

A QUALITATIVE STUDY OF COLLEGIATE
AVIATION INSTITUTIONS AND THE COLLEGIATE
AVIATION ACCREDITATION PROCESS

By

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NOMENCLATURE

A&P	Airframe and Power Plant Mechanic
ABET	Accreditation Board for Engineering Technology
AMTS	Aviation Maintenance Technician Schools
AOPA	Aircraft Owners and Pilots Association
ATEC	Aviation Technician Education Council
CAA	Council on Aviation Accreditation
CATS	Computer Aided Testing Services
CHEA	Council for Higher Education Accreditation
CMSU	Central Missouri State University
COC	Commission on Colleges
COEI	Commission on Occupational Education Institutions
COPA	Council on Postsecondary Accreditation
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FCC	Federal Communication Commission
FSA	Federal Student Aid
FSDO	Flight Standards District Office
HEA	Higher Education Act
ISCET	International Society of Certified Electronic Technicians
NAIT	National Association of Industrial Technology

UAA University Aviation Association
USDE United States Department of Education

CHAPTER 1

INTRODUCTION

Background

Accreditation arose in the United States as a means of conducting non-governmental, peer evaluation of educational institutions and programs. Private educational associations of regional or national scope have adopted criteria reflecting qualities of sound educational program and developed procedures for evaluating institutions or programs to determine if they are operating at basic levels of quality (U.S. Department of Education, n.d.).

The U.S. Secretary of Education is required by statute to publish a list of nationally recognized accrediting agencies the Secretary determines to be reliable authorities as to quality of education or training provided by institutions of higher education and the higher education programs they accredit. The Secretary only evaluates accrediting agencies that apply for recognition.

Most institutions attain eligibility for Federal funds by holding accredited status with one of the accrediting agencies recognized by the Secretary, in addition to fulfilling other eligibility requirements. According to U.S. Department of Education (2006):

A school that wishes to participate in the Federal Student Aid (FSA) programs must demonstrate that it is eligible to participate before it can be

certified for participation. A school must apply to and receive approval from the Department of its eligibility to participate. Some schools apply only for a designation as an eligible institution (they do not seek to participate) so that students attending the school may receive deferments on FSA program loans, or be eligible for the HOPE/Lifetime Learning Scholarship tax credits, or so that the school may apply to participate in federal Higher Education Act (HEA) programs other than the FSA programs. The same application is used to apply for both eligibility and certification for participation. To be eligible an institution must adhere to the following requirements: 1) It must be Legally Authorized by the state where the institution offers postsecondary education to provide a postsecondary education program. 2) It must be Accredited by a nationally recognized accrediting agency or have met the alternative requirements, if applicable. and 3) It must Admit as a regular student only individuals with a high school diploma or its recognized equivalent, or individuals beyond the age of compulsory school attendance in the state where the institution is located. (p. 2-2)

Accreditation by a nationally recognized institutional accrediting agency enables institutions to establish eligibility to participate in Federal student financial assistance programs administered by the U.S. Department of Education (USDE) under Title IV of the Higher Education Act of 1965, as amended.

Approximately 80 accrediting organizations in the United States are themselves reviewed for quality. They routinely undergo a process called “recognition” by either the Council for Higher Education Accreditation (CHEA) or by the federal government through USDE or both. (U.S. Department of Education, 2006.).

The Council on Aviation Accreditation (CAA) 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 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 in aviation. This manual was printed and distributed to colleges and universities with aviation curricula. Several institutions volunteered for program evaluation under new guidelines, which became adopted as a "recommended standard for aviation curricula (Council on Aviation Accreditation, n.d.).

The Council on Aviation Accreditation was established on October 18, 1988, at the UAA annual meeting in Dallas. CAA initially functioned as a subsidiary of the University Aviation Association for administrative support. However, operationally 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 concepts and principles acceptable to and in keeping with Council on Postsecondary Accreditation (COPA) standards (Council on Aviation Accreditation, 2005a).

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 [associate degree accreditation standards] was followed in 1994, by the Federal Aviation Administration's (FAA) 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 (Council on Aviation Accreditation, 2005a, p.5).

Collegiate programs are housed at associate, baccalaureate, master's, and doctoral degree awarding institutions. Associate degree programs take from two to three years to complete, with 60 to 70 semester hours of course work required. Baccalaureate degree programs take four to five years to complete,

with 120 to 140 semester hours of coursework. Aviation degree programs deal with flight, aviation management, aircraft maintenance, and avionics fields. A program's diversity depends upon characteristics and philosophies of individual institutions. The majority of programs provide students with broadened aviation curricula that exceed FAA requirements for certificates and ratings. Some programs offer internships, providing experiences in the aviation industry, to bridge theory and practice (Crehan, 1995).

Problem statement

In 1999, the Department of Power and Transportation at Central Missouri State University (CMSU) was seeking reaccreditation of four CAA aviation options and initial accreditation of one CAA aviation option. Those options included Professional Pilot, Avionics Management, Aviation Management, and Systems Design Technology. The Aviation Maintenance Management option required initial accreditation review (J. Dennison, personal communication, June 1999).

During the self-study process, a preliminary phase of accreditation or reaccreditation, a number of questions arose related to accreditation. These faculty discussions initially centered on concern for required capital and time expenditure of seeking accreditation. Several comments were made questioning whether the effort was a wise investment of limited resources and faculty availability. Ultimately, the department had to answer if accreditation would

provide better aviation academic programs to students. Finally, how was the department going to organize the self-study? These comments and questions again were raised at Ohio University when that institution was considering seeking initial accreditation of both flight and management options. These questions face all institutions as they try to decide on accreditation and became the basis for this study (J. Dennison, personal communication, June 1999).

Purpose

The purpose of this study is to understand decision factors involved as aviation institutions of higher education consider undertaking CAA accreditation and gather data related to organizational structure and resource allocation while completing the accreditation process.

Research questions

To achieve the purpose of this study, the following research questions need to be answered:

1. Are aviation institutions aware of aviation program specific accreditation?
2. Why do some institutions with aviation programs seek program specific accreditation?
3. Do aviation accredited institutions seek accreditation for all of their aviation program options?
4. Why do some institutions choose not to seek accreditation?

5. What bearing does aviation student population have on institutions seeking accreditation?
6. What bearing does type of university have on institutions seeking accreditation?
7. How much time was required to complete various phases of the accreditation process (research and data gathering, self-study draft and revisions, and preparation for visiting team arrival)?
8. What costs are required to complete the various phases of the accreditation process?
9. What different sources do institutions use to receive guidance for preparation of required reports and supporting documents?
10. How do institutions utilize their faculty and staff to complete the self-study process?

Need for the study

Findings of this study can be used by educational institutions as an administrative tool in the decision-making process to evaluate whether or not to seek aviation accreditation. Universities can also use results of this study in organizing and planning for the accreditation process. Whether for initial accreditation or reaccreditation, there is value in knowing about experiences of others when approaching a task. The Council on Aviation Accreditation could use results of this research in revising procedures to make the process more user friendly and to better understand why many institutions do not seek accreditation.

CHAPTER 2 REVIEW OF RELATED LITERATURE

Historical background of aviation program accreditation

An account of aviation education in the United States was first recorded in 1908 by H. Lavonne Twining of Los Angeles Polytechnic High School where he discussed aviation in his physics classes (Strickler, 1968). In 1914, Massachusetts Institute of Technology offered the first post-secondary courses in aviation (Rollo, 1990). Many schools offered aviation education programs in the 1920s spurred by aviation interest created by the Great War. The Galt school system of California established the first public flight training program at the secondary level in 1925. Collegiate aviation programs can trace their beginnings to the Galt schools when they added a two year junior college level aviation education program in 1926 (Strickler, 1994).

Two months after Charles Lindbergh's historic flight across the Atlantic, Oliver "Lafe" Parks, on August 1, 1927, founded Parks College, now Parks College of Engineering and Aviation of St. Louis University. This aeronautical school opened in a rented hanger with two planes at Lambert Field with Oliver Parks as the only instructor. Anticipating future aviation importance, Parks recognized the need for instruction in aircraft design, maintenance, and flight

safety. Parks College became the first federally approved school of aeronautics, receiving Air Agency Certificate Number 1 (Faherty, 1990).

The Council on Postsecondary Accreditation (COPA) was established in 1974 as a nongovernmental organization whose purpose was to foster and facilitate the role of accrediting agencies in promoting and ensuring quality and diversity of American postsecondary education. COPA recognized, coordinated, and periodically reviewed work of its member accrediting agencies and the appropriateness of existing or proposed accrediting agencies and their activities. Creation of COPA occurred through the merger of two organizations: the National Commission on Accreditation, founded in 1949 as the first national organization to develop criteria and recognize accrediting agencies, and the Federation of Regional Accrediting Commission of Higher Education (U.S. Department of Education, 2006)

The commissions of the institutional (regional and national) accrediting agencies recognized by the Secretary of Education have no legal control over educational institutions or programs. They promulgate standards of quality or criteria of institutional excellence and approve or renew membership of those institutions that apply for accreditation and meet their standards or criteria.

