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# Aviation Education: Universities and Schools Networking

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business was exposure to and acceptance by the educational community on a formal basis. This report was written during a time of peak effort by industry in aerospace education. The problem was that government and industry programs had been used by only a small percentage of the nation's 30,000 high

schools and over one million elementary schools.

I submit that a national clearinghouse could lay the foundation for greater exposure and acceptance. That type of effort can be developed by focusing the resources of all the major aerospace organizations involved into a national plan that

is consistent and sustaining. The challenge is much more involved today than just providing a teacher with a picture of an airplane. We must adopt valid educational procedures if we are going to be able to take concrete steps to ensure our future growth and properly educate the public.



## AVIATION EDUCATION: UNIVERSITIES AND SCHOOLS NETWORKING

Peggy Baty

In the spring of 1990 the Aviation Education Committee of the University Aviation Association (UAA) conducted a study of its members to determine their current involvement, if any, with elementary and secondary schools. The purpose of the study was to determine:

1. Current status of networking by UAA member institutions
2. Role of UAA in helping its members who wanted to network
3. Future plans or strategies for increased efforts

The survey was mailed to 85 institutional members of the UAA. Forty one surveys were returned producing a return rate of 48%. A basic overview of the survey results follows.

### Question #1

Is your aviation department/program currently involved in working with elementary and/or secondary schools in your area to promote aviation education?

#### Answer

85% responded yes

### Question #2

Please check all activities listed below that describe your involvement:

1. Workshops/courses for teachers, grades K-6

A. 20% yes

2. Workshops/courses for teachers, grades 7-12

A. 27% yes

3. Summer programs for young people, grades K-3

A. 2% yes

4. Summer programs for young people, grades 4-6

A. 12% yes

5. Summer programs for young people, grades 7-12

A. 29% yes

6. Teacher aviation/space resource center

A. 27% yes

7. Faculty who visit and speak in elementary and secondary classrooms

A. 73% yes

8. College students who visit and speak in elementary classrooms

A. 54% yes

9. Involvement with local science fairs (host, judge, etc.)

A. 34% yes

10. Coordinated aviation

education efforts with local organizations such as Civil Air Patrol, Experimental Aircraft Association, Ninety-Nines, Boy Scouts, Girl Scouts, etc.

A. 56% yes

11. ours of university aviation facilities

A. 68% yes

12. Faculty/staff who serve on state aviation education organizations

A. 46%

13. Individuals who work with local high school guidance counselors

A. 59%

14. Individuals who work with local/state career days in area schools

A. 78%

**Question #3**

If you offer "workshops" or courses for teachers, do you grant college credit?

A. 24% yes

Undergraduate or graduate credit?

A. 7 graduate

5 undergraduate

3 both

**Question #4**

Does your aviation program have articulation agreements with a high school aviation program?

A. 17% yes

**Question #5**

Who is the primary coordinator for your university aviation education program as it relates to involvement with elementary and secondary school activities? What is that person's official title or position?

A. Department Chair, faculty member, dean.

**Question #6**

What is the philosophy of your aviation program when it comes to dealing with aviation education at the K-12 level?

A. Many say it is a means of good public relations and/or recruiting tool. Some felt that the idea of networking was a good idea but they had no time or resources to initiate any formalized program or approach.

**Question #7**

Please attach any brochures, advertisements, or agendas of activities demonstrating your organizations's involvement in aviation education.

A. Approximately ten schools forwarded copies of brochures used to advertise summer camps, teacher work-shops, resource center, etc.

**Question #8**

Do you believe that the

University Aviation Association could assist you in developing, promoting, or expanding your current efforts? If yes, how so?

A. 42% yes

12% no

46% unsure/no response

The overall involvement of university aviation programs with elementary and high schools is very good. Often, though, the contact and involvement is based on the efforts of just one individual. In some instances comments were made on the survey forms that a particular institution once had a thriving program of working with area schools but because a particular individual left the college, the activities ceased.

Although not readily apparent from the numbers shared earlier, a majority of the networking that occurs is accomplished with senior high school students. To make any kind of change or impact in an individual student's life, the interaction should first occur at the elementary school level. In the field of aviation this is even more true when considering the value of encouraging minorities and females to enter this career area.

