



# **North Texas Aviation Education Initiative**

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

## **Program Coordination**

October 2009



# North Texas Aviation Education Initiative

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

## 4.2 PROGRAM COORDINATION

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## PROGRAM COORDINATION

### A. GLOSSARY

This section defines acronyms and abbreviations used throughout the document.

<b>Term</b>	<b>Description</b>
ACE	Aviation Career Education
AFW	Fort Worth Alliance Airport
DFW	Dallas/Fort Worth International Airport
DTO	Denton Municipal Airport
EAA	Experimental Aircraft Association
FAA	Federal Aviation Administration
FTW	Fort Worth Meacham International Airport
GA	general aviation
GKY	Arlington Municipal Airport
GVT	Majors Airport at Greenville
ISD	Independent School District
LNC	Lancaster Municipal Airport
NCTCOG	North Central Texas Council of Governments
RBD	Dallas Executive Airport
ROTC	Reserve Officers' Training Corps



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## PROGRAM COORDINATION

### B. INTRODUCTION

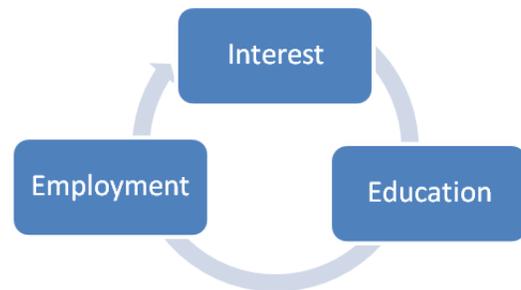
The creation of multiple, integrated programs which support aviation education opportunities in North Central Texas is necessary for this region to provide, both short and long term, the diverse and growing workforce needs of this region's pre-eminent aviation industry. This report, one of many components of the North Texas Aviation Education Initiative sponsored by the North Central Texas Council of Governments (NCTCOG), details the coordination requirements necessary for "seamless" education experiences at various academic levels. Cooperation, connections and alliances should be established among:

- Education institutions such as community colleges, universities and independent school districts (ISDs);
- Aviation professional associations, organizations and youth-oriented program providers; and
- Aviation businesses and companies at all levels and in all related fields.

Once competition among various entities is put aside, the recommendations for program coordination contained herein will establish opportunities to create a seamless aviation education experience in the region.

### C. CAREER DEVELOPMENT SYSTEM

In order to better understand the cycle of aviation education—its precedents and its outcomes, the interrelationships of interest, education and employment should be examined. When considered in concert, these elements are the basis for structuring a successful approach to meeting workforce demands in the aviation industry.



#### Interest

Interest initiates the process and offers the first step for influencing a person's career choice. Interest is spawned from observation of a career field or publicity of that career field in terms of adventure, pay, social status and/or social contribution. Interest guides an individual toward an educational path and stimulates personal investment (time and/or money) for traveling in that path. The development of interest in the aviation career field is a marketing avenue that promotes aviation education and aviation employment.

#### Education

Education is the response to, or the connection between, interest and employment. Employment, as documented in the aviation education study, sets requirements for how the educational system supports the industry relative to specific employment needs. Both education and employment have the responsibility to spur interest in order to establish a sustainable system. The education component also assists in determining the aptitudes of persons as they choose specific careers.



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## Employment

Employment serves as both the culmination and the initiation of the cycle, and the generation/regeneration of the needs to continue and mature education opportunities. Studying the supply/demand equations compiled during this initiative reveals numerous cross ties amidst the peripheral aviation career fields. Many choices and opportunities exist for persons to branch into related career fields. Therefore, a clear and singular pipeline for some aviation career fields, especially in management, is difficult to establish. Cooperation and coordination are imperative among educators and employers so that aviation employment career paths are clear, and, in fact, doable.



Source: [www.aviationemployment.com](http://www.aviationemployment.com)

## Aviation Learning—Education and Employment Life Cycles

Comprehensive learning in any field is achieved through the combination of formal education and employment experiences. Creating a seamless education opportunity must factor in the realities of the career learning experience and document the intersections (sometimes several) of education and employment. An educational system that provides incrementally increasing skill levels to support the aviation industry best represents the education model being recommended.