The Accrediting Agency Evaluation Unit has been established within the Department of Education to deal with accreditation matters. Located in the Office of Postsecondary Education, the Unit carries out the following major functions with respect to accreditation:

1. Conduct a continuous review of standards, policies, procedures, and issues in the area of the Department of Education's interests and responsibilities relative to accreditation;
2. Administer the process whereby accrediting agencies and State approval agencies secure initial and renewed recognition by the Secretary of Education;
3. Serve as the Department's liaison with accrediting agencies and State approval agencies;
4. Provide consultative services to institutions, associations, State agencies, other Federal agencies, and Congress regarding accreditation;
5. Interpret and disseminate policy relative to accreditation issues in the case of all appropriate programs administered by the Department of Education;
6. Conduct and stimulate appropriate research; and
7. Provide support for the Secretary's National Advisory Committee on Institutional Quality and Integrity. (US Department of Education, 2006a)

Regional accreditation associations operate in six specific clusters of states (regions) in the United States and review both degree granting and nonprofit institutions. These regional associations are becoming increasingly interested in not only assessment procedures and administration of such procedures, but also placing considerable emphasis on use of assessment findings for program evaluation. Other types of accreditation agencies include Faith-based accreditors operating nationally and review religiously affiliated or doctrinally based institutions. Private career accreditors operate nationwide. Many are single-purpose institutions focusing on specific curriculums such as education in business and information technology. Programmatic specialized

accreditors operate nationwide reviewing programs and some single-purpose institutions (Council for Higher Education Accreditation, 2006).

Most collegiate aviation programs have blended technical academic programs into an acceptable academic major (Johnson & Lehrer, 1995). On many campuses, traditional academia has not been convinced that aviation is a viable collegiate program, and view technical programs as too vocational to belong on campus. Scholars in traditional academic disciplines have often not understood or appreciated aviation education for a variety of reasons, including its traditional mission of vocational education, its applied (vs. theoretical) orientation, and the failure of aviation faculty to publish research (Truitt & Kaps, 1995). This reluctance by the academic community to accept aviation as an academic field may be partially responsible for the lack of published literature in non-engineering aeronautical/aerospace science programs at the doctoral level (Johnson & Lehrer, 1995). Another contributing factor influencing the academic community is the acceptance of aviation as an academic field is lack of aviation doctoral degrees. Only two universities are offering non-engineering doctoral aviation degrees: Oklahoma State University (Doctorate in Applied Behavioral Science with a concentration in aviation) and University of Nebraska – Omaha (Doctorate in Public Administration with a minor in aviation).

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 needs for curricula accreditation.

A report of that Committee was prepared in April 1975, which 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 aviation 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 standards for aviation curricula" (Council on Aviation Accreditation, 2005a).

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, FAA first contracted with UAA in 1983 to evaluate proposed curricula from institutions that 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 review of curricula and evaluation of nearly thirty aviation programs throughout the country (Council on Aviation Accreditation, 2005a).

In September 1987, 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 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. In July 1988, a 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, definition of an aviation professional, and an outline of topics to be encompassed in the standards manual (Council on Aviation Accreditation, 2005a).

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 formation

of the accreditation council. This information was furnished to the UAA Board in two mailings during the summer of 1988.

Accreditation

Accreditation is a system for recognizing quality within educational institutions and their professional programs. It attempts to verify and document the institution has achieved and maintains a level of superior performance, integrity, and quality in its instructional programs. Attainment of accreditation enhances confidence of the educational community and the public it serves. In the United States, this recognition is extended primarily through nongovernmental, voluntary, institutional, or professional associations. These groups establish their own independent criteria for accreditation after receiving approval from Department of Education and/or CHEA. Accreditation is a private, voluntary process and accrediting decisions are used as a consideration in many formal actions by governmental funding agencies, scholarship commissions, foundations, employers, counselors, and potential students. Accrediting bodies such as National Association of Industrial Technology (NAIT), Accreditation Board for Engineering Technology (ABET), and CAA are viewed as quasi-public entities with important responsibilities to many groups who interact with the educational community (Council on Aviation Accreditation, n.d.).

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. (Council on Aviation Accreditation, 2005a, p. 6)

Accrediting agencies are international, national, or regional in scope, and are comprised of individuals from institutions that have achieved and maintained accreditation. A specialized body of evaluators conducting accreditation of a program preparing students for a profession or occupation is often closely associated with professional associations in the field.

Two types of accreditation exist, institutional and program-specific. Institutional accreditation is granted by regional and national accrediting commissions of schools and colleges, which collectively serve most of the institutions chartered or licensed in the United States. These commissions and associations accredit the institution as a whole. Commissions on accreditation established by national professional organizations grant specialized accreditation of professional and occupational schools and programs. Each of these groups has its own eligibility criteria, standards for accreditation, and operating procedures. All of these groups have undertaken accreditation activities primarily to ensure that the members of the profession or occupation have received the highest level of educational preparation possible. CAA is a specialized accrediting organization comprised of representatives from all segments of the aviation field (education, airline industry, aerospace manufacturing, aviation-related goals, and military representatives) (Council on Aviation Accreditation, n.d.).

Advantages of accreditation

Programs that are accredited derive a number of significant advantages:

Accreditation increases the attractiveness of the program to prospective students and their parents by assuring them the program meets accepted standards of quality. Employers are assured graduates possess a well-defined background in the aviation industry as well as skills needed for aviation specialization. Institutions realize their aviation programs will periodically perform a comprehensive self-analysis to achieve their accreditation objectives. This leads to self imposed focus on progress and continued improvement (Council on Aviation Accreditation, n.d.).

The Council on Aviation Accreditation's 1999 Annual Industry/Educator Forum, hosted by Purdue University, focused on the value of accreditation.

Those in attendance at the meeting included representatives from industry and universities who addressed the value of accreditation from three perspectives: value to students, value to universities, and value to industry. Summary results of this forum, as reported in *The CAA News*, August 1999, are listed below:

The following were considered as values of accreditation to students:

- Students will have greater opportunity for internships, jobs, and scholarships
- Improved marketability
- Ensures currency of program content and curriculum
- Quality of education/training is improved and standardized

The following were considered as values of accreditation to universities:

- Process provides an external evaluation and forces the institution to self-evaluate (at a relatively inexpensive cost)
- Brings institutional credibility to both faculty and programs
- Sets a standard for faculty and staff and ensures equality within institution
- Potential justification for added resources
- Link of communication with industry that leads into guidance and curriculum
- Improved development
- Higher job placement
- Quality of education appropriate in currency and thoroughness and completeness

The following were considered as values of accreditation to industry:

- Get a known product (have credibility with industry)
- Input and, to some extent, influence on the curriculum by industry
- Students grounded in needed skills of communication, teaming, broad industry view
- Lowers industry training costs and increases efficiency in selection
- Higher quality and predictability of long-term performance of new hires
- Provides a quality pool of interns and co-op students
- Better potential that new hires will have developed attributes such as attitude and character (Council on Aviation Accreditation, n.d.)

Goals of CAA

At its first meeting on January 10, 1989, CAA 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. Link of communication with industry that leads into guidance and curriculum

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 (Council on Aviation Accreditation, 2005a).

An institution seeking accreditation must complete a self-study before 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) 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 (Council on Aviation Accreditation, 2005a).

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 (Council on Aviation Accreditation, n.d.).

Revocation of accreditation

If, during the period of accreditation, a question arises regarding an institution's continued compliance, CAA will appoint one of its members to conduct an inquiry. If CAA determines the program is not in compliance, it will ask the institution to respond. If the response is not satisfactory, the institution will be so notified, and a campus visit will be scheduled to determine the facts. If non-compliance is evident, a letter of revocation stating the reason will be sent, and the institution will be asked to respond. If the response is inadequate, accreditation will be revoked. This "not to accredit" action may be appealed. The institution remains accredited until completion of the appeal process (Council on Aviation Accreditation, n.d.)

In 1999, the CAA Standards Committee discussed assessment by institutional members including how its mission is changing to outcome evaluations. The synopsis of the meeting is as follows.

At the CAA Standards Committee meeting which was held in conjunction with its July 7-9, (1999) annual meeting, Dr. Fred Emshousen, Associate Dean for the School of Technology at Purdue University, reported on educational trends as they relate to assessment. Emshousen, who is a member of the Accreditation Board for Engineering Technology (ABET) accrediting group, said that higher education is changing from an input to an outcomes assessment process. The challenges for educators involved in the accreditation process are to conduct thorough training, have sufficient volunteers, obtain a commitment by stakeholders, and

structure accreditation to be a highly valued part of institutional improvement. High standards do not come directly from accreditation, according to Emshousen, but rather from improving learning. Assessment requires a systematic approach starting with determining educational objectives, determining outcomes required, and evaluating how well objectives are achieved. Some typical assessment measures are placement data, employer surveys, and alumni surveys. Assessment should be performance-based and institutions should engage in continuous self-assessment and improvement. Accreditation, according to Emshousen, then looks at how well the process results in a better product. (Council on Aviation Accreditation, 1999b, p. 1).

In a move to strengthen its position as the world's leader in the advancement of aviation education accreditation, the Council on Aviation Accreditation (CAA) announced a change of name and identity. CAA, a CHEA-recognized specialized accrediting body, will now be known as the Aviation Accreditation Board International (AABI). The official transition will be made at the Annual Meeting, July 10-14, 2006, in Duluth, MN; this change culminates a two-year effort in furthering the Council's commitment to its mission to advance quality aviation education worldwide through accreditation and leadership. As the only non-governmental, specialized accrediting body for aviation programs in the world, this change is being made to avoid confusion with foreign civil aviation

government agencies and recognize the international scope of the organization. (University Aviation Association, 2006, p.23)

Formats of aviation program accreditation

A review of the CAA Form 117, *CAA Member Institution Accreditation Status Summary* dated February 10, 2005, indicates that there are nineteen institutions with accredited programs.

1. Arizona State University
2. Auburn University
3. Central Missouri State University
4. Daniel Webster College
5. Embry-Riddle Aeronautical University – Daytona
6. Embry-Riddle Aeronautical University – Prescott
7. Florida Institute of Technology
8. Hampton University
9. Louisiana Tech University
10. Mercer County Community College
11. Middle Tennessee State University
12. North Shore Community College
13. Parks College of Engineering and Aviation of St. Louis University
14. Purdue University
15. St. Cloud State University
16. University of Nebraska – Omaha
17. University of North Dakota
18. Utah State University
19. Western Michigan University

Fifty-six individual aviation programs residing within five CAA program options were accredited within nineteen institutions

1. Twenty Aviation Management
2. Six Aviation Maintenance
3. Three Aviation Electronics
4. Ten Aviation Studies
5. Seventeen Flight Education

Two institutions have programs in Candidate Status - reaccreditation.

