent), cost (62.9 percent), reputation of the institution or aviation program (60 percent), financial aid/scholarships (57.1 percent), and aviation training facilities (57.1 percent). Only three respondents indicated that AABI accreditation status played a role in their decision making process.

In addition to this checklist, the questionnaire sent to students also contained an open-ended item inviting students to comment on AABI and the role of AABI accreditation in their education and future career opportunities. Of the 15 comments received, five theme categories were created using content analysis. The category with

the most responses can be titled, “Lack of awareness of AABI.” As one student expressed, “When I was a high school student looking at colleges, AABI certification wasn’t even something I thought of. When I was applying and interviewing for positions the topic never came up either.” Thus, the qualitative data seems to support the quantitative data in this regard.

9. Among aviation industry employers, what beliefs are most widely held regarding AABI accreditation?

In an effort to adequately answer this research question, a quantitative and qualitative approach was adopted. Quantitatively, the following four items were developed seeking participant’s level of agreement or disagreement with each one: (a) “The AABI should better market itself to our industry,” (b) “Our organization prefers to hire graduates of AABI accredited programs,” (c) “It would be beneficial to our industry if more collegiate aviation programs became accredited by the AABI,” and (d) “Our industry does not realize any direct or indirect benefits from the AABI and its efforts.” Based on frequency of responses, the majority of respondents were neutral with regard to three of these four items. Although they also indicated strong neutrality, 44.7 percent disagreed with the following statement: “The AABI should better market itself to our industry.”

Qualitatively, responding industry employers were invited to share any additional thoughts they had on AABI accreditation and the hiring of recent college graduates by the aviation industry. Of the 17 responses received, five general themes could be recognized using content analysis. The themed category with the most responses refers to lack of awareness of AABI. As a result, aviation industry employers did not widely hold beliefs

about AABI, as they generally knew very little about the organization and its impact on their industry.

10. Is there a relationship between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of awareness of the AABI?

This research question aimed to determine the level of awareness of AABI among the four groups included in the study. To accomplish this, the following item was developed and included on each of the four questionnaires: “Prior to receiving this survey, I was unaware of the Aviation Accreditation Board International (AABI).” Respondents were asked to indicate their level of agreement or disagreement with this statement on a five-point Likert scale. A Kruskal-Wallis test revealed a significant difference among the four groups regarding their level of awareness of AABI. Administrators of AABI accredited programs and non-AABI accredited programs generally disagreed with this item (95 percent and 82.9 percent, respectively). On the other hand, aviation industry employers and collegiate aviation students tended to agree that they were unaware of AABI prior to receiving the survey (85.8 percent and 60 percent, respectively). Thus, the difference seems to lie between collegiate aviation administrators on the one hand, and collegiate aviation students and aviation industry employers on the other hand.

11. Is there a significant difference between administrators of AABI accredited and non-AABI accredited programs, collegiate aviation students, and aviation industry employers regarding their level of perceived value of AABI accreditation?

The subtitle of this dissertation, “An Analysis of the Perceived Value of Specialized Accreditation by the Aviation Accreditation Board International,” is closely tied to this last research question. What is the perceived value of AABI accreditation

among the four groups studied during this research project and is there a significant difference among their levels of perceived value? The goal was to determine if any of the groups of stakeholders included in this project held differing views about the perceived value of AABI accreditation.

To address this, a 10-point interval scale was developed to measure the perceived value among these four groups. An analysis of variance (ANOVA) combined with a Scheffe post hoc test were used to determine whether there was a difference among the four groups regarding their level of perceived value of AABI accreditation. These tests discovered that a significant difference in perceived value exists among and between all groups (with the exception of between non-AABI administrators and students). Specifically, administrators of AABI accredited programs registered the highest perceived value (8.3684), while aviation industry employers registered the lowest perceived value (3.3617). Collegiate aviation students and administrators of non-AABI accredited programs shared the middle ground (5.3428 and 5.8571, respectively).

Discussion

AABI Accredited Programs

Of those institutions with AABI accredited programs, the findings reveal a strong interest in maintaining AABI accreditation. In fact, not one responding administrator of a currently accredited program has plans to discontinue AABI accreditation. Clearly, these program administrators realize benefits from AABI accreditation, including improved credibility, protection of the program, and positioning of the program as a leader in collegiate aviation. According to this group, therefore, once accredited by AABI (even though the process may have required a great deal of work on the part of faculty and

administration), the benefits seem to outweigh the costs. As indicated in the recommendations, this point must be stressed to non-AABI accredited programs. As part of this finding, it was interesting to discover why AABI accredited programs were currently accredited. As discussed earlier, there was generally strong agreement among administrators of AABI accredited programs with seven of the nine statements presented in the survey. These statements included ideas such as, (a) ensuring a program meets standards established by the profession, (b) helping to clarify the program's mission and future direction, (c) helping to attract and recruit highly qualified students and faculty, (d) enhancing program visibility and recognition, (e) assisting potential students in selecting a quality training program, (f) identifying for employers those programs which have successfully met the profession's standards of preparation, and (g) gaining the confidence of the educational community, related professions, and the public. As discussed later in this chapter, although not all of these beliefs ring completely true in reality, it is helpful to know what these administrators feel is important regarding AABI accreditation. In essence, their responses to these statements support the high value they place on AABI accreditation.

Non-AABI Accredited Programs

Although there are many collegiate aviation programs that are not accredited by AABI, the findings indicate this is not due to lack of awareness, or the belief that AABI accreditation is not beneficial to the accredited program. As indicated earlier, a majority of responding administrators from non-AABI accredited programs do have plans to pursue AABI accreditation at some point in the future. This is indeed good news for AABI and for collegiate aviation in general. However, for those programs not interested

in pursuing AABI accreditation, the findings of the study shed light onto the various reasons for this. Specifically, comments listed in Appendix S center around several areas, including inappropriateness of AABI standards, current accreditation by another agency (such as ABET), successful without AABI accreditation, and the time and resources necessary to pursue AABI accreditation (e.g., the Self-Study requirement).

In addition to the level of awareness of AABI, or lack thereof, administrators of non-AABI accredited programs were also asked why their programs were not currently accredited by AABI. More specifically, respondents were asked to indicate their level of agreement with eight statements. Surprisingly, as detailed in chapter four, none of these statements were highly regarded among respondents. In fact, there was general disagreement among each of the following statements: (a) our program is too new to seek accreditation, (b) we cannot get approval from our dean and/or president to seek AABI accreditation, (c) the faculty in our department do not feel there are adequate benefits for the cost and time involved, (d) it is too costly to seek accreditation, (e) the preparation of the required self-study is too time consuming, (f) our programs do not meet AABI standards, (g), we feel the AABI accreditation standards are inappropriate, and (h) we do not have sufficient information to decide. What then, are the reasons why non-AABI accredited programs have not sought accreditation? Although not completely clear, the qualitative data presented in Appendix S provides insight into these reasons. As detailed in chapter four, responses centered around six main themes: (a) time/expense/effort versus benefits, (b) curriculum requirements/standards, (c) smaller program, (d) similar accreditation, (e) lack of awareness, and (f) currently successful. As one may gather, a number of these areas were addressed in the statements provided in the questionnaire.

However, it seems that respondents were more willing to give open-ended answers than be forced into admitting their programs do not currently meet AABI standards, for instance. In any event, the reasons given for not pursuing AABI accreditation are as diverse as the programs represented. As discussed later in this chapter, more research is needed to obtain more significant findings in this area.

Aviation Students

The majority of current aviation students are not even aware of AABI, don't know whether or not the program they currently attend is accredited by AABI, and share that the AABI accreditation status of aviation programs had no effect on their decision making process of which institution to attend. Indeed, only three student respondents indicated that AABI accreditation status played a role in their decision making process as to which institution to attend. Furthermore, students do not consider the AABI accreditation status of a program in deciding which institution to attend. Is this because of a lack of awareness of AABI? Quite possibly, as 60 percent of responding students indicate a lack of awareness of AABI. Additionally, of the qualitative responses received by students, the theme category with the most responses is entitled, "Lack of awareness." These findings seem to support statements made by administrators of non-AABI accredited programs regarding the fact that neither students nor parents have ever asked if their program was accredited. However, these findings challenge assumptions previously made by academia and AABI. For instance, administrators of AABI accredited programs point to their AABI accreditation status as important in marketing and attracting high quality students.

Aviation Employers

Another significant finding of this study involves aviation industry employers. In particular, the vast majority of aviation industry employers are not aware of AABI, do not consider the AABI accreditation status of a program when hiring graduates of collegiate aviation programs, and see little benefit in AABI's efforts. As a result, previous assumptions held by academia and AABI that industry not only realizes the value of AABI accreditation, but prefers graduates of AABI accredited programs, are not accurate. Interestingly, however, some level of industry is aware of the benefits of specialized accreditation in general, and of AABI accreditation in particular. Thus, it would seem that if AABI better marketed itself to industry (a point that 45 percent of AABI accredited programs and 37.2 percent of non-AABI accredited programs agreed with), industry would begin to see the benefits of AABI accreditation, subsequently improving industry's perceived value of AABI accreditation.

Perceived Value

As discussed earlier, determining the perceived value of AABI accreditation was a major goal of this study. As determined by the statistical analysis of the data related to research question 11, a significant difference was discovered among the four groups surveyed regarding their perceived value of AABI accreditation. Specifically, administrators of AABI accredited programs registered the highest perceived value (8.3684), while aviation industry employers registered the lowest perceived value (3.3617). Collegiate aviation students and administrators of non-AABI accredited programs shared the middle ground (5.3428 and 5.8571, respectively). This finding is not only important, but interesting as well. Interesting, in that lack of awareness was only

an issue among collegiate aviation students and industry employers. One would expect those with lack of awareness to also perceive little value in AABI accreditation.

However, it seems that even though collegiate aviation students were generally unaware of AABI, they perceive of the general benefits of accreditation, and thus equate some of these same benefits to AABI accreditation. On the other hand, even though administrators of non-AABI accredited programs were aware of AABI, they question the value of AABI accreditation to collegiate aviation, so much so in fact, that there is not a significant difference between this group and students on this issue.

These findings lead one to question the degree to which AABI has fulfilled its original purpose. As previously noted, AABI recognizes seven specific purposes. On the surface, it appears that AABI is generally fulfilling these seven purposes. However, although AABI has accomplished curriculum standardization within collegiate aviation, it is clear that not all stakeholders want AABI accreditation for the various reasons AABI has outlined. The lack of demand from students and industry for AABI accredited programs further complicates the issue. Indeed, non-AABI accredited programs generally feel successful at what they do and there is no requirement that students graduate from an AABI accredited program (as in other fields where national certification/licensure tests require the applicant to have graduated from an accredited program). Thus, AABI is in a difficult situation. The organization appears to be fully meeting the needs of some programs, while not meeting the needs of other programs. Likewise, it appears that AABI is not meeting the needs of various stakeholders (such as students and industry employers).

Challenges to Existing Assumptions

These findings surely challenge existing assumptions. When measuring the level of awareness of AABI, administrators of both AABI and non-AABI accredited programs appear well aware of AABI. However, the level of awareness seems to stop at the doors of academia, or more specifically, at the office doors of faculty and administrators in the aviation program. Students, for instance, were generally unaware of AABI. More disconcerting, however, was the very low level of awareness among industry. What are the meanings of these findings? In essence, if there is no demand for AABI accreditation from the constituents of collegiate aviation programs, there will be little demand for AABI accreditation among aviation programs. For if future college students don't seek out AABI accredited programs and industry is not demanding graduates of AABI accredited programs, "What's the use?" as one administrator stated. Clearly, without demand for AABI accredited aviation programs, the main reason a program would seek AABI accreditation is for self-improvement. In other words, would someone spend all the time and effort necessary to acquire a doctoral degree if, upon completion, it was only recognized by the individual's immediate family? This is doubtful; yet, this is to some degree the position AABI and collegiate aviation is in today. AABI accreditation seems to be only recognized by academia, that close group of administrators and faculty of collegiate aviation programs. However, the goal of AABI and collegiate aviation programs accredited by AABI should be to spread the good news of AABI accreditation far and wide, so that prospective students, current students, industry, the general public, and the general academic community are aware of AABI accreditation and the many benefits derived there from.

In addition to the assumptions previously discussed that were challenged by these findings, the results of the study also challenged current thought in other areas as well. For instance, although administrators of AABI accredited programs indicated a high level of agreement with statements presented in the questionnaire as to why their program decided to initially seek and maintain AABI accreditation, it appears from findings elsewhere in the study that some of these beliefs may be erroneously held. For instance, 95 percent of responding administrators of AABI accredited programs indicated they sought and maintained AABI accreditation “to ensure that the program meets standards established by the profession.” However, 85.8 percent of responding industry employers were not even aware of AABI prior to receiving the survey. Likewise, 32.0 percent of responding industry employers feel AABI does not offer any direct or indirect benefits to industry. Thus, if industry is unaware of AABI and questions its benefits, how is industry establishing standards for collegiate aviation programs? A likely answer would be the AABI Industry-Educator forum. Each summer, AABI invites industry (in the form of an Industry panel) to offer challenges to educators. These challenges typically spell out industry requirements in certain areas and the need for graduates to possess certain skills, knowledge, and abilities. Subsequently, educators present a response to Industry at each AABI Winter meeting. Clearly, some of these findings make their way into AABI standards or criteria. However, many do not, and more importantly, the industry challenge is presented by a mere handful of industry representatives (that already are, or soon become, aware of AABI). Thus, AABI should consider whether the Industry-Educator Forum has sufficient industry support and adequately reflects industry concerns, resulting in AABI accredited programs having “standards established by the profession.”

When explaining why they sought and continue to maintain AABI accreditation, administrators of AABI accredited programs also strongly agreed with the following statement: “To help attract and recruit highly qualified students and faculty.” Although this research effort did not include faculty within the four population groups, it did address collegiate aviation students. In choosing which program to attend, only 8.6 percent of responding students indicated AABI accreditation status as having any bearing on that decision. When specifically asked if it was important for the student to attend a program accredited by AABI, only 20.0 percent of students responded in the affirmative. Lastly, 60.0 percent of students indicated a lack of awareness of AABI. Thus, it appears that AABI accreditation does not help to “attract and recruit highly qualified students.” To rectify this situation, AABI should better market its efforts, including the purpose of specialized accreditation and the derived benefits, to high school students and high school guidance counselors. In essence, students need to be “captured” prior to their making a decision about which institution and aviation program to attend. Many comments were received during this and previous research efforts indicating that students (either future or current) rarely ask if a particular aviation program is accredited by AABI.

Similarly, based on the student responses previously detailed, it would appear that the belief that AABI accredited programs sought and maintain AABI accreditation “to assist potential students in selecting a quality training program,” is also an error in judgment. In fact, with so few students aware of AABI and even fewer considering the AABI accreditation status of a program important in selecting an institution to attend, the aviation program accredited by AABI does little to “assist potential students in selecting a quality training program.” The solution to this issue also involves more aggressive

marketing by AABI to the many potential collegiate aviation students intending on pursuing an aviation career. Likewise, however, AABI accredited programs have a role to play in making sure that students considering their program are well aware of AABI, in terms of the standards the program has met, and the benefits of attending an AABI accredited program.

Another area of concern is that 80.0 percent of responding administrators of AABI accredited programs agree that their program initially sought and maintains AABI accreditation to “identify for employers those programs which have successfully met the profession’s standards of preparation.” However, as previously mentioned, industry employers to a great degree are unaware of AABI and place little, if any, emphasis on hiring graduates of AABI accredited programs. Thus, how does an AABI accredited program identify itself as a program having met the profession’s standards of preparation? Once industry becomes aware of AABI and places a value on programs with accreditation by AABI, this issue should resolve itself.

A final area of concern involves the strong level of agreement among AABI accredited programs, when explaining why they sought and maintain AABI accreditation, with the following statement: “To gain the confidence of the educational community, related professions, and the public.” Although the study did not focus on the educational community (with the exception of administrators of collegiate aviation programs), it focused on related professions (in terms of industry employers), and the public to some degree (in the form of collegiate aviation students). As detailed earlier, collegiate aviation students and industry employers are generally unaware of AABI and place minimal value on AABI accreditation. Thus, it would appear a mistaken belief for an

AABI accredited program to believe it is gaining the confidence of related professions and the public. This issue can be resolved by better educating the educational community (including other academic fields), related professions, and the public as to the role AABI plays in ensuring excellence in collegiate aviation.

Contributions of Study

This study makes contributions to the field of specialized accreditation in general, and collegiate aviation in particular. First, of the literature reviewed for this research effort, only a handful of studies could be located addressing the perceived value of specialized accreditation and the reasons why some programs chose to seek accreditation, while others did not. Due to the dearth of literature on this topic in the field of collegiate aviation, other fields had to be included in the literature reviewed. However, even then, less than 10 studies could be located, with many dating from the mid-1980s. Thus, this study will provide much needed reference in the area of specialized accreditation that will be useful to those conducting research not only within the field of collegiate aviation, but in other academic fields as well.

Another important contribution of this study will be in better understanding the only specialized accrediting organization in collegiate aviation. Chapter one provides much insight into the history of the Council on Aviation Accreditation and subsequently the Aviation Accreditation Board International. Additionally, the steps to obtaining accreditation are highlighted. The AABI standards (both old and new) are presented and discussed as well. In general, this dissertation presents the reader with a very thorough review of the CAA and AABI and their role in ensuring quality and standardization in collegiate aviation.

The study also plays an important role in providing insight into why so few collegiate aviation programs are accredited by the AABI. In fact, this is the only comprehensive study of its kind that examined the perceived value of AABI accreditation among four groups of stakeholders. More than that, the study also examined why some programs made the decision to seek AABI accreditation, while others do not. It is also the first study to investigate what influence, if any, AABI accreditation has on student decisions as to which institution to attend and on aviation industry employer hiring decisions. Rather than continuing to examine AABI accreditation from within the halls of academia, this study was the first nationwide study to branch out and consider the views of two very important stakeholders, those of students and employers. In that regard, the results of this study will not only contribute to the dearth of existing literature on this topic, but will also prove useful to the Aviation Accreditation Board International, the University Aviation Association, and collegiate aviation programs.

It is anticipated that the findings of this study will be applied by the Aviation Accreditation Board International at improving its image, services, and outreach. As explained by Mr. Gary Kiteley, Executive Director of the Aviation Accreditation Board International, AABI has recognized the need to increase the number of accredited programs as one of the organization's top five goals (Prather, 2006b). The results of this study will shed important light onto areas of concern that AABI has wrestled with in the past (Prather, 2006b). Indeed, as the author presents these findings to AABI, it is hoped that AABI will digest these findings, consider the many recommendations, and implement a concerted effort to not only maintain AABI's international standing as the premier collegiate aviation specialized accrediting body, but also to greatly enhance the

value of AABI to collegiate aviation, collegiate aviation students, and aviation industry employers.

Although recommendations to AABI should naturally flow from these findings, it is prudent to discuss the changing landscape of accreditation in general, and of specialized accreditation by AABI in particular. In essence, substantial changes are now in effect that will greatly affect the manner in which collegiate aviation programs endeavor toward AABI accreditation, and subsequently the manner in which AABI reviews programs for accreditation. Simply, these changes involve a transition from content-based standards (Appendix C) to outcomes-based standards (Appendix D). As a result, the specialized accrediting environment has changed. No longer must collegiate aviation programs offer specific courses in a specific sequence to meet AABI standards. Today, these programs must develop learning outcomes for each aviation concentration the institution wishes to accredit through AABI. These learning outcomes, although historically a part of the higher education landscape to some degree, now must be formalized. Programs must develop learning outcomes for their entire program (to include both aviation courses and general education courses), devise methods of assessment to be certain these learning outcomes are being achieved, and then collect evidence to show (an AABI Visiting Team, for example) the level to which these learning outcomes have been achieved and the manner in which students are being prepared to be successful in the aviation industry.

How will this changing landscape in specialized accreditation affect the perceived value of AABI accreditation and the number of collegiate aviation programs accredited by AABI? Obviously, this is an answer this research effort did not attempt to answer.

However, based on discussions the author has had in the past with collegiate aviation program administrators, and comments collected from these individuals in this research effort and Prather (2006b), more programs will be interested in pursuing AABI accreditation due mainly to the greater degree of flexibility the new AABI criteria offer. For instance, programs pursuing AABI accreditation under the former content-based standards were required to include a Calculus course within their aviation program degree requirements. In speaking with program administrators, at least two programs had not pursued AABI accreditation in the past because of this single requirement. In essence, they would have been forced to revise their general education requirements to include the Calculus requirement. However, under the new AABI criteria (AABI, 2007, p. 14), programs must only ensure “a combination of college level mathematics and basic sciences appropriate to the program.” Although it is unknown at this time, it is possible that more programs will pursue AABI accreditation in the future solely because of the flexibility offered in the new outcomes-based criteria.

Recommendations

Although numerous recommendations resulted from this research effort, the reader is also directed to Prather (2006b). The 2006 study also contains numerous recommendations directed mainly at educating industry, prospective students and parents, and non-AABI accredited programs. For clarification, the recommendations below are categorized according to the group to which they are addressed.

Aviation Accreditation Board International

1. Due to the lack of industry and student awareness of AABI discovered in this research effort, the organization should develop a comprehensive marketing

program aimed toward the various stakeholders of collegiate aviation. By adopting this recommendation, industry may begin to realize the benefits of AABI accreditation, subsequently improving industry's perceived value of AABI accreditation and the emphasis industry places on hiring graduates of AABI accredited programs. Likewise, by educating high school students and high school guidance counselors as to the purpose and benefits of specialized accreditation, AABI can increase the awareness of AABI accreditation among potential aviation students. In essence, students need to be "captured" prior to their making a decision about which institution and aviation program to attend.

2. AABI should seek enhanced collaboration with industry. As part of this, AABI should consider whether the Industry/Educator Forum has sufficient industry support and adequately reflects industry concerns, resulting in AABI accredited programs having "standards established by the profession." This recommendation stems from the contrasting views among AABI accredited programs and industry regarding the benefits of AABI to industry. One criticism voiced by collegiate aviation administrators is that only a small segment of the industry regularly participates in the I/E Forum. Obviously, this must be addressed if this important component of AABI is to achieve all that it is intended to achieve.
3. AABI should explore the intrinsic merits of accreditation to truly determine how beneficial AABI accreditation is and the degree to which AABI is fulfilling its original purpose. This recommendation stems from the strongly contrasting views among collegiate aviation programs regarding the benefits of AABI accreditation and the apparent success of non-AABI accredited programs.

Administrators of AABI Accredited Programs

1. Due to the lack of awareness of AABI among collegiate aviation students, AABI accredited programs should clearly advertise to prospective students and their parents that their program is accredited by the Aviation Accreditation Board International. Collegiate aviation programs have a role to play in bringing about an awareness among potential students of AABI accreditation, so that this becomes a major determinant among high school graduates and transfer students in deciding which institution to attend.
2. AABI accredited programs should make a concerted effort to bring about an awareness of AABI accreditation among the wider academic community, related professions, and the public as to the role AABI accreditation plays in the quality of your aviation programs.

Administrators of Non-AABI Accredited Programs

1. Administrators and faculty of non-AABI accredited programs should examine the new outcomes-based AABI criteria to determine if the flexibility inherent in the new criteria are beneficial to the program.

Aviation Industry Employers

1. Be willing to collaborate with AABI on developing quality aviation graduates via the AABI Industry/Educator Forum and consider placing an emphasis on hiring graduates of AABI accredited programs.

Areas for Further Research

Due to limited resources, this study did not include faculty members of collegiate aviation programs, the general public, and related industry employers. It would have

been helpful to survey faculty members to determine, if in fact, they were attracted to an AABI accredited program because of its AABI accreditation status, or conversely, do not feel there are adequate benefits for the cost and time involved for accreditation among non-AABI accredited programs. Is the general public aware of specialized accreditation in general, and of AABI accreditation in particular? If so, what effect does that have on the visibility of a particular aviation program and the confidence the general public has in such a program? Additionally, are other industries aware of the specialized accrediting organizations in their academic field? Are other industries aware of AABI accreditation? For instance, some collegiate aviation students enter fields other than aviation upon graduation. Are related, but non-aviation industry employers (such as the Federal Highway Administration, Microsoft, or General Motors) aware of AABI? Lastly, future research could be conducted on this topic utilizing different samples of collegiate aviation students and industry employers. For instance, this study did not survey any airport managers, nor did it include students who are not student members of UAA.

Another area for further research would involve a comparison of the competencies possessed by graduates from both AABI accredited and non-AABI accredited programs. This would likely involve a subjective measurement of the quality of graduates, including how well prepared these graduates are for industry, by surveying those employers hiring graduates of collegiate aviation programs. It would be interesting to discover whether AABI accredited programs are indeed producing more successful graduates with enhanced industry skills and a broader knowledge base. If so, one could then make a case that if industry awareness of this fact increased (due to greater marketing by AABI for example), demand among industry employers for graduates of

AABI accredited programs would increase, thereby likely having a positive effect on the number of non-AABI accredited programs interested in pursuing AABI accreditation for the benefit of their future graduates.

Yet another area for future research involves a deeper look at non-AABI accredited programs. Since administrators of non-AABI accredited programs generally disagreed with the eight statements included in the questionnaire targeting their reason for not having pursued AABI accreditation, more research is needed with this group to more clearly determine the reasons why their programs are not accredited. Although qualitative data was gathered in this area during this project, their disagreement with all of the provided statements did not allow for a beneficial quantitative analysis of their responses. Perhaps future research can incorporate the qualitative responses gathered in this study into close-ended statements to which respondents would then be asked to indicate their level of agreement or disagreement.