Women today still account for approximately only 6% of the pilot population. The number becomes even more dismal when comparing the number of women airline pilots. Women account for less than 3% of this total. And, because aviation is still considered by many of the general public as a "man's world," the time to reach these young women is during their first years in school. Research has shown that, although children may change their minds several times about their eventual careers, the

possibility of their selecting a nontraditional role must be nurtured at an early age.

In a study conducted in 1990 of women students attending aviation colleges, the majority of those responding indicated that their first desire to enter this field occurred at an early age (i.e., 7-12 years old). Many indicated that a friend or family member had encouraged them.

Aviation magazines and journals are often guilty of publishing few if any stories of successful women or minorities in aviation today. Their reasoning is often based purely on economics. Because 95% of their readers are white males, they portray those individuals in their stories, reports, and advertising.

One reason the problem perpetuates itself, in few ethnic minorities and role models entering aviation, is the lack of sufficient visible role models. At the National Women in Aviation Conference conducted last year, a number of participants commented that they did not realize the contributions women had made to the field and how many women were making successful careers in aviation. For many it was their first opportunity to meet other women aviation professionals from around the nation and to talk firsthand with those who had earned a name for themselves in history (such as Jeana Yeager, Brooke Knapp, and several WASP pilots) or to meet individuals who are working up the career ladder. The UAA membership has a responsibility to promote and encourage aviation education and awareness, not only at the postsecondary level but also in the elementary and secondary grades. A few

institutions are doing exemplary work, others are just beginning to explore the possibilities, but others have yet to begin. With

the help of all UAA member institutions working with other aviation organizations we can make young people in this

country more aware of aviation, including its career opportunities.



## PROFESSIONAL ACCREDITATION OF NON-ENGINEERING COLLEGIATE AVIATION PROGRAMS

Thomas J. Connolly

The primary objective of our colleges and universities is to present undergraduate and graduate instruction to qualified students in the liberal arts and the sciences, in applied fields, and in the professions, including the aviation profession. On many college campuses, research of a basic or applied nature has major significance. Most colleges consider extension programs, seminars, and other specialized education activities as their normal function.

Aviation by its very nature is a many-faceted activity, blending well into the broad and flexible organization of the college and university system. The capacity of the institutions of higher learning to address professional requirements is tremendous, and if adequate support is provided, any specific need in aviation can be met.

According to information available from the University Aviation Association (UAA) there are currently at least 400 colleges, including community colleges, and universities offering non-engineering aviation degree programs. Many of us recognize that the rapid development of technology combined with the increasing complexity of both the air traffic control system and the airborne equipment can only mean that the higher education resource is the most likely source of employees for the aviation industry of the future.

Unfortunately a "Professional Pilot" program, for example, be-

ing offered at any given college is not of itself a guarantee that the institution has specific courses or course patterns leading to a fully qualified entry level professional pilot. A nationwide analysis conducted by the UAA revealed a wide variety of academic course work, some of it with rather limited application to the professional pilot occupation.

The analysis also found that in many cases the actual flight training focused on the FAA minimum standards specified for certification as a Commercial Pilot.

Obviously, in the past, employers of entry level pilots have not, by any means, restricted their hiring to collegiate aviation school graduates. Indeed, even if the employees had wanted to, they would have found the supply of aviation graduates from college programs simply wasn't sufficient to satisfy the demand for entry level pilots. The needs of the industry for

new pilots are changing and embrace a broad spectrum of talent.

Consequently I believe we will see an increasing industry interest in the college educated aviation professional and along with that interest a pressing need for a definite set of program standards and criteria for evaluation.

A number of aviation professionals have recognized the need for academic standards for quite some time. As far back as 1987, a Professional Accreditation Task Force was appointed by the President of the UAA to further evaluate the feasibility of formal aviation program accreditation. A survey of UAA institutional members in the spring of 1988 showed general support for the establishment of a formal accrediting organization for aviation programs.

The Task Force determined from the survey of UAA institutional members that there was general consensus of need for