1. Arizona State University: Aviation Management, and Flight Education

2. North Shore Community College, A.S. Professional Pilot

Five institutions have programs in Candidate Status – New

1. College of Aeronautics
2. Kent State University
3. Kansas State University – Salina
4. University of Dubuque
5. University of Oklahoma

Fifteen programs are included in the new candidate status

1. Six Aviation Management
2. One Aviation Electronics
3. Two Aviation Studies
4. Six Flight Education

The Federal Aviation Administration certifies airmen, a term that applies to both aircrewmembers and mechanics. Mechanic certification by FAA is not accreditation, but it is closely related since CAA will accredit mechanic schools after these schools receive certification from the FAA. Aviation maintenance certification is regulated by the Federal Aviation Administration under the Department of Transportation. The Federal Air Regulations (FAR) Part 147 prescribe curriculum standards for mechanic certification. Mechanics can be issued a certificate designated Airframe only (A), Power Plant only (P), or both Airframe and Powerplant (A&P) (Federal Aviation Administration, 2005).

FARs also regulate the Aviation Maintenance Training Schools (AMTS) covering both mandated curriculum and operating rules. The FAA does not attempt to market accredited schools or required certification exams. Any marketing attempts are controlled by individual AMTSs and FAA approved

testing services such as Computer Aided Testing Services (CATs) or LaserGrade.

For an AMTS to become certified by the FAA, five phases must be completed before the school can be opened to students. First, a preapplication is processed and a determination is made by the FAA to verify there is a need for the program. Next, a formal application is completed and forwarded to the FAA Flight Standards District Office (FSDO) for approval or denial. If accepted, the school then undergoes a document compliance audit to verify compliance with FAR Part 147. The school must then pass a demonstration of facilities and a formal FAA inspection to be followed by certification. All five phases may overlap and can be concurrent to result in the school receiving an Air Agency Certificate. During the first ninety days, the FAA will assess compliance with regulations by conducting frequent inspections. A contractual arrangement between the FAA and AMTS allows the school to be inspected at any time without advance notification. It is typical for the FAA to make on-site inspections two to four times per academic year (Federal Aviation Administration, 2005).

Avionics Technology programs must conform to institutional accreditation requirements of the approving accreditation organization by meeting Commission on Colleges (COC) or Commission on Occupational Education Institute (COEI) accreditation requirements. Other than standards established by CAA, there are no established national or state requirements for avionics program accreditation or certification. Depending upon employer and specific job duties, some job applications must meet Federal Communications Commission (FCC) and /or

FAA certification requirements before entry into avionics occupations (Sappe & Squires, 1990).

One other electronic certification exists through the International Society of Certified Electronic Technicians (ISCET). Since its founding in 1965, this organization has certified more than 40,000 people. This voluntary program is designed to help provide employers with job applicants who meet higher standards of work preparation than those with less training, giving them a means to assure quality of work (National Skills Standards, 1996).

Avionics technology is also indirectly accredited through the National Association of Industrial Technology (NAIT) by accreditation of electronic programs. NAIT certification provides recognition the institution has satisfied certain professional standards by Industrial Technologists and signifies a professional has attained a certain level of expertise in a specified field or area.

CHAPTER 3

METHOD OF STUDY

Introduction

This is a qualitative study with two major purposes: 1) To understand the decision factors involved as aviation institutions of higher education consider undertaking CAA accreditation and 2) Gathering data related to organizational structure and resource allocation while completing the accreditation process.

Choice and method of data collection depends upon information needs, value, budget, resources available and timing requirements. Each of the three methods of data collection has its own special abilities and limitations, and some information can be obtained by only one method. Table 1 provides a review of major data collection factors.

Table 1

Comparison of Data Collection Methods

	Personal	Telephone	Mail
Data Collection Cost	High	Medium	Low
Data Collection Time Required	Medium	Low	High
Sample size for a given budget	Small	Medium	Large
Data quantity per respondent	High	Medium	Low
Reaches widely dispersed sample	No	Maybe	Yes
Reaches special locations	Yes	Maybe	No
Interaction with respondents	Yes	Yes	No
Degree of interviewer bias	High	Medium	None
Severity of nonresponse bias	Low	Low	High
Presentation of visual stimuli	Yes	No	Maybe
Fieldworkers training required	Yes	Yes	No

Source: Alreck & Settle (1995 p. 32)

An online questionnaire was utilized to obtain institutional factual data, perceptions, and opinions regarding the accreditation process. Alreck & Settle (1995) indicate surveys may be easier, quicker, less expensive or a more accurate way to get required information when compared to personal or telephone interviews.

Surveys are usually conducted for one of three basic reasons: 1) They want to influence or persuade some audience. 2) They want to create or modify a product or service they provide for a particular public. 3) They want to understand or predict human behavior or conditions because it's the focus of their academic or professional work. (Alreck & Settle, 1995 p.3).

Questionnaires are frequently a concise, preplanned set of questions designed to yield specific information to meet a particular need for research

information. Advantages of questionnaires include 1) Economy - Expense and time involved in training interviewers and sending them to interview are reduced. 2) Uniformity of questions - Each respondent receives the same set of questions phrased in exactly the same way. 3) Questionnaires yield data more comparable than information obtained through an interview. 4) Standardization - If questions are highly structured and conditions under which they are answered are controlled, then the questionnaire could become standardized. One disadvantage of questionnaires includes the difficulty in assessing a respondent's motivation, which can affect the response validity. Unless a random sampling of returns is obtained, returned and completed questionnaires may represent biased samples. Factors affecting questionnaire return percentage include 1) Length of the questionnaire, 2) Reputation of sponsoring agency, 3) Complexity of questions asked, 4) Relative study importance determined by potential respondent, 5) Extent to which respondents believe their responses are important, 6) Quality and design of questionnaire, and 7) Time of year questionnaires are sent out (Key, n.d.).

Alreck & Settle (1995) indicate response rates of over 30% are rare with response rates often about 5-10%. In this study, the overall response rate received was 25.6%. However, the response rate from accredited institutions was 73.6% (14 of 19 accredited institutions responded). Four additional institutions seeking accreditation responded, representing an 80.0% of institutions identified as seeking initial accreditation. The overall response rate was 18 of 24 for a total of 75%, an excellent response rate. Responses from

schools not accredited and not currently seeking accreditation were very low but not of major significance since they are not key to the research question other than providing information as to why schools do not seek accreditation.

Population and Sample

Institutions were identified by the *Collegiate Aviation Guide* published by UAA and *AOPA Flight Training Magazine Collegiate Directory* as collegiate aviation programs granting a minimum of an associate degree. The only qualification criteria of population schools selected was the institution granted, as a minimum, an associate degree in aviation. Certificate schools were not considered part of the research population. One hundred sixty-four collegiate degree-granting institutions were identified as the population of the study. Since aviation institutions offering a minimum of an associate's degree in aviation is a small population and only nineteen institutions are CAA accredited, this study utilized comprehensive sampling methods.

The central purpose for this study is to understand decision factors involved as aviation institutions of higher education consider undertaking CAA accreditation and to gather data related to organizational structure and resource allocation while completing the accreditation process. Only one aviation professional (dean, department chair, or program coordinator) from each institution was asked to participate in this study. Individuals were selected based on their listing as the collegiate flight program's primary contact person according to UAA and CAA databases, AOPA Flight Training Guide, and college websites. Surveyed institutional representatives were contacted by phone to verify that they

were the most qualified to answer the survey questionnaire, to ensure survey receipt, and to encourage participation.

Instrumentation

The research instrument for this study was created to qualitatively explore whether collegiate aviation institutions are pursuing CAA accreditation. The research instrument used in this study was a structured questionnaire consisting of two parts. Institutions not seeking accreditation answered the first seven questions. Accredited institutions or those seeking accreditation answered all twenty-one questions. The questions are a combination of yes/no, multiple-choice, and open-ended questions. A copy of the questionnaire can be found in Appendix C.

Testing the survey questionnaire is essential. Oppenheim (1996) stressed questionnaires should be tested, revised, and adapted “after many abortive test flights” until researchers can ensure that the questionnaire “can do the job for which they are needed” (p.47). This process of pilot testing not only enhanced the validity of the questionnaire, but also promoted data reliability. Pilot tests are done via a review from experts who help the researcher eliminate bias, clarify ambiguities, and confirm appropriate wording and structure (Marshall & Rossman, 1999). In this study, the researcher invited comments or suggestions from selected experts on wording, meaning, interpretation, grammar, and typographical errors, which contributed to fine-tuning the questionnaire and elevating the level of appropriateness about expected data. Selected institutional

aviation department/program representatives are experts on the needs and philosophy of their individual programs and were selected because they oversee daily operations of their respective aviation programs. These individuals have the most knowledge about current and future issues/trends regarding their collegiate programs.

The research instrument was developed to collect demographic, self-study organization and financial data regarding aviation program accreditation and to assess perceptions of participants (dean, department chair, or program coordinator), and the results should be valid.

Procedures

The research instrument was electronically mailed to 164 collegiate aviation programs, specifically to aviation professionals administering these collegiate aviation programs located in the United States and Canada identified by the researcher. Nowhere on the research questionnaire does the researcher ask for a participant's name or institution of employment. Data given by each individual participant cannot be linked back to that participant. When a participant submits his/her responses, the data is anonymously and electronically sent to a data file created by Simple Survey Builder V2.0. The researcher will not be able to identify data to a particular participant because responses have been anonymously submitted. The participants are notified in the questionnaire introduction area that their information will be kept confidential and responses will be anonymously

recorded. Administrative access to Simple Survey Builder V2.0 is password protected, allowing only the researcher to create, modify, view results, or delete data files. To prevent respondents from submitting multiple surveys, an option of allowing one submission was selected.