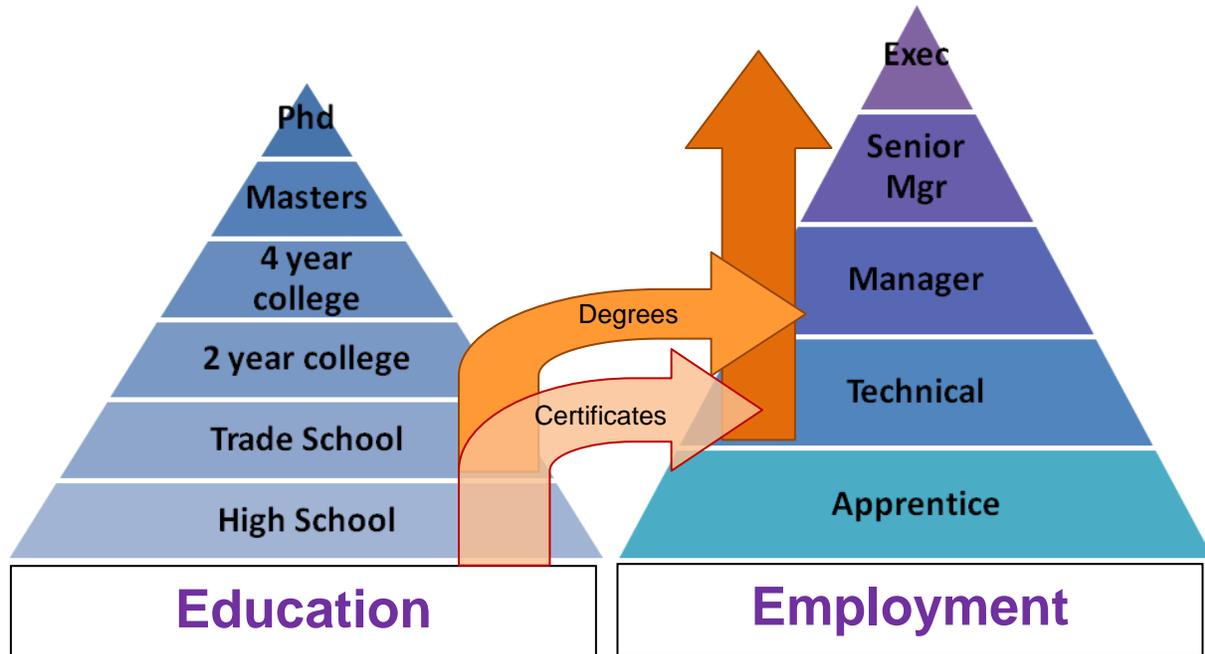
The aviation career field is not unlike others; it supports a range of skills ranging from laborers and craftsmen to technical experts to senior managers to professional engineers and scientists to business executives. A viable educational system built on learning “increments” presents a hierarchy of learning opportunities that address the explicit needs of the industry. An individual (student) can exit a focused career development program at several points and be eligible and qualified for employment at each of those levels. Likewise, the same individual could “re-enter” the educational system and continue towards graduation as time and money permit.



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## Exhibit 1: Traditional Education Employment Relationship



Source: Aviation Education Team

As shown above in Exhibit 1, in the traditional education path, a student graduates from an educational program (a trade school, two- or four-year college program) and enters the employment arena for the balance of his or her career, rising to levels of additional responsibilities and compensation dependent upon accomplishments, seniority, and/or job vacancies that may occur. Career advancement also occurs as employees move among industry employers; a move “up” often requires a person to seek employment with another company in the industry.