Additionally, since it is quite possible that the perspectives of many administrators and faculty will change now that AABI has transitioned from content-based standards to outcomes-based criteria, it will be helpful to duplicate this study to determine what effects if any, these new AABI criteria have on the level of interest shown by collegiate aviation programs toward AABI accreditation. It would seem that a study conducted five years in the future would be sufficient, as programs that were recently accredited or affirmed for re-accreditation would have completed a self study and navigated the accreditation process under the new criteria by that time. One must be careful if duplicating this study five years into the future however. Specifically, as the researcher measures the perceived value of AABI accreditation, if improvements are seen

(especially in the eyes of students and industry employers), it may be the result of more aggressive marketing by AABI, for instance. If this is indeed the case, the study can determine which recommendations from the current study were followed and then attempt to measure the effects those implemented recommendations have had on the stakeholders of collegiate aviation.

Lastly, research could be conducted that seeks to determine from non-AABI accredited program administrators and faculty what their needs are, in regards to academic quality and specialized accreditation of collegiate aviation programs. Findings from this research could then be used by AABI to better meet the needs of those programs that have not sought AABI accreditation.

Epilogue

Although the main purpose of this research effort was to complete a dissertation to obtain a terminal degree, it was also designed to be useful research. I believe strongly in specialized accreditation, and was disappointed at the time of beginning this research to learn how few collegiate aviation programs are accredited by the Aviation Accreditation Board International. In particular, as compared to other academic fields, collegiate aviation seems to lag behind in terms of the percentage of programs that are accredited by their specialized accrediting agency. Thus, this research effort was designed to not only discover why so few programs are accredited by AABI, but to also develop recommendations that may be useful to AABI in not only increasing the number of AABI accredited programs, but also enhancing the perceived value of AABI accreditation among the many stakeholders of collegiate aviation. To this end, if I am able to influence, albeit in a small way, the development of AABI into a more highly

regarded and recognized international accrediting body for collegiate aviation, this research effort will have been useful in my eyes.

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APPENDICES

APPENDIX A
CHEA-RECOGNIZED
SPECIALIZED/PROFESSIONAL ACCREDITING ORGANIZATIONS

**AACSB International—The Association to Advance
Collegiate Schools of Business (AACSB)**

Web: www.aacsb.edu

*Recognized by the Council for Higher Education Accreditation,
January 2002*

**Accreditation Board for Engineering and Technology, Inc.
(ABET)**

Web: www.abet.org

*Recognized by the Council for Higher Education Accreditation,
January 2003*

Accreditation Council for Pharmacy Education (ACPE)

Web: www.acpe-accredit.org

*Recognized by the Council for Higher Education Accreditation,
April 2004*

**Accreditation Review Commission on Education for the
Physician Assistant, Inc. (ARC-PA)**

Web: www.arc-pa.org

*Recognized by the Council for Higher Education Accreditation,
January 2004*

**Accrediting Council on Education in Journalism and Mass
Communications (ACEJMC)**

Web: www2.ku.edu/~acejmc

*Recognized by the Council for Higher Education Accreditation,
April 2002*

**American Association for Marriage and Family Therapy
(AAMFT), Commission on Accreditation for Marriage and
Family Therapy Education (COAMFTE)**

Web: www.aamft.org

*Recognized by the Council for Higher Education Accreditation,
April 2003*

**American Association of Family and Consumer Sciences
(AAFCS), Council for Accreditation**

Web: www.aafcs.org

*Recognized by the Council for Higher Education Accreditation,
May 2001*

**American Association of Nurse Anesthetists, Council on
Accreditation of Nurse Anesthesia Educational Programs
(CoA-NA)**

Web: www.aana.com

*Recognized by the Council for Higher Education Accreditation,
January 2001*

**American Board of Funeral Service Education (ABFSE)
Committee on Accreditation**

*Recognized by the Council for Higher Education Accreditation,
May 2001*

American Council for Construction Education (ACCE)

Web: www.acce-hq.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

**American Culinary Federation Educational Institute
Accrediting Commission (ACF)**

Web: www.acfchefs.org

*Recognized by the Council for Higher Education Accreditation,
January 2004*

**American Dietetic Association, Commission on
Accreditation for Dietetics Education (CADE-ADA)**

Web: www.eatright.org/cade

*Recognized by the Council for Higher Education Accreditation,
May 2001*

**American Library Association (ALA)
Committee on Accreditation (CoA)**

Web: www.ala.org/accreditation/

*Recognized by the Council for Higher Education Accreditation,
May 2001*

**American Occupational Therapy Association (AOTA)
Accreditation Council for Occupational Therapy Education
(ACOTE)**

Web: www.aota.org

*Recognized by the Council for Higher Education Accreditation,
April 2002*

**American Optometric Association (AOA)
Accreditation Council on Optometric Education (ACOE)**

Web: www.theacoe.org

*Recognized by the Council for Higher Education Accreditation,
May 2001*

**American Physical Therapy Association (APTA)
Commission on Accreditation in Physical Therapy
Education (CAPTE)**

Web: www.capteonline.org

*Recognized by the Council for Higher Education Accreditation,
January 2002*

**American Podiatric Medical Association (APMA)
Council on Podiatric Medical Education (CPME)**

Web: www.cpme.org

*Recognized by the Council for Higher Education Accreditation,
April 2004*

**American Psychological Association (APA)
Committee on Accreditation (CoA)**

Web: www.apa.org

*Recognized by the Council for Higher Education Accreditation,
April 2002*

**American Society of Landscape Architects (ASLA)
Landscape Architectural Accreditation Board (LAAB)**

Web: www.asla.org

*Recognized by the Council for Higher Education Accreditation,
April 2003*

**American Speech-Language-Hearing Association (ASHA)
Council on Academic Accreditation in Audiology and
Speech-Language Pathology**

Web: www.asha.org

*Recognized by the Council for Higher Education Accreditation,
April 2003*

**American Veterinary Medical Association (AVMA)
Council on Education**

Web: www.avma.org

*Recognized by the Council for Higher Education Accreditation,
May 2001*

**Association of Collegiate Business Schools and Programs
(ACBSP)**

Web: www.acbsp.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

Aviation Accreditation Board International (AABI)

formerly Council on Aviation Accreditation (CAA)

Web: www.aabi.aero

*Recognized by the Council for Higher Education Accreditation,
January 2002*

**Commission on Accreditation of Allied Health Education
Programs (CAAHEP)**

Web: www.caahep.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

**Commission on Accreditation of Healthcare Management
Education (CAHME)**

Web: www.cahme.org

*Recognized by the Council for Higher Education Accreditation,
April 2003*

Commission on Collegiate Nursing Education (CCNE)

Web: www.aacn.nche.edu/accreditation

*Recognized by the Council for Higher Education Accreditation,
January 2002*

**Computer Sciences Accreditation Commission (CSAC) of
the Computing Sciences Accreditation Board (CSAB)**

*Merged with Accreditation Board for Engineering and Technology,
Inc. (ABET), September 30, 2001*

Council for Accreditation of Counseling and Related Educational Programs (CACREP)

Web: www.cacrep.org

Recognized by the Council for Higher Education Accreditation, April 2002

Council for Interior Design Accreditation

Formerly Foundation for Interior Design Education Research (FIDER)

Web: www.accredit-id.org

Recognized by the Council for Higher Education Accreditation, April 2002

Council on Chiropractic Education (CCE)**Commission on Accreditation**

Web: www.cce-usa.org

Recognized by the Council for Higher Education Accreditation, January 2005

Council on Rehabilitation Education (CORE)**Commission on Standards and Accreditation**

Web: www.core-rehab.org

Recognized by the Council for Higher Education Accreditation, May 2001

Council on Social Work Education (CSWE), Office of Social Work Accreditation and Educational Excellence

Web: www.cswe.org/CSWE

Recognized by the Council for Higher Education Accreditation, April 2003

Foundation for Interior Design Education Research (FIDER)

See Council for Interior Design Accreditation

Joint Review Committee on Education in Radiologic Technology (JRCERT)

Web: www.jrcert.org

Recognized by the Council for Higher Education Accreditation, April 2004

Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT)

Web: www.jrcnmt.org

Recognized by the Council for Higher Education Accreditation, April 2002

National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)

Web: www.naacls.org

Recognized by the Council for Higher Education Accreditation, April 2002

National Association of Industrial Technology (NAIT)

Web: www.nait.org

Recognized by the Council for Higher Education Accreditation, January 2002

National Association of Schools of Art and Design (NASAD)

Web: www.arts-accredit.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

National Association of Schools of Dance (NASD)

Web: www.arts-accredit.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

National Association of Schools of Music (NASM)

Web: www.arts-accredit.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

National Association of Schools of Public Affairs and Administration (NASPAA), Commission on Peer Review and Accreditation (COPRA)

Web: www.naspaa.org

*Recognized by the Council for Higher Education Accreditation,
January 2004*

National Association of Schools of Theatre (NAST)

Web: www.arts-accredit.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

National Council for Accreditation of Teacher Education (NCATE)

Web: www.ncate.org

*Recognized by the Council for Higher Education Accreditation,
January 2002*

National League for Nursing Accrediting Commission, Inc. (NLNAC)

Web: www.nlnac.org

*Recognized by the Council for Higher Education Accreditation,
January 2001*

National Recreation & Park Association (NRPA) Council on Accreditation

Web: www.councilonaccreditation.org

*Recognized by the Council for Higher Education Accreditation,
January 2003*

Planning Accreditation Board (PAB)

Web: showcase.netins.net/web/pab_fi66/index.htm

*Recognized by the Council for Higher Education Accreditation,
May 2001*

Society of American Foresters (SAF) Committee on Accreditation

Web: www.safnet.org/educate/accnews.htm

*Recognized by the Council for Higher Education Accreditation,
May 2001*

Teacher Education Accreditation Council, Inc. (TEAC)
Web: www.teac.org
*Recognized by the Council for Higher Education Accreditation,
May 2001*

APPENDIX B

AABI FORM 117

AABI MEMBER INSTITUTION ACCREDITATION STATUS

Adapted from AABI Form 117, *AABI Member Institution Accreditation Status*, available from <http://www.aabi.aero/>

INSTITUTION	PERIOD OF ACCREDITATION	AVIATION MANAGEMENT	AVIATION MAINTENANCE	AVIATION ELECTRONICS	AVIATION STUDIES	FLIGHT EDUCATION
Arizona State University, Mesa AZ	02-17-05 to 02-28-10 One or more programs first accredited in 2000	B.S. Air Transportation Management				B.S. Professional Flight
Auburn University, Auburn, AL	02-19-03 to 02-28-08	B.S. Aviation Management				B.S. Aviation Mgmt. -- Flight Education
Daniel Webster College, Nashua, NH	07-12-06 to 07-31-11 One or more programs first accredited in 2001	B.S. Aviation/Air Traffic Mgmt. B.S. Aviation Management				B.S. Aviation Flight Ops.
Embry-Riddle Aeronautical University, Daytona Beach FL	02-15-06 to 02-28-11 One or more programs first accredited in 1992	B.S. ABA General Mgmt. AOC B.S. ABA Flight Ops. AOC B.S. ABA Airport Mgmt. AOC B.S. ABA Airline Mgmt. AOC B.S. ABA Aviation Marketing Mgmt. AOC B.S. ABA International Air Transportation Mgmt. AOC	B.S. ASM Maintenance Mgmt. AOC	B.S. ASM Aerospace Electronics AOC	B.S. Applied Meteorology B.S. Safety Science B.S. Air Traffic Mgmt.	B.S. Aeronautical Science

Embry-Riddle Aeronautical University, Prescott, AZ	02-15-06 to 02-28-11 One or more programs first accredited in 1992					B.S. Aeronautical Science
Florida Institute of Technology, Melbourne, FL	07-18-07 to 07-31-12 One or more programs first accredited in 1992	B.S. Aviation Management B.S. Aviation Management: Flight Option				B.S. Aviation Computer Science B.S. Aeronautical Science B.S. Aeronautical Science: Flight Option
Kansas State University - Salina, Salina, KS	02-15-06 to 02-28-11					B.S. Professional Pilot
Kent State University, Kent, OH	02-15-06 to 02-28-11	B.S. Aviation Management			B.S. Aeronautical Systems Engineering Technology	B.S. Aeronautical Studies B.S. Flight Technology
Korea Aerospace University, Gyeonggi-Do, South Korea	02-21-07 to 02-28-12	B.S. Aviation Business Administration				B.S. Air Transportation Systems B.S. Air Traffic Management B.S. Aeronautical Science & Flight Ops.
Hampton University, Hampton, VA	07-18-07 to 07-31-12 One or more programs first accredited in 1997	B.S. Aviation Management Administration			B.S. Aviation Electronic Systems	B.S. Aviation Computer Science B.S. Air Traffic Control Mgmt. B.S. Flight Education
Louisiana Tech University, Ruston, LA	02-18-04 to 02-28-09 One or more programs first accredited in 1993	B.S. Aviation Management				B.S. Professional Aviation

Mercer County Community College, Trenton, NJ	07-22-03 to 07-31-08 One or more programs first accredited in 1998					A.S. Aviation Flight Tech.
Middle Tennessee State University, Murfreesboro, TN	07-18-07 to 07-31-12 One or more programs first accredited in 1992	B.S. Aerospace Administration	B.S. Aerospace Maintenance Management		B.S. Aerospace Technology B.S. Flight Dispatch and Scheduling	B.S. Professional Pilot
North Shore Community College, Danvers, MA	07-13-05 to 07-31-10 One or more programs first accredited in 2000					A.S. Professional Pilot
Parks College of Engineering, Aviation & Technology of Saint Louis University, St. Louis, MO	07-12-06 to 07-31-11 One or more programs first accredited in 1996					B.S. Aviation Science/ Professional Pilot
Purdue University, West Lafayette, IN	02-19-03 to 02-28-08 One or more programs first accredited in 1998	B.S. Aviation Administration	B.S. Aeronautical Technology			B.S. Flight Technology
St. Cloud State University, St. Cloud, MN	07-14-04 to 07-31-09 One or more programs first accredited in 1994	B.S. Management			B.S. Aviation Flight Ops.	B.S. Professional Flight
Seneca College of Applied Arts & Technology, Toronto, ON, CA	02-21-07 to 02-28-12					B.S. Applied Technology Flight Program

Southeastern Oklahoma State University, Durant, OK	07-18-07 to 07-31-12	B.S. Aviation Management: Business Option			B.S. Aviation Mgmt: Safety Option	B.S. Aviation: Professional Pilot
University of Central Missouri, Warrensburg, MO	02-15-06 to 02-28-11 One or more programs first accredited in 1995	B.S. Airport Mgmt. (Opt. 3) B.S. Flight Ops Mgmt. (Opt. 6)	B.S. Maintenance Management	B.S. Avionics Management	B.S. Systems Design Tech.	B.S. Professional Pilot
University of Dubuque, Dubuque, IA	07-13-05 to 07-31-10	B.S. Aviation Management			B.S. Aviation Flight Ops.	
University of Nebraska at Omaha, Omaha, NE	07-18-07 to 07-31-12 One or more programs first accredited in 1997				B.S. Aviation- Air Transport Administration	
University of North Dakota, Grand Forks, ND	07-18-07 to 07-31-12 One or more programs first accredited in 1992				B.S. Air Traffic Control	B.S. Commercial Aviation
University of Oklahoma, Norman, OK	07-13-05 to 07-31-10	B.S. Aviation Management				B.S. Professional Pilot
Utah State University, Logan, UT	07-16-04 to 07-31-09		B.S. Aviation Tech. – Maint. Management			B.S. Professional Pilot
Western Michigan University, Kalamazoo, MI	07-18-07 to 07-31-12 One or more programs first accredited in 1997	B.S. Aviation Science and Administration	B.S. Aviation Maintenance Technology			B.S. Aviation Flight Science Option A B.S. Aviation Flight Science Option B

APPENDIX C

CAA CONTENT-BASED STANDARDS MANUAL

Adapted from *CAA Accreditation Standards Manual*, available from
<http://www.aabi.aero/Forms&Pubs/101CAASStandardsIntlrev07-05.pdf>
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1.0 INTRODUCTION

1.1 BACKGROUND

The Council on Aviation Accreditation can trace its beginnings back to 1974 when collegiate faculty concerned with academic standards for aviation programs set up the Academic Standards Committee in the University Aviation Association (UAA). This Committee was later divided into two subcommittees, one concerned with standards and articulation, the other with accreditation. In 1974, the Accreditation Subcommittee was authorized to conduct a survey of schools with aviation programs to identify current practices and potential need for curricula accreditation. A report of that Committee was prepared in April 1975, and led to the formation of a Task Force to develop an Academic Standards Manual under grants from several aviation industry organizations. The Task Force met in Wichita, Kansas, in October 1976, and developed the "College Aviation Accreditation Guidelines," which became the first standards manual for associate, baccalaureate, and graduate programs. This manual was printed and distributed to colleges and universities with aviation curricula. Several institutions volunteered for program evaluation under the new Guidelines, which became adopted as a "recommended standard for aviation curricula."

Another major step forward occurred in 1981, following the strike by Federal Aviation Administration Air Traffic Controllers. UAA offered to assist the FAA in staffing its technical positions with college graduates. This led to the formation of a Task Force for the development of a special curriculum targeted toward five FAA occupational specialties. Once the curriculum was developed, the FAA first contracted with UAA in 1983 to evaluate proposed curricula from institutions, which desired recognition under the FAA Airway Science Program. This led to further expansion of UAA services in 1985 to include on-site campus evaluations of facilities, administration, faculty, and students of institutions applying for FAA Airway Science program recognition. All of this was carried out by a UAA Airway Science Curriculum Committee of professional educators who served as both a review and evaluation board for curricula and on-site evaluations. During the period 1983 to 1988, the UAA gained extensive experience in the review of curricula and the evaluation of nearly 30 aviation programs throughout the country.

In September 1987, the UAA set up an Accreditation Task Force to further evaluate the feasibility of formal aviation program accreditation. A survey of UAA institutional members in the spring of 1988 showed general support for the establishment of a formal accrediting organization for aviation programs. The Task Force determined from the survey that there was a general consensus on the need for specialized accreditation of non-engineering aviation programs, and that there was no existing accrediting organization with the appropriate statement of purpose and experience to carry out such accreditation. A July 1988 Task Force then expanded the "Guidelines" into an initial draft of what could serve as the foundation of an accreditation standards manual including rationale and goals for accreditation, overall philosophy, the definition of an aviation professional, and an outline of topics to be encompassed in the standards manual.

The purpose of this initial development was to provide sufficient information to the UAA Board of Trustees on the accreditation structure and process to enable them to make an intelligent decision with respect to the formation of the accreditation council. This information was furnished to the Board in two mailings during the summer of 1988 and led to the recommendations to the UAA Board of Trustees at its annual meeting. The Council on Aviation Accreditation (CAA) was established on October 18, 1988, at the UAA Annual Meeting in Dallas. The CAA initially functioned as a subsidiary of the University Aviation Association for administrative support. However, operationally the CAA was an autonomous, legally chartered entity with directors and officers elected from within the organization. The CAA formulated and published bylaws by which the organization is governed. These bylaws embrace the concepts and principles acceptable to and in keeping with the Council on Postsecondary Accreditation (COPA) standards. COPA was subsequently dissolved, and a new organization, the Council for Higher Education Accreditation (CHEA) has assumed essentially the same role vis-à-vis CAA. In March 1994, the CAA Board of Trustees initiated action to establish accreditation standards for associate degree programs. A subcommittee of the Standards Committee was charged with developing associate degree standards for approval at the Summer 1995 meeting of the CAA. That initiative was followed in 1994 by the FAA's reorientation of the Airway Science program, and its stated intention of bestowing Airway Science recognition only on associate and baccalaureate degree programs that were accredited by CAA.

In July 2001, the Montreal Office was established at Concordia University, marking the initiation of an international presence. In July 2002, the first group of International Trustees Members was elected to the Board and an Ad Hoc International Standards Subcommittee was created. In 2003, the CAA made the charge to the newly named Ad Hoc International Committee to adapt the existing standards to accommodate international accreditation. In support of this initiative the Ad Hoc International Committee proposed to change the name from CAA to an appropriate name which incorporates the international scope of the organization.

1.2 RATIONALE

Accreditation is a status granted to an educational institution or a program that has been found to meet or exceed stated criteria of educational quality. In the United States, accreditation is voluntarily sought by institutions and programs, and is conferred by non-governmental bodies.

Accreditation has three fundamental purposes: (a) to ensure the quality of the institution or program; (b) to assist in the improvement of the institution or program; and (c) to maintain relevance of the educational program with the constituencies it serves. Accreditation, which applies to institutions or programs, is to be distinguished from certification and licensure, which apply to individuals.

The bodies conducting institutional accreditation are national or regional in scope, and are comprised of institutions that have achieved and maintained accreditation. A specialized body conducting accreditation of a program preparing students for a

profession or occupation is often closely associated with professional associations in the field.

1.3 GOALS

The Council on Aviation Accreditation, at its first meeting on January 10, 1989, adopted the following goals of collegiate aviation accreditation:

- a. Stimulate collegiate aviation program excellence and self-improvement.
- b. Establish uniform minimum educational quality standards.
- c. Increase the credibility, integrity, and acceptance of collegiate aviation programs within institutions of higher education and aviation communities.

2.0 POLICIES

2.1 STATEMENT OF ACCREDITATION AND GENERAL POLICIES

Accreditation is a time-honored process for evaluating and substantiating academic programs. An effective accrediting process ensures and promotes high quality educational programs. An aviation program that meets or exceeds stated criteria becomes more credible in the eyes of those considering enrollment in the program as well as those who are providing support for the program on the campus.

The Council on Aviation Accreditation will:

- a. Evaluate for accreditation only those programs at institutions with regional or internationally recognized equivalent national or international accreditation, recognized by CHEA (Council for Higher Education Accreditation) or its equivalent.
- b. Evaluate for accreditation only those academic programs that lead to the associate degree, and/or the baccalaureate degree or internationally recognized equivalent.
- c. Accredite only those programs in compliance with the criteria specified in Section 4 of this document.
- d. Establish standards and procedures for accreditation of aviation programs, including the granting, denying, reaffirming, extending, revoking and reinstating of accreditation for any institution that is accredited, or is seeking accreditation.
- e. Invite institutions to seek accreditation of their aviation programs, but will not attempt to persuade or pressure them to do so.
- f. Accredite based on well-defined standards and criteria, but will encourage innovation and experimentation.
- g. Encourage the development of new, creative programs that advance aviation as an academic discipline.
- h. Not accredit programs deficient in any area of competency that graduates of aviation programs should reasonably be expected to have.
- i. Require accredited programs to state accreditation status in an accurate and clear manner in their institution's publications.
- j. Insist that its evaluations be objective and fair, but reserve the right to be the final authority on matters which are qualitative in nature.

k. Publish a list of accredited programs at least once a year.

The initial and subsequent periods of accreditation will be for five years unless it is determined by CAA that a reaccreditation visit is warranted at an institution in less than five years. In this case, the institution will be so advised in writing with the reasons for an earlier review set forth.

An institution seeking accreditation **MUST** complete a **SELF-STUDY** prior to the accreditation or reaccreditation visit.

Accreditation visiting teams will include at least one college aviation educator from an institution of the same type (associate or baccalaureate or internationally recognized equivalent) as the institution being reviewed, and one person who is a practicing aviation professional appropriate to the program(s) being accredited.

Institutions **MUST** comply with "Recommendations" of the CAA, and **SHOULD** comply with "Suggestions".

The CAA will treat evaluation reports in a confidential, responsible manner. An institution will have ample opportunity to respond to recommendations and suggestions made by the accrediting team prior to action on accreditation by the CAA board.

2.2 CONTINUOUS COMPLIANCE WITH CAA STANDARDS

An accredited institution **MUST** make every effort to continuously comply with CAA standards during the accreditation period.

2.2.1 REPORTING REQUIREMENTS

Institutions **SHOULD** report to the CAA causes for concern regarding their ability to continue to meet accreditation standards. If such a report is received, or other information is forthcoming that would question the institution's ability to maintain compliance with the standards, the Chairperson of the Accreditation Committee, with the advice and consent of the CAA President, will appoint two or more members to conduct a review of that program. With the cooperation of the institution, the Guidance Committee, and other resources provided by CAA, CAA will assist the institution in its efforts to remain in compliance.

During the period of review and efforts to bring the program back into compliance with the standards, for institutions that voluntarily report compliance concerns, the accreditation status of the program will remain unchanged. Notwithstanding this, the institution **MUST** provide a report to the Accreditation Committee on the progress of its efforts to maintain compliance, no later than six (6) months after conclusion of the review. All information related to the report of concern, and the subsequent review and related activities by CAA, will be held in strict confidence.

2.2.2 REVOCATION OF ACCREDITATION

If the Board determines that the institution is not in compliance, and does not have an adequate plan to return to compliance within a reasonable period of time (as determined by the Board), the Board will send a letter of proposed revocation of certification. If, in

the opinion of the Board, the institutional response to this letter is inadequate, accreditation will be revoked.

The revocation action may be appealed through formal notification to the Board, as specified in paragraph 2.3. In this case, the institution will remain accredited until completion of the appeal process.

2.3 APPEAL POLICY

The only appealable decision of CAA is a "not to accredit" decision. If an institution wishes to appeal a decision of "not to accredit," CAA must receive a letter of intent within 30 days of the date the letter of revocation or "not to accredit" was postmarked. Upon receiving the letter of appeal, CAA will appoint a committee of three members to hear the appeal. The Committee will convene in conjunction with the next regularly scheduled meeting of the CAA unless that meeting is scheduled within 30 days, in which case the institution may request the hearing be held at the following meeting. The Committee will report its findings to the CAA within 24 hours of hearing the appeal. The CAA will then take final action on the appeal.

2.4 PUBLIC RELEASE POLICY

The institution **MUST** not publish or otherwise publicly state any period of accreditation. In any public release concerning accreditation, the institution may refer only to the aviation programs that are accredited by the CAA. The institution may use the term 'accredited' only for those specific programs accredited by CAA. There **MUST** be no implication that all of the institution's aviation programs are accredited if the programs are not. The institution may not publicly quote, in whole or in part, from CAA correspondence. If accreditation is withheld, withdrawn, or revoked, the institution may not use the phrase "accredited by CAA," even if the phrase states or implies prior accreditation.