Data Analysis - Timeline for Conducting the Study

The research study was conducted over a five-month period. Research questionnaire development started during the first weeks of the study. A survey instrument was developed and validated with one aviation institution that previously completed the accreditation process. This institution responded prior to actual survey distribution to determine validity of responses and modification of questions based upon input of the trial institution. The completed research questionnaire was then available for electronic mailing to participants. The researcher also identified collegiate aviation programs to participate in the study. Data collection and analysis was completed during the first six months of the study. The instrument was emailed to the 164 institutions identified as offering a minimum of an associate degree program in aviation.

A cover letter explaining the purpose of the study was developed to both introduce the survey instrument and encourage maximum participation. A copy of the survey cover letter and instrument are included in Appendix A and Appendix C, respectively. In addition to peer review for validity, Lincoln & Guba (1985) and Berg & Latin (1994) outline their criteria for high validity research as follows: a) possessing a standard set of guidelines for publication of the inquiry

communication; b) displaying honesty or authenticity about its own and their researcher's stance; and c) giving voice to participants.

Of the 164 institutions identified as offering associate or higher degree programs in aviation, nineteen institutions were identified by CAA form 117, *CAA Member Institution Accreditation Status* dated February 10, 2005, with accredited programs.

The instrument cover letter was emailed to CAA and UAA listed Institutional representatives and AOPA identified institutional aviation department representatives on March 27, 2006, directing survey respondents to an online CAA accreditation survey. Simple Survey Builder 2.0 is an automatic data compilation program that removes all identifying marks from responses. It is impossible for the researcher to discover who has responded, or to discover any other specific demographic information. From April 3 to April 7, 2006, institutional representatives were contacted by phone to ensure survey receipt and encourage participation. A second instrument was emailed on April 10, 2006, to all institutions with a returned email indication, or to respondents that indicated they did not receive the initial survey to obtain a maximum number of returns. All questionnaires returned by April 21, 2006, were included in the analysis.

Methods of Recording Data

Reliability of this project rests in the category of research consistency. Research reliability could be obtained by a reproducible methodology. Through

Survey Builder 2.0, along with the promise of confidentiality, this researcher hoped to provide adequate protection of respondents' identities. This pledge of confidentiality was clearly indicated on the instrument cover letter. All respondents logged onto <http://www.cmsu.edu/surveys/?formID=435> to complete the online survey. Simple Survey Builder V2.0 recorded and tracked answers to all questions, thereby allowing survey users to remain anonymous. Ethical concerns were closely considered. This section could simultaneously ease participants' anxiety and increase their participation confidence (Creswell, 1998; Maykut & Morehouse 1994). Comments from Maykut & Morehouse (1994), Maxwell (1996), and Creswell (1998) concerning ethical considerations for protection of participants are listed as the following: a) no harm to career of individual participants; b) no harm to human rights and freedom of individual participants c) no harm to dignity d) no harm to participants and any related objects f) feedback and results provided to participants g) anonymity ensued. Ethical concerns were accomplished by taking webbased training related to human subjects required by Central Missouri State University as the researcher is a member of the Human Subjects Review Committee.

CHAPTER 4

REPORT OF FINDINGS

Analysis of the data

This chapter summarizes the findings of the study. The questionnaire included in Appendix C was used to obtain required data from respondents who submitted their candid perceptions of the accreditation process.

Institutions were identified by the *Collegiate Aviation Guide* published by UAA, accredited or candidates for accreditation with CAA, and *AOPA Flight Training Magazine Collegiate Directory* as collegiate aviation programs granting as a minimum an associates' degree. The only qualification criteria of schools selected for the population was the institution granted as a minimum, an associate degree in aviation; certificate schools were not considered as a part of the research population. One hundred sixty-four collegiate degree-granting institutions were identified as the population of the study. Forty-two surveyed institutions (25.6%) completed the online survey (Table 2).

Table 2

Number of Questionnaires Returned

Questionnaires sent	Number of Respondents	Rate of Return %
164	42	25.6

Question one (Table 3) evaluated responses from surveyed institutions to identify type of institution. Eight institutions (19.0%) reported being private comprehensive institutions; one institution (2.4%) reported being a private regional institution. Eighteen institutions (42.9%) indicated they were a public comprehensive institution, six institutions (14.3%) reported being public regional institutions, and nine institutions (21.4%) reported as a public community college.

Table 3

Number of Respondents According to Institution

TYPE OF INSTITUTION	NUMBER RESPONSES	PERCENTAGE
Private Comprehensive	8	19.0
Private Regional	1	2.4
Private Community College	0	0.0
Public Comprehensive	18	42.9
Public Regional	6	14.3
Public Community College	9	21.4
Total Responses	42	100

Questionnaire item two (Table 4) was designed to determine the aviation department or program student population. Nine institutions (21.4%) reported aviation student populations between 201-300 followed by eight institutions (19.0%) reported a population of 50 or less and eight institutions (19.0%) reported a population between 50-100.

Table 4

Aviation Department/Program Student Population

STUDENT POPULATION	NUMBER RESPONSES	PERCENTAGE
0-50	8	19.0
51-100	8	19.0
101-150	7	16.7
151-200	5	11.9
201-300	9	21.4
301-400	0	0.0
401-500	3	7.1
500 or more	2	4.8
Total Responses	42	100.0

To determine types of degrees offered by the aviation department, question three (Table 5) asked participants to respond to degrees offered by the aviation institution. Fifteen institutions (27.3%) responded they offered an associate degree. Thirty-one institutions (56.4%) reported they offered a baccalaureate degree. Eight institutions (14.5%) reported they offered a masters degree, and one institution (1.8%) reported they offered a doctoral degree. Many

institutions offer a variety of degrees. It is possible for one aviation department to offer a doctoral degree, education specialist degree, masters degree, bachelors degree, and an associate degree. The numbers in this table exceed 42 respondents, but it is possible in this scenario to have one aviation department offering five different academic degree levels.

Table 5

Type of Degrees Offered by the Aviation Department

DEGREES OFFERED	NUMBER RESPONSES	PERCENTAGE
Associate	15	27.3
Baccalaureate	31	56.4
Masters	8	14.5
Education Specialist	0	0.0
Doctoral	1	1.8
Total Responses	55	100

Questionnaire item four asked, “How does your institution view accreditation and its importance to students?” This was an open-ended question that respondents were required to complete. A total of 42 responses were received that Simple Survey Builder compiled into a file stripped of all associations after each survey was submitted. Similar responses were grouped together, resulting in twenty-seven distinct and different responses. In summary, responses ranged from important to not important and vary as much as each institution is different. Key comments by respondents were:

- Didn't even know it existed or why we would want to do so

- Big waste of time and money.
- Truthfully, I have felt no pressure and seen no advantage in accreditation. Prospective students don't know anything about it, nor do future employers. Having done very little research, it seems as though it is a great deal of work, for an already over-worked staff. My Dean supports me doing it, but also doesn't really care.
- As director of the program, I was not aware of accreditation so have not yet considered it. Our school provides FAR Part 141 flight training so I am not convinced that accreditation would be a benefit to our students.
- More important to administration than students.
- Accreditation means little to our students. However, the accreditation process can help focus the program faculty and staff on the strengths and weaknesses of the program and serve as a vehicle for program improvement.
- The institution views it as important to the institution, not necessarily to the students. Most technical programs do not see the need. The institution's goal is to accredit all programs if an external accrediting body exists.
- The assessment culture in higher education requirements outside verification of assessment. One of these can be a CAA accreditation. Accreditation also separates the haves from the have nots.
- We are accredited by the CAA and our institution, department faculty, and college dean all view accreditation through CAA as very important to our existence and to our students education.
- Accreditation is important to the program and students in many ways. It is a mechanism for improvement of the program through a rigorous program review. It enables institutions to assess their programs against standards determined by the wisdom of other educators (a form of benchmarking). It is a quality stamp to the internal and external worlds. All of these factors make accreditation important to the students who benefit from that process.
- Our institution considers it to be important in that it can provide students some assurance regarding the quality of the program. It is important to faculty and the administration because it helps assure there is a periodic outside review of the program. Probably the

greatest value it achieves is providing a high-level connection between academic programs and industry.

- Accreditation is important to give the prospective student the assurance that the school of choice is viable and capable to teach what is expected, (because at that time, the student isn't skilled enough to make that decision themselves). It also gives the school a benchmark to evaluate their own programs for viability. However, since the FAA is in the business of giving many of these guidelines, aviation accreditation associations often become political in nature, costing programs, (and ultimately the student) unnecessary fees to establish membership privileges. With these "bought" privileges, the program can now advertise that they are part of this elite group of aviation providers. In this case, instead of the student getting a benefit, they are falsely lead into situations where the benefit is actually an arrogant attempt by colleges to appear to be better capable than those who "haven't paid the fees".

Questionnaire item five asked institutions to indicate if they were CAA members (Table 6). Twenty institutions (47.6%) indicated they were members of Council on Aviation Accreditation, and twenty-two institutions (52.4%) indicated they were not members of Council on Aviation Accreditation.

Table 6

Institutional CAA Membership Status

CAA MEMBER	NUMBER RESPONSES	PERCENTAGE
Yes	20	47.6
No	22	52.4
Total Responses	42	100.0

Questionnaire item six (Table 7) was used to determine accreditation status of the 42 respondent institutions. Eighteen institutions (42.8%) indicated

they were not accredited by CAA and decided not to seek aviation-program-specific accreditation. Thirteen institutions (31.0%) indicated they were accredited by the Council on Aviation Accreditation. Seven institutions (16.7%) indicated they were not aware aviation specific accreditation existed. Institutions can be members of CAA and still not have their programs accredited by CAA, a prerequisite for accreditation application. CAA membership rosters indicate 51 member schools and 19 institutions with accredited programs.