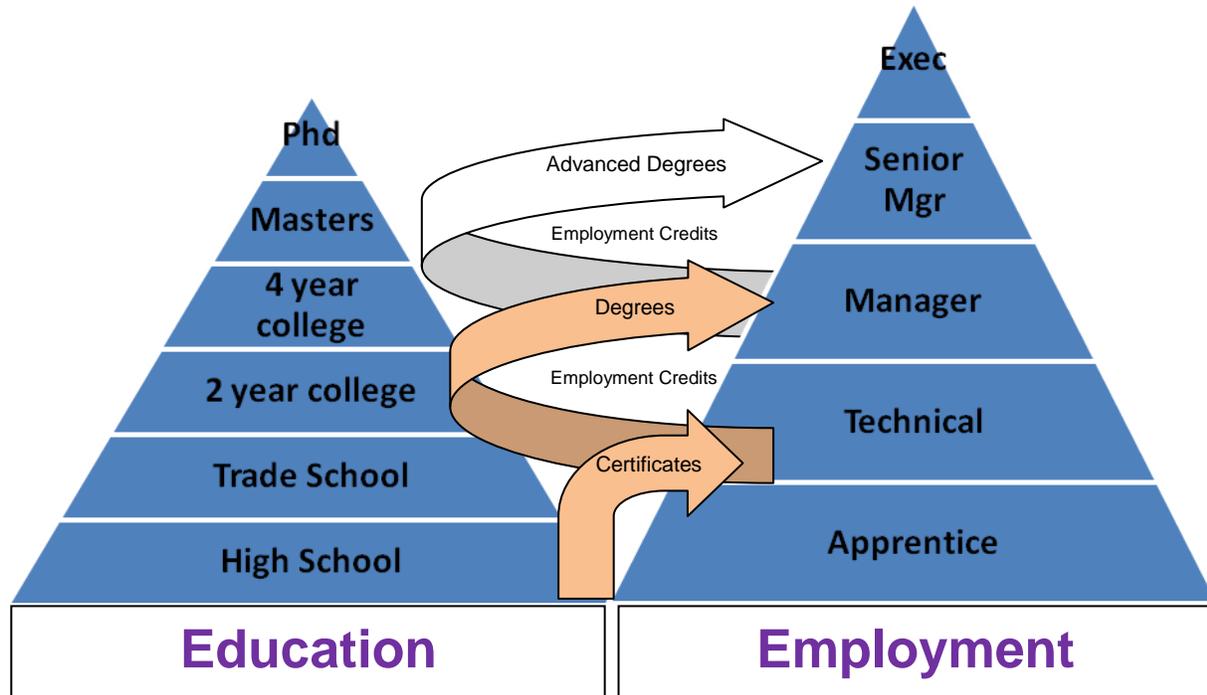
A truly integrated education and employment model builds on the opportunities for an individual to rise in his or her career path by spending time in school and/or on the job.



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## Exhibit 2: Integrated Education Employment Model



Source: Aviation Education Team

An enhanced method of viewing educational opportunities and career progressions, shown above in Exhibit 2, considers the kinds of typical career progressions that occur given the opportunities of melding education with employment learning opportunities. Persons can take several career paths ranging from entering the workplace directly out of high school to completing higher education and then entering the work force to adapting to life experiences while juggling education and employment learning opportunities to achieve career advancement. This last mode offers a potential optimization of career advancement that is extremely flexible in that it allows the education experience to fit many lifestyles and work patterns. This model also supports the opportunities to fully utilize an integration of the region's many aviation employment opportunities. The possibility of including degree credits from interim work experiences affords opportunities for both students and employees who are involved in aspects of aviation education and career development.

### D. IDENTIFYING THE STAKEHOLDERS

Coordination among all of the parties which should be involved in the creation of a successful aviation education program in the region cannot be accomplished without open communication and full cooperation. The identification of whom should be involved, in itself, is a task that will continue to evolve as education and employment opportunities develop and present themselves.



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## Educators

In recent years, institutions of higher education have become more competitive in recruiting students, and state university systems have been expanding geographically by establishing schools in most areas of the state. In North Central Texas, the University of Texas, Arlington is highly-ranked for its sciences and engineering, including aerospace, among other study courses, and the University of North Texas, Dallas is growing due, in part, to its strong technology degree programs. The University of North Texas for decades has offered exceptional business programs at its central campus in Denton and recently received full accreditation for its new Bachelor of Science degree in Aviation Logistics. A new campus in south Dallas offers upper level courses, with its first freshman class starting in the fall of 2010.

At least three area community colleges are offering aviation-related classes and training; they are Tarrant County Community College, Mountain View Community College and Paris Junior College. ISDs which are known to offer unique aviation-related courses include Dallas, Desoto, Fort Worth and Irving, and Denton ISD has a task force in place to create an aviation career track at the high school level.



Private universities in the region with aviation tracks include Embry-Riddle Aeronautical University and Southern Methodist University. A basic aviation curriculum has been developed and is being taught by a private contractor through a program of the Workforce Solutions' Aerospace Cluster.



## The Aviation Industry

The strongest, economically-viable industry in North Central Texas encompasses the approximately 1,030 aviation employers doing business in this area. There are approximately 80 aerospace product and parts manufacturing facilities; 70 scheduled air transportation operations; 12 nonscheduled air transportation services; and 115 support activities for other air transportation businesses in North Central Texas.