2.4.1 ACCURATE REPRESENTATION OF ACCREDITATION STATUS IN CATALOGUES AND OTHER DOCUMENTS

Institutions **MUST** clearly and accurately represent their current accreditation status in all institutional documents and publications, including on-line documents, in which they refer to CAA accreditation. Failure to adhere to this requirement may result in revocation of accreditation for all CAA accredited programs at the institution.

2.5 SCOPE

The collegiate aviation accreditation process acknowledges the need for broadly educated individuals who are specifically qualified in aviation, requiring the preparation afforded by associate degree programs with a significant general education component, or baccalaureate programs or their internationally recognized equivalents. The CAA currently does not have standards for associate degree programs designed only to prepare students for technical careers (i.e., without general education and aviation breadth) nor graduate programs. However, standards for these programs may be considered at a later time.

3.0 METHOD OF EVALUATION

3.1 APPLICATION

The institution seeking to be accredited **MUST** initiate the process by submitting a letter of intent to CAA which will determine whether the preliminary request is appropriate for further action. If it is reasonably certain that the programs for review fall within its purview, CAA will furnish the institution with an application form to be returned with information pertinent to the accreditation process.

The application and supporting information will address the general background of the institution with specific responses aimed at the appropriateness of the aviation programs to be accredited by CAA.

Each program seeking accreditation **SHOULD** have completed at least one full cycle and have graduated at least one class.

3.2 SELF-STUDY

Once the application has been reviewed and evaluated and it has been determined that the programs are appropriate, the institution will undertake a **SELF-STUDY** in accordance with the outline presented in CAA Form 104.

A critical examination will be made of all facets of each academic program for which accreditation is sought, including its faculty, staff, administration, students, and resources. Performance histories of students will be analyzed, as well as projected enrollments and placement opportunities for graduates.

All the foregoing information will be compiled in a narrative **SELF-STUDY** report with accompanying data in appropriate tables, charts and graphs. Five copies of the report will be furnished to CAA.

The **SELF-STUDY** and all associated communications **MUST** be written in the English language.

3.2.1 REPORTING PROGRAM CHANGES AFTER SUBMISSION OF THE SELF-STUDY

The **SELF-STUDY** is intended to be a “snap shot” of the institution’s program at the time of its submission to CAA, and program changes may occur between the completion of the **SELF-STUDY** and the site visit. Because one purpose of the site visit is to verify the institution’s **SELF-STUDY**, the visiting team must know of changes that have occurred since its preparation and submission. To enable the site visit team to be fully prepared to conduct the visit and prepare their report effectively and efficiently, the institution **MUST** notify the CAA of any substantive changes (any changes that would affect a **MUST** statement) from the conditions reported in the **SELF-STUDY** as soon as possible prior to the site visit. The institution **MUST** also provide a revision to any affected section(s) of the **SELF-STUDY** at least thirty days prior to the scheduled date of the site visit.

3.3 CAMPUS VISIT

Members of the accreditation visiting teams will be selected from the membership of institutions which make up CAA and the aviation higher education community at large. Just as CAA has professional representation from the greater aviation community, so too will the visiting team. Each visiting team will be made up of members having different areas of interest and competence so that the institution's programs will receive a thorough and rigorous review. This segment of the evaluation process has three major purposes:

- a. To examine in detail the materials furnished in the SELF-STUDY report to determine if the information is a reasonable and accurate assessment of the institution, particularly with regard to:
 - (1) organization, control and administrative support for the institution and for the specific program(s);
 - (2) breadth, depth, and quality of the aviation academic program(s);
 - (3) breadth, depth, and quality of the faculty, staff and administration of the program(s);
 - (4) admission, retention and graduation criteria for the program(s) and numbers of students admitted, enrolled and graduated;
 - (5) career opportunities, student placement, and advanced education opportunities;
 - (6) faculty teaching loads, research commitments and non-teaching requirements;
 - (7) physical facilities support;
 - (8) financial support.
- b. To assess those factors, which cannot be adequately described in the SELF-STUDY report, intangible qualities, which do not lend themselves to quantitative analysis, **SHOULD** be reviewed. Issues of faculty, staff and student morale, intellectual atmosphere, caliber of the faculty, staff and students, and nature and quality of student work, are all intangible factors, which are difficult to document, yet have profound effects on the overall quality and conduct of the programs.
- c. To assist the institution in identifying and assessing its strengths and weaknesses.

3.4 TEAM REPORT

Upon completion of the campus visit, the visiting team will prepare a report describing its findings. The report and the recommendations of the Accreditation Committee will be presented to the CAA Board for its review and subsequent action.

4.0 CRITERIA

4.1 PROGRAM DESIGN AND LEVEL

In order to be considered for accreditation, collegiate aviation programs **MUST** be designed to prepare graduates to function as aviation professionals. An aviation professional is one who employs a common body of knowledge gained by study, experience, and practice, and applies it with imagination, intuition, judgment, competence, reason, ethics, integrity, and responsibility, to the design, management and operation of safe, efficient and comprehensive national and international aviation and aerospace systems.

This definition of an aviation professional implies the safe and efficient management and operation of a vehicle in the aviation and aerospace systems, and the design, management and operation of safe and efficient aviation and aerospace systems in which the vehicle operates.

To assist in the identification and recognition of the characteristics of collegiate aviation programs for accreditation purposes, the criteria that follow have been adopted by CAA.

4.2 INTENT OF CRITERIA

These criteria are intended to ensure the adequate foundation of a collegiate aviation education, an understanding of the national and international aviation and aerospace systems, and preparation in an aviation specialization. The criteria are intended to afford flexibility to accommodate unique programs and permit the expression of an institution's individual qualities and ideals. They are to be regarded as a statement of principles to be applied with professional judgment.

4.2.1 INTERDISCIPLINARY CRITERIA

The CAA Industry/Educator Forums have identified important knowledge, skills, and attitudes that deserve particular attention in aviation programs (Appendix C.8). These are interdisciplinary in nature and typically involve all aspects of the student's education. It is anticipated that different programs will use a variety of approaches to assure particular attention is focused on these areas, but an emphasis **SHOULD** be placed on the application and assessment of the knowledge, skills, and attitudes in aviation course work.

In order to be considered for accreditation or renewal of accreditation, collegiate aviation programs **MUST** have a written plan for the systematic evaluation and assessment of student educational outcomes. The plan **SHOULD** include both internal and external measures of student outcomes assessment and **SHOULD** document changes as the result of assessment.

4.2.2 GENERAL EDUCATION CURRICULUM CRITERIA

General Education content **MUST** provide an integrated education experience that prepares students to apply pertinent knowledge in identifying and solving problems. The curriculum **MUST** be designed to provide a sequential development leading to advanced course work. Associate degree programs **MUST** provide the foundation necessary for transfer to a baccalaureate program or career placement.

NOTE: Semester-quarter conversion will be 2:3; e.g. 12 semester hours = 18 quarter hours.

Programs **MUST** incorporate the following: studies in communications which emphasize competency in written and verbal communication skills; studies in mathematics which, in associate programs or their internationally recognized equivalent, must include a minimum of three (3) credit hours or internationally recognized equivalent of college algebra, and in baccalaureate programs or their internationally recognized equivalent must include a minimum of three (3) credit hours or internationally recognized equivalent

of concepts in calculus; studies in basic science which, in associate degree programs or internationally recognized equivalent, **SHOULD**, and in baccalaureate programs or internationally recognized equivalent **MUST**, include a minimum of three (3) credit hours or internationally recognized equivalent of physics or three (3) credit hours or internationally recognized equivalent of chemistry at a level appropriate for the aviation major option pursued; and demonstrated competence in using computers for problem-solving.

Academic programs **MUST** also be supported by an adequate infrastructure. The components of this infrastructure are presented and discussed in Section 4.3 - General Criteria.

4.2.3 AVIATION CORE CRITERIA

The object of the aviation core is to ensure that all students in a collegiate aviation program have a foundation of essential and specialized knowledge of national and international aviation and aerospace systems appropriate to the degree being sought. The student's foundation of knowledge of these systems **SHOULD** include a broad understanding of the components of the systems, insight into how these components function together, and an understanding of how these relate to the physical, economic, political and social environments within which these systems operate.

The broad subject matter areas that **MUST** be addressed in the core curriculum are:

- a. Attributes of an aviation professional, career planning, and certification.
- b. Aircraft design, performance, operating characteristics, and maintenance.
- c. Aviation safety and human factors.
- d. National and International aviation law and regulations.
- e. Airports, airspace, and air traffic control.
- f. Meteorology and environmental issues.

Guidelines for the topical content in each of the six broad subject matter areas are presented in Appendix C.1. The specific topics covered may vary among programs due to differences in the emphasis of particular curricula. However, all of the broad subject matter areas **MUST** be covered. In addition, the practices and procedures common to aviation **SHOULD** be presented in a manner to assist the student in understanding how to apply them as an aviation professional. Each institution is free to organize and present the ideas, concepts, and material to be covered in the core in a manner it can demonstrate to be effective within the guidelines presented below.

Aviation Core topics may be covered in courses, or portions of courses, throughout the curriculum; however, the equivalent of a least six (6) semester hours of course work in associate programs or their internationally recognized equivalent and the equivalent of twelve (12) semester hours of course work in baccalaureate programs or their internationally recognized equivalent **MUST** be primarily focused on providing breadth of understanding in Aviation Core subjects. To assure some balance in the coverage, the equivalent of at least one-half (0.5) semester hour of course work in associate programs, and the equivalent of one (1) semester hour of course work in baccalaureate programs,

MUST be devoted to each of the six broad subject matter areas listed above. The remaining hours of the requirement can be distributed over these topics as deemed appropriate by the institution.

The specific hours counted toward meeting the requirements of the Aviation Core cannot also be counted as part of the requirements of a particular Aviation Option. However, it is possible to credit part of a course toward meeting the Aviation Core requirements, and another part of that same course toward the Aviation Option requirements. In addition, some of the general education courses may be counted toward the Aviation Core, but not toward the Aviation Option.

The core topical content presented in Appendix A is not intended to be an exhaustive listing of the topics that should be covered nor dictate the course structure in which to present the topics. It is not required that each topic appear in the core curriculum. Rather, the core topical content is intended to provide guidelines for the types of topics which SHOULD be contained in the core curriculum.

4.2.4 AVIATION OPTION CRITERIA

In order to prepare the aviation student with an associate or baccalaureate education having some degree of specialization, the following options have been identified:

Aviation Management

Aviation Maintenance Technology (associate programs only or their international equivalent)

Aviation Maintenance (baccalaureate programs only or their international equivalent)

Aviation Electronics

Aviation Studies

Flight Education

For associate programs, or internationally recognized equivalent, each option MUST require of a minimum of 18 semester hours, or internationally recognized equivalent, (not including 6 semester hours of core aviation courses) in a coherent sequence of courses, the objective of which is to provide the student with special knowledge in preparation for a career as an aviation professional.

For baccalaureate programs (or internationally recognized equivalent), each option MUST require of a minimum of 36 semester hours (or internationally recognized equivalent) (not including 12 semester hours of core aviation courses) in a coherent sequence of courses, the objective of which is to provide the student with special knowledge in preparation for a career as an aviation professional.

For both associate and baccalaureate degree programs, institutions MUST have a CAA-accredited Flight Education program in order to offer a Flight Option as part of any other academic program for which accreditation is sought.

Institutions seeking accreditation for Aviation Management, Aviation Maintenance Technology, Aviation Maintenance, Aviation Electronics, or Flight Education MUST apply for accreditation under the appropriate discipline represented by

the option listed above in this Standard. These areas will not be accredited under the Aviation Studies Option.

4.3 GENERAL CRITERIA

4.3.1 INTRODUCTION

While the curricula offerings are the foundation of an aviation program, there are other important characteristics of a quality program, referred to as the general criteria. Within the discussion of general criteria, CAA has identified practices and activities that **SHOULD** be part of quality collegiate aviation programs. The sections that follow have been carefully prepared to identify those criteria that CAA considers essential for an aviation program of excellence.

4.3.2 ADMINISTRATION

The aviation program **MUST** have a mission statement that reflects an educational philosophy, goals, purposes, and general intent, and that clearly complements the institutional mission. The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution **SHOULD** ensure that the specific mission, goals and objectives of the aviation program are in accord with the general mission, goals and objectives of the institution. The administration of the institution **MUST** enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission.

Responsibility for designing, developing, approving and evaluating aviation programs **SHOULD** be carried out by the faculty and administration of the officially designated unit. In the design, development and evaluation of these programs, advice **SHOULD** be sought from the aviation industry, governmental bodies and the student body. The unit within the institution having official responsibility for the aviation program **MUST** be composed of faculty and staff who have appropriate qualifications, experience, and commitment to collegiate aviation.

The diversity of aviation programs, in general, and the specificity of some, in particular, demands careful identification of the professional qualifications of faculty and staff. An institution that includes flight education, aircraft maintenance, or other specializations will require faculty with adequate knowledge and experience in the specialization coupled with appropriate educational preparation and certification.

This same diversity in aviation programs requires that the administrator of the program have both appropriate academic qualifications and a broad experiential background. The administrator is expected to represent the interests of the aviation program to other constituencies of the institution and to provide liaison between the academic community and external institutions and agencies in both the public and private sectors.

Insofar as possible, the aviation program **SHOULD** establish an advisory committee which includes individuals whose professional aviation interests are consistent with the aviation programs offered. Representation **SHOULD** be sought from individuals who represent management and non-management perspectives. It may be desirable to include

members of the general public, business and industry, government agencies, graduates of the program, and current students. The principal thrust in membership, however, **SHOULD** be focused on the selection of individuals actively involved in the aviation community.

If an advisory committee is formed, the aviation faculty **SHOULD** ensure that the efforts of the committee contribute to the support and improvement of the aviation program. The advisory committee can be a valuable resource to evaluate the quality, depth and breadth of the aviation program; to assist in the placement and follow-up of graduates; to serve as a liaison between the aviation program and the community at large; to serve as an advocate for the aviation program with the administration of the institution; and to provide financial and other resources and work-based learning opportunities for students

4.3.2.1 Aviation Safety Culture and Program

To foster an effective safety culture, the institution **MUST** have, and actively use, a verifiable formal aviation safety program for operations involving flight, maintenance, and/or avionics laboratories that actively involves students, faculty, and staff.

4.3.3 INSTITUTIONAL COMMITMENT

The commitment of the institution may be evidenced by the relationship of the aviation program to the institution as a whole.

The fiscal policy and the financial resources available; the suitability of the facilities, equipment, and services; the overall organizational structure; and the instructional philosophy of the institution **MUST** be such that it provides reasonable assurance that an accredited aviation program will, in fact, retain its strength throughout the period of accreditation. Areas of institutional support and commitment considered especially important include:

- a. recruitment and continued support of well qualified faculty;
- b. recruitment and continued support of well qualified administrators;
- c. creation and maintenance of a library to include current technical and non-technical material, staffed with qualified librarians;
- d. acquisition, maintenance, and operation of office and laboratory equipment, facilities, and instrumentation including computer equipment and associated support personnel;
- e. provision for sufficient secretarial and clerical support, office equipment, and maintenance of such equipment.

4.3.4 FINANCIAL RESOURCES

Financial resources of an institution can significantly influence the quality of its aviation program. Sound fiscal policies **SHOULD** permit and support planning by the administration for the aviation program. The amount of financial commitment to the aviation program shall be sufficient to support mutually agreed upon goals and objectives. Where resource allocation appears inadequate to support quality programs, comparisons with support levels and facilities allocated to other relevant programs at the institution may be pertinent.

External support for the aviation program may be critical to achieving and maintaining a high level of excellence. Such external funding SHOULD be treated as supplementary support and SHOULD not be used to offset funding normally allocated to the aviation program by the university and college administrations.

Certain types of aviation programs present unique financial considerations. As an example, general aviation public airports are rarely self-supporting and require considerable funding beyond that generated from airport operating revenues. The institution MUST be prepared to allocate funds to subsidize an airport operated by a collegiate aviation program, or if federal, state and/or local funds are sought to support the airport, it SHOULD be recognized that such support may be coupled with requirements and constraints that could compromise or complicate the administration and operation of a collegiate aviation program.

4.3.5 LEARNING RESOURCES

1. Library facilities: The library MUST be adequate to support the teaching, research, and other educational needs of the aviation programs. The library that serves the aviation programs MUST be adequately staffed, and sufficient financial support MUST be provided to maintain its staff and collection. The library holdings to support aviation programs MUST be both technical and non-technical, to include books, professional magazines, journals, Federal Aviation Regulations (FAR) (or internationally recognized equivalent), FAA Advisory Circulars (or internationally recognized equivalent), and other reference material for collateral reading in connection with instructional and research programs, and faculty professional needs. Keeping all documents in the aviation collection current is a vital factor and the responsibilities associated with the maintenance of a valid technical collection MUST be recognized at the outset, i.e., the maintenance of current FARs (or internationally recognized equivalent) for flight education and maintenance programs. Recommendations from faculty members, community organizations, and student requests, SHOULD be considered in maintaining and building the library collection. The importance of a working liaison with government and industry is recommended to ensure an effective program. Access to government or industrial data retrieval systems SHOULD be provided where practical. Decisions concerning the use of the central library versus a departmental library SHOULD be made on the basis of institutional policies and the best interests of the aviation program. Aviation branch libraries may be established at an airport facility or within a department location providing support to the aviation curriculum. Materials and staffing could be under the jurisdiction of the main library. This type of expanded library service SHOULD be recognized as an important convenience to students in aviation programs. Whether centralized or decentralized, the library collection SHOULD be readily available for use with the assistance of a trained library staff, or through an open-stack arrangement, or both.

2. Audiovisual: Instructional and learning media resources SHOULD be available and maintained to contemporary standards.
3. Computer capability: Aviation programs are increasingly dependent upon the use of computers for database management, flight planning, weather data acquisition and processing, maintenance control and applications, flight control, flight management, computer-based and managed instruction, and many other developing functions and applications. The computer facilities available to the student and faculty, therefore, MUST reflect these requirements to encourage the use of computers by providing accessibility and availability as a part of the educational experience. Sufficient resources to provide for upkeep and maintenance MUST be available.

4.3.6 FACULTY

The faculty selected to support an aviation program MUST possess the experience, qualifications and capabilities essential for the successful conduct of the program in accordance with the program mission. These qualities include appropriate aviation background and experience, academic degrees and professional certificates, demonstrated teaching ability, involvement in community service and/or service to the aviation community, and continued professional development and maintenance of industry contacts.

4.3.6.1 Faculty Qualifications

The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The uniqueness of the program will often require employment of faculty members who do not precisely fit the description of the traditional college faculty member. Special notice SHOULD be paid to the unique certification requirements in aviation and allowances SHOULD be made for a faculty member possessing this certification.

Regular and adjunct faculty directly involved in an aviation program MUST meet at least the minimum standards for academic credentials as these are specified by the institution and required by the regional accrediting agency. Flight instructional, and other laboratory staff, not holding regular faculty appointments and rank are not considered "faculty" for the purposes of this section.

4.3.6.2 Recruitment and Selection

Recruitment and selection of faculty members at all times MUST be consistent with any institutional, regional, and national mandates concerning affirmative action. If possible, candidates SHOULD be sought with degree(s) from other than the parent institution to encourage a cross-fertilization of ideas and maintenance of high quality program standards.

To be eligible for appointment as a full-time faculty member, the individual MUST possess the combination of credentials and experience which best suits the needs of the program and the institution.

An institution SHOULD recognize that auxiliary faculty can and frequently do contribute significantly to a collegiate aviation program. Reliance on auxiliary faculty SHOULD be consistent with the practices and procedures of the particular institution.

4.3.6.3 Duties and Responsibilities

The three most important faculty responsibilities are teaching, research and service. An important support function is the advisement of students, especially in support of their career choices in the aviation industry.

1. **Teaching:** All faculty members SHOULD be current in their academic fields and always be prepared to meet classes as scheduled. Teaching methods SHOULD be enhanced and periodically varied to maintain student interest and to constantly improve upon the learning outcomes achieved. They SHOULD also reflect the recommendations made by the CAA Industry Advisory Board.
2. **Research/Creative Activity:** To the extent that institutional policy allows, all faculty members SHOULD involve themselves in creative activities such as funded research projects (federal, industry, internal/departmental or other sources), historical research, descriptive research, survey research, or other similar activities focused on the aviation industry. The end result SHOULD be expanded knowledge about the aviation industry as expressed in publications such as books, articles, etc., and presentations at local, state, regional, national, or international conferences. This activity experience will enhance faculty members' teaching performance and students' learning experiences.
3. **Service:** Faculty members SHOULD serve on university, college and/or departmental committees. Aviation faculty members MUST maintain a close relationship with the aviation industry through professional organization memberships, attendance at national, state, regional or local aviation meetings, and attendance at aviation-related symposiums and workshops. Such participation will enhance faculty contributions to their students, institutions and profession.

4.3.6.4 Rank, Promotion, and Tenure

Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure or the equivalent institutional policies, SHOULD be available for regular aviation faculty members consistent with those for regular faculty across other units of the institution. However, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation MUST be considered when making these judgments. Institutions SHOULD consider the adoption of special criteria for academic promotion and tenure since the nature of non-engineering aviation programs often requires special certification, yet by its nature, precludes the normal opportunities for traditional research and publication by aviation faculty.

4.3.6.5 Salaries and Working Conditions

Salaries SHOULD fall into the same ranges as those offered to other faculty members of the institution doing comparable work. Aviation faculty teaching loads SHOULD be in

accordance with the institution's own standards. However, in calculating the academic load for aviation faculty, consideration **SHOULD** be given to the various off-campus and co-curricular responsibilities since an aviation program may demand exceptional out-of-classroom commitments from its instructional staff.

In addition, an institution **SHOULD** periodically evaluate the size and makeup of its instructional staff, particularly with regard to faculty oversight and the number of full-time versus part-time teaching personnel. Under no circumstance **SHOULD** economics or enrollment pressures be allowed to derogate safety and quality.

4.3.6.6 Faculty and Instructional Staff Evaluation

Most institutions have a requirement for faculty evaluation, ranging from administrative and/or peer evaluations to student evaluations. Any form of evaluation, as prescribed by existing institutional policy, **SHOULD** include all regular and auxiliary aviation faculty. Ongoing evaluations of all regular aviation faculty, along with appropriate follow-up action where necessary, **SHOULD** ensure teaching effectiveness, accountability, professional development, and lead to continued program improvement.

4.3.6.7 Faculty Development

All institutions **MUST** have a policy which supports active faculty development. All regular and auxiliary faculty members **SHOULD** be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development for aviation faculty includes opportunities available to all faculty and those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include:

- acquisition of advanced degrees;
- acquisition of advanced aviation certification;
- membership and participation in professional aviation associations;
- participation in community, regional, and national aviation functions;
- cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- sabbatical and/or professional development leaves.

4.3.7 SUPPORT PERSONNEL

Adequate support personnel include non-faculty instructional staff, graduate assistants, laboratory assistants, research librarians, secretarial and clerical personnel, and administrative/professional staff.

The administration **MUST** provide for an adequate number and quality of support staff. An adequate number of technical, flight and ground instructors **MUST** be available whose academic credentials are consistent with the needs of the program. Support personnel **MUST** also have proper certification and/or appropriate experience for the program. Salary and compensation levels **SHOULD** be sufficient to attract and retain quality candidates.

4.3.8 STUDENT SERVICES

Academic advising **MUST** be an institutional commitment of highest priority, second only to the quality of the academic program. The institution **MUST** provide the resources and organization which will maximize the effectiveness of the academic advising system. Because of the unique nature of aviation careers, designated academic advisors may be solicited from among faculty in the aviation programs. If not, specially qualified advisors **SHOULD** be available. Advising **SHOULD** be available to all students.

Special attention **SHOULD** be paid to the development of services which foster and encourage interest in aviation careers or related fields. A career development program **SHOULD** be available which has a specialized component dealing with careers in aviation or aviation related fields. The program **SHOULD** include general and specific career information and planning, placement services, career counseling, testing services, and follow-up activities. Personal counseling of students is also a high priority need. The institution **SHOULD** have a competent and trained staff available for personal counseling of students.

4.3.9 FACILITIES, EQUIPMENT AND SERVICES

The size of an institution, the scope and emphasis of its academic program, and its declared purposes and objectives are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of both teaching and research. The physical environment of the institution is important and **SHOULD** identify all space utilization factors that may impinge on program quality. Laboratory equipment, computers, etc., **SHOULD** be the type encountered in industry and practice. It is critical that adequate support personnel be provided to implement and maintain the laboratory component of the program. Adequate instructional assistance **MUST** be provided for the laboratories.

Applicable regulations and advisory publications **SHOULD** be primary, but applicable national aviation regulations may also be helpful for off-campus space allocation. The essential need is for adequate space to meet program objectives. All guidelines pertaining to on-campus space **SHOULD** be followed. The quality of off-campus aviation courses **MUST** not be compromised because of remote or airport location. To ensure quality programs, changing needs and conditions **SHOULD** be periodically reviewed. Appropriate facilities **MUST** also exist to support the scholarly activities of the faculty. Depending on the nature of such activities, this work may require facilities in addition to those necessary to support the student activities. At a minimum, all faculty members **SHOULD** have access to a computing capability for instructional and/or research purpose.

The administration **MUST** ensure that facilities and equipment are consistent with the size and purpose of the program. Adequate classrooms, laboratories, shops, briefing rooms and office space **MUST** be provided for the faculty, students, staff and administrators, both on campus and at any remote site where program elements may be offered.

In flight education programs, careful consideration **MUST** be given to the number of aircraft available to ensure that students can complete the program in a reasonable period of time. (See Section 4.3.9.1.)

Library holdings, including government publications and aviation periodicals, **SHOULD** be adequate for the aviation program being offered. Sufficient financial support **SHOULD** be given to allow the holdings to be current, comprehensive and extensive enough to support the needs of the faculty, students and staff.

By their nature, aviation programs are particularly well served by strong audiovisual programs. The administration **SHOULD** provide funding for the A/V equipment, materials for classroom or laboratory use, and for tutorials.