Table 7

Respondents According to Institutional Accreditation Status

CAA ACCREDITED	NUMBER RESPONSES	PERCENTAGE
Yes	13	31.0
No, Not aware aviation specific accreditation existed	7	16.7
No, decided not to seek accreditation	18	42.8
No, but in the process of seeking accreditation	4	9.5
No, Applied for accreditation but withdrew the application	0	0.0
No, applied but application was rejected by CAA	0	0.0
Total Responses	42	100

Questionnaire item seven asked respondents to evaluate their institutional attitudes and why aviation institutions are not seeking CAA accreditation.

Institutions not interested in aviation specific accreditation do not see the benefit to the students, department, or institution. Respondent key comments were:

- We already have an FAA 141 school and are "approved" by the FAA. This seems to be what matters to potential applicants. They have heard of the FAA but not the CAA.
- Title IV Accreditation is widely recognized sufficient for transfer and job seeking purposes. No significant advantages are seen in multiple accreditation.
- Do not see the need or benefit at this time. I am not aware of the benefits to the institution or our students.
- Our institution is accredited through NCA. I wasn't aware of the CAA accreditation. Our program is accredited through the NCA.
- We do not see the benefits versus expending the resources necessary for initial accreditation and the costs of continued accreditation. Our institution has 175 students and our faculty are swamped just trying to keep up with all our students, let alone go through the accreditation process. We do not feel that becoming a CAA accredited institution will significantly improve our program.
- CAA has never demonstrated any expertise in aircraft maintenance, or provided any help or services to aircraft maintenance training institutions.
- We joined CAA as a member but the dues got so high we decided the cost benefit was not worth the money. Small schools do not have the resources of the big ones. I went to the annual convention three years ago and felt the program was totally focused on the big schools and did not relate to small school. The cost of accreditation is well beyond our resources. In the hundreds of inquiries I get I have never been asked if we are accredited by CAA.
- We were a member of CAA but determined that we did agree with the specific requirements for accreditation under CAA. Specifically, we did not think that the CAA allowed sufficient preparation outside the aviation discipline, business and basic technology coursework, so we terminated membership in CAA. We feel that accreditation is beneficial and determined that the NAIT standard more closely

aligned with our philosophy. We have completed the self-study and site visit with a recommendation for accreditation.

- Historically, the CAA template for accreditation has been quite narrow and does not fit programs outside of the original "Airway Science" mold.

All remaining responses are from the 18 schools either accredited or seeking accreditation. Questionnaire item eight asked respondents to evaluate why aviation institutions are seeking aviation program accreditation. These institutions agree that accreditation assures quality while being validated by an outside agency and is a way to improve the institution's aviation program.

Respondent key comments were:

- To substantiate conformity of our program and its academics to standards established by the academia.
- It's a good international benchmark to measure by. We know our curriculum meets standards of an outside organization.
- If we do, it will be to brag across my campus, and get good press with the trustees, AND I'll start bragging to prospective students.
- There are numerous reasons. We like to advertise that we are the only accredited collegiate aviation program with our state and all the states that border our state. We want to be one of the elite collegiate aviation programs in the nation, and accreditation through the CAA, we believe, is the first step toward that elitist stature. CAA accreditation sets the guidelines for which curriculum subject areas are important and therefore required. CAA also sets the standards that have to be met to achieve accreditation. Our institution always deals with all of the CAA requirements and just does whatever is necessary to make it happen. We were one of the first institutions accredited by the CAA and we have remained accredited every five years since that first accreditation visit.
- The self-study is a great way to look inside your own program to see what is happening and make adjustments where needed. National

accreditation is expected of all departments at our University. Accreditation allows our program to measure up with other institutions across the country.

- Accreditation is important to the program and students in many ways. It is a mechanism for improvement of the program through a rigorous program review. It enables institutions to assess their programs against standards determined by the wisdom of other educators (a form of benchmarking). It is a quality stamp to the internal and external worlds. All of these factors make accreditation important to the students who benefit from that process.
- We are seeking accreditation because some of our competitors are accredited and also because some employers are now emphasizing the importance of accreditation in obtaining internship agreements with them, etc.
- To gain third-party validation of the quality of our program using a standard agreed upon by the academic and industry community with the awareness of the regulatory body.

Question nine evaluated respondent institution accreditation status (Table 8). Thirteen respondent institutions (76.4% of the subset of 18) indicated they were accredited by CAA. Four respondent institutions (23.5% of the subset of 18) indicated they were seeking initial accreditation.

Table 8

Accreditation Status

ACCREDITATION STATUS	NUMBER RESPONSES	PERCENTAGE
Accredited	13	76.5
Seeking initial accreditation	4	23.5
Seeking reaccreditation	0	0.0
Total Responses	17	100.0

Table 9 corresponds to questionnaire item ten to determine if accreditation institutions had their entire aviation program accredited by CAA. Thirteen institutions (72.2%) indicated they had all program options accredited by CAA. Five institutions (27.8%) responded they did not have all program options accredited. If four institutions are seeking initial accreditation then not all of their programs could be accredited. This would indicated that 13 of the fourteen accredited institutions had all programs accredited and only one accredited something less than all their programs.

Table 9

All Options Accredited or Seeking Accreditation

ALL OPTIONS ACCREDITED	NUMBER RESPONSES	PERCENTAGE
Yes	13	72.2
No	5	27.8
Total Responses	18	100.0

Questionnaire item eleven asked, how many options do you have and what are your options (Table 10)? Respondents indicated a total of fifty-three aviation programs options. Professional Pilot represented the highest number of programs with sixteen programs (30.19%). The next program most mentioned by respondents was Aviation Management (20.75%).

Table 10

Number of Options and Type

AVIATION PROGRAM OPTIONS	NUMBER RESPONSES	PERCENTAGE
Aviation Science	1	1.9
Professional Pilot	16	30.2
Maintenance Management	7	13.2
Aviation Management	11	20.7
Meteorology	1	1.9
Safety Science	2	3.8
Air Traffic Management	3	5.7
Avionics systems	4	7.5
Aviation Administration	4	7.5
Aviation Flight Education	1	1.9
Aviation Computer Science	1	1.9
Flight Dispatch and Scheduling	1	1.9
Airport Management	1	1.9
Total Responses	53	100.0

Questionnaire item twelve asked, if not all programs are accredited, which ones are not accredited and why did you elect to not accredit these programs?

Three institutions responded to this question. Two institutions mentioned flight

education not being able to meet accreditation standards. One respondent indicated aviation maintenance was not accredited due to the death of a key staff member.

- Flight Education is not currently accredited, but will be put up for accreditation within the next year. We contract the flight training and until previously, we could not meet the accreditation requirements (degree requirements for flight instructors).
- We initially chose to pursue accreditation for both our BS in Professional Pilot and Aviation Maintenance, but as we were about to begin the self-study, the key leader of our Aviation Maintenance staff died. We continued to achieve accreditation for the BS in Professional Pilot and expect to apply for accreditation for our BS in Aviation Maintenance in the near future. We want the emphasis on the BS programs.
- Professional flight, we were unable to meet the standards.

Table 11 represents responses to question thirteen, how institutions completed the task of writing the self-study. Responses of those who reported their institution were accredited or in the process of being accredited were analyzed to reveal how their self-study process was organized and completed. Four respondents (22.2%) reported one individual completed their self-study. Eleven institutions (61.1%) reported their self-study was completed by one major writer supported by a number of associates, and three institutions reported use a team effort to complete the self-study.

Table 11

Writers of Self-study

HOW SELF-STUDY WRITTEN	NUMBER OF RESPONSES	PERCENTAGE
One Individual	4	22.2
One major writer supported by a number of associates	11	61.1
Writing Team of ____ sharing approximately equal writing responsibilities	3	16.7
Total Responses	18	100.0

Questionnaire item fourteen asked institutions which employed a writing team, how many members shared equal writing responsibilities? A total of three responses were received, each one with a different perspective on how to organize the writing team. One respondent indicated a major writer with data input from various administrative support staff from the university. One respondent indicated entire department, and one respondent indicated support from six individuals. A response of three is inadequate to derive any significance; however, the data is of interest because it identifies a diversity of techniques in dealing with the workload and may be a function of faculty size, program size, or other factors not identified in this study.

Question fifteen determined how much time was devoted to complete the research and data gathering phase of the self-study. Each writing phase of

accreditation is currently not tracked by institutions resulting in a variety of respondent answers. Four institutions (28.58%) responded they completed the self-study in 40 hours. Respondents indicated time spent ranged from three hours reassigned time to over 200 hours to complete this phase of seeking accreditation. Again, the data is insufficient to draw significant conclusions but indicates a range of effort that likely is due to several factors specific to each program.

Questionnaire item sixteen determined how much time was devoted by individuals to complete the draft writing of the self-study. Two institutions (16.68%) responded with one three hour course reduction, and another two institutions (16.68%) responded with 20 hours to complete the draft writing. Fourteen additional responses were received ranging from six hours to 560 hours.

Question seventeen evaluated how much time was devoted by individuals to complete the revision phase of the self-study. Eleven institutions responded with nine separate responses. Two institutions (18.1%) responded with five hours to complete the revision writing of the self-study.

Responses received to questionnaire item eighteen determining how much time individuals devoted to complete preparation for the visit phase of accreditation. Two institutions responded with five hours to complete the preparation for visit phase. Another two institutions (14.29%) responded with 20 hours to complete the preparation for visit phase. An additional two institutions (14.29%) responded to 50 hours to complete the preparation for visit phase. Two

additional institutions (14.29%) responded with 50-60 hours to complete the preparation for visit phase.

