



North Texas Aviation Education Initiative

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Focus Group Findings and Recommendations

August 2009



North Texas Aviation Education Initiative

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

FOCUS GROUP FINDINGS AND RECOMMENDATIONS

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FOCUS GROUP FINDINGS AND RECOMMENDATIONS

A. GLOSSARY

This section defines acronyms and abbreviations used throughout the document.

| Term | Description |
|--------------|--|
| A&M | Texas A&M University |
| A&P | Airframe & Powerplant |
| ASU | Arizona State University |
| ATC | air traffic controller |
| Embry-Riddle | Embry-Riddle Aeronautical University |
| FAA | Federal Aviation Administration |
| GED | General Education Diploma |
| L-3 IS | L-3 Communications Integrated Systems |
| MIT | Massachusetts Institute of Technology |
| MVC | Mountain View Community College |
| NCTCOG | North Central Texas Council of Governments |
| OSU | Oklahoma State University |
| PJC | Paris Junior College |
| TCC | Tarrant County College |
| TSTC | Texas State Technical College |
| UNT | University of North Texas |
| UT | University of Texas at Austin |



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B. INTRODUCTION

Despite the abundance of aviation employers and related employment opportunities in North Central Texas as well as the demonstrated need to train additional aviation professionals, the region lacks a public university with a comprehensive four-year college program for students who would like to pursue an aviation career. The North Texas Aviation Education Initiative, sponsored by the North Central Texas Council of Governments (NCTCOG) and funded by the Federal Aviation Administration (FAA), is an independent study. This research, analysis and resulting recommendations will provide a basis for the design and implementation of a comprehensive higher education program that meets the needs of both local students and employers, ensuring the long-term success of the regional aviation industry.

Part of the scope of this study included three focus groups aimed to gain insight into the needs and concerns of individuals interested in aviation employment. Efforts were made to be diverse and inclusionary. Participants varied in age, education level, ethnicity, and socioeconomic status. Flyers announcing each focus group were distributed at a variety of locations, including Tarrant County College (TCC), Northeast Campus; Mountain View Community College (MVC), University of North Texas (UNT) and area flight training schools. Participants were included on a volunteer basis and received \$25 compensation for their time. A list of general questions was developed, but the format for each focus group was informal discussion. Each session lasted up to an hour.

Focus Group One (Appendix A) was composed of high school students participating in ACE Camp, sponsored by the Organization of Black Pilots and the FAA. Participants in this group agreed that college education is a necessity and expressed frustration about the lack of aviation-related opportunities in North Central Texas. Many have identified avenues to meet their educational goals, but they must leave the area to do so. Furthermore, having been involved in the ACE Camp and aviation in high school, all participants were familiar with the variety of aviation related companies and careers.

Focus Group Two (Appendix B) was at TCC, Northeast Campus, which offers aviation education as far as Airframe & Powerplant (A&P) certification. Many of these participants are currently involved in TCC's program, but some are exploring other education or career opportunities. The reoccurring concern expressed during this discussion was the expense of education. Furthermore, many of the participants articulated an interest in aviation but were not necessarily aware of opportunities in the field beyond working as a mechanic or commercial pilot.

Focus Group Three (Appendix C) was at MVC. The participant group included people with a variety of backgrounds ranging from a high school student to an individual who was over 50 and looking for a career change. The participants in this group showed knowledge of career opportunities made available through aviation education. Two participants currently studying at Paris Junior College (PJC) noted the promising career opportunities offered by L-3 Communications Integrated Systems (L-3 IS) to graduates of the program. The general consensus of this group was that information on aviation educational and career opportunities is extremely difficult to find. Furthermore, some agreed that counseling in regards to aviation education should start in high school.