The institution **MUST** provide a variety of instructional support services, facilities and personnel to its curricular offerings. These **SHOULD** include professionally staffed learning skills centers and laboratories, along with duplicating, computing and audiovisual support services. There **SHOULD** be an adequate number of current ground training devices and/or simulators which are appropriate to the program which these support.

Services **MUST** be available to allow special-needs students to reach the same levels of achievement as the other members of the student body. These services **MUST** be convenient and available to all who require them. These **SHOULD** be organized and administered so as to provide easy access to faculty as well as student users. These **SHOULD** be adequate to support the student body and its principal reason **MUST** be to contribute to the effectiveness of learning. These requirements **SHOULD** be met by all programs regardless of their locus of operation or method of delivery.

4.3.9.1 Classroom and Laboratory Facilities

The physical facilities, including buildings, classrooms, laboratories, and equipment **MUST** be suitable to serve the aviation program objectives.

1. **Classroom:** Efficient usage of space is a key factor in determining classroom requirements. Seating comfort, work space, lighting, and acoustics **SHOULD** be considered. Ventilation, heating, cooling, and noise **MUST** be considered at all times, particularly at airport locations.
2. **Flight laboratory facilities:** The physical facilities and equipment, including aircraft, simulators, ground trainers, visual aids, computer-based teaching systems, and special resources **MUST** be adequate to support the objectives of the program. Flight laboratory pre- and post-briefing rooms **SHOULD** afford privacy and **MUST** be sufficient in number to handle the normal number of instructor-student pairs using the facility at any one time. The institution **MUST** provide an adequate number of reliable, and appropriately equipped and maintained aircraft to satisfy program objectives.
3. **Aviation management laboratory facilities:** Institutions offering aviation management programs **MUST** provide access to computer systems and software, media

equipment, and/or personal computers capable of supporting the objectives of the program.

4. Aviation technology: Laboratory facilities will have a major influence on the success of this type of aviation program. In addition to specialized aviation laboratories, it is essential that related facilities in the sciences, engineering, and applied arts be fully utilized. Where programs are to be certificated by the respective national aviation authority, information found in applicable regulations and advisory publications will identify basic requirements. If the aviation laboratory is located at an airport, consideration **MUST** be given to student transportation requirements.

4.3.9.2 Office Space

The institution **SHOULD** provide properly furnished and equipped faculty, staff, and administrative space appropriate to the size and nature of its aviation programs.

4.3.9.3 Instructional Support Services

- a. The institution **MUST** provide a variety of instructional support services, facilities, and personnel to sustain its curricular offerings. These **SHOULD** include professionally staffed resource centers and laboratories; duplication, computing, and audiovisual support services; and equipment maintenance and repair services.
- b. The institution **MUST** provide modern office equipment, such as computer/word processing and duplicating equipment. In addition, secretarial support **MUST** be consistent with the type of programs, level of research and other activities.

4.3.9.4 Testing, Evaluation, and Certification of Students

Placement testing and classroom evaluation of students **SHOULD** be consistent with the overall needs, requirements and standards of the institution. Aviation programs, however, may have unique certification requirements which are greater than those of the institution. If these are integral requirements of the program, it is incumbent upon the institution to provide programs and services which allow and encourage the timely achievement of the certification.

4.3.10 STUDENT BODY

Standards for the selection and admission of students, methods of testing, evaluation and certification of students, are indicators of the quality of the aviation student body and **SHOULD** be conducted consistent with institutional policies and guidelines.

Institutions **SHOULD** be able to demonstrate the quality of student work, to include examples of examinations, homework problems, laboratory exercises, and reports. These items, which include the competence of students in both subject matter areas and communication skills, **SHOULD** be made available to the visiting team.

An institution applying for accreditation of a program **MUST** be prepared to produce records of graduate employment or continuing education over a period of at least three years.

4.3.11 ADMISSIONS, TRANSFER, NON-COLLEGIATE CREDIT

4.3.11.1 Admission of Students

Candidates selected for the aviation programs SHOULD meet the same standards for admission required by comparable academic units of the institution. Selection SHOULD be based on the ability of the individual to meet the minimum entrance requirements of the institution with the further expectation that the individual will have the academic skills, abilities and financial resources which will allow for completion of the aviation degree program within a reasonable period of time. In institutions with open admissions policies or where students are admitted with known deficiencies, adequate remedial education MUST be available.

Academic standards may be supported by some combination of admission requirements and appropriate evaluation and retention methods. Any or all, however, MUST be equitably applied and the ultimate goal MUST be the preparation of high quality graduates. The respective national aviation medical standards required in specialized aviation careers, such as air traffic control and flight, MUST be clearly stated in admissions requirements.

Admission policy SHOULD be related to the educational mission and purposes of the institution and be clearly stated. Admission policies which deal with the acceptance of transfer students must be clearly stated. Institutions SHOULD establish policies for the acceptance of transfer students and for the validation of credit for courses taken elsewhere. The institution MUST have in place procedures to ensure that the programs of all transfer students satisfy all applicable general and option criteria of this Manual.

4.3.11.2 Transfer Credit

1. Transfer Policy: In granting course credit to transfer students, the gaining institution MUST have procedures to ensure that the overall educational experience of the transferring student is equivalent in quality and quantity to that of the student completing all work at the receiving school.
2. Flight Education Transfer Credits: Granting of flight education transfer credit SHOULD be based on the student's demonstration of knowledge and skill commensurate with the flight education performance standards of the receiving institution. A major point of emphasis is that certification by the national aviation authority merely sets minimum flight education performance standards which an institution may choose to exceed.

4.3.11.3 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria must be met:

1. One of two approaches can be used to achieve accreditation:
 - a. When applying for accreditation the participating programs may write a joint SELF-STUDY, and will be reviewed by a team that will visit all institutions involved and write a comprehensive report. The Board will review and act on the entire report.

- b. If the degree granting institution uses only partners with CAA accredited programs then only the degree granting institution will be reviewed.
2. The academic unit offering the degree program must be clearly and distinctly identified with an aviation orientation.
3. If the degree granting institution accepts students from other than the complementary programs, then these students must be enrolled in a separately-designated program.

4.3.11.4 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree-granting institution to be substantially similar to courses it offers at the lower division level, the degree-granting institution **SHOULD** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Validation techniques such as standardized and/or locally prepared examinations, successful completion of advanced courses in the institution, and interviews would be considered. Each institution **SHOULD** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used. Consistent with institutional policies, various methods may be provided for students to earn credit by means other than college enrollment. Some recognized methods are listed below:

1. High School Advanced Placement program (or the internationally recognized equivalent): Through the High School Advanced Placement program, high school students who are qualified through registration in an advanced placement course in their high school or through other special educational experiences may apply for advanced standing through the designated or appropriately approved college entrance examination board.
2. College Level Examination Program: Through the general examination of the College Level Examination Program, students may apply for credit which will substitute for general studies courses.
3. Credit for Examination: Through various proficiency examination programs, institutions can equate previously acquired learning with formal course content. Such procedures allow students to demonstrate their mastery of course related subject matter. Proficiency testing **SHOULD** be closely administered by the department concerned. Rules used to govern the administration of such programs **SHOULD** be developed so as to conform with academic, admission and record keeping requirements of the particular institution.
4. Military Experience Evaluation: There is general agreement among college and university personnel that students **SHOULD** be granted credit and advanced standing for their educational achievements acquired through military service and schooling when such credit is appropriate to the fulfillment of degree requirements. Credit **SHOULD** be granted on the basis of institutional policy as established by appropriate accrediting agencies.
5. Credit for Aviation Credentials: Entering students who have certification from their national aviation authority may elect to challenge the appropriate courses.

Institutions which recognize such certification as an index of requisite knowledge, skill, and experience SHOULD establish validation procedures to ensure that the student meets or exceeds the standards of the institution's courses. The validation procedures SHOULD include one or a combination of oral, written, and/or practical examinations.

4.4 OPTION CRITERIA

4.4.1 INTRODUCTION

Sections 4.2.2, General Education Curriculum Criteria, and 4.2.3, Core Criteria, specify the curricular requirements to provide the student with a breadth of knowledge and understanding. In addition to this broad foundation, most positions in the aviation industry also require specialized knowledge and skills. The purpose of the Option Criteria is to provide depth and focus in particular study areas. An option offered by an institution MUST be taught by the institution with its own personnel and resources, except as specifically provided for in the CAA Standards governing a particular option.

4.4.2 AVIATION MANAGEMENT

Narrative Description: For associate degree programs or internationally recognized equivalent, the Aviation Management option MUST consist of a minimum of 18 semester hours or internationally recognized equivalent in a coherent sequence of business and aviation courses designed to prepare the student to transfer to a baccalaureate institution or to function effectively as a manager in a selected segment of the aviation industry. For baccalaureate degree programs, or internationally recognized equivalent, the Aviation Management option MUST consist of a minimum of 36 semester hours or internationally recognized equivalent in a coherent sequence of business and aviation courses designed to prepare the student to function effectively as a manager in a selected segment of the aviation industry. The combination of business and aviation courses SHOULD be designed to provide breadth of understanding of basic business principles and a depth of understanding of the particular segment of the aviation industry. Each school is free to specify the area of preparation, but it MUST provide focus on a potential career field rather than be an extension of the general approach provided by the core. The focus may be oriented toward a segment of the industry, such as airlines and airport, or towards a specific skill area, such as flight operations management or aircraft maintenance management. Each focus area SHOULD be developed by the aviation faculty with advice from appropriate industry associations and professionals in the field.

Required Topics: The specific topics to be addressed will depend on the area of preparation. It is anticipated that many schools will develop a single aviation management degree program that permits an aviation management student to select from a variety of capstone sequences to provide the required focus. (See Topical Content contained in Appendix C.2) Baccalaureate or internationally recognized equivalent curricula MUST include a significant culminating upper division experience in Aviation Management providing a minimum of three credit hours or internationally recognized equivalent. Each focus MUST include a significant culminating experience specific to that focus. Examples of the minimum culmination experience include a capstone course, an internship, or a special project that builds on prior course work.

Examples: Aviation Management, Air Carrier Management, Airway Science Management, Airport Management, Flight Operations Management, Maintenance Management.

4.4.3 AVIATION MAINTENANCE TECHNOLOGY (Associate degree programs only, or internationally recognized equivalent)

Narrative Description: The Aviation Maintenance Technology option shall be comprised of a coherent sequence of courses of not less than 18 semester hours, or internationally recognized equivalent, designed to provide the student with a broad, yet balanced, combination of classroom, laboratory and professional experience courses. The objective is to prepare the graduate for a position in the aviation maintenance industry or transfer to a baccalaureate degree program.

Required Topics: Classroom and laboratory topics **MUST** lead to national aviation authority certification as an Aviation Maintenance Technician. The focus of the program may be oriented toward a segment of the aviation industry, such as air carriers or general aviation, or toward a specialty area, such as electronics, materials, propulsion, or logistics. The required topics **MUST** be taught by the institution within its own (non-contract) aviation maintenance curriculum. (See Topical Content contained in Appendix C.3)

Examples: Aviation Maintenance, Aeronautical Technology, Airway Science Maintenance.

4.4.4 AVIATION MAINTENANCE (Baccalaureate degree programs only or internationally recognized equivalent)

Narrative Description: The Aviation Maintenance option shall be comprised of a coherent sequence of courses of not less than 36 semester hours, or internationally recognized equivalent, in baccalaureate programs or internationally recognized equivalent, designed to provide the student with a broad, yet balanced, combination of classroom, laboratory and professional experience courses. The objective is to prepare the graduate for a position in the aviation maintenance and manufacturing industry.

Required Topics: Classroom and laboratory topics **MUST** lead to national aviation authority certification as an Aviation Maintenance Technician. It is anticipated that many schools will develop a single aviation maintenance degree program that permits students to select from a variety of course sequences to provide the required breadth and depth of knowledge. These focus areas may be oriented toward a segment of the aviation industry, such as air carriers or general aviation, or toward a specialty area, such as electronics, materials, propulsion, or logistics. The topics **MUST** be taught by the institution within its own (non-contract) aviation maintenance curriculum. (See Topical Content contained in Appendix C.4)

Examples: Aviation Maintenance, Aviation Maintenance/Manufacturing, Aeronautical Technology, Airway Science Maintenance.

4.4.5 AVIATION ELECTRONICS

Narrative Description: The Aviation Electronics option shall be comprised of a minimum of 18 semester hours or internationally recognized equivalent in associate programs or internationally recognized equivalent and 36 semester hours, or internationally recognized equivalent, in baccalaureate programs or internationally recognized equivalent, of electronics and avionics or airway electronics courses, designed to provide the student with a broad, yet balanced, combination of classroom and laboratory courses. The objective is to prepare the graduate for a position in general, commercial, and military aviation, aerospace, and aviation related government agencies. For associate degree programs or internationally recognized equivalent it should also prepare the student for transfer to a baccalaureate degree program or internationally recognized equivalent.

Required Topics: Classroom and laboratory topics SHOULD include advanced mathematics, physical science, technical science, technical specialty, and related technical studies. Applied science and technology topics SHOULD emphasize application of technical knowledge and methods to current problems in the aviation and aviation electronics industry. (See Topical Content contained in Appendix C.5)

Examples: Avionics Technology, Airway Electronics, Aviation Management, Aviation Technology, Aviation Maintenance Management.

4.4.6 AVIATION STUDIES

Narrative Description: The Aviation Studies option shall be comprised of a minimum of 18 semester hours, or internationally recognized equivalent, for associate programs, or internationally recognized equivalent, and 36 semester hours, or internationally recognized equivalent, for baccalaureate programs or internationally recognized equivalent in a coherent sequence of courses to prepare the graduate for a position in the aviation industry and aviation related government agencies, requiring either broad or specialized educational preparation. For associate degree programs or internationally recognized equivalent it should also prepare the student for transfer to a baccalaureate degree program or internationally recognized equivalent.

Required Topics: Classroom and laboratory courses which will provide the student either a broad preparation or preparation in a defined aviation specialty will be required. (See Topical Content contained in Appendix C.6)

Option Examples: Airway Computer Science, Aviation Studies, Aviation Science, Air Traffic Control, Atmospheric Science, Aviation Meteorology, Aviation Human Factors, Aviation Business Administration.

4.4.7 FLIGHT EDUCATION

Narrative Description: The Flight Education option shall be comprised of a minimum of 18 semester hours or internationally recognized equivalent for associate programs or internationally recognized equivalent and 36 semester hours or internationally recognized equivalent for baccalaureate programs or internationally recognized equivalent in a coherent sequence of courses designed to provide the student with a broad, yet balanced,

combination of classroom, flight laboratory, and professional experience courses. The objective is to prepare the graduate for a professional flight operations career in the aviation industry and aviation related government agencies. For associate degree programs or internationally recognized equivalent it should also prepare the student for transfer to a baccalaureate degree program or internationally recognized equivalent. Required Topics: The institution MUST offer classroom and flight laboratory topics specified in Appendix C.7. These topics should provide the foundation for the development of a career as a professional flight officer and MUST include preparation for the following licenses, certificates, and/or ratings (course and/or program requirement for students obtaining licenses, certificates, and/or ratings is optional):

- a. Associate degree programs or internationally recognized equivalent - Commercial Pilot certificate with an instrument rating.
- b. Baccalaureate degree programs or internationally recognized equivalent - Commercial Pilot certificate with an instrument rating, AND multiengine land rating or flight instructor certificate.

Instructional Control:

- a. The institution MUST teach all academic and "ground school" courses using faculty and instructional staff employed by the institution.
- b. "Flight laboratory" (hands-on instruction in aircraft and training devices or simulators) may be taught by either an institution's instructional staff OR by one or more qualified contractors.
- c. If the institution uses one or more qualified contractors to offer flight laboratory instruction, the institution MUST through a formal contract or written agreement:
 1. Designate an appropriately qualified regular Full Time Equivalent (FTE) aviation faculty member to administer the Flight Education option and to provide responsible oversight of the contractor(s) to assure that the program meets or exceeds the performance requirements set forth in these Standards.
 2. Employ (as regular faculty, adjunct faculty, or as a consultant) a qualified flight standards pilot, who has no business or employment relationship to the independent contractor(s). The flight standards pilot MUST conduct periodic flight standards evaluations to determine that students enrolled in the Flight Education option meet or exceed the performance standards set forth by the institution and CAA standards for the option. Every academic semester or quarter, as appropriate, the flight standards pilot MUST conduct a formal evaluation of at least one student completing each flight course in the CAA-accredited curriculum.

3. Ensure that flight instructors possess the appropriate aeronautical certificates and ratings.
4. Ensure that flight instructors meet the employment requirements of the institution for an equivalent position.
 - d. The relationship with the contractor MUST be expressed in document form and be available for review by all interested parties, including students, parents, institution departments, faculty, and accreditation agencies. The document MUST include at least the following:
 1. A description of the relationship between the provider of flight training and the academic department(s) involved in supporting and relating curricula.
 2. A description of the committee and meeting structure specifying regular interchange of curricular requirements and suggestions between the academic faculty and the provider of flight training.
 3. The means of scheduling flight training in use by the institution and provider of flight training.
 4. The means of selecting flight training instructors for students, and the process available to students for changing instructors.
 5. The means for reviewing student performance in flight training, with their advisor.
 6. The means for curriculum and flight training program changes as a result of equipment and technology changes that may occur in both the flight training and academic curricula.

Examples: Aircraft Systems Management, Flight Operations, Career Pilot, Professional Pilot, Aeronautical Science.

4.5 ASSESSING LEARNING FROM EXPERIENCE

4.5.1 INTRODUCTION

Institutions may establish non-traditional aviation related programs to meet the needs of students who have already achieved a verifiable level of competence in an aviation occupation. Students enter the program possessing a specified minimum combination of specialized aviation knowledge and experience. The curriculum is composed of three distinct elements:

Aviation Credit: Granted through non-collegiate achievement in accordance with Section 4.3.11.3. The maximum amount of aviation credit which may be applied toward an associate degree is 18 semester hours or internationally recognized equivalent and toward a baccalaureate degree or internationally recognized equivalent is 36 semester hours or internationally recognized equivalent.

Specified General Education Courses: Providing the essential, basic academic foundation of every institution's associate and baccalaureate degree.

Required and Elective Courses: Preparing graduates for career growth and assumption of greater professional responsibility.

Schools offering non-traditional programs **MUST** require clear and comprehensive evidence that the applicant possesses the required qualifications. Knowledge and experience **MUST** be clearly described and documented.

4.5.2 ACADEMIC STANDARDS

1. Credit **MUST** be awarded only for the learning that comes through experience and not for experience alone.
2. Learning from experience **MUST** be clearly described and documented.
3. If an institution grants credit for experiential learning, that credit **MUST** be awarded only for learning equal to the college course for which credit is being sought.
4. Credit **SHOULD** be awarded only for learning that has a balance, appropriate to the subject, between theory and practical application.
5. The determination of competence levels and credit awards **MUST** be made by individuals with academic credentials in the appropriate subject matter.

4.5.3 ADMINISTRATIVE STANDARDS

1. Credit awards and their transcript entries **MUST** be monitored to avoid giving credit twice for the same learning.
2. Policies and procedures applied to assessment, including provision for appeal, **MUST** be fully disclosed and prominently available.
3. Fees charged for assessment **SHOULD** be based on the services performed in the process.
4. All personnel involved in the assessment of learning **SHOULD** receive adequate training for the functions they perform, and there **SHOULD** be continued professional development.
5. The assessment program **MUST** be regularly monitored, reviewed, evaluated and revised as needed to reflect changes in the needs being served and in the state of the assessment arts.

4.6 EXPERIMENTAL AND INNOVATIVE PROGRAMS; INCLUDING DISTANCE LEARNING

Schools are encouraged to be innovative and create original aviation programs. However, CAA will only accredit under those options presented in Section 4.2.3.

4.6.1 INTRODUCTION

Experimental and Innovative programs are being designed to provide many features such as flexible scheduling, on-site instruction, distance learning, self-directed independent study, and other creative approaches to academic content and educational process. While content, structure, and procedures may vary widely from program to program, the central concern **SHOULD** be to balance quality and standards with access and program design. Given the wide variety of possible programs, institutions, and technologies, it is clear that a well defined set of standards is required to help define the parameters of excellence, dispel misunderstandings and doubts about the purpose, legitimacy, and worth of these efforts.

4.6.2 STANDARDS

1. The program **MUST** have a mission statement that reflects an educational philosophy, goals, purposes, and general intent and that clearly complements the institutional mission.
2. Faculty and academic professionals working with these programs **MUST** have the special knowledge and skills required to teach, advise, and counsel in this environment.
3. Clearly articulated programmatic learning outcomes **MUST** be stated for the comprehensive curriculum as well as specific learning experiences.
4. The program **SHOULD** be designed to provide diverse learning experiences while meeting the established CAA standards.
5. Assessment of a student's learning **MUST** be based on the achievement of comprehensive and specific learning outcomes.
6. The policies, procedures, and practices of the program **SHOULD** take into account the conditions and circumstances of the students and promote the success of these students.
7. The administrative structures and the human, fiscal, and learning resources **MUST** be sufficient, appropriate, and stable for accomplishing the program mission.
8. Program evaluation **MUST** involve faculty, academic professionals, administrators, and students on a continuing, systematic basis to assure quality and standards, and to stimulate program improvement.

4.7 COOPERATIVE EDUCATION AND INTERNSHIP PROGRAMS

Cooperative education and internship experiences are defined as optional or academic program opportunities that enable a student to obtain work experience in one or more career fields.

4.7.1 COMMITMENT TO THE PROGRAM

Specific formal commitment to cooperative education and intern programs **MUST** be expressed and understood by the school, student, and employer:

1. The school **MUST** justify the establishment of these programs by ensuring that the academic and practical validity of the cooperative education or intern experience is consistent with the career objectives of the student.
2. The employer **MUST** recognize and accept the program as an educational effort rather than as an inexpensive labor source, and **MUST** be willing to provide progressively more responsible experience during the work assignment.
3. The student **SHOULD** have specific education and/or career objectives for each work assignment.

4.7.2 ACADEMIC REQUIREMENTS AND CONTROL

In granting credit, the academic value of the work experience **MUST** be closely evaluated by the institution. Under no circumstances **SHOULD** the credit awarded exceed the amount the student would be able to obtain during a normal on-campus academic term.

The quality of the program **MUST** meet the same academic standards as courses offered on campus.

The programs **SHOULD** be published in the official institution catalog or bulletin. The academic department awarding the credit **SHOULD** be responsible for establishing and maintaining the program's educational standards.

Regular reports from the student and employer **SHOULD** be submitted for evaluation. The reports **SHOULD** reflect both problems encountered and progress attained in the accomplishment of stated career and educational objectives.

Final reports **SHOULD** be submitted by the student, employer, and department at the completion of each cooperative education or intern experience.

APPENDIX C.1 CORE TOPICAL CONTENT

The following is topical content for the subject matter areas listed in Section 4.2.3 Core Criteria. It is not intended that all of these topics be covered in each program, nor is it intended to suggest how courses are to be structured. The function of these topics is to provide a sense of the type of material that **SHOULD** be covered under the specified subject matter area.

1. Attributes and behavior of an aviation professional, career planning, and certification.
 - Concepts of an aviation professional
 - Professional ethics
 - Responsibilities of the aviation professional
 - Basic qualifications, privileges and limitations of all classes of airmen
 - The relationship between certification and actual job qualifications
 - The national aviation authority legal mandate and philosophy toward certification
 - Overview of career opportunities
 - Information on typical career paths
 - Analysis of the effect of organizational growth on career progression
 - Financial and educational investments required for career growth
 - Self-assessment and determination
 - Substance abuse
2. Aircraft design, performance, operating characteristics, and maintenance.
 - Aircraft certification criteria
 - Aerodynamics including the major aerodynamic considerations of different categories of aircraft, and basic aerodynamic considerations in aircraft design
 - Flight mechanics
 - Aircraft materials and rationale for their use in various types of aircraft
 - Considerations in determining the appropriate propulsion system for a particular application and the fundamentals of operation of each type of propulsion system
 - Aircraft systems including control, electrical, and hydraulic systems
 - Analysis of the tradeoffs in basic aircraft designs, material used in construction and propulsion systems
 - Reliability and maintainability issues and how these considerations affect aircraft design
 - The operating capabilities of the types of aircraft currently being manufactured including representative general aviation airplanes, air carrier airplanes, helicopters, and military aircraft
 - Environmental factors affecting the performance capabilities of aircraft and the relative importance of these factors
 - Identification of the major cost categories associated with various types of operations and an analysis of the relative costs of operating aircraft of different classes
 - Analysis of the appropriate aircraft types for various users
 - Aviation regulations, records, and documents associated with aircraft maintenance
 - Maintenance cycles used for various types of aircraft and operations emphasizing typical periodic and progressive approaches

- Factors affecting the maintenance cycles of airframes, engines, and systems
- 3. Aviation safety, security, and human factors.
 - Meaning of human factors
 - Types and consequences of human error
 - Physiological aspects
 - Effects of stress and fatigue
 - Effects of alcohol and drugs, including prescription drugs
 - Communications issues, including interpersonal and cross-cultural aspects
 - Judgment and decision-making
 - Workstation design
 - Team resource management
 - Discussion of actual accident/incident cases
 - Overview of the areas where safety is a problem in aviation
 - Analysis of the relative safety of different classes of operators in the aviation industry
 - Principles of safe operating procedures for general aviation and commercial aviation
 - Responsibilities of operators, pilots, maintenance technicians, managers, and owners
 - National aviation safety regulations on accident reporting
 - National aviation security regulations, policies, and procedures
 - Human factors issues with automated and advanced systems
- 4. Legal and labor issues in national and international aviation.
 - The national legal system
 - Important legal concepts affecting aviation
 - Applicable regulation of the aviation industry
 - International regulation of the aviation industry
 - The relationship between laws and regulations
 - Labor management relations
 - Discrimination
- 5. Airports, airspace, and air traffic control.
 - National aviation authority's legal responsibility as manager of the airspace system
 - Basic structure of the airspace system and the rationale for its design
 - Overview of the respective national airspace system
 - Present and future navigation systems
 - Overview of the national and international systems
 - Metropolitan and state airport systems
 - Airport design
 - Airport development
 - Major factors involved in operating an airport
 - Special interest group impact on airports
 - Funding sources for airport development and operation
 - Overview of the air traffic control system
 - Relationships between en route, terminal, tower, and flight service functions
 - Anticipated developments in the air traffic control system
 - Capacity limits and how the equipment and rules affect these limits
- 6. Meteorology and environmental issues.
 - Structure and energy of the atmosphere
 - Air mass circulation and fronts

Weather observation, analysis, and forecasting
Critical weather phenomena and severe storms
Environmental law
Airport environmental issues
Hazardous material considerations
Environmental considerations in maintenance operations
Handling aviation fuels

APPENDIX C.2

AVIATION MANAGEMENT OPTION TOPICAL CONTENT

The topical content of an Aviation Management option will be heavily dependent on the specific area of focus. The following major subject areas and the topical content within those areas is not intended to dictate the structure to be followed by an individual institution.