Question nineteen evaluated the cost incurred by institution that are accredited or seeking accreditation (Table 12). Five institutions (29.4%) responded monetary cost was between \$5,001 and \$6,000. Two institutions (11.8%) responded monetary cost was over \$10,000. This results in seventeen institutions reporting accreditation cost. Institutions cannot calculate total cost of accreditation until after the accreditation visit has occurred. This would indicate one of eighteen institutions was still awaiting their accreditation visit.

Accreditation fees (Council on Aviation Accreditation 2005b) specify one program's application fees at \$1,750. An additional fee of \$350 for each additional accredited program is required. A Visit Fee of \$1,250 is paid prior to the institutional visit based on a three-member team. The host institution deposits \$2,000 minimum (based on a three-member team) to cover team travel expenses and will receive an invoice for actual visiting team expenses to include an honorarium for each team member that averages \$800-\$1,000.

Reconciliation of team expenses could result in either a refund or an additional charge to the host institution.

Table 12

Cost Institution Incurred Seeking Accreditation

AMOUNT SPENT SEEKING ACCREDITATION	NUMBER RESPONSES	PERCENTAGE
\$ 5,000 (\$1,700 Application Fee, \$1,250 visit fee, \$2,000 initial travel deposit)	3	17.6
\$5,001 - \$6,000	5	29.4
\$6,001 - \$7,000	1	5.9
\$7,001 - \$8,000	3	17.6
\$8,001 - \$9, 000	0	0.0
\$9,001 - \$10,000	3	17.6
Over \$10,000	2	11.8
Total Responses	17	100.0

Questionnaire item twenty asked if institutions found the standards manual and self-study guide useful for completing the self-study. A total of ten responses (55%) were received from surveyed institutions. Eight institutions (45%) were nonrespondents. After grouping similar responses together, seven distinct and different responses resulted. Responding institutions agreed the standards manual and self-study guide were adequate for complying with CAA self-study requirements. Respondent comments were:

- Good manual
- Yes, but many unanswered questions that required several calls to CAA.

- Generally, yes. However, there is room for improvement in the documents.
- Yes, the self-study guide and CAA standards manual are very useful and simple to understand, especially since we attained initial accreditation back in 1993, and gone through two other reaccreditation visits since then.
- The manual is confusing. The guidance in workshops and in the manual was not followed. Hours charts caused too many questions and ambiguities.
- The manuals are helpful, but the manuals are updated - is important to agree on which edition of the standards apply to your institution at the time of application and accreditation visit. Certainly the standards manual was useful. The self-study guide was essential, but is certainly not user-friendly. It was designed for a time when information was entered with a typewriter. It now requires a person that is very talented word processor to do a good job. So far, the manual seems to be a useful guide. We have only looked at the self-study guide in order to try to figure out who will do which writing tasks. Compared to a North Central Association of Schools and Colleges review, the CAA self-study manual seems a bit more complete and also more detailed in its instructions.
- Too prescriptive

Question twenty-one asked how institutions sought answers to questions which arose during the self-study phase of accreditation. When institutional questions arose concerning the self-study requirement, CAA was contacted directly for guidance. One respondent indicated guessing at the answer, having not received an adequate response from CAA. Comments from respondents were:

- Contacted CAA directly.
- Visited the CAA website for answers to our questions.

- Contacting CAA Office until the visiting team chair was identified and then we worked through that person.
- Gussed, no help by committees and executive director
- Talked to CAA Board
- Calls to other institutions that are accredited.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to understand decision factors involved as aviation institutions of higher education consider undertaking CAA accreditation and gather data related to organizational structure and resource allocation while completing the accreditation process. Prior to this study no analysis has been made showing how collegiate institutions viewed aviation-program-specific accreditation.

Institutions were identified by the *Collegiate Aviation Guide* published by UAA and *AOPA Flight Training Magazine Collegiate Directory* as collegiate aviation programs. The only qualification criteria of population schools selected was institutions granted as a minimum, an associate degree in aviation; certificate schools were not considered as a part of the research population. A total of 164 collegiate degree-granting institutions were identified as the population of the study. All 164 institutions were sent survey questionnaires via email with forty-two responding.

Accredited respondents or institutions seeking program-specific accreditation indicated the accreditation process provides validation of academic programs by an external agency. All respondents agreed it is easier to market

an accredited aviation program. Respondents also pointed out that accredited programs are more apt to secure internships and scholarships for their students. Respondents also felt it was important for an outside agency to validate quality programs and provide guidance for improvement where needed, and it was important to support CAA and to promote a quality program with a competitive advantage.

Eleven institutions (61.1%) accredited or seeking accreditation used a primary writer supported by associates in the data gathering and writing processes. Time requirements to complete various accreditation phases ranged from three faculty members reassigned duties for one summer to over 200 hours for each phase of the accreditation process. Costs to obtain accreditation ranged from \$5,000 to over \$10,000 for all accreditation-related expenses.

All accredited respondents agreed the *Self-Study Guide* and *CAA Accreditation Manual* were helpful, although some standards were unclear and required CAA clarification. Respondents indicated they called CAA directly, contacted other institutions, or asked their visiting team leader when questions arose concerning the accreditation process. The data does not have significance other than showing a range of responses and that other factors may be at play not identified by the respondents.

Twenty-nine non-accredited institutions reported concern for the accreditation process. Four respondents indicated they are accredited or “approved” by the Federal Aviation Administration or regional accreditation agencies such as North Central Association. Maintenance institutions state,

“CAA has never demonstrated any expertise in aircraft maintenance or provided any help or services to aircraft maintenance training institutions.” Five respondents indicated they do not see the need or benefit for external aviation program accreditation, cost vs. benefits and they do not feel that becoming an accredited institution will significantly improve the program with perceived marginal returns for their money. One respondent indicated “its not part of our strategic plan.” Some nonaccredited institutions realized they do not meet CAA standards and must reorganize prior to applying for accreditation. Some concern existed about institutions losing program control to CAA if they would accredit their program. These institutions were concerned if all accredited programs meet the same CAA standards, aviation programs would be a cookie cutter approach to aviation academics, the only difference being university location and prices. Several institutions realized their programs do not comply with CAA standards, and do not have any interest in completely overhauling their programs just to have the privilege of seeking accreditation.

Conclusions

Data analysis indicates sentiment towards Council on Aviation Accreditation (CAA) accreditation resides in one of two distinct categories with no middle ground. Institutional administration and higher education culture consider external program specific-accreditation important because it validates what the department is teaching to students. It gives prospective students assurance the school of choice is viable and competent to teach what is expected.

Accreditation is an important mechanism for program improvement by meeting published standards and validation through the review process. Respondents also indicated accreditation provides a high level of contact with the aviation industry. To answer the research question, are aviation institutions aware of aviation program specific accreditation, several comments were received to indicate the majority of smaller aviation institutions or community colleges either have not heard about Council on Aviation Accreditation or do not accept program-specific accreditation. Comments received to support this include “As director of the program, I was not aware of accreditation so have not yet considered it.” “Didn't even know it existed or why we would want to do so.” “We are only concerned with University accreditation by traditional accreditors at this time.” “Title IV Accreditation is widely recognized sufficient for transfer and job seeking purposes.” “No significant advantages are seen in multiple accreditations.” “Do not see the need or benefit at this time.” “ I am not aware of the benefits to the institution or our students.” “ Our institution is accredited through NCA. I wasn't aware of the CAA accreditation. Our program is accredited through the NCA.” “ I'm not aware of any advantages for being accredited by the CAA.” Comments received by flight schools not in favor of accreditation include “Our school provides FAR Part 141 flight training, so I am not convinced that accreditation would be a benefit to our students.”

Reasons why accredited programs sought CAA accreditation were evaluated. Respondents stated it was to assure quality and to substantiate conformity of programs and academic standards established by CAA. The

argument presented by those against accreditation of being haves vs. have nots, is justified by these institutions with statements such as “to brag across my campus, and get good press with the trustees, AND I'll start bragging to prospective students.” and “We like to advertise that we are the only accredited collegiate aviation program with our state and all the states that border our state.” Views concerning the self-study and accreditation resulted in the self-study as a great way to look at a program to see what is happening and make adjustments where needed. It is also viewed as a mechanism for program improvement enabling institutions to assess programs against standards.

Accredited institutions do not automatically accredit their entire program. Initially capital expenditure is one reason, and reorganization of additional programs until they can meet current standards is another. Data comments received to support this include “Flight Education is not currently accredited, but will be put up for accreditation within the next year.” “We contract the flight training and until previously, we could not meet the accreditation requirements (degree requirements for flight instructors).” “We initially chose to pursue accreditation for both our BS in Professional Pilot and Aviation Maintenance, but as we were about to begin the self-study, the key leader of our Aviation Maintenance staff died. We continued toward achieving accreditation for the BS in Professional Pilot and expect to apply for accreditation for our BS in Aviation Maintenance in the near future. We want the emphasis on the BS programs. Professional flight, we were unable to meet the standards.”

Institutions which are not interested in seeking accreditation question the value and price of seeking accreditation. Smaller aviation programs are not aware that aviation-program-specific accreditation exists, considering their accreditation status is derived from the Federal Aviation Administration through Parts 61, 141, or 147 certification and question what benefit is derived for students from CAA accreditation. These institutions believe students interested in aviation will continue to enroll in aviation universities whether a particular institution is accredited by the Council on Aviation Accreditation or not. These institutions argue prospective students do not know anything about program specific accreditation, nor do future employers. The argument is also made that it is a great deal of work for an already over-worked staff with capital expenditure viewed as needless when proposed against an already tight budget being another consideration against seeking accreditation. Another argument is the FAA is in the business of mandating certification guidelines resulting in CAA accreditation becoming political in nature, costing programs and students unnecessary fees to establish membership privileges. These schools argue that with "bought" privileges, aviation programs can now advertise they are part of this elite group, falsely leading students to institutions with an arrogant attempt by colleges to appear to be better capable than those who "haven't paid the fees."