Aviation companies which have already distinguished themselves in their community-based efforts to strengthen the region's aviation workforce include L-3 Communications, Bell Helicopter, Lockheed Martin, Raytheon and Vought Aircraft Industries. L-3 initiated and funded a workforce development initiative lead by Paris Junior College and supported by the City of Greenville. The other companies are the leaders of the DFW Workforce Solutions' Aerospace Cluster which is serving as a funding mechanism for workforce development grants by the U.S. Department of Labor through the Texas Workforce Commission. Sponsors of a strong education and outreach program in north Fort Worth are: Arlington Chamber of Commerce, Fort Worth Chamber of Commerce, Hillwood Properties, Texas Manufacturing Assistance Center and Workforce Solutions for Tarrant County.





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## Airports and Training Facilities

The strengths of Dallas/Fort Worth International Airport (DFW) enable the region to compete internationally, and, as a major employer itself, should be engaged in the successful implementation of the aviation education program. Also playing roles should be general aviation (GA) airports which are located in close proximity to the various states schools with aviation-related programs. They are:

- Denton Municipal (DTO)
- Majors at Greenville (GVT)
- Lancaster Municipal (LNC)
- Arlington Municipal (GKY)
- Fort Worth Meacham International (FTW)
- Fort Worth Alliance (AFW)
- Dallas Executive (RBD)

Beginning with the 2009-2010 school term, Desoto ISD offers a flight training program that results in students earning flight training hours toward their private pilot's license. In weeks before fall classes began and every other Saturday during the fall term, Desoto students are joining Dallas ISD students for flight training at RBD in southern Dallas County.

Approximately 54 flight schools are operating out of the GA airports throughout the area.

## Student Organizations and Programs

Young people are being introduced to the adventures and opportunities of aviation careers through programs sponsored by industry leaders including the following:

- Federal Aviation Administration's (FAA) Aviation Career Education (ACE) Academy
- Experimental Aircraft Association's (EAA) Young Eagle Program
- CRP Future Pilots Flight School/Aviation Academy
- Civil Air Patrol youth programs
- U.S. Air Force and U.S. Navy Reserve Officers' Training Corps (ROTC) programs



## E. RECOMMENDATIONS TO FACILITATE COORDINATION

Coordination among all parties involved in the aviation education initiative must occur at multiple levels and be paced with regular and frequent intervals. In-person meetings, webinars, telephone conference calls and email are the tools for moving forward. The following recommendations should be executed immediately so that collaboration can begin and mutually agreed upon goals can be established.



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## Convener and Coordination

The convener and the coordinator of the overall aviation education initiative's implementation should be NCTCOG. As a neutral entity whose mission includes helping the multi-county area achieve a higher quality of life, NCTCOG should function as the initiative's administrator and help with implementation costs by securing grant dollars.

## Aviation Education Industry Task Force

A task force made up of industry representatives should be established to review and amplify the strategic business plan developed during the aviation education study. The task force should assume responsibilities for, but not limited to, securing baseline funding which may require authorization by the state legislature, THECB, and boards of regents and trustees of universities and colleges which are likely to become integrated into the overall aviation education program. Final recommendations about how best to solicit private sector funding on an on-going basis should be made to a new entity to be established to lead what will ultimately be a unique education delivery system. (See discussion in the strategic business plan.)



## Aviation Education Task Force of Colleges and Universities

A task force made up of representatives of area colleges and universities should be established to review and amplify the aviation education curricula that have been developed during the aviation education study. The task force should assume responsibilities for, but not limited to, endorsing the overall integrated plan, assuring the involvement of all publicly-supported schools which offer, or desire to offer, aviation related curriculum, and fully exploring the proper vehicles for THECB endorsement/ratification.

## Elected and Government Officials

Because federal and state education and workforce development funding is critical to the success of the overall aviation education program, information should be shared with government officials at the federal, state and local levels. As individual programs are developed, it will be necessary to coordinate funding efforts as well as to gain assistance in general outreach and marketing activities. These groupings of persons who should be involved in early phases of the program's implementation include:

### Elected officials

- Members of Congress from North Central Texas and public education committee chairs for both the U.S. House of Representatives and the U.S. Senate
- Members of the Texas Legislature from North Central Texas and public education committee chairs for both the Texas House of Representatives and the Texas Senate
- Members of the State Board of Education from North Central Texas
- Trustees for ISDs throughout the region



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## **Funding organizations**

Key contact within the following agencies should be established immediately.

- Texas Education Agency
- Texas Workforce Commission through its Investment Council
- U.S. Department of Labor

## **Associations**

Professional organizations in the aviation field should also play a role in creating and sustaining an integrated education program. These associations should include the following:

- Aircraft Electronics Association
- Aircraft Owners and Pilots Association
- Airport Minority Advisory Council
- National Business Aviation Association
- National Coalition for Aviation Education
- University Aviation Association



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Exhibit 3 visualizes the balance that should be achieved as collaboration and cooperation begins to create the integrated aviation education program that the region desires.