Basic Business Management Foundation

Accounting

Interpretation and analysis of financial statements

Financial control concepts

Development and use of accounting and budgetary data to assist management in decision making and control activities

Micro and Macro Economics

Foundations of the market economy

Production theory and costs

Cost benefit analysis

Economic growth concepts

Market structure and price theory

International economic relationships

Finance

Nature of capital planning

Methods of evaluating capital projects

Cost of capital concepts

Overview of financial instruments

Financial planning and forecasting

Management

Management styles

Models of decision making

Characteristics of effective leadership

Organizational structure and primary functional areas of business firms

Management information systems

Business Law

Nature and sources of law

Legal problems encountered by managers

Protection and enforcement of individuals' rights in the corporate field

Human Resource Management

Employee recruitment and selection

Wage and salary administration

Labor-management relations

Employee motivation and morale

Management Focused Aviation Course work

General

An in-depth analysis of the growth of the major components of the aviation industry at the national and international levels

An in-depth study and analysis of the current structure of the aviation industry including general aviation, the airlines, corporate aviation, airports, and manufacturers

An analysis of how technical changes have shaped the aviation industry, and the outlook for the industry based on new technologies

Analysis of the impact of limited airspace and airport capacity on the growth of the aviation industry

Analysis of the effects of management actions/decisions/policies on safety

Focus

This area **MUST** be defined by the institution and **SHOULD** provide preparation for a career. It **SHOULD** provide depth and special expertise in a particular area, and **SHOULD** be carefully developed with advice from industry associations and professionals in the field. Additional management and other support courses may be used, but the capstone requirement **MUST** deal with material that is unique to the desired area of focus in the aviation industry.

The following examples provide for a focus in air carrier management, but this list is not presented as a list that **SHOULD** be adopted. It is important that each institution go through the process of defining the area of focus and then identify appropriate subject areas and topics to be covered.

It **SHOULD** be kept in mind that the focus is intended to prepare the student for a career in the appropriate area and not for a specific position, although some preparation for the entry position may be appropriate.

A typical array of topics that would be appropriate for focusing on air transportation management might include:

The national and international markets for air transportation services

Labor issues in the air carrier industry

Analysis of the economic regulation of the air carrier industry

Comparison of the management structure of airlines and the relationship between the size and structure of various carriers

Management practices in the air carrier industry

Analysis of air carrier scheduling practices

Analysis of air carrier financial structures and the relative success of different structures

Air carrier cost structure and the impact of changes in resource costs

Airline reservation and yield management philosophies

APPENDIX C.3
AVIATION MAINTENANCE TECHNOLOGY OPTION TOPICAL CONTENT
(Associate Degree Programs only, or internationally recognized
equivalent)

The programs under the Aviation Maintenance Technology option are structured to meet the eligibility requirements for certification as an aviation maintenance technician with airframe and/or powerplant ratings. The organization and sequence of required topics to show content and level shall be the responsibility of the institutions seeking accreditation; however, technical courses SHOULD include material that exceeds the minimum guidelines outlined in the respective national aviation regulations. Furthermore, all laboratory courses SHOULD apply the maintenance resource management principles.

General Topics

Basic electricity

Aircraft drawings

Weight and balance

Fluid lines and fittings

Materials and processes

Ground operation and servicing

Cleaning and corrosion control

Mathematics

Maintenance forms and records

Basic physics

Maintenance publications

Mechanic privileges and limitations

Airframe Topics

Airframe Structures

Wood structures

Aircraft covering

Aircraft finishes

Sheet metal structures

Welding

Assembly and rigging

Airframe inspection

Airframe Systems and Components

Aircraft landing gear systems

Hydraulic and pneumatic power systems

Cabin atmosphere control systems

Aircraft instrument systems

Communication and navigation systems

Aircraft fuel systems

Aircraft electrical systems

Position and warning systems

Ice and rain protection systems

Fire protection systems

Characteristics of flight management systems and electronic flight deck systems

Powerplant Topics

Powerplant theory and maintenance

Reciprocating engines

Turbine engines

Engine inspection

Powerplant Systems and Components

Engine instrument systems

Engine fire protection systems

Engine electrical systems

Lubrication systems

Ignition systems

Fuel metering systems

Engine fuel systems

Induction systems

Engine cooling systems

Engine exhaust systems

Propellers

APPENDIX C.4 AVIATION MAINTENANCE OPTION TOPICAL CONTENT

(Baccalaureate Degree Programs only, or internationally recognized equivalent)

The programs under the Aviation Maintenance option are structured to meet the eligibility requirements for certification as an aviation maintenance technician with airframe and/or powerplant ratings. The organization and sequence of required topics to show content and level shall be the responsibility of the institutions seeking accreditation; however, upper division technical course work is required and **SHOULD** complement and expand on lower division courses. Upper division technical courses may be included in the program's curriculum approved by the respective national aviation authority; however, the content of these courses **MUST** substantially exceed the minimum guidelines outlined in the respective national aviation regulations. Furthermore, all laboratory courses **SHOULD** apply the maintenance resource management principles

General Topics

- Basic electricity
- Aircraft drawings
- Weight and balance
- Fluid lines and fittings
- Materials and processes
- Ground operation and servicing
- Cleaning and corrosion control
- Mathematics
- Maintenance forms and records
- Basic physics
- Maintenance publications
- Mechanic privileges and limitations
- Airframe Topics
- Airframe Structures
- Wood structures
- Aircraft covering
- Aircraft finishes
- Sheet metal structures
- Welding
- Assembly and rigging
- Airframe inspection
- Airframe Systems and Components
- Aircraft landing gear systems
- Hydraulic and pneumatic power systems
- Cabin atmosphere control systems
- Aircraft instrument systems
- Communication and navigation systems
- Aircraft fuel systems
- Aircraft electrical systems

Position and warning systems
Ice and rain protection systems
Fire protection systems
Characteristics of flight management systems and electronic flight deck systems
Powerplant Topics
Powerplant theory and maintenance
Reciprocating engines
Turbine engines
Engine inspection
Powerplant Systems and Components
Engine instrument systems
Engine fire protection systems
Engine electrical systems
Lubrication systems
Ignition systems
Fuel metering systems
Engine fuel systems
Induction systems
Engine cooling systems
Engine exhaust systems
Propellers

APPENDIX C.5 AVIATION ELECTRONICS OPTION TOPICAL CONTENT

The topical content of an Aviation Electronics option will be dependent on the area of specialization. All specializations will require a basic foundation in the electronics technologies. Specializations in avionics or airway electronics may require a different application of aviation electronics. The following major subject areas and the topical outlines provide a sense of the type of material that **SHOULD** be included in a program with an aviation electronics option. There is no intention to dictate a specific structure that **MUST** be followed by an individual institution.

Basic Electronics Foundation, All Specializations

Advanced Mathematics

Algebra and trigonometry

Calculus with analytical geometry

Differential equations recommended

Physical Science

Physics

Chemistry

Engineering Graphics

Fundamentals of Alternating and Direct Current

Conductors, insulators, and resistors

Analyzing DC circuit networks

Magnetism

Inductance and capacitance

Analyzing AC circuit networks

Testing and measuring instruments, practical application

Microelectronics/Solid State Technology

Semiconductor theory

Small signal amplifiers

Special electronic devices

Integrated circuits

Power amplifiers

Amplifier applications

Testing and measuring instruments, practical application

Pulse Fundamentals

Pulse waveforms

Frequency domain analysis

RC circuits

RL-RLC circuits and distributed parameters

Witching circuits

Testing and measuring instruments, practical application

Digital Technology

Logic families

Boolean algebra

Systematic reduction of expressions

Number systems
Counters and registers
Multiplexer and demultiplexers
Arithmetic circuits
Digital memories
Interface and display
Testing and measuring instruments, practical application
Communications Technology
Elements of noise
Modulation, AM, FM, SSB, Phase, Digital
Receiver circuits
Transmitter circuits
Transmission lines
Antenna and radiowave propagation
Fiber optics
Testing and measuring instruments, practical application
Microwave Technology
Microwave devices and circuits
Transmission lines and wave propagation
Antennas and waveguides
Basic radar system
Testing and measuring instruments, practical application
Microprocessors
Microprocessors and assembly language
Microprocessor architecture
Programming techniques
Interfacing peripherals
Microprocessor applications
Testing and measuring instruments, practical application
Fundamentals of Fault Diagnostics
Fault Tree Analysis
Failure Effects and Modes Analysis
Reading, writing, and testing fault diagnosis procedures
Avionics Technology Specialization
The following topical subject areas **SHOULD** be completed in addition to the basic electronics foundation by those programs offering an avionics specialization:
Airborne Communications
VHF communications systems
UHF communications systems
HF communications systems
Aircraft antennas
Voice systems
Data links
Airborne Navigation
Air traffic control systems
VHF omnirange

ILS & MLS systems
Long range navigation systems
Inertial navigation systems
Area navigation systems
Distance measurement systems
Airborne Surveillance Systems
Air traffic control systems
Transponder, mode S
Weather radar
Low frequency mapping systems
TCAS systems
Radar altimeter
Flight Control
Principles of flight control
Light and heavy aircraft systems
Airborne Instrumentation and System Interface
Flight management systems
Data bus
Electronic flight instruments systems
Avionics system interface
Airway Electronics Specialization
The following topical subject areas **SHOULD** be completed in addition to the basic electronics foundation by those programs offering an airway electronics option:
Air Traffic Control System
Metropolitan airports
Air route traffic control centers
Communications facilities
Remote sites
Electronic facilities
Radar Systems
Long range
Airport surface detection
Microwave links
Associated airborne systems
Automation Systems
Computer Systems
Optimization of radar information
Aircraft tracking
Flight plan processing
Communication Systems
Multi-channel recording systems
Air to ground radio communications
Ground to air radio communications
Navigation Systems
Instrument landing systems
Automatic direction finder

Distance measuring
Microwave landing systems
Tactical navigation
Runway visibility and wind shear

APPENDIX C.6 AVIATION STUDIES OPTION TOPICAL CONTENT

It would be impossible to list a topical outline for all program possibilities which could fall under Aviation Studies; however, the following broad, general information is presented as guidelines for the institution offering an Aviation Studies program and for team members examining such a program.

Aviation Studies Topics - General

History of aviation
 Foundation of aeronautics
 Air transportation
 Airport management
 Aviation law
 Aviation meteorology
 Aviation business administration
 Aviation economics
 Aviation safety
 Air traffic control
 Special topics in aviation
 Aviation Studies Topics - Specific

Example 1 - Air Traffic Control

Departure control
 Meteorology
 En route traffic control
 Terminal area control
 Aviation safety
 Air carrier operations
 Aviation law
 Aircraft performance
 Aviation human factors
 Navigation and approach charts
 The National Airspace System
 Example 2 - Aviation Safety
 Introduction to aviation safety
 Foundations of aeronautics
 Aviation meteorology
 Aircraft powerplants & systems
 Human factors in aviation safety
 Quantitative analysis
 Aircraft performance
 Safety program management
 Basic aerodynamics
 Mechanical and structural factors in aviation safety
 Aircraft crash survival analysis and design
 Aircraft accident investigation

Aircraft crash and emergency management

APPENDIX C.7 FLIGHT EDUCATION OPTION TOPICAL CONTENT

Inasmuch as airman certification is regulated and managed by national aviation authorities, the minimum content which the Flight Education option subject matter areas and topics **MUST** meet is contained in the appropriate national aviation regulations and related publications.

Classroom Course Subject Matter Area and Topical Content:

Classroom courses in the Flight Education Option **MUST** contain subject matter areas and topics which satisfy the areas of aeronautical knowledge or the ground training subjects required in the respective national aviation regulations, as appropriate, under which the Flight Education Option is administered, for the airman certificates and ratings in the option.

At the baccalaureate level or internationally recognized equivalent the objective of the Flight Education Option is to provide the graduate additional preparation for a professional flight operations career in the aviation industry and related government agencies. The classroom course offerings at the baccalaureate level or internationally recognized equivalent **MUST** include the following topics within the subject matter area of corporate and/or air carrier operations:

Turbine engine theory

High altitude airspace

Navigation and approach procedure chart interpretation

Aircraft flight guidance systems, including advanced avionics and navigation systems

High altitude physiology

Flight planning

High altitude weather

Weather radar

Severe weather avoidance

Transport category operations specifications

Air Taxi Operators and Commercial Operators

Certification and Operations of Air Carriers and Commercial Operators of Large Aircraft

Crew Resource Management

Crew concept procedures

Operations procedures

Safety programs and issues

Hydroplaning

Wind shear avoidance

Aircraft systems theory and operation

Emergency procedures

Aircraft performance, weight and balance

Professional responsibility

Flight Laboratory Course Subject Matter Area and Topical Content:

Flight Laboratory courses in the Flight Education Option **MUST** contain subject matter areas and topics which satisfy the proficiency operations or the flight

training operations required by the respective national aviation regulations, as appropriate under which the Flight Education option is administered, for the airman licenses, certificates, and/or ratings required in the option.

APPENDIX C.8

FUNDAMENTAL SKILLS AND VALUES OF AVIATION GRADUATES

Industry and education leaders in the aviation field identified the following important skills and values for aviation professionals that are typically not well developed in graduates of current programs. Consequently aviation programs are expected to pay particular attention to the development of these skills and values.

Critical Thinking Skills

Problem analysis; problem solving

Judgment and decision making (including resource identification and management)

Interpersonal Skills

Oral and written communications

Conflict management/conflict resolution

Team building; team maintenance; individual accountability

Values and Attitudes

Ethical standards; integrity

Flexibility; versatility; openness to change

Curiosity, imagination, creativity

Motivation

Passion

Dedication

APPENDIX D

AABI OUTCOMES-BASED ACCREDITATION CRITERIA MANUAL

Adapted from AABI Form 201, *Accreditation Criteria Manual*, available from
<http://www.aabi.aero/obcriteria.html>
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1.0 INTRODUCTION

This publication describes the criteria used by the Aviation Accreditation Board International (AABI) in the accreditation of associate and baccalaureate aviation programs and their international equivalent. The criteria, along with the accreditation policies and procedures, serve as the basis to evaluate the quality of the educational program offered and to hold the program accountable to the educational community, the aviation profession, and the public. The criteria are written as broad statements that embrace several areas of expected institutional performance. Their purpose is to strengthen aviation programs, elevate the aviation profession by promoting ethical and professional practices, and serve as the field's primary vehicle for quality assurance and self-regulation.

All programs seeking AABI accreditation are expected to meet the criteria presented in this document. Program compliance promotes excellent educational practices in the field of aviation and thus enables AABI to grant or reaffirm accreditation.

2.0 BACCALAUREATE DEGREE PROGRAMS

In order to be considered for accreditation, collegiate aviation programs **MUST** be designed to prepare graduates to function as aviation professionals.

To assist in the identification and recognition of the characteristics of collegiate aviation programs for accreditation purposes, AABI has adopted the criteria that follow.

It is the responsibility of the institution seeking accreditation of an aviation program to demonstrate clearly that the program meets the following criteria.

Criterion 2.1 Students

The quality and performance of the students and graduates are important considerations in the evaluation of an aviation program. The institution **MUST**:

- a. Evaluate, advise, and monitor students to determine its success in meeting program objectives
- b. Have and enforce policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere
- c. Have and enforce procedures to assure that all students meet all program requirements
- d. Publish standards for the selection and admission of students which are related to the educational mission and purposes of the institution
- e. Maintain recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items will include evidence of student competence in both subject matter areas and communications skills
- f. Assess the effectiveness of its validation methods in granting credit for non-collegiate achievement
- g. Produce records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.

Criterion 2.2 Program Educational Objectives

The aviation program **MUST** have a mission statement that reflects an educational philosophy, goals, purposes, and general intent, and that clearly complements the institutional mission. The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution

MUST enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission. The aviation program for which an institution seeks accreditation or reaffirmation MUST have in place:

- a. Published educational objectives, having sufficient detail to be measured, that are consistent with the mission of the institution and these criteria
- b. A process based on the needs of the programs' various constituencies in which the objectives are determined and periodically evaluated
- c. A curriculum and process that ensure the achievement of these objectives
- d. A system of ongoing evaluation that demonstrates achievement of these objectives and uses the results to improve the effectiveness of the program.

Criterion 2.3 General Outcomes

2.3.1 Outcomes. Aviation programs MUST demonstrate that graduates have:

- a. An ability to apply knowledge of mathematics, science, and applied sciences
- b. An ability to analyze and interpret data
- c. An ability to function on multi-disciplinary teams
- d. An understanding of professional and ethical responsibility
- e. An ability to communicate effectively, including both written and verbal communication skills
- f. A recognition of the need for, and an ability to engage in, life-long learning
- g. A knowledge of contemporary issues
- h. An ability to use the techniques, skills, and modern technology necessary for professional practice
- i. An understanding of the national and international aviation environment
- j. An ability to apply pertinent knowledge in identifying and solving problems.

2.3.2 Assessment. Each program MUST have an assessment process that includes a written plan with documented results. The assessment process MUST demonstrate that the program outcomes are being measured and that the program objectives are being met. Evidence MUST be given that the results are applied to the further development and improvement of the program. Evidence that may be used includes, but is not limited to, the following: student portfolios, including graded assignments and/or projects; nationally normed subject content examinations; alumni surveys that document professional accomplishments and career development activities; placement data of graduates; and employer surveys.

Criterion 2.4 Curriculum

The curriculum requirements specify subject areas appropriate to aviation programs, but do not prescribe specific courses. The program's faculty **MUST** ensure that the aviation curriculum devotes adequate attention and time to each component, consistent with the objectives of the program and institution. Students **MUST** be prepared for careers in aviation and aerospace through the curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work. The curriculum **MUST** address:

- a. A combination of college level mathematics and basic sciences appropriate to the program
- b. A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.
- c. Student knowledge of the following aviation core topics:
 1. Attributes of an aviation professional, career planning, and certification
 2. Aircraft design, performance, operating characteristics, and maintenance
 3. Aviation safety and human factors
 4. National and international aviation law and regulations
 5. Airports, airspace, and air traffic control
 6. Meteorology and environmental issues.

Criterion 2.5 Faculty

Full-time and adjunct faculty directly involved in an aviation program **MUST** meet at least the minimum standards for academic credentials specified by the institution and required by the regional or national accrediting agency. The faculty **MUST** be of sufficient number as determined by student enrollment and the expected outcomes of the program. Each program **MUST** have at least one dedicated full-time faculty member. Faculty **MUST** engage in teaching, service, and scholarship. Flight instructional, and other laboratory staff, not holding full-time faculty appointments and rank are not considered faculty for the purposes of this section.

The institution **MUST** demonstrate an appropriate mix of full-time and adjunct faculty necessary to fulfill its stated program outcomes.

2.5.1 Qualifications. The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The faculty **MUST** have sufficient qualifications to develop, guide, deliver, evaluate, and improve the program. The overall qualifications of the faculty may include such factors as education, diversity of backgrounds, applicable experience, teaching performance, ability to communicate, enthusiasm for developing more effective programs, level of scholarship, participation in professional societies, and applicable certifications, registrations, or licenses.

2.5.2 Recruitment and Selection. Recruitment and selection of faculty members **MUST** be consistent with institutional, regional, and

national mandates. Candidates SHOULD be sought with degree(s) from other than the parent institution to encourage a cross-fertilization of ideas and maintenance of high quality program standards.

2.5.3 Rank, Promotion, and Tenure. Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure (for tenure-track faculty), MUST be consistent with those for full-time faculty across other units of the institution. In addition, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation MUST be considered when making these judgments.

2.5.4 Salaries and Working Conditions. Salaries for aviation faculty MUST fall into the same ranges as those offered to other faculty members of the institution in comparable disciplines. Aviation faculty teaching loads MUST be in accordance with the institution's standards.

2.5.5 Support Personnel. The administration MUST provide for an adequate number and quality of support staff. An adequate number of technical, flight and ground instructors whose academic credentials are consistent with the needs of the program MUST be available. Support personnel MUST also have proper certification and/or appropriate experience for the program.

2.5.6 Faculty and Instructional Staff Evaluation. Institutions MUST have a process for faculty evaluation to include all full-time and adjunct aviation faculty.

Ongoing evaluations of all full-time aviation faculty, along with appropriate follow-up actions where necessary, MUST ensure teaching effectiveness, service accountability, professional development and scholarship and lead to continued program improvement.

2.5.7 Faculty Development. All institutions MUST have a policy that supports active faculty development. All full-time and adjunct faculty members SHOULD be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development of aviation faculty includes opportunities available to all faculty and also those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include but are not limited to:

- Acquisition of advanced degrees;
- Acquisition of advanced aviation certification;
- Membership and participation in professional aviation associations;
- Participation in community, regional, and national aviation functions;
- Cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- Sabbatical and/or professional development leaves.

Criterion 2.6 Facilities, Equipment, and Services

Classrooms, laboratories, and associated equipment **MUST** be adequate to accomplish the program objectives and provide an atmosphere conducive to learning. Appropriate facilities **MUST** be available to foster faculty-student interaction and to create a climate that encourages professional development and professional activities. Programs **MUST** provide opportunities for students to learn the use of modern applicable instruments and equipment. Computing and information infrastructures **MUST** be in place to support the scholarly activities of the students and faculty and the educational objectives of the institution. The quality of off-campus aviation courses at remote facilities or airport locations **MUST** be maintained at least to the level of on-campus courses.

2.6.1 Laboratory Facilities. The size of an institution, the scope and emphasis of its academic program, and its declared purposes and objectives are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of both teaching and research. Laboratory equipment, computers, etc., **MUST** be appropriate to the program objectives and **SHOULD** be the type encountered in industry and practice. Support and instructional personnel **MUST** be provided to implement and maintain the laboratory component of the program. Pre- and post-briefing rooms **SHOULD** afford privacy and **MUST** be sufficient in number to handle the instructor-student pairs using the facility at any one time.

2.6.2 Flight Equipment. Careful consideration **MUST** be given to the number of aircraft available to ensure that students can complete the program in a reasonable period of time. The institution **MUST** provide an adequate number of safe, reliable, and appropriately equipped and maintained aircraft to satisfy program objectives.

2.6.3 Library. Access to appropriate reference materials **MUST** be adequate for the aviation program(s).

Criterion 2.7 Institutional Support and Financial Resources

Institutional support, financial resources, and constructive leadership **MUST** be adequate to assure the quality and continuity of the aviation program throughout the period of accreditation. Resources **MUST** be sufficient to acquire, maintain, and operate facilities and equipment appropriate for the aviation program. In addition, support personnel and institutional services **MUST** be adequate to meet the program needs.

Criterion 2.8 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria **MUST** be met:

2.8.1 Approach Options. One of two approaches can be used to achieve accreditation:

2.8.1.1 When applying for accreditation the participating programs may write a joint **SELF-STUDY**, and will be reviewed by a team

that will visit all institutions involved and write a comprehensive report. The Board will review and act on the entire report.

2.8.1.2 If the degree granting institution uses only partner institutions with corresponding AABI-accredited programs, then only the degree granting institution will be reviewed.

2.8.2 Unit Offering Degree. The academic unit offering the degree program must be clearly and distinctly identified with an aviation orientation.

2.8.3 Students Transferring. If the degree granting institution accepts students from other than the complementary programs, these students must be enrolled in a separately designated program.

Criterion 2.9 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree granting institution to be substantially similar to courses it offers at the lower-division level, the degree granting institution **MUST** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Validation techniques such as standardized and/or locally prepared examinations, successful completion of advanced courses in the institution, and interviews may be used to meet this criterion. Each institution **MUST** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used.

2.9.1 Credit for Aviation Credentials. Entering students who have aviation credentials may elect to challenge the appropriate courses. Institutions which recognize aviation credentials as a measure of requisite knowledge, skill, and experience **MUST** establish validation procedures to ensure that the student meets or exceeds the standards of the institution's courses. The validation procedures **MUST** include documentation of the student's competency appropriate to the aviation credentials held.

Criterion 2.10 Aviation Safety Culture and Program

To foster an effective safety culture, the institution **MUST** have, and actively use, a verifiable formal aviation safety program that actively involves students, faculty, and staff for operations involving flight, maintenance, avionics, and other aviation laboratories.

Criterion 2.11 Program-level Criteria

Each program **MUST** satisfy applicable program-level and general criteria. Program-level criteria provide the specificity applicable to a given discipline. A program offered by an institution **MUST** be taught by the institution with its own personnel and resources, except as specifically provided for elsewhere in the AABI Criteria.

3.0 ASSOCIATE DEGREE PROGRAMS

It is the responsibility of the institution seeking accreditation of an academic aviation program to demonstrate clearly that the program meets the following criteria.