Reasons why institutions are not seeking CAA accreditation tend to echo the view of external accreditation. These institutions state it has become a club for "elite" schools to control other schools and universities that were already accredited by regional accreditation bodies and approved by the FAA, which

seems to be what matters to potential applicants. These institutions do not see the need, advantage, or benefit of pursuing accreditation and question benefits to the institution or students. Aviation Maintenance Departments of institutions are emphatic that CAA has never demonstrated any expertise in aircraft maintenance, or provided any help or services to aircraft maintenance training institutions. These institutions do not see benefits versus expending resources necessary for initial accreditation and costs of continued accreditation. Faculty are overworked trying to keep up with students and institutional requirements, let alone go through the accreditation process. They feel becoming a CAA-accredited institution will not significantly improve their aviation program. Aviation institutions that do not pursue accreditation state accreditation representatives promote their own ideas of what makes a quality program, and programs lose flexibility offering quality programs with other courses in mind; human nature causes programs to focus on meeting requirements, and not on the student. These institutions also believe that CAA did not allow sufficient preparation outside the aviation discipline such as business and basic technology coursework. Respondents indicated other program-specific accreditation agencies such as NAIT or ATECH standards are more closely aligned with their philosophy.

The amount of time required to complete various phases of the accreditation process is overwhelming. This element is not tracked by institutions and is a guess when respondents are questioned.

Institutions accredited or seeking accreditation used a primary writer supported by associates in the data gathering and writing processes. Time requirements to complete various accreditation phases range from three faculty members reassigned duties for one summer to over 200 hours for each phases of the accreditation process. Costs to obtain accreditation ranged from \$5,000 to over \$10,000 for all accreditation related expenses.

When evaluating the question, “did you find the CAA standards manual and self-study guide useful for completing the study,” respondents agreed that the manual is adequate for this task. Some respondents indicated the manual is confusing and not user-friendly, along with the required matrix, which causes too many questions and ambiguities. Institutions that indicated they have completed the accreditation process several times find the task easier than institutions that have attempted accreditation only once. Determining which standards apply during accreditation visits were confusing when institutions apply under one standard and that standard is revised before the accreditation visit.

When evaluating how institutions sought answers to questions as they arose, respondents indicated they called CAA directly and spoke with CAA representatives. Other responses indicate they contacted other accredited institutions or their visiting team leader. Significant outliers indicated respondents guessed after having no help from the executive director or committee members. Institutions organized the self-study process with one major writer supported by a number of associates.

Study findings should be used by aviation program supervisors as an administrative tool in the decision-making process to evaluate whether to seek aviation-program-specific accreditation. Institutions that are already accredited can make better judgments regarding how to organize for their next self-study requirements. Those institutions planning for first-time accreditation may gain knowledge of alternatives used by other institutions in becoming accredited.

Future Studies

The two research questions cannot be answered at this time due to incomplete data. They are 1) what bearing does aviation student population have on institutions seeking accreditation, and 2) what bearing does type of university have on institutions seeking accreditation? A follow-up study should be implemented. Furthermore, this study could be improved upon by evaluating parallel studies from other accreditation agencies such as NAIT or ABET distinctive to their academic programs compared to CAA accreditation. Another study to be considered is parents' and students' perception of accredited programs. Does an institution with an accredited program actually play a role in students' selection of an aviation academic program? Researchers should also concentrate on seeking additional academic aviation institutions' respondents as a whole in addition to targeting specific program options such as aviation maintenance or avionics. One question to explore is why institutions with an emphasis on aviation mechanic training affiliate with the Aviation Technician Education Council (ATEC) and choose not to receive or pursue CAA accreditation, but pursue accreditation by another accreditation agency such as

NAIT or ABET. Additional studies could concentrate on community colleges in addition to aviation graduate programs. Currently, no aviation graduate programs are being accredited by CAA. Do we need to accredit graduate programs, and would institutions currently accredited at the undergraduate level support a graduate accreditation process?

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APPENDIXES

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL LETTER
AND COVER LETTER

Oklahoma State University Institutional Review Board

Date: Tuesday, March 14, 2006
IRB Application No ED06104
Proposal Title: Are Higher Education Aviation Institutions Seeking Council on Aviation Accreditation (CAA) Accreditation?
Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 3/13/2007

Principal Investigator(s)
Mark Sherman Steven Marks
Dept. of Aviation TR Gains 300 Cordell North
Warrensburg, MO 64093 Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 415 Whitehurst (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Sue C. Jacobs, Chair
Institutional Review Board

Aviation Department Chair Survey E-Mail

You are invited to participate in a Doctoral Dissertation study regarding *Are Higher Education Aviation Institutions Seeking Council on Aviation Accreditation (CAA) Accreditation?* Selection is based upon one of three sources identifying higher education institutions offering as a minimum an Associate Degree in aviation. These sources include the Council on Aviation Accreditation (CAA) with an accredited aviation program, or listed with either the University Aviation Association (UAA) *Guide to Collegiate Aviation*, or Aircraft Owners and Pilot Association *Flight Training Guide*.

This survey is voluntary in nature and participants may discontinue the research activity at any time without reprisal or penalty. If you choose to participate, research questions are online located at: <http://www.cmsu.edu/surveys/?formID=435>. Other study participants will not be able to access answers that you provide to questions. You will be able to access this website from any computer with internet access, taking approximately 10 minutes to complete the survey. There is no time limit for answering the questions, but please try to answer the questions in one visit to the website.

This is a blind study and no identifying information will be collected. You will not be required to provide your name or any other identifying information while completing questions at the website. No reference will be made in oral or written reports that could link you or your institution to the study. The records will only indicate that CAA/UAA/AOPA identified institutions were contacted to participate in the study. Please send an email to the principal investigator, Mark Sherman (masherman@cmsu1.cmsu.edu), if you have further questions. For information on subjects' rights, contact Dr. Sue Jacobs, IRB Chair, 415 Whitehurst Hall, 405-744-1676.

Thank you for your time and effort in this matter.

Mark Sherman
Assistant Professor
Department of Aviation
T. R. Gaines 210
Central Missouri State University
Warrensburg, MO 64063
660-543-8742
660-543-4979 Fax





Human Subjects Protection Program
Ward Edwards 1800
Warrensburg, MO 64093
Office 660-543-4621 FAX 660-543-4778
www.cmsu.edu/hs

March 22, 2006

MARK SHERMAN
TR GAINES 210
CMSU

Dear Mr. Sherman,


Your research project, "Are Higher Education Aviation Institutions Seeking Council on Aviation Accreditation (CAA) Accreditation?" was approved by the Human Subjects Review Committee on March 22, 2006.

Please note that you are required to notify the committee in writing of any changes in your research project and that you may not implement changes without prior approval of the committee. You must also notify the committee in writing of any change in the nature or the status of the risks of participating in this research project.

Should any adverse events occur in the course of your research (such as harm to a research participant), you must notify the committee in writing immediately. In the case of any adverse event, you are required to stop the research immediately unless stopping the research would cause more harm to the participants than continuing with it.

If you have any questions, please feel free to contact me at the number above.

Sincerely,


David S. Kreiner, Ph.D.
Associate Dean of The Graduate School
kreiner@cmsu1.cmsu.edu

Approved Co-Investigators: None

APPENDIX B
LIST OF INSTITUTIONS

LIST OF INSTITUTIONS

1. Academy College of Aviation
2. AIM Community College
3. Andrews University
4. Anoka Technical College
5. Arizona State University
6. Arkansas State University - Newport
7. Auburn University
8. Averett College
9. Baker College
10. Baylor University
11. Big Bend Community College
12. Black Hawk Technical College
13. Bob Jones University
14. Bowling Green State University
15. Bridgewater State College
16. Broward Community College
17. Caldwell Community College & Technical Institute
18. California State University, Los Angeles
19. Casper College
20. CCSF/City College of San Francisco ACFT Maint.
21. Central Christian College of Kansas
22. Central Missouri State University
23. Central Texas College
24. Central Washington University
25. Chandler-Gilbert Community College
26. Clayton College & State University
27. Cochise College
28. Columbus State Community College
29. Community College of Allegheny County
30. Community College of Baltimore County
31. Community College of Beaver County
32. Community College of Southern Nevada
33. CUNY Aviation Institute At York College
34. Daniel Webster College
35. Delaware State University
36. Delta College
37. Delta State University
38. Dowling College

39. Eastern Kentucky University
40. Eastern Michigan University
41. Eastern New Mexico University - Roswell
42. Elizabeth City State University
43. Embry Riddle - Daytona
44. Embry Riddle - Prescott
45. Enterprise Ozark Community College
46. Everett Community College
47. Everglades University
48. Fairmont State College
49. Farmingdale State University of New York
50. Florida Community College
51. Florida Institute of Technology
52. Florida Memorial College
53. Fox Valley Technical College
54. Gateway Technical College
55. Georgia Aviation Technical College
56. Georgia State University
57. Georgian College
58. Gilford Tech Community College
59. Green River Community College
60. Hampton University
61. Henderson State University
62. Hesston College
63. Hinds Community College
64. Honolulu Community College
65. Indian Hills Community College
66. Indiana State University
67. Inver Hills Community College
68. Iowa Central Community College
69. Iowa Lakes Community College
70. Iowa Western Community College
71. Ivy Tech State College
72. Jacksonville University
73. Jamestown Community College
74. Kansas State - Salina
75. Kent State
76. Lake Superior College
77. Lane Community College
78. Lansing Community College
79. Lehigh Carbon Community College