## Exhibit 3: Primary Connections



Source: Aviation Education Team

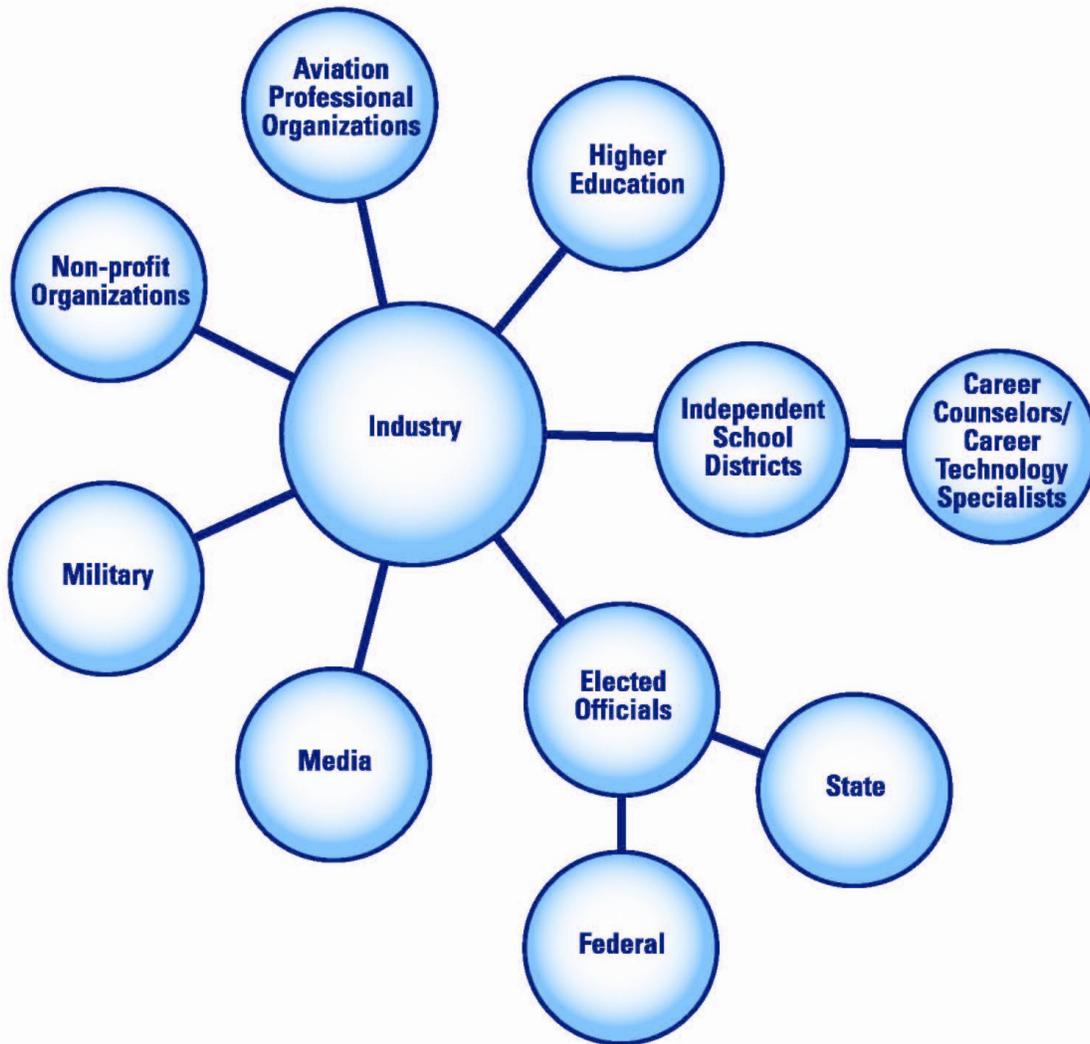


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Exhibits 4 and 5 show the interrelationships inherent in the connections that should be made among parties in the aviation industry and parties in the education component of this initiative.

## Exhibit 4: Secondary Connections: Industry



Source: Aviation Education Team



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## Exhibit 5: Secondary Connections: Education



Source: Aviation Education Team

Recommendations for establishing the connections described in this report are detailed in the strategic business plan which follows in a separate report. However, in summary, this report serves as a compilation of the entities that should be involved in cooperative and collaborative efforts as early as possible in the implementation phase of the North Texas Aviation Initiative.