Criterion 3.1 Students

The quality and performance of the students and graduates are important considerations in the evaluation of an aviation program. The institution **MUST**:

- a. Evaluate, advise, and monitor students to determine its success in meeting program objectives

- b. Have and enforce policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere
- c. Have and enforce procedures to assure that all students meet all program requirements
- d. Publish standards for the selection and admission of students which are related to the educational mission and purposes of the institution
- e. Maintain recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items, **MUST** include the competence of students in both subject matter areas and communications skills
- f. Assess the effectiveness of its validation methods in granting credit for non-collegiate achievement
- g. Produce records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.

Criterion 3.2 Program Educational Objectives

The aviation program **MUST** have a mission statement that reflects an educational philosophy, goals, purposes, and general intent, and that clearly complements the institutional mission. The mission statement **MUST** be published and widely available to the institution's constituents. The administration of the institution **MUST** enable the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission. The aviation program for which an institution seeks accreditation or reaffirmation **MUST** have in place:

- a. Detailed published educational objectives that are consistent with the mission of the institution and these criteria
- b. A process based on the needs of the program's various constituencies in which the objectives are determined and periodically evaluated
- c. A curriculum and process that ensures the achievement of these objectives
- d. A system of ongoing evaluation that demonstrates achievement of these objectives and uses the results to improve the effectiveness of the program

Criterion 3.3 General Outcomes

3.3.1 Outcomes. Associate degree programs in aviation **MUST** demonstrate that their graduates have:

- a. An ability to apply knowledge of mathematics to aviation related disciplines
- b. An ability to identify, formulate, and solve applied aviation problems
- c. An ability to function on teams
- d. An understanding of professional and ethical responsibility
- e. An ability to communicate effectively, including both written and verbal communication skills

- f. A recognition of the need for, and an ability to engage in, life-long learning
- g. A knowledge of contemporary issues
- h. An ability to use the techniques, skills, and modern tools in aviation for professional practice

3.3.2 Assessment. Each program **MUST** have an assessment process that includes a written plan with documented results. The assessment process **MUST** demonstrate that the program outcomes are being measured. Evidence **MUST** be given that the results are applied to the further development and improvement of the program. Evidence that may be used includes, but is not limited to, the following: student portfolios, including graded assignments and/or projects; nationally normed subject content examinations; alumni surveys that document professional accomplishments and career development activities; placement data of graduates; and employer surveys.

Criterion 3.4 Curriculum

The curriculum requirements specify subject areas appropriate to aviation subjects but do not prescribe specific courses. The faculty **MUST** assure that the program curriculum devotes adequate attention and time to each component, consistent with the objectives of the program and institution. The curriculum **MUST** address:

- a. A combination of college level mathematics and basic sciences appropriate to the program
- b. A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.
- c. Student knowledge of the following aviation core topics:
 1. Attributes of an aviation professional, career planning, and certification
 2. Aircraft design, performance, operating characteristics, and maintenance
 3. Aviation safety and human factors
 4. National and international aviation law and regulations
 5. Airports, airspace, and air traffic control
 6. Meteorology and environmental issues.

Criterion 3.5 Faculty

Full-time and adjunct faculty directly involved in an aviation program **MUST** meet at least the minimum standards for academic credentials specified by the institution and required by the regional or national accrediting agency. The faculty **MUST** be of sufficient number as determined by student enrollment and the expected outcomes of the program. The aviation unit **MUST** have at least one dedicated full-time faculty member. Faculty **MUST** engage in teaching and service. Flight instructional, and other laboratory staff, not holding full-time faculty appointments and rank are not considered faculty for the purposes of this section.

The institution **MUST** demonstrate an appropriate mix of full-time and adjunct faculty necessary to fulfill its stated program outcomes.

3.5.1 Qualifications. The mission of a particular aviation program will directly affect the makeup of the faculty who participate in the program. The faculty **MUST** have sufficient qualifications to develop, guide, deliver, evaluate, and improve the program. The overall qualifications of the faculty may include such factors as education, diversity of backgrounds, applicable experience, teaching performance, ability to communicate, enthusiasm for developing more effective programs, participation in professional societies, and applicable certifications, registrations, or licenses.

3.5.2 Recruitment and Selection. Recruitment and selection of faculty members **MUST** be consistent with institutional, regional, and national mandates.

3.5.3 Rank, Promotion, and Tenure. Opportunities for appointment at all institutional ranks, as well as opportunities for promotion and tenure (for tenure-track faculty), **MUST** be available for full-time aviation faculty members consistent with those for full-time faculty across other units of the institution. In addition, the uniqueness of the professional qualifications required for participation in the many facets of collegiate aviation **MUST** be considered when making these judgments.

3.5.4 Salaries and Working Conditions. Salaries for aviation faculty **MUST** fall into the same ranges as those offered to other faculty members of the institution in comparable disciplines. Aviation faculty teaching loads **MUST** be in accordance with the institution's standards.

3.5.5 Support Personnel. The administration **MUST** provide for an adequate number and quality of support staff. An adequate number of technical, flight and ground instructors whose academic credentials are consistent with the needs of the program **MUST** be available. Support personnel **MUST** also have proper certification and/or appropriate experience for the program.

3.5.6 Faculty and Instructional Staff Evaluation. Institutions **MUST** have a process for faculty evaluation to include all full-time and adjunct aviation faculty.

Ongoing evaluations of all full-time aviation faculty members, along with appropriate follow-up actions where necessary, **MUST** ensure teaching effectiveness, service accountability, and lead to continued program improvement.

3.5.7 Faculty Development. All full-time and adjunct faculty members **SHOULD** be encouraged to further their professional academic development, thus enhancing their individual contributions to the institution, the program, and the students. Professional development of aviation faculty includes opportunities available to all faculty and also those which may be unique to the aviation field.

Examples of acceptable and desirable forms of faculty development include but are not limited to:

- Acquisition of advanced degrees;

- Acquisition of advanced aviation certification;
- Membership and participation in professional aviation associations;
- Participation in community, regional, and national aviation functions;
- Cooperative efforts with area schools in furthering aviation education faculty exchange programs;
- Sabbatical and/or professional development leaves.

Criterion 3.6 Facilities, Equipment and Services

Classrooms, laboratories, and associated equipment **MUST** be adequate to accomplish the program objectives and provide an atmosphere conducive to learning. Appropriate facilities **MUST** be available to foster faculty-student interaction and to create a climate that encourages professional development and professional activities. Programs **MUST** provide opportunities for students to learn the use of modern applicable instruments and equipment. Computing and information infrastructures **MUST** be in place to support the scholarly activities of the students and faculty and the educational objectives of the institution. The quality of off-campus aviation courses at remote facilities or airport locations **MUST** be maintained at least to the level of on-campus courses.

3.6.1 Laboratory Facilities. The size of an institution, the scope and emphasis of its academic program, and its declared purposes and objectives are factors to be taken into account with respect to facilities and equipment considerations. Certain programs in aviation require substantial laboratory and classroom facilities to serve the objectives of the program. Laboratory equipment, computers, etc., **MUST** be appropriate to the program objectives and **SHOULD** be the type encountered in industry and practice. Support and instructional personnel **MUST** be provided to implement and maintain the laboratory component of the program. Pre- and post-briefing rooms **SHOULD** afford privacy and **MUST** be sufficient in number to handle the instructor-student pairs using the facility at any one time.

3.6.2 Flight Equipment. Careful consideration **MUST** be given to the number of aircraft available to ensure that students can complete the program in a reasonable period of time. The institution **MUST** provide an adequate number of safe, reliable, and appropriately equipped and maintained aircraft to satisfy program objectives.

3.6.3 Library. Access to appropriate reference materials **MUST** be adequate for the aviation program(s).

Criterion 3.7 Institutional Support and Financial Resources

Institutional support, financial resources, and constructive leadership **MUST** be adequate to assure the quality and continuity of the associate degree program in aviation. Resources **MUST** be sufficient to attract, retain, and provide for continued professional development of a well-qualified faculty. Resources also **MUST** be sufficient to acquire, maintain, and operate facilities and equipment appropriate for the program. In addition, support personnel and institutional services **MUST** be adequate to meet program needs.

Criterion 3.8 Complementary Degree Programs

Complementary degree programs involve two or more institutions working together to offer a degree program, and the degree granting institution does not offer all elements of the program. In these circumstances the following criteria **MUST** be met:

3.8.1 Approach Options. One of two approaches can be used to achieve accreditation:

3.8.1.1 When applying for accreditation the participating programs may write a joint SELF-STUDY, and will be reviewed by a team that will visit all institutions involved and write a comprehensive report. The Board will review and act on the entire report.

3.8.1.2 If the degree granting institution uses only partner institutions with corresponding AABI-accredited programs, then only the degree granting institution will be reviewed.

3.8.2 Unit Offering Degree. The academic unit offering the degree program must be clearly and distinctly identified with an aviation orientation.

3.8.3 Students Transferring. If the degree granting institution accepts students from other than the complementary programs, then these students must be enrolled in a separately-designated program.

Criterion 3.9 Credit for Non-Collegiate Achievement

For credits that are neither covered by articulation agreements nor determined by the degree granting institution to be substantially similar to courses it offers at the lower-division level, the degree granting institution **MUST** establish validation procedures if advanced placement, waiving of requirements, or granting of credit for experience is offered. Validation techniques such as standardized and/or locally prepared examinations, successful completion of advanced courses in the institution, and interviews would be considered. Each institution **MUST** maintain published non-collegiate credit policies and adequate records to evaluate the effectiveness of the validation techniques used.

3.9.1 Credit for Aviation Credentials. Entering students who have aviation credentials may elect to challenge the appropriate courses. Institutions which recognize aviation credentials as a measure of requisite knowledge, skill, and experience **MUST** establish validation procedures to ensure that the student meets or exceeds the standards of the institution's courses. The validation procedures **MUST** include documentation of the student's competency appropriate to the aviation credentials held.

Criterion 3.10 Aviation Safety Culture and Program

To foster an effective safety culture, the institution **MUST** have, and actively use, a verifiable formal aviation safety program that actively involves students, faculty, and staff for operations involving flight, maintenance, avionics, and other aviation laboratories.

Criterion 3.11 Program-level Criteria

A program is a clearly delineated major, degree, or option or combination of options within a major or degree as defined by the institution.

Each program **MUST** satisfy applicable program-level and general criteria. Program-level criteria provide the specificity applicable to a given discipline. A

program offered by an institution **MUST** be taught by the institution with its own personnel and resources, except as specifically provided for elsewhere in the AABI Criteria.

4.0 PROGRAM CRITERIA

4.1 Program Criteria for Aviation Management

These criteria apply to Aviation Management and similarly named applied programs such as: Air Carrier Management, Airway Science Management, Airport Management, Flight Operations Management, and Maintenance Management.

4.1.1 Baccalaureate Programs. The aviation faculty **MUST** develop each program with advice from appropriate industry associations and professionals in the field. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a manager in the aviation industry. Each program may be oriented toward a segment of the industry, such as airlines, general aviation, or airports; or towards a specific area, such as flight operations management or aircraft maintenance management, or may be of a general nature. Additionally, each program **MUST** provide evidence that its graduates demonstrate competency in program objectives.

Each program **MUST** provide evidence of a significant culminating upper division experience in aviation management. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.2 PROGRAM CRITERIA FOR AVIATION MAINTENANCE

These criteria apply to Aviation Maintenance and similarly named applied programs such as: Aviation Maintenance/Manufacturing, Aeronautical Technology, and Airway Science Maintenance.

4.2.1 Baccalaureate Programs. The aviation faculty **MUST** develop each program with advice from appropriate industry associations and professionals in the field. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a maintenance professional in the aviation industry.

An Aviation Maintenance program is designed to prepare the graduate for a position in aviation maintenance or manufacturing. Classroom and laboratory topics **MUST** lead to appropriate national certification. The program objectives **MUST** include certification/licensure as an Aviation Maintenance Technician with airframe and/or powerplant ratings, or national equivalent. It is anticipated that many schools will develop a single aviation maintenance degree program that permits students to select from a variety of course sequences to provide the required breadth and depth of knowledge. These focus areas may be oriented toward a segment of the aviation industry, such as air carriers or general aviation, or toward a specific area, such as electronics, materials, propulsion, or logistics.

Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

Each program MUST provide evidence of a significant culminating upper division experience in aviation maintenance. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.2.2 Associate Programs. An Aviation Maintenance Technology program MUST prepare the graduate for a position in the aviation maintenance industry or transfer to a baccalaureate degree program. Classroom and laboratory topics MUST lead to appropriate national certification as an Aviation Maintenance Technician with airframe and/or powerplant ratings, or national equivalent. The focus of the program MUST be oriented toward a segment of the aviation industry, such as air carriers or general aviation, or toward a specific area, such as electronics, materials, propulsion, or logistics. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

4.3 Program Criteria for Aviation Electronics

These criteria apply to Aviation Electronics and similarly named applied programs such as: Avionics Technology, Airway Electronics, or Aviation Technology.

4.3.1 Baccalaureate Programs. The aviation faculty MUST develop each program with advice from appropriate industry associations and professionals in the field. Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as an aviation electronics professional in the aviation industry.

An Aviation Electronics program is designed to prepare the graduate for a position in general, commercial, or military aviation, aerospace, and aviation related government agencies. Graduates MUST be able to apply science and technology to current problems in the aviation and the aviation electronics industry. The topical content of an Aviation Electronics program will depend on the area of specialization. However, graduates of all specializations MUST demonstrate a basic foundation in the electronics technologies. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

Each program MUST provide evidence of a significant culminating upper division experience in aviation electronics. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.3.2 Associate Programs. An Aviation Electronics program MUST prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

4.4 Program Criteria for Aviation Studies

These criteria apply to Aviation Studies and similarly named applied programs such as: Airway Computer Science, Aviation Science, Air Traffic Control, Safety, Security, Atmospheric Science, Aviation Meteorology, or Aviation Human Factors. These criteria address programs not described in other program criteria.

4.4.1 Baccalaureate Programs. The aviation faculty **MUST** develop each program with advice from appropriate industry associations and professionals in the field. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a professional in the aviation industry.

The Aviation Studies option provides baccalaureate courses in a coherent sequence to prepare the graduate for a position in the aviation industry and aviation related government agencies, requiring either broad or specialized educational preparation. Each program **MUST** provide evidence that its graduates demonstrate competency in program objectives.

Each program **MUST** provide evidence of a significant culminating upper division experience in aviation studies. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.4.2 Associate Programs. An Aviation Studies program **MUST** prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program **MUST** provide evidence that its graduates demonstrate competency in program objectives.

4.5 Program Criteria for Flight Education

These criteria apply to Flight Education and similarly named programs such as: Aircraft Systems Management, Flight Operations, Career Pilot, Professional Pilot, or Aeronautical Science.

4.5.1 Baccalaureate Programs. The aviation faculty **MUST** develop each program with advice from appropriate industry associations and professionals in the field. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as professional pilots in the aviation industry.

Classroom and laboratory topics **MUST** lead to appropriate national certification. The program objectives **MUST** include certification/licensure as a Commercial Pilot with an instrument rating, rotorcraft, and multiengine land rating or flight instructor. Each program **MUST** provide evidence that its graduates demonstrate competency in program objectives.

Each program **MUST** provide evidence of a significant culminating upper division experience in flight education. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.5.2 Associate Programs. A Flight Education program MUST prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

Classroom and laboratory topics MUST lead to appropriate national certification. The program objectives MUST include certification/licensure as a Commercial Pilot with an instrument rating. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

4.5.3 Baccalaureate and Associate Programs: Instructional Control, Safety, and Oversight.

a. Institutions that utilize either internal or contract flight training as part of an aviation program MUST assure that:

1. Student learning in the classroom is well integrated with learning in the laboratory.
2. There is a common approach to safety with a single, integrated, and verifiable formal aviation safety program.
3. Training equipment is acquired or upgraded to reflect current industry practice.
4. Students have adequate access to training equipment and resources.

b. The institution MUST teach all academic and "ground school" courses using faculty and instructional staff employed by the institution.

c. "Flight laboratory" (hands-on instruction in aircraft and training devices or simulators) may be taught by either an institution's instructional staff OR by one or more qualified contractors.

d. If the institution uses one or more qualified contractors to offer flight laboratory instruction, the institution MUST through a formal contract or written agreement:

1. Designate an appropriately qualified regular Full Time Equivalent (FTE) aviation faculty member to administer the Flight Education option and to provide responsible oversight of the contractor(s) to assure that the program meets or exceeds the performance requirements set forth in these Criteria.
2. Employ (as regular faculty, adjunct faculty, or as a consultant) a qualified flight standards pilot, who has no business or employment relationship to the independent contractor(s). The flight standards pilot MUST conduct periodic flight standards evaluations to determine that students enrolled in the Flight Education option meet or exceed the performance standards set forth by the institution and AABI Criteria for the option. Every academic semester or quarter, as appropriate, the flight standards pilot MUST conduct a formal evaluation of at least one student completing each flight course in the AABI-accredited curriculum.

3. Ensure that flight instructors possess the appropriate aeronautical certificates and ratings.
 4. Ensure that flight instructors meet the employment requirements of the institution for an equivalent position.
- e. The relationship with the contractor **MUST** be expressed in document form and be available for review by all interested parties, including students, parents, institution departments, faculty, and accreditation agencies. The document **MUST** include at least the following:
1. A description of the relationship between the provider of flight training and the academic department(s) involved in supporting and relating curricula.
 2. A description of the committee and meeting structure specifying regular interchange of curricular requirements and suggestions between the academic faculty and the provider of flight training.
 3. The means of scheduling flight training in use by the institution and provider of flight training.
 4. The means of selecting flight training instructors for students, and the process available to students for changing instructors.
 5. The means for reviewing student performance in flight training, with their advisor.
 6. The means for curriculum and flight training program changes as a result of equipment and technology changes that may occur in both the flight training and academic curricula.

4.6 Program Criteria for Safety Science Programs

These criteria apply to Safety Science and similarly named programs such as: Aviation Safety, Flight Safety, or Industrial Safety.

4.6.1 Baccalaureate Programs. The faculty **MUST** develop each program with advice from appropriate industry associations and professionals in the field. Each program **MUST** provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as safety professionals in the aviation industry.

Each program **MUST** provide evidence that graduates are able to anticipate, recognize, and evaluate hazardous conditions and practices affecting people, property, and the environment; develop and evaluate appropriate strategies designed to mitigate risk; and apply principles of safety and health in a non-academic setting through an intern, cooperative, or supervised experience.

Each program **MUST** provide evidence of a significant culminating upper division experience in safety science. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

4.6.2 Associate Programs. A Safety Science program MUST prepare the graduate for a position in the aviation industry or transfer to a baccalaureate degree program. Each program MUST provide evidence that its graduates demonstrate competency in program objectives.

APPENDIX E
STEPS TO AABI ACCREDITATION

Adapted from CAA Form 112, *Steps to Accreditation*, available from
<http://www.aabi.aero/Forms&Pubs/112StepstoAccred.pdf>

1. The institution must be an educator member of CAA to be eligible for accreditation.
2. The institution submits an application (Form 102), application fee, three copies of institution catalog, three copies of the aviation program curriculum, and course descriptions, three copies of the classroom hour coverage of core topics, and three copies of a curriculum review form for each program submitted for candidacy.
3. Executive Director reviews application documents and, if complete submits copies to Accreditation Committee Chair for review. If not complete, Executive Director notifies institution of additional required items.
4. Accreditation Committee Chair determines the institution's status (full Self-study or denied).
5. Chair of the Accreditation Committee notifies Executive Director, by letter, of the decision regarding candidate status.
6. Executive Director notifies the institution, by letter, advising status. If approved for full Self-study, enclose Form 101 (Accreditation Standards Manual) and Form 104 (Outline for a Self-Study Report). If denied, advise institution of reasons for denial.
7. Institution completes full or preliminary Self-study (6 - 9 month process). Self-study should be completed in one academic year.
8. Institution submits three copies of Self-study to CAA office. If the institution has had a catalog change at any time since submission of their application, three copies of the new catalog should also be submitted. Executive Director reviews Self-study and if complete mails a copy of the Self-study (and new catalog, if applicable) to the Accreditation Committee Chair for review. If not complete, Executive Director notifies institution of additional required items.
9. Accreditation Committee Chair advises the Executive Director, by letter, if the Self-Study Report is accepted. This letter may include items for review by Visiting Team.
10. Executive Director notifies the institution and requests three dates for a team visit. A list of visiting team members is sent to the institution, which has the option of striking any member.
11. When the institution responds, Executive Director selects Chair of Visiting Team. Executive Director, in consultation with Chair of the Visiting Team, selects the date of the visit and visiting team size. Team members are selected. Executive Director notifies the institution of date of visit and visiting team members and sends Form 106 (Information and Procedures for the Visiting Team), Form 107 (Typical Schedule for a Visiting Team), Form 109 (Guide to Preparation of the Visiting Team Report), and Form 120 (Team Visit Checklist for Institutions).
12. Executive Director sends a copy of Self-study and catalog to the Visiting Team Chair. If this is a reaccreditation, the Chair is also sent the previous visiting team report and interim report(s). The institution sends a copy of Self-study and catalog to the other team members.
13. Executive Director sends to the visiting team a travel expense report (with explanation of travel procedures) to be completed and returned to CAA Central Office and CAA Forms 106 (Information and Procedures for the Visiting Team), 107 (Typical Schedule for a Visiting Team), 108 (Aviation Program Evaluation), 109 (Guide to Preparation of the Visiting Team Report), and 120 (Team Visit Checklist for Institutions). Executive Director sends Form 114 (Team Member Assessment of the Performance of the Visiting Team Chairperson) to team members and Form 115 (Chairperson's Assessment of the Performance of the Visiting Team Member) to Team Chair, to be completed and returned to CAA Central Office. CAA pays the expenses of the visiting team, to include a \$50 honorarium for each team member, and invoices the institution for the amount.
14. Executive Director sends to the Visiting Team Chair Form 110 (Visiting Team Recommendation to the Accreditation Committee and Board of Trustees).

15. Executive Director notifies appropriate regional and specialized accreditation association(s) of visit by letter.
16. Visiting Team Chair corresponds with institution to work out a detailed schedule of visit. CAA form entitled •CAA Accreditation Visit Timetable Worksheet•, leading up to accreditation action, prepared by the Executive Director with final schedule completed by Team Chair and copies sent by Team Chair to institution, team, Accreditation Committee Chair and CAA Central Office.
17. Visiting team members conduct visit. (Executive Director may participate as an observer, if deemed necessary by Visiting Team Chair or Executive Director.)
18. After visit, Chair of the Accreditation Committee and Executive Director receive visiting team first draft report from the Team Chair for review. Their comments sent to Team Chair, who will incorporate comments into second draft of report.
19. Chair of the Visiting Team completes Form 115 (Chairperson's Assessment of the Performance of the Visiting Team) and returns to the CAA Central Office to be filed in the Visiting Team members' files.
20. Visiting Team members complete Form 114 (Team Member's Assessment of the Performance of the Visiting Team Chairperson) and return to the CAA Central Office to be filed in the Chair's file.
21. Chair of Visiting Team sends the visiting team second draft report to the President of the institution for review and correction of factual errors.
22. President reviews second draft and sends comments and draft back to the Chair of the Visiting Team. A final report is completed by Chair and sent to Chair of the Accreditation Committee and Executive Director, along with Form 110 (to Executive Director only).
23. Executive Director sends final report to institution for response to recommendations and, if desired, to suggestions.
24. Institution submits response to final report to Executive Director.
25. Forty days prior to their next meeting, Executive Director sends final visiting team report and the institution's response to the report to all members of Accreditation Committee with Form 111 (Guidelines for Accreditation Committee Review of the Visiting Team Report and Preparation of the Report to the Board of Trustees) and Form 116 (Accreditation Committee Ballot for Initial or Renewal Accreditation) for review and balloting. The completed Form 110 is submitted to the Accreditation Committee Chair.
26. Thirty days prior to their next meeting, Executive Director sends the visiting team report, the institution's response to the report, and Forms 110 to the Board of Trustees.
27. Accreditation Committee reviews the visiting team report and the institution's response to the report, and each member completes Form 116. Upon receipt of the Forms 116, the Chair prepares for the Board of Trustees an Executive Summary as outlined in Form 111. Chair presents Executive Summary to the Board.
28. Board acts on the report and makes decision.
29. If accredited, an official Letter of Notification of the action is sent to the institution by the Executive Director within 30 days of the action.

APPEAL PROCESS

1. If not accredited, the Executive Director sends a letter, also within 30 days of the action, notifying institution of action and basis of action.
2. Institution may appeal action by notifying CAA within 30 days of receipt of Executive Director's letter.
3. Executive Director submits letter of appeal to CAA President.
4. President appoints three Trustees to Appeal Committee.
5. Appeal Committee meets at next CAA meeting and makes recommendation to Board.
6. Board reviews recommendation and makes decision.
7. Board acts on the report and makes decision.
8. If accredited, an official Letter of Notification of the action is sent to the institution by the Executive Director within 30 days of the action.

INTERIM REPORT

1. Institution is given period for interim report(s), the items required in the report and deadline date of submittal.
2. Institution submits interim report(s) to CAA.
3. Executive Director reviews report(s) and submits to Accreditation Committee Chair.
4. Accreditation Committee reviews report.
5. Accreditation Committee Chair prepares report for the Board with recommendations.

APPENDIX F
SURVEY OF ADMINISTRATORS OF AABI ACCREDITED PROGRAMS

Survey of Administrators of AABI Accredited Programs

This survey has been designed to gather perceptions among administrators of collegiate aviation programs regarding the Aviation Accreditation Board International (AABI). Although your participation in this research effort is voluntary, confidentiality is assured for those who choose to participate.

The Aviation Accreditation Board International (AABI) is the sole, formal specialized accrediting organization responsible for granting specialized accreditation to non-engineering collegiate aviation academic programs. Currently, there exist 71 AABI accredited programs at 25 institutions nationwide.

1. Please explain why the aviation program(s) at your institution initially decided to seek AABI accreditation. (Please use back of sheet if necessary.)

2. Does your program(s) have plans to maintain existing AABI accreditation?

(If Yes, please skip to question 4.)