80. Lenoir Community College
81. Letourneau University
82. Lewis University
83. Liberty University
84. Lincoln Land Community College
85. Longbeach City College
86. Louisiana Tech University
87. Lynn University
88. Marywood University
89. Mercer County Community College
90. Metropolitan State College of Denver
91. Metropolitan State University
92. Middle Tennessee State University
93. Minnesota State University-Mankato
94. Montana State University - Great Falls Cot Bozeman
95. Mountain View College
96. Mt. San Antonio College
97. Naugatuck Valley Community College
98. North Shore Community College
99. Northern Kentucky University
100. Northern Michigan University
101. Northwest Arkansas Community College
102. Northwestern Michigan College
103. Northwestern State University
104. Ocean County College
105. Ohio State University
106. Ohio University
107. Oklahoma State University
108. Palo Alto College
109. Palomar Community College
110. Parks College of Engineering and Aviation of St. Louis University
111. Pennsylvania College of Technology
112. Pima Community College
113. Portland Community College
114. Purdue University
115. Rock Valley College of Aviation
116. Rocky Mountain College
117. Salt Lake Community College
118. San Bernardino Valley College
119. San Jacinto College
120. San Joaquin Valley College

121. San Jose State University
122. San Juan College
123. Schenectady County Community College
124. Seneca College of Applied Science and Technology
125. Solano Community College
126. South Dakota State University
127. Southeastern Oklahoma state University
128. Southern Arkansas University Tech
129. Southern Illinois University-Carbondale Department of Aviation Management and Flight
130. Southern Illinois University-Carbondale Department of Aviation Technology
131. Southern Nazarene University
132. Southern University at Shreveport
133. Southwestern Illinois College
134. Spokane Falls Community College
135. St. Cloud State University
136. Tarleton State University
137. Tennessee State University
138. Texas Southern University
139. Texas State Technical College
140. Tulsa Community College
141. University of Alaska Anchorage
142. University of Alaska Fairbanks
143. University of Cincinnati/Clermont College
144. University of Dubuque
145. University of Illinois
146. University of Louisiana at Monroe
147. University of Maryland Eastern Shore
148. University of Nebraska - Kearney
149. University of Nebraska – Omaha
150. University of North Dakota
151. University of Oklahoma
152. University of the District of Columbia
153. University of Western Ontario
154. Utah State University
155. Utah Valley state College
156. Vaughn College of Aeronautics
157. Vincennes University Aviation Technology Center
158. Walla Walla College
159. Wallace State Community College
160. Wayne Community College

161. Western Michigan University
162. Western Oklahoma State College
163. Westminster College
164. Winona State College

APPENDIX C
QUESTIONNAIRE

QUESTIONNAIRE

1. Is your institution a member of the Council on Aviation Accreditation (CAA)?

- Yes
 No

2. Type of institution?

- Private Comprehensive
 Private Regional
 Private Community College
 Public Comprehensive
 Private Regional
 Private Community College

3. Aviation Department/Program Student Population

- 0-50
 50-100
 100-150
 150-200
 200-300
 300-400
 4000-500
 500 or more

4. Type of degrees offered by aviation program at your institution

- Associate
 Baccalaureate
 Graduate
 Masters
 Education specialist
 Doctorial

5. Are you accredited by the CAA?

- Yes
- No, Not aware aviation specific accreditation existed
- No, decided not to seek accreditation
- No, but in the process of seeking accreditation
- No, Applied for accreditation but withdrew the application
- No, applied but application was rejected by CAA

6. How does your department/program view aviation program accreditation and its important to your students?

7. If not seeking CAA accreditation, why are you not seeking aviation program accreditation? (Thank you for your time, please disregard the following questions)

If you are accredited or seeking accreditation please continue with the following questions

8. If accredited, why did you seek aviation program accreditation?

9. If accredited or seeking accreditation, what is your accreditation status?

- Accredited
- Seeking initial accreditation
- Seeking reaccreditation

10. If you have more than one program option, are all options accredited?

11. If accredited, how many options do you have and what are your options? Examples could be but not limited to Aviation Management, Avionics Management, Professional Flight, Maintenance management, Meteorology, etc.

12. If not all programs are accredited, which ones are not and why did you elect to not accredit these programs?

13. If accredited, how was the task of writing the self-study completed?

- One individual
- One major writer supported by a number of associates
- Writing team of _____ (number) sharing approximately equal writing responsibilities

14. If a writing team, how many members sharing approximately equal writing responsibilities

15. If accredited or seeking accreditation, approximately how much time in hours, was devoted by the individual(s) to complete the research and data gathering phase of self-study?
16. If accredited or seeking accreditation, approximately how much time in hours, was devoted by the individual(s) to complete the writing of the draft phase of self-study?
17. If accredited or seeking accreditation, approximately how much time in hours, was devoted by the individual(s) to complete the revision phase of self-study?
18. If accredited or seeking accreditation, approximately how much time in hours, was devoted by the individual(s) to complete the preparation for visit phase of self-study?
19. If accredited, approximately what cost did your institution incur in the process of accreditation?
- _____ \$5,000 (Application Fee, visit fee, initial travel deposit)
 - _____ \$5,000 - \$6,000
 - _____ \$6,000 - \$7000
 - _____ \$7,000 - \$8,000
 - _____ \$9,000 - \$10,000
 - _____ Over \$10,000
20. If accredited, did you find the CAA standards manual and self-study guide useful for completing the study?
21. If accredited, if any questions arose during the self-study, how did you find answers to your concerns?

APPENDIX D
STEPS TO ACCREDITATION



COUNCIL ON AVIATION ACCREDITATION

STEPS TO ACCREDITATION

FORM 112

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.

Source: Council on Aviation Accreditation

APPENDIX E
THE ACCREDITATION PROCESS



APPLICATION PROCEDURES FOR CANDIDATE STATUS FORM 102 INSTRUCTIONS

The Accreditation Process

The institution submits the following:

- CAA Form 102, Application for Candidate Status (hard copy and in electronic format)
- the application fee
- three (3) copies of the institution catalog (please tab aviation sections)
- three (3) copies of aviation curriculum plan format*
- three (3) copies of aviation course descriptions
- three (3) copies of Classroom Hour Coverage of Core Topics
- three (3) copies of curriculum review forms*

*Submit for each program submitted for candidacy

The application must be signed by the program director, the next higher administrative officer (i.e., Dean of the College), and the chief executive officer of the institution. The completed application and accompanying materials, along with the initial application fee, are submitted to the Council for review and action.

The Council action can take one of two forms:

a. Candidate Status

The institution will be granted Candidate Status if: 1.) the aviation program appears to meet CAA Standards and Criteria, as determined by the Council, and 2.) at least one class will have completed the full program and graduated by the time of the required on-site visit.

b. Candidate Status not Granted

The institution will be denied Candidate Status if, as determined by the Council, the program does not appear able to be brought into compliance with CAA Standards and Criteria within the five (5) year period.

The institution is notified by the Executive Director as to the reasons for the decision. The institution may then request reconsideration for cause or withdraw its application and make new application at such time that the deficiencies have been corrected.

Attachments:

Application for Candidate Status (CAA Form 102)

Classroom Hour Coverage of Core Topics

Curriculum Review Forms – one set for each of CAA's five options

Source: Council on Aviation Accreditation

VITA

Mark Allen Sherman

Candidate for the Degree of

Doctor of Education

Thesis: A QUALITATIVE STUDY OF COLLEGIATE AVIATION INSTITUTIONS
AND THE COLLEGIATE AVIATION ACCREDITATION PROCESS

Major Field: Applied Educational Studies

Biographical:

Personal Data:

Certified Flight Instructor (Airplane Single Engine, Instrument Airplane). Certified Ground Instructor (Advanced and Instrument). Commercial Pilot Certification (Airplane Single Engine Land, Instrument Airplane, and Glider). Airframe and Powerplant Mechanic. FCC General Radiotelephone Operator with Radar Endorsement

Education:

Completed the requirements for the Doctorate of Education in Applied Behavioral Studies at Oklahoma State University December, 2006. Education Specialist Degree, 2001. Master of Arts in History, 1999. Master of Science in Aviation Safety, 1989. Bachelor of Science in Aviation Technology, 1989. Central Missouri State University, Warrensburg, Missouri 64093

Name: Mark Allen Sherman

Date of Degree: December, 2006

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: A QUALITATIVE STUDY OF COLLEGIATE AVIATION
INSTITUTIONS AND THE COLLEGIATE AVIATION
ACCREDITATION PROCESS

Pages in Study: 89

Candidate for the Degree of Doctor of Education

Major Field: Applied Behavioral Studies

Scope and Method of Study: A qualitative study to understand the decision factors involved as institutions of higher education in aviation consider undertaking CAA accreditation and to gather data related to organizational structure and resource allocation while completing the accreditation process. An online questionnaire was utilized to obtain institutional factual data, perceptions, opinions regarding the accreditation process, collect demographic, self-study organization, and financial data regarding aviation program accreditation and to assess perceptions of the participants.

Findings and Conclusions: Accredited respondents or institutions seeking program-specific accreditation indicated the accreditation process provides validation of academic programs by an external agency. Data analysis indicates sentiment towards Council on Aviation Accreditation (CAA) accreditation resides in one of two distinct categories with no middle ground. Institutional administration and higher education culture consider external program specific-accreditation important because it validates what the department is teaching to students. Accredited institutions do not automatically accredit their entire program. Initially capital expenditure is one reason, and reorganization of additional programs until they can meet current standards is another.

Institutions which are not interested in seeking accreditation question the value and price of seeking accreditation. Smaller aviation programs are not aware that aviation-program-specific accreditation exists, considering their accreditation status is derived from the Federal Aviation Administration through Parts 61, 141, or 147 certification and question what benefit is derived for students from CAA accreditation. Several comments were received to indicate the majority of smaller aviation institutions or community colleges either have not heard about Council on Aviation Accreditation or do not accept program-specific accreditation.

ADVISER'S APPROVAL: Dr. Timm Bliss