Yes

No

3. If your program(s) is not planning on maintaining AABI accreditation, please explain why. (Please use back of sheet if necessary.)

Please indicate how strongly the following statements reflect your beliefs as to why your program(s) sought and attained AABI accreditation.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4. To ensure that the program meets standards established by the profession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. To help clarify the program's mission and future direction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. To help attract and recruit highly qualified students and faculty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. To enhance program visibility and recognition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
8. To protect programs from internal budgetary constriction in periods of curtailed enrollment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. To assist potential students in selecting a quality training program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. To facilitate the participation of students and faculty in an intensive program evaluation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. To identify for employers those programs which have successfully met the profession's standards of preparation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. To gain the confidence of the educational community, related professions, and the public.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
13. AABI accreditation is beneficial to the AABI accredited program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International (AABI).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. It would be beneficial if more aviation programs were accredited by the AABI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The AABI should better market itself to collegiate aviation programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to collegiate aviation.

- 1 – no value
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 – high value

17. How many aviation degree programs does your institution currently provide? _____

18. What is the total number of aviation degree-seeking students at your institution? _____

Thank you for your time and effort in completing this questionnaire! Your participation will greatly contribute to the success of this research project. Please return the completed questionnaire in the self-addressed stamped envelope. Or you may mail to:

C. Daniel Prather,
Aerospace Department,
MTSU,
P. O. Box 67,
Murfreesboro, TN 37132

615-898-2289

dprather@mtsu.edu

APPENDIX G

SURVEY OF ADMINISTRATORS OF NON-AABI ACCREDITED PROGRAMS

Survey of Administrators of Non-AABI Accredited Programs

This survey has been designed to gather perceptions among administrators of collegiate aviation programs regarding the Aviation Accreditation Board International (AABI). Although your participation in this research effort is voluntary, confidentiality is assured for those who choose to participate.

The Aviation Accreditation Board International (AABI) is the sole, formal specialized accrediting organization responsible for granting specialized accreditation to non-engineering collegiate aviation academic programs. Currently, there exist 71 AABI accredited programs at 25 institutions nationwide.

1. Please explain why the aviation programs at your institution are not currently AABI accredited. (Please use back of sheet if necessary.)

2. Does your program have plans to pursue AABI accreditation at some point in the future? (If No, please skip to question 4).

- Yes
 No

3. If your program(s) is planning on seeking AABI accreditation, please explain what motivated this decision. (Please use back of sheet if necessary.)

Please indicate how strongly the following statements reflect your beliefs as to why your program has not sought AABI accreditation.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4. Our program is too new to seek accreditation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. We cannot get approval from dean and/or president to seek AABI accreditation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The faculty in our department do not feel there are adequate benefits for the cost and time involved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
7. It is too costly to seek accreditation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The preparation of the required self-study is too time consuming.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Our programs do not meet AABI standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. We feel the AABI accreditation standards are inappropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. We do not have sufficient information to decide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
12. AABI accreditation is beneficial to the AABI accredited program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International (AABI).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It would be beneficial if more aviation programs were accredited by the AABI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The AABI should better market itself to collegiate aviation programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to collegiate aviation.

- 1 – no value
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 – high value

17. How many aviation degree programs does your institution currently provide? _____

18. What is the total number of aviation degree-seeking students at your institution? _____

Thank you for your time and effort in completing this questionnaire! Your participation will greatly contribute to the success of this research project. Please return the completed questionnaire in the self-addressed stamped envelope. Or you may mail to:

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APPENDIX H

SURVEY OF AVIATION PROGRAM STUDENTS ON AABI ISSUES

Survey of Aviation Program Students on AABI Issues

This survey has been designed to assess your awareness of the Aviation Accreditation Board International (AABI) and the role AABI accreditation played in your decision as to which institution to attend. Although your participation in this research effort is voluntary, confidentiality is assured for those who choose to participate.

The Aviation Accreditation Board International (AABI) is the sole, formal specialized accrediting organization responsible for granting specialized accreditation to non-engineering collegiate aviation academic programs. Currently, there exist 71 AABI accredited programs at 25 institutions nationwide.

1. Please check all items that you considered when selecting which institution and aviation program to attend.

- Athletic team reputation
- Aviation training facilities
- AABI accreditation status
- Cost
- Family member's alma mater
- Financial aid/scholarships
- Friends attending
- Institutional accreditation status
- Location
- Particular professor
- Reputation of institution or aviation program
- Specific academic program

2. Do you currently attend an AABI accredited aviation program?

- Yes
- No
- Don't Know

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3. Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International (AABI).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4. I feel that aviation industry employers prefer graduates of AABI accredited programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. It greatly benefits students to attend aviation programs that are accredited by the AABI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In deciding which aviation program to attend, it was important to me to attend a program accredited by the AABI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to you as a student.

- 1 – no value
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 – high value

8. What is your gender?

- Male
- Female

9. What year are you in school?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate student

10. Please share any further thoughts you may have on the AABI and the role of AABI accreditation in your education and future career opportunities (use back of sheet if necessary).

Thank you for your time and effort in completing this questionnaire! Your participation will greatly contribute to the success of this research project. Please return the completed questionnaire in the self-addressed stamped envelope. Or you may mail to:

C. Daniel Prather,
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MTSU,
P. O. Box 67,
Murfreesboro, TN 37132

615-898-2289

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APPENDIX I

SURVEY OF AVIATION INDUSTRY EMPLOYERS ON AABI ISSUES

Survey of Aviation Industry Employers on AABI Issues

This survey has been designed to assess your knowledge of the Aviation Accreditation Board International and the influence AABI accreditation has on aviation industry hiring decisions. Although your participation in this research effort is voluntary, your confidentiality is assured if you choose to participate.

The Aviation Accreditation Board International (AABI) is the sole, formal specialized accrediting organization responsible for granting specialized accreditation to non-engineering collegiate aviation academic programs. Currently, there exist 71 AABI accredited programs at 25 institutions ationwide.

Please indicate your level of agreement or disagreement with the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The AABI should better market itself to our industry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International (AABI).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Our organization prefers to hire graduates of AABI accredited programs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It would be beneficial to our industry if more collegiate aviation programs became accredited by the AABI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Our industry does not realize any direct or indirect benefits from the AABI and its efforts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate your perceived value of AABI accreditation to your industry.

- 1 – no value
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 – high value

7. How many individuals are currently employed by your company?

- Less than 100
- 100 or more, but less than 300
- 300 or more, but less than 500
- 500 or more, but less than 1,000
- 1,000 or more

8. Please share any additional thoughts you may have on AABI accreditation and the hiring of recent college graduates by the aviation industry.

Thank you for your time and effort in completing this questionnaire! Your participation will greatly contribute to the success of this research project. Please return the completed questionnaire in the self-addressed stamped envelope. Or you may mail to:

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APPENDIX J

MTSU IRB APPROVAL LETTERS

December 5, 2006

C. Daniel Prather
Department of Aerospace
dprather@mtsu.edu

Subject: “Specialized Accreditation in Collegiate Aviation: An Analysis of the Perceived Value of Specialized Accreditation by the Aviation Accreditation Board International”
IRB # 07-111, **Exempt Research**

Dear Investigator:

Based upon my review, I have found your proposed study to be exempt from Institutional Review Board (IRB) continued review. The exemption is pursuant to 45 CFR 46.101(b)(2) and is based on the fact that the research is involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior; no identifiers will be used; and, any disclosure of the human subjects’ responses could not reasonably place the subjects at risk.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting data and you are ready to submit your thesis and/or publish your findings. Should you not finish your research within the three (3) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions

Any change to the protocol must be submitted to the IRB before implementing this change. According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project.**

Also, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Tara M. Prairie
Compliance Officer

March 23, 2007

C. Daniel Prather
Department of Aerospace
dprather@mtsu.edu

Subject: “Specialized Accreditation in Collegiate Aviation: An Analysis of the Perceived Value of Specialized Accreditation by the Aviation Accreditation Board International”
IRB # 07-111, **Exempt Research**

Dear Investigator(s):

I have reviewed your research proposal identified above and your requested changes. I approve of the requested changes from the Unit Review Committee of your Graduate School, the University of Nebraska-Lincoln.

Please note that any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918. Any change to the protocol must be submitted to the IRB before implementing this change.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting data and you are ready to submit your thesis and/or publish your findings. Should you not finish your research within the one (1) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions.

According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project.

Also, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Tara M. Prairie
Compliance Officer
Middle Tennessee State University

APPENDIX K
UNL IRB APPROVAL LETTERS



HUMAN RESEARCH PROTECTIONS
Institutional Review Board

June 20, 2007

C. Daniel Prather
Brent Bowen
819 Kanatak Lane
Murfreesboro, TN 37128

IRB# 2007-03-280 EX

TITLE OF PROJECT: **Specialized Accreditation in Collegiate Aviation: An Analysis of the Perceived Value of Specialized Accreditation by the Aviation Accreditation Board International**

Dear Mr. Prather:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. This project has been approved by the Unit Review Committee from your college and sent to the IRB. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

Date of EX Review: 03/16/2007

You are authorized to implement this study as of the Date of Final Approval: 06/18/07. This approval is Valid Until: 06/17/08.

1. Please include the IRB approval number on the 4 letters to participants. Please submit a copy of each letter on UNL letterhead, with the IRB number included, for our records.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board. For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email at shorstman1@unl.edu.

Sincerely,

Dan R. Hoyt, Chair
for the IRB

Shirley Horstman
IRB Administrator



HUMAN RESEARCH PROTECTIONS
Institutional Review Board

June 25, 2007

C. Daniel Prather
Brent Bowen
819 Knatak Lane
Murfreesboro, TN 37128

IRB# 2007-03-280 EX

TITLE OF PROJECT: **Specialized Accreditation in Collegiate Aviation: An Analysis of the Perceived Value of Specialized Accreditation by the Aviation Accreditation Board International**

Dear Mr. Prather:

The Institutional Review Board for the Protection of Human Subjects has completed its review of the Request for Change in Protocol submitted to the IRB.

1. It has been approved to change the third contact with survey participants from a post card to a letter on UNL letter head.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:


- Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
- Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
- Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
- Any breach in confidentiality or compromise in data privacy related to the subject or others; or
- Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This letter constitutes official notification of the approval of the protocol change. You are therefore authorized to implement this change accordingly.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email shorstman1@unl.edu.

Sincerely,


Dan R. Hoyt, Chair
for the IRB


Shirley Horstman
IRB Administrator

APPENDIX L
COMMUNICATION WITH PARTICIPANTS



THE COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Pre-notice letter

Date

«Title» «First_Name» «Last_Name»
«Company_Name»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

IRB#2007-03-280 EX

Dear «Title» «Last_Name»:

In a few days you will receive a mailed request to complete a brief questionnaire for an important study that is being conducted as part of a doctoral dissertation project. This study seeks to understand the perceived value and awareness of specialized academic accreditation by the Aviation Accreditation Board International (AABI) among aviation academic administrators, aviation industry employers, and aviation program students.

Even though you may not be aware of the AABI, your perceptions on this issue are extremely important and will lend great support to the study. In understanding the value and awareness of AABI accreditation, aviation programs can better meet the needs of students and industry, while the AABI can better meet the needs of programs and industry, thus creating a win-win situation for all involved.

I'm hopeful you will decide to participate in this important national study. With your assistance, this study will be a success!

With appreciation,

C. Daniel Prather, A.A.E.

Doctoral candidate
University of Nebraska-Lincoln

Associate Professor of Aerospace
Middle Tennessee State University

PS. If you have any questions about this study at any time, you may contact either Dr. Brent Bowen, faculty advisor, via phone (402) 554-3424 or email bbowen@mail.unomaha.edu or you may contact me via phone (615) 898-2289 or email dprather@mtsu.edu.



THE COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Cover/consent letter

Date

IRB#2007-03-280 EX

«Title» «First_Name» «Last_Name»

«Address_Line_1»

«City», «State» «ZIP_Code»

Dear «Title» «Last_Name»:

In order to successfully complete my dissertation research project, I need your help. This national study, entitled **SPECIALIZED ACCREDITATION IN COLLEGIATE AVIATION: AN ANALYSIS OF THE PERCEIVED VALUE OF SPECIALIZED ACCREDITATION BY THE AVIATION ACCREDITATION BOARD INTERNATIONAL**, is being conducted among aviation program administrators, aviation program students, and aviation industry employers, and is focused on the Aviation Accreditation Board International (AABI). As you may know, in addition to regional accreditation, specialized accreditation allows for accreditation of specific academic programs, such as aviation. However, there are currently only 20 percent of University Aviation Association (UAA) member institutions with AABI accredited programs. Thus, this study has been designed to better understand the issues surrounding the current level of accreditation among aviation academic programs.

Results from this study may enable the AABI to better meet the needs of aviation programs, students, and industry. This completed study will form a doctoral dissertation that should prove useful to the academic community and others conducting future research on this issue.

You were selected for this study because of your involvement with collegiate aviation (either as an administrator, student, or aviation professional). Specifically, one form of this questionnaire is being sent to all non-engineering aviation academic programs nationwide, all student members of the University Aviation Association, and a random sample of industry representatives from the American Association of Airport Executives, Air Transport Association, National Air Transport Association, and the National Business Aviation Association. There are no known risks for participating in this research, and the questionnaire should take less than 10 minutes to complete.

Although your participation in this survey is voluntary, confidentiality is assured for those who are kind enough to participate. The small identification number on each questionnaire will be used only to follow-up with non-respondents. Survey results will

Page 2

be reported in aggregate and will in no way identify specific individuals, aviation programs, or aviation industry employers.

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators, the University of Nebraska-Lincoln, Middle Tennessee State University or other participating agent. Your decision will not result in any loss of benefits to which you are otherwise entitled.

Attached, please find the brief questionnaire and a stamped, self-addressed envelope. Please do not delay in completing and returning the questionnaire at your earliest convenience.

If you have any questions about your rights, as a research participant, that have not been answered by the investigators or to report any concerns about this study, you may contact the University of Nebraska-Lincoln Institutional review Board, telephone (402) 472-6965. Additionally, you may contact the individuals below.

Shirley Horstman
IRB Administrator
University of Nebraska-Lincoln IRB
312 N. 14th St, 209 Alex West
Lincoln, Nebraska 68588-0408
Fax (402) 472-6048
Phone (402) 472-6965
E-Mail: irb@unl.edu

Ms. Tara Prairie, MA
Compliance Officer
Middle Tennessee State University IRB
Business Aerospace Building, S245
P O Box 134
Murfreesboro, TN 37132
Fax: (615) 904-8020
Phone: (615) 494-8918
E-Mail: tprairie@mtsu.edu

With appreciation,

C. Daniel Prather, A.A.E.

Doctoral candidate
University of Nebraska-Lincoln

Associate Professor of Aerospace
Middle Tennessee State University

PS. If you have any questions about this study at any time, you may contact either Dr. Brent Bowen, faculty advisor, via phone (402) 554-3424 or email bbowen@mail.unomaha.edu or you may contact me via phone (615) 898-2289 or email dprather@mtsu.edu



THE COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Thank-you contact

Date

«Title» «First_Name» «Last_Name»
«Company_Name»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

IRB#2007-03-280 EX

Dear «Title» «Last_Name»:

A questionnaire was mailed to you last week seeking your perceptions of the value of specialized accreditation by the Aviation Accreditation Board International. You were selected to participate in this study because of your active involvement with collegiate aviation.

If you have already completed and returned the questionnaire, I would like to thank you. If you have not yet had the time, I would ask that you please take a few moments and complete the questionnaire today.

If you did not receive a questionnaire, or have misplaced it, please contact me and I will forward one to you immediately.

Thank you!

C. Daniel Prather, A.A.E.

Doctoral Candidate
University of Nebraska-Lincoln

Associate Professor of Aerospace
Middle Tennessee State University

615-898-2289
dprather@mtsu.edu



THE COLLEGE OF EDUCATION AND HUMAN SCIENCES
Department of Educational Administration

Follow-up Date

IRB#2007-03-280 EX

Dear «Title» «Last_Name»:

Approximately three weeks ago, you should have received a questionnaire from me asking about your perceptions of AABI accreditation of aviation academic programs. As of this date, the questionnaire has not yet been returned.

Others, however, have responded and have provided extremely valuable comments. These questionnaires are being analyzed to better understand the perceptions of aviation program administrators, aviation program students, and aviation industry employers on the important topic of specialized accreditation in collegiate aviation. Although response rates in the range of 28 to 63 percent have been recorded thus far, your participation in this survey is greatly needed to ensure a successful study with valid findings that are representative of the selected populations.

You may have noticed a small identification number on the top right-hand corner of page one of the questionnaire. You can be confident that this is designed only to track those who have responded and will in no way be used to identify survey respondents with specific responses. Protecting your confidentiality is of utmost importance to me in completing this project; and in fact, I am bound by University guidelines to uphold the confidentiality of respondents.

Rest assured that your participation in this important research project is voluntary; however, I hope that you will kindly either complete the questionnaire previously mailed to you or log on to the website below and easily complete the on-line version.
http://www.surveymonkey.com/s.aspx?sm=O9e6EY_2bq8uAglCaFQKO4rg_3d_3d

If you have questions at any time, please contact either my faculty advisor, Dr. Brent Bowen, at (402) 554-3424 or myself at (615) 898-2289. If you have any questions about your rights as a research participant that have not been answered by the investigators or to report any concerns about this study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965. Additionally, you may contact the individuals below.

Page Two

Shirley Horstman
IRB Administrator
University of Nebraska-Lincoln IRB
312 N. 14th St, 209 Alex West
Lincoln, Nebraska 68588-0408
Fax (402) 472-6048
Phone (402) 472-6965
E-Mail: irb@unl.edu

Ms. Tara Prairie, MA
Compliance Officer
Middle Tennessee State University
Institutional Review Board
P O Box 134
Murfreesboro, TN 37132
Phone: (615) 494-8918
E-Mail: tprairie@mtsu.edu

With appreciation,

C. Daniel Prather, A.A.E.
Doctoral candidate- University of Nebraska-Lincoln & Associate Professor of
Aerospace-MTSU

Final fax contact.

Date

IRB#2007-03-280 EX

«Title» «First_Name» «Last_Name»
 «Company_Name»
 «Address_Line_1»
 «Address_Line_2»
 «City», «State» «ZIP_Code»

Dear «Title» «Last_Name»:

This fax is being sent as a final reminder and to ask for your participation in the national study of issues related to the Aviation Accreditation Board International (AABI). During the past two months, I have sent several mailings to you about this important study. While the study is drawing to a close, your urgent participation is needed.

Indeed, hearing from everyone selected for this project is very important, whether or not you have any knowledge of the AABI. For that reason, a fax contact was chosen to highlight the importance of this study and ask for a few minutes of your time to complete and return the questionnaire.

Finally, as your participation in this study is voluntary, I understand if you are unable to participate. Nonetheless, I appreciate your willingness to consider this last request to participate in this survey (attached). Alternately, you may log on to http://www.surveymonkey.com/s.aspx?sm=qdbNeXHBk92WXtIt_2fszIJw_3d_3d and complete the questionnaire.

If you have questions at any time, please contact either my faculty advisor, Dr. Brent Bowen, at (402) 554-3424 or myself at (615) 898-2289.

Thank you for your time.

Sincerely,

C. Daniel Prather, A.A.E.

Doctoral candidate
 University of Nebraska-Lincoln

Associate Professor of Aerospace
 Middle Tennessee State University

APPENDIX M

SURVEY RESPONSE RATES

Response Rate as of August 5, 2007 Prior to any Follow-Up Contacts

GROUP	NUMBER OF RESPONSES	PERCENTAGE
Non-AABI Accredited	29	38.16
AABI Accredited	16	69.56
Aviation Program Students	20	24.10
AAAE	16	40.0
NBAA	16	40.0
NATA	10	25.0
ATA	3	16.67
Total Industry Group	45	32.61

Response Rate at Completion of Study After Five Contacts

GROUP	RESPONSES	USABLE RESPONSES	PERCENTAGE	RESPONSE RATE CHANGE
Non-AABI Accredited	37/76	36/76	47.36	+9.2
AABI Accredited	22/23	21/23	91.30	+21.74
Aviation program Students	35/83	34/83	40.96	+16.86
AAAE	18/40	18/40	45.0	+5.0
NBAA	18/40	18/40	45.0	+5.0
NATA	11/40	11/40	27.50	+2.5
ATA	3/18	3/18	16.67	0
Total Industry Group	50/138	50/138	36.23	+3.62

Note: Response rate change refers to the change in response rate percentage among each group at completion of study (after five contacts) and during study (after only two contacts). Number after “/” indicates total number in that sample, as in “out of.”

APPENDIX N

RAW DATA

AABI ADMINSTRATORS

Item 2	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	Value	Item 18	Item 19
1	1	1	2	1	2	1	3	1	2	1	5	1	3	10	13	3000
	2	2	2	2	2	2	2	2	2	2	4	3	3	5	2	50
															2	57
1	1	1	1	1	1	1	1	1	1	1	5	2	2	8	4	200
1	1	2	2	1	2	1	1	1	1	1	5	2	3	10	7	400
1	1	3	2	1	3	1	2	2	1	1	5	2	2	10	1	150
1	3	2	1	3	5	2	5	5	2	2	5	1	2	8	2	220
1	2	2	2	2	3	2	2	2	1	2	4	2	3	9	3	170
1	1	2	2	2	2	2	2	1	2	1	5	2	2	8	5	780
1	1	2	2	2	3	3	2	1	1	1	5	1	2	10	3	630
1	2	3	3	2	5	3	2	3	2	2	5	2	3	7	7	275
1	1	1	1	1	1	1	1	1	1	1	5	3	3	10	3	700
1	2	3	3	2	3	3	5	2	2	2	5	2	3	8	5	65
1	2	3	2	1	3	2	2	2	1	2	5	1	2	7	3	300
1	1	1	1	1	2	1	1	1	1	1	5	1	3	10	2	200
1	2	2	2	2	2	4	4	4	2	3	5	2	2	3	6	600
1	1	1	1	1	1	1	1	1	1	1	5	1	1	10	2	200
1	2	3	4	4	4	4	2	4	4	4	5	3	4		7	1450
1	1	2	3	1	2	2	2	2	1	1	5	2	2	9	3	75
1	2	2	1	1	3	2	3	2	2	2	1	2	3	9	2	32
1	2	2	2	2	3	2	2	2	1	1	5	2	3	8	2	130

APPENDIX O

RAW DATA

NON-AABI ADMINISTRATORS

Item 2	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Value	Item 17	Item 18
1	1	5	3	3	5	3	3	5	1	5	1	3	8	1	3
1	4	5	5	3	2	5	5	5	2	5	3	2	7	2	104
1	4	4	4	2	3	4	4	4	2	5	3	3	7	1	60
1	4	5	5	3	2	4	4	3	2	5	3	3	5	4	250
2	3	3	3	3	2	4	4	2	3	2	3	3	6	7	225
1	4	4	4	3	2	5	4	3	3	4	2	3	8	3	40
2	5	5	4	4	4	2	1	4	3	5	3	3	3	2	70
0														3	103
1	4	2	1	1	1	4	3	1	2	2	3	1	4	3	175
0	2	3	4	2	3	4	4	4	3	5	3	2	5	5	150
1	4	4	3	3	2	3	4	1	2	2	2	1	7	3	60
1	4	5	5	3	4	3	5	4	2	5	1	3	10	1	60
1	4	4	3	4	2	3	4	4	2	5	1	3	5	2	130
2															
1	5	1	5	2	4	5	4	4	2	5	2	3	8	3	162
1	5	5	4	4	4	5	5	3	3	5	1	2	8	4	431
1	4	5	4	2	2	3	4	3	2	5	2	3	8	2	40
1	3	5	1	1	2	2	3	3	2	5	2	3	6	2	600
2	5	5	2	5	5	4		4	3	5	3	3	5	4	250
1	3	4	3	3	1	3	3	1	3	5	3	3	5	4	200
2	5	5	1	1	1	5	1	5	2	3	3	1	5	2	65
2	5	4	1	4	2	5	3	4	4	4	4	3	4	3	350
2	4	5	1	3	2	5	3	3	5	5	4	3	2	3	250
1	4	2	2	1	2	4	3	2	3	5	3	2	7	4	150
2	4	2	1	1	2	5	3		3	4	4	3	3	3	120
2	2	4	3	2	2	4	3	3	3	5	4	2	3	1	150
1	4	4	2	2	3	4	4	4	2	5	4	2	7	1	75
2	4	3	1	3	2	3	3	2	3	3	3	3	1	1	36

2	5	5	1	3	1	5	1	5	4	5	5	3	1	5	500
1									1	5	2	2	10	2	200
1	5	5	4	4	2	5	4	4	2	5	2	2	7	3	138
1	5	5	3	3	4	3	2	5	2	5	3	3	6	4	435
1	1	5	1	5	1	2	1	5	1	5	1	3	7	3	325
2	4	3	2	3	2	3	3	2	3	2	3	3	1	2	99
1									1	5	1	4	10	1	105
1		5	1	3	2	4	4	4	2	5	1	2	9	3	200
1	5	5	5	5	5	5	5	5	2	5	2	2	7	3	325

APPENDIX P

RAW DATA

STUDENTS

Item 2	Item 3	Item 4	Item 5	Item 6	Value Index	Item 8	Item 9
3	1	2	2	1	9	1	5
2	4	3	6	6	5	1	4
3	2	3	6	4	2	1	5
3	5	3	1	1	9	2	4
2	2	4	3	4	3	2	5
2	1	3	4	5	2	1	4
3	2	3	3	3	3	1	4
3	1	3	3	3	8	1	4
3	1	3	3	3	1	1	5
3	1	3	2	2	8	2	5
2	1	3	3	5	3	2	4
3	4	4	5	5	3	1	5
2	1	3	6	6	5	1	4
1	5	3	6	6	7	2	4
3	1	5	2	3	7	1	4
2	5	4	3	4	5	2	5
2	1	4	3	3	5	1	5
1	5	2	2	1	8	2	5
1	5	2	2	2	10	1	5
3	4	4	6	6	1	1	3
2	2	3	2	2	7	1	
1	4	5	4	4	2	1	5
1	1	3	1	1	9	1	3
1	4	3	4	2	5	1	5
2	2	3	6	6	1	1	
2	1	3	4	6	3	1	5
2	4	2	2	2	7	1	5
2	4	3	4	2	4	1	5

3	1	3	2	3	8	1	4
1	3	4	1	1	8	1	4
3	1	3	6	6	5	1	4
1	5	2	1	1	10	2	4
3	1	4	3	3	5	1	2
2	1	4	6	6	2	1	5
3	2	4	6	6	7	1	5

APPENDIX Q

RAW DATA

AVIATION INDUSTRY EMPLOYERS

Item 1	Item 2	Item 3	Item 4	Item 5	Value Index	Item 7	Item 8
3	1	3	3	3	1	1	5
4	1	3	3	5	10	2	0
	1					1	4
3	1	5	5	1	1	2	7
4	4	3	2	4	5	5	0
4	3	4	3	2	3	5	0
3	1	3	3	3	5	5	0
2	1	3	3	3	1	1	0
2	2	2	2	3	6	5	2
2	2	3	3	1	1	1	7
3	1	3	3	3	1	1	0
2	4	2	1	4	8	5	1
4	1	3	1	4	9	5	4
5	1	3	3	1	1	5	2
3	1	3	3	3	2	1	7
4	4	3	2	3	4	5	5
4	1	4	3	3	1	5	7
5	1	5	3	3		1	0
5	1	3	2	3	3	3	4
4	4	4	5	3	3	1	0
	1				1	1	4
2		3	3	2	5	1	7
	1				1	1	7
3	1	3	3	2	1	1	7
2	5	3	1	4	8	4	7
4	1	5	3	1	1	5	0
3	2	5	5	5	1	1	0
5	1	5	3	3	1	1	7

4	1	3	3	1	1	5	0
3	1	4	3	2	1	1	7
5	1	3	3	1	1	1	5
3	1	3	3	2	3	1	7
2	2	2	2	4	8	2	5
3	2	3	2	3	4	5	0
4	4	3	3	3	6	1	0
4	1	4	2	2	3	1	5
3	1	3	2	3	8	1	5
3	1	3	3	3		1	7
3	1	3	3	2	2	1	0
3	1	3	3	3	5	2	5
3	2	3	3	3	1	1	4
5	1	3	3	2	4	3	0
3	2	5	3	2	3	1	0
4	2	3	1	3	5	1	7
3	1	4	2	3	2	3	0
3	1	5	3	3	5	1	5
5	1	3	3	3	1	2	0
4	1	4	3	3	3	1	4
3	1	3	3	3	1	1	0
4	2	3	3	4	7	1	

APPENDIX R

“PLEASE EXPLAIN WHY THE AVIATION PROGRAM(S) AT YOUR INSTITUTION INITIALLY DECIDED TO SEEK AABI ACCREDITATION.”

Source: Actual comments provided by administrators of AABI accredited collegiate aviation programs to item 1 of the “Survey of Administrators of AABI Accredited Programs.”

To maintain our role as the leader in aviation education.

Mainly to get the stamp of approval of an accrediting body in-tune with aviation education and issues.

Standardization & Quality Control.

Professional accreditation was important to insure program quality and equal stature with competitive schools. Helped establish ties and communications with industry. Also helps with advertising, parents, etc.

Our local state accrediting body is not familiar with aviation and we thought having accreditation by an agency that understand aviation would be an asset.

It assists in establishing small college credentials and demonstrates to the community and other accrediting bodies we meet a high standard.

More marketing opportunities. Gave us a chance to have a different set of eyes look at our program. Added status within the University.

[We] wanted to be in step with the best Aviation programs in the USA and to provide the best opportunities for our graduates.

Faculty at our institution/department were early leaders in the formation and development of CAA (now AABI). We recognized the value of external peer review, adherence to standards, and other benefits of specialized accreditation early on.

To protect us!

Our program needs to be accredited to mirror other university programs and to better our programs.

University policy-all programs must be accredited.

Credibility in the collegiate aviation environment; Add to the appeal of the program to incoming students; Be a part of efforts to encourage industry to differentiate among programs.

Verification of program quality by an outside body.

Administrative decree.

To ensure the aviation programs meet established standards; to attract and recruit highly qualified potential students and faculty; to enhance program visibility and recognition; to facilitate the participation in an intensive program evaluation.

Have outside evaluation of the program.

We decided to accredit for visibility, place in academia, improve our program, disturb complacency, and get an objective evaluation from aviation professionals.

Self improvement, marketing, internal leverage.

APPENDIX S

“PLEASE EXPLAIN WHY THE AVIATION PROGRAMS AT YOUR INSTITUTION
ARE NOT CURRENTLY ACCREDITED.”

Source: Actual comments provided by administrators of non-AABI accredited collegiate aviation programs to item 1 of the “Survey of Administrators of Non-AABI Accredited Programs.”

Currently making significant changes in majors.

Not sure institution can comply with requirements at this time.

Lack of faculty with terminal degree.

Until recently, we were going to seek accreditation for all programs at once, but one of the programs (Av Mgt) was problematic. So, we simply did not go forward, hoping AABI would change the criteria.

We have considered. However entrenched faculty members have feared the loss of enrollment due to difficult coursework. I disagree.

The . . . program staff evaluated the CAA/AABI criteria and fundamentally disagreed with many parts. We therefore opted for NAIT accreditation.

Will be seeking ABET accreditation for our . . . curriculum.

We are a community college. We feel our aviation maintenance program is one of the best. Our flight program is selling their airplanes and will just teach ground school.

We are doing self study now.

We are currently pursuing accreditation. Self studies have been conducted in the past but have not been acted upon. (Reasons unknown).

In the process of getting AABI accreditation.

We have applied for AABI accreditation and are currently completing the self study. Accreditation visit has been scheduled for Oct 2007.

Have started the process.

We have applied for accreditation.

We are awaiting our site visit results.

Cost/Time

Cost and time to complete the accreditation process. What is the benefit to our institution for obtaining this accreditation?

Currently lack the time to go through the accreditation process.

Time to complete self-study because of small faculty and teaching requirements at present.

Cost concerns are the primary reasons we have not sought AABI accreditation.

Cost; not currently the highest priority.

Have not gotten around to it. Currently pursuing SACS; too busy.

The cost

Too expensive

Cost of accreditation

We do not see the advantages of AABI.

We see no benefit to being accredited by AABI.

No perceivable benefit for seeking accreditation.

Lack of resources

Program is in early stages of initiation and will not need to be accredited for now. Our interest is for planning purposes.

Program is too small, not enough time for administration of procedures required by AABI.

By choice. My biggest concern is that the system is set up for large schools and small ones are put on the sideline. In my three years I have not had one parent ask if we are AABI (CAA) accredited. I think it should be part of regional accreditation, not a stand-alone organization.

I was not aware of AABI.

Have not been familiar with the program or the value.

APPENDIX T

“IF YOUR PROGRAM(S) IS PLANNING ON SEEKING AABI ACCREDITATION, PLEASE EXPLAIN WHAT MOTIVATED THIS DECISION.”

Source: Actual comments provided by administrators of non-AABI accredited collegiate aviation programs to Item 3 of the “Survey of Administrators of Non-AABI Accredited Programs.”

Program quality assurance and competitive nature of the aviation business motivates us to seek accreditation.

Oversight, prestige, "move us up to next level."

Credibility, advertising, auditing of program.

Further improve program recognition.

I will look into AABI to obtain additional information. After that, I will make a decision.

Awareness of the accreditation from FAA.

Our goal is to seek AABI accreditation for all Part 147, Avionics, Part 141, and Aviation Administration programs.

We're just evaluating it. Motivated by the desire to improve.

Making sure our students have a quality program that keeps pace with the standards of a steadily changing industry.

University Administration.

Industry recognition.

Our school would like to see each program accredited.

Institutional interest of accrediting all the professional schools.

Going to look into it eventually. In the years I've been here, nobody has ever asked if we are AABI accredited.

To maintain quality, marketing.

PhD of Dean.

(1) Benchmarking to ensure our programs and graduates meet industry standards; (2) internal and external recognition; & (3) leverage to ensure university administration provides us with the resources we need.

Our president wants it.

We decided to pursue accreditation for flight only. There are less issues and we perceive some benefits for saying we are accredited (assuming we get accredited!).

We recently revised our management program to meet AABI standards (hopefully).

The desire to be accredited by AABI. We view this association as extremely important to give credibility to our program.

Two prior attempts were aborted.

Good self-study guide

APPENDIX U

AVIATION STUDENTS

“PLEASE SHARE ANY FURTHER THOUGHTS YOU MAY HAVE ON THE AABI AND THE ROLE OF AABI ACCREDITATION IN YOUR EDUCATION AND FUTURE CAREER OPPORTUNITIES.”

Source: Actual comments provided by students of collegiate aviation programs to Item 10 of the “Survey of Aviation Program Students on AABI Issues.”

Do not know much about how AABI affects my aviation program, so have very little comments.

I think the AABI should have frequent follow-ups/inspections to make sure students are getting their money's worth of education at these institutions.

Before this study I had never heard of the AABI. As president of the aviation fraternity and a student who spent two years in the program, I've never heard AABI mentioned even in passing.

I don't think enough is known about AABI. I only have a basic understanding of what it is now. When I was a high school student looking at colleges, AABI certification wasn't even something I thought of. When I was applying and interviewing for positions the topic never came up either.

I feel that AABI accreditation is an important step for institutions to take in validating their program. Prior to this survey, however, I was extremely unaware of AABI's existence. I therefore feel that the role of AABI must be clearly defined and well publicized to the aviation community-which it may be and I have just not noticed it.

Provides some security the school will be around when it's time to graduate.

I personally agree that accreditation is a very important issue when choosing and subsequently attending a school for an aviation education.

I don't know what AABI is or what value or significance it has. I am a Human Factors major, what significance does AABI have for this non-flying major? I did see the AABI conference advertised last year in a UAA publication that I read a quick blurb on, other than that I'm unfamiliar, so can't say it had any influence on my decisions for choosing institution. (I'm interested in learning more and significance to Human Factors field.)

There is no advertisement for AABI accreditation. Benefits: I cannot perceive any benefits for my career. As a "student candidate" (looking for a school to apply), I had no idea of AABI existence.

I am glad there is a board to accredit programs and regulate collegiate aviation.

Higher standards are always good for an institution to try to achieve.

If AABI accreditation is so important, then I wish I would have known about it prior to choosing my aviation program I'm in now. Even though I'm not sure if my institution is AABI accredited, I hope it won't affect my opportunities for a future career in aviation.

Previously I had never heard of the AABI. I don't believe that going to an AABI accredited school would greatly affect one's career opportunities; however, it may provide a slightly higher chance of getting hired over someone who didn't attend an accredited school.

Accreditation is a credential that could potentially put my resume near the top of the stack when applying for aviation jobs. Many students/friends from ERAU were hired based upon the name of the school...credentials. Additionally, I have recently been made aware that the University of OK is no longer accredited (through NBAA). Due to this misfortune, I could not receive scholarships I had applied for and the NBAA PDP course I took was no longer certifiable. This hurts my potential credentials.

APPENDIX V

“PLEASE SHARE ANY ADDITIONAL THOUGHTS YOU MAY HAVE ON AABI ACCREDITATION AND THE HIRING OF RECENT COLLEGE GRADUATES BY THE AVIATION INDUSTRY.”

Source: Actual comments provided by aviation industry employers to Item 9 of the “Survey of Aviation Industry Employers on AABI Issues.”

As an FBO operator, I really had no basis upon which to give an opinion, thus I was waiting for an opinion from . . . [a nearby collegiate aviation program]. They responded in the affirmative today saying that the accreditation you provide is extremely valuable to them and that they are in the process of aligning [their program] with AABI. As an FBO operator, however, this will not come onto our radar screen in any way that I can anticipate.

We hire a mix of students. Some from aviation programs and some from insurance programs.

We are a small corporate flight department with 4 employees. None of us are familiar with AABI.

Unfortunately this is the first time I have heard about this AABI program. When I worked for a large airline I experienced 50% of new grad engineers who could not communicate orally or in writing. Subsequently working with prime customers, maintenance, pilots, manufacturers, senior management etc... was a failure out of the box. The successful engineers were those that had practical experience via apprenticeships and internships. Several of the floundering engineers had to be sent back to night school to learn how to write so as not to be misunderstood. Next generation aircraft will rely on electrical & computer driven systems. Electrical troubleshooting and reliability engineers will be in high demand with structural and mechanical engineers getting less in demand as airframes and engines get simplified and more reliable. This trend started with the glass cockpit and continues to increase. Today’s engineers require more practical experience and must learn early on that spending time to learn aircraft systems in flight, on the ramp, in the hangar or in the back shops is the key to effective engineering management.

Just recently learned about AABI. Survey would have had different responses before that.

Never heard of this organization and don't know what you do or how valuable your accreditation is.

More aviation related organizations should become aware of this Board. Please market yourself aggressively.

We are a software company which is focused on delivering business solutions to airports. The benefit of hiring recent AABI accredited graduates would only be of limited interest to us.

It may be of value, but if it is, it's unknown to me.

I believe accreditation can be positive if done correctly.

I never have heard of the AABI. Flying experience is more important than a degree in corporate aviation.

Unfortunately, I am unfamiliar with AABI.

Need more contact with end users of your students. We can give you more details of what we would like to see in a student/worker.

The aviation industry represents 5% of our business. We sell to anyone that sealcoats asphalt paving which includes anyone with a parking lot. I believe any type of accreditation helps to ensure better understanding of how and why to do project.

APPENDIX W
 STATISTICAL FINDINGS
 AABI ADMINISTRATORS

“Does your program(s) have plans to maintain existing AABI accreditation?”

Response	Number of Responses	Percentage
Yes	19	100.00
No	0	0

Note: Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“Please indicate how strongly the following statements reflect your beliefs as to why your program(s) sought and attained AABI accreditation.”

	SA	A	N	D	SD
To ensure that the program meets standards established by the profession.	10 (50%)	9 (45%)	1 (5%)	0	0
To help clarify the program’s mission and future direction.	5 (25%)	10 (50%)	5 (25%)	0	0
To help attract and recruit highly qualified students and faculty.	6 (30%)	10 (50%)	3 (15%)	1 (5%)	0
To enhance program visibility and recognition.	10 (50%)	8 (40%)	1 (5%)	1 (5%)	0
To protect programs from internal budgetary constriction in periods of curtailed enrollment.	3 (15%)	7 (35%)	7 (35%)	1 (5%)	2 (10%)
To assist potential students in selecting a quality training program.	7 (35%)	8 (40%)	3 (15%)	2 (10%)	0

To facilitate the participation of students and faculty in an intensive program evaluation.	5 (25%)	10 (50%)	2 (10%)	1 (5%)	2 (10%)
To identify for employers those programs which have successfully met the profession's standards of preparation.	8 (40%)	8 (40%)	1 (5%)	2 (10%)	1 (5%)
To gain the confidence of the educational community, related professions, and the public.	11 (55%)	8 (40%)	0	1 (5%)	0

Note: "SA" refers to Strongly Agree, "A" refers to Agree, "N" refers to Neutral, "D" refers to Disagree, and "SD" refers to Strongly Disagree. Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“Please indicate your level of agreement or disagreement with the following statements.”

	SA	A	N	D	SD
AABI accreditation is beneficial to the AABI accredited program.	11 (55%)	7 (35%)	1 (5%)	1 (5%)	0
Prior to receiving this survey I was <u>unaware</u> of the Aviation Accreditation Board International (AABI)	1 (5%)	0	0	2 (10%)	17 (85%)
It would be beneficial if more aviation programs were accredited by the AABI.	6 (30%)	11 (55%)	3 (15%)	0	0
The AABI should better market itself to collegiate aviation programs.	1 (5%)	8 (40%)	10 (50%)	1 (5%)	0

Note: "SA" refers to Strongly Agree, "A" refers to Agree, "N" refers to Neutral, "D" refers to Disagree, and "SD" refers to Strongly Disagree. Numbers represent number of

responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to collegiate aviation.”

1-no value	0	
2	0	
3	1 (5.3%)	
4	0	
5	1 (5.3%)	
6	0	
7	2 (10.5 %)	
8	5 (26.3 %)	
9	3 (15.8 %)	$M=8.3684$
10-high value	7 (36.8%)	$s=1.8918$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“How many aviation degree programs does your institution currently provide?”

1-3	13 (65%)	
4-7	6 (30%)	$M=4$
More than 7	1 (5%)	$s=2.7928$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may

not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“What is the total number of aviation degree-seeking students at your institution?”

Less than 100	5 (22.7%)	
101-400	11 (50%)	
401-800	4 (18%)	$M=461.142$
More than 800	2 (9%)	$s=673.462$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

APPENDIX X

STATISTICAL FINDINGS

NON-AABI ADMINISTRATORS

“Does your program have plans to pursue AABI accreditation at some point in the future?”

Yes	23 (65.7%)
No	12 (34.3%)

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“Please indicate how strongly the following statements reflect your beliefs as to why your program has not sought AABI accreditation.”

	SA	A	N	D	SD
Our program is too new to seek accreditation.	2 (6.3%)	2 (6.3%)	3 (9.4%)	15 (46.9%)	10 (31.3%)
We cannot get approval from dean and/or president to seek AABI accreditation.	1 (3%)	3 (9.1%)	4 (12.1%)	8 (24.2%)	17 (51.5%)
The faculty in our department do not feel there are adequate benefits for the cost and time involved.	10 (30.3%)	4 (12.1%)	7 (21.2%)	7 (21.2%)	5 (15.2%)
It is too costly to seek accreditation.	5 (15.2%)	6 (18.2%)	14 (42.4%)	5 (15.2%)	3 (9.1%)
The preparation of the required self-study is too time consuming.	5 (15.2%)	17 (51.5%)	3 (9.1%)	5 (15.2%)	3 (9.1%)

Our programs do not meet AABI standards.	0	3 (9.1%)	9 (27.3%)	10 (30.3%)	11 (33.3%)
We feel the AABI accreditation standards are inappropriate.	4 (12.5%)	1 (3.1%)	11 (34.4%)	12 (37.5%)	4 (12.5%)
We do not have sufficient information to decide.	3 (9.4%)	4 (12.5%)	7 (21.9%)	11 (34.4%)	7 (21.9%)

Note: “SA” refers to Strongly Agree, “A” refers to Agree, “N” refers to Neutral, “D” refers to Disagree, and “SD” refers to Strongly Disagree. Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“Please indicate your level of agreement or disagreement with the following statements.”

	SA	A	N	D	SD
AABI accreditation is beneficial to the AABI accredited program.	4 (11.4%)	16 (45.7%)	12 (34.3%)	2 (5.7%)	1 (2.9%)
Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International (AABI)	0	4 (11.4%)	2 (5.7%)	3 (8.6%)	26 (74.3%)
It would be beneficial if more aviation programs were accredited by the AABI.	7 (20.0%)	8 (22.9%)	14 (40.0%)	5 (14.3%)	1 (2.9%)
The AABI should better market itself to collegiate aviation programs.	3 (8.6%)	10 (28.6%)	21 (60.0%)	1 (2.9%)	0

Note: “SA” refers to Strongly Agree, “A” refers to Agree, “N” refers to Neutral, “D” refers to Disagree, and “SD” refers to Strongly Disagree. Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to collegiate aviation.”

1-no value	3 (8.6%)	
2	1 (2.9%)	
3	3 (8.6%)	
4	2 (5.7%)	
5	6 (17.1%)	
6	3 (8.6%)	
7	8 (22.9%)	
8	5 (14.3%)	
9	1 (2.9%)	$M=5.8571$
10-high value	3 (8.6%)	$s=2.5221$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“How many aviation degree programs does your institution currently provide?”

1-3	27 (75%)	
4-7	9 (25%)	$M=2.7777$
More than 7	0	$s=1.3545$

Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“What is the total number of aviation degree-seeking students at your institution?”

Less than 100	11 (30.5%)	
101-400	21 (58.3%)	
401-800	4 (11.1%)	$M=184.3333$
More than 800	0	$s=141.4863$

Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question

APPENDIX Y
 STATISTICAL FINDINGS
 AVIATION STUDENTS

“Please check all items that you considered when selecting which institution and aviation program to attend.”

Athletic team reputation	0
Aviation training facilities	20 (57.1%)
AABI accreditation status	3 (8.6%)
Cost	22 (62.9%)
Family member’s alma mater	1 (2.9%)
Financial aid/scholarships	20 (57.1%)
Friends attending	6 (17.1%)
Institutional accreditation status	15 (42.9%)
Location	23 (65.7%)
Particular professor	1 (2.9%)
Reputation of institution or aviation program	21 (60.0%)
Specific academic program	17 (48.6%)

Note: Items listed in alphabetical order. Respondents were asked to select all items that applied, thus numbers and percentages represent those selecting each item and will not total to 100%, nor equal the number of respondents.

“Do you currently attend an AABI accredited program?”

Yes	8 (22.9%)	
No	13 (37.1%)	$M=2.1714$

Don't Know	14 (40.0%)	$s=0.7853$
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Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “M” refers to the mean, and “s” refers to standard deviation. In calculating mean and standard deviation, Yes=1 and No=2. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question

“Please indicate your level of agreement or disagreement with the following statements.”

	SA	A	N	D	SD	DK
Prior to receiving this survey, I was <u>unaware</u> of the Aviation Accreditation Board International.	15 (42.9%)	6 (17.1%)	1 (2.9%)	7 (20.0%)	6 (17.1%)	N/A
I feel that aviation industry employers prefer graduates of AABI accredited programs.	0	5 (14.3%)	19 (54.3%)	9 (25.7%)	2 (5.7%)	N/A
It greatly benefits students to attend aviation programs that are accredited by the AABI.	4 (11.4%)	8 (22.9%)	8 (22.9%)	5 (14.3%)	1 (2.9%)	9 (25.7%)
In deciding which aviation program to attend, it was important for me to attend a program accredited by the AABI.	6 (17.1%)	6 (17.1%)	7 (20.0%)	4 (11.4%)	3 (8.6%)	9 (25.7%)

Note: “SA” refers to Strongly Agree, “A” refers to Agree, “N” refers to Neutral, “D” refers to Disagree, “SD” refers to Strongly Disagree, and “DK” refers to Don't Know. N/A refers to items for which “Don't Know” was not an option. Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may

not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to you as a student.”

1-no value	3 (8.6%)	
2	4 (11.4%)	
3	5 (14.3%)	
4	1 (2.9%)	
5	7 (20.0%)	
6	0	
7	5 (14.3%)	
8	5 (14.3%)	
9	3 (8.6%)	$M=5.3428$
10-high value	2 (5.7%)	$s=2.7859$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “*M*” refers to the mean, and “*s*” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“What is your gender?”

Male	27 (77.1%)
Female	8 (22.9%)

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“What year are you in school?”

Freshman	0
Sophomore	1 (3.0%)
Junior	2 (6.1%)
Senior	13 (39.4%)
Graduate student	17 (51.5%)

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

APPENDIX Z
STATISTICAL FINDINGS
INDUSTRY EMPLOYERS

“Please indicate your level of agreement or disagreement with the following statements.”

	SA	A	N	D	SD
The AABI should better market itself to our industry.	0	7 (14.9%)	19 (40.4%)	14 (29.8%)	7 (14.9%)
Prior to receiving this survey I was <u>unaware</u> of the Aviation Accreditation Board International (AABI).	33 (67.4%)	9 (18.4%)	1 (2.0%)	5 (10.2%)	1 (2.0%)
Our organization prefers to hire graduates of AABI accredited programs.	0	3 (6.4%)	30 (63.8%)	7 (14.9%)	7 (14.9%)
It would be beneficial to our industry if more collegiate aviation programs became accredited by the AABI.	4 (8.5%)	9 (19.2%)	31 (66.0%)	0	3 (6.4%)
Our industry does not realize any direct or indirect benefits from the AABI and its efforts.	6 (12.8%)	9 (19.2%)	24 (51.1%)	6 (12.8%)	2 (4.3%)

Note: “SA” refers to Strongly Agree, “A” refers to Agree, “N” refers to Neutral, “D” refers to Disagree, “SD” refers to Strongly Disagree, and “DK” refers to Don’t Know. N/A refers to items for which “Don’t Know” was not an option. Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may

not total to 100%, nor equal the number of respondents if a respondent chose to skip a question

“On a scale of 1 to 10 (with 1 representing no value and 10 representing high value), please indicate how valuable you feel AABI accreditation is to your industry.”

1-no value	19 (40.4%)	
2	3 (6.4%)	
3	7 (14.9%)	
4	3 (6.4%)	
5	6 (12.8%)	
6	2 (4.3%)	
7	1 (2.1%)	
8	4 (8.5%)	
9	1 (2.1%)	$M=3.3617$
10-high value	1 (2.1%)	$s=2.6327$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“How many individuals are currently employed by your company?”

Less than 100	29 (58.0%)	
100 or more, but less than 300	5 (10.0%)	
300 or more, but less than 500	3 (6.0%)	
500 or more, but less than 1,000	1 (2.0%)	$M=2.24$
1,000 or more	12 (24.0%)	$s=1.6970$

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. “ M ” refers to the mean, and “ s ” refers to standard deviation. In calculating

the mean and standard deviation, “Less than 100” = 1; “100 or more, but less than 300” = 2; “300 or more, but less than 500” = 3; “500 or more, but less than 1,000” = 4; and “1,000 or more” = 5. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.

“How would you characterize your company?”

Aircraft manufacturer	1 (2.0%)
Airline	2 (4.1%)
Airport	0
FAR Part 135 operator	10 (20.4%)
FBO	8 (16.3%)
MRO organization	0
Other Manufacturer	4 (8.0%)
Service provider	24 (48.9%)

Note: Numbers represent number of responses, while numbers in parentheses represent percentages. Numbers may not total to 100%, nor equal the number of respondents if a respondent chose to skip a question.