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C. FOCUS GROUP FINDINGS

The focus group findings overwhelmingly support the belief that an affordable, comprehensive aviation education program is important to sustain the industry's economic vitality and employment opportunities in North Central Texas. Specific opinions and perceptions that were apparent among all three groups include:

- Currently, aviation education opportunities in North Central Texas are limited.
- High school students are generally unaware of the career opportunities in aviation, unless a family member is employed in an aviation job.
- Most young adults are not aware of the myriad of jobs that are available in the aviation industry.
- The internet provides the portal through which individuals learn about aviation jobs and education programs.
- College career “fairs” are valuable.
- Training schools and colleges must be affordable in order for most individuals to enroll and successfully complete their degrees/certifications.
- Out-of-state tuition at existing schools that offer aviation programs is, for the most part, too expensive, even with student loans and scholarships.
- High school counselors generally are not aware of aviation jobs and schools.
- Mature adults are gravitating to aviation education programs because the field offers good pay and job security.
- Training to jobs programs like offered through PJC and L-3 IS in Greenville are important.

Based on the input from the focus group, the following recommendations are made:

- A four-year college program with a flight component should be created to provide the academic credentials that area aviation employers are seeking in the workforce.
- “Pre-aviation” learning should be initiated in high school—and even junior high school—through math, the sciences and extracurricular activities.
- High school career counselors should be well informed about education and employment opportunities in the aviation sector, given the dominance of the industry in North Central Texas.
- Employers in aviation fields should have a greater presence at college career “fairs”.
- Mentoring programs should be established to support students and young adults interested in aviation.
- A central repository of information should be established that serves both students and employers with information about the pipeline from aviation education programs to active employment in the industry. This should be web-based.
- Academic programs should be advertised to all ages as well as persons being discharged from the military.



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FOCUS GROUP FINDINGS AND RECOMMENDATIONS

APPENDIX A

Focus Group One (ACE Camp)

June 11, 2009

13 Participants

5 females; 8 males
5 Anglo
1 Hispanic
1 Asian
1 Indian
5 African American

Eleven of the participants are currently enrolled in some level of either public or charter school. Two of the students attend private schools. Two are entering college as freshmen. Nine participants are currently enrolled in high school. Grade level of those going into the 2009-10 school year ranges from 9-12. One participant graduated from high school in May 2009. Two participants are high school sophomores, six are high school juniors, and one is a high school senior. Their favorite subjects are mostly science related. Seven noted their favorite subject as science while two noted specific areas (physics and chemistry). Three participants said they enjoy math. One participant likes band, and another favors art.

The group agreed that college is necessary, and all plan to attend college upon graduation from high school. Participants noted several state schools that they are planning to attend. These included UNT, University of Texas at Austin (UT), and Texas A&M (A&M). One participant added that he did not know specifically where he wants to go in Texas; he just knows that he wants to attend a large state school. Other notable colleges, either private or out of state, that were mentioned include Massachusetts Institute of Technology (MIT), Rice University, and Embry-Riddle Aeronautical University (Embry-Riddle). One student noted that he participates in track and would go to a school that offers him an athletic scholarship. The student who talked about MIT would like to study engineering and aviation without going into the military. Some participants expressed a desire to serve in the military for a variety of reasons. One rationale was to have the military assist with education costs. Participants also seemed to view the military as a fast track to his or her career of choice. Two participants showed a strong desire to attend the U.S. Air Force Academy. The attraction to the Air Force Academy rests in the school's academic reputation as well as the opportunities it provides in the field of aviation. No one in the group considered becoming a navy pilot an option.

Everyone in the group has at least one family member currently enrolled in college at some level or holding a degree. There were also three participants whose parent or parents are involved in the military. One noted that a grandparent was an aviator in the Air Force but that his father was not. Seven of the participants have a family member or friend currently employed in the aviation industry.



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Behind pilot, the most noted career in aviation was air traffic controller (ATC). There were two participants in the group who aspire to receive training to become an ATC. Several expressed a desire to become mechanics in aviation with one participant's brother currently working as a mechanic. After the group's tour of American Airlines, group members said they are aware of operational support positions that include both dispatchers and scheduling personnel who assist the flight operations and help them to run smoothly. One participant noted the opportunity exists for a career in engineering design and aerospace engineering. They are also aware of the study of electronics, specifically components aircraft and how they all connect to contribute to a safe flight.

Participants are aware of several companies in aviation that are not a major airline. These included The Boeing Company, Eurocopter, Chance Vought, and Bell Helicopter Textron, Inc. The participants are also aware of a strong industry presence in North Central Texas, Seattle, and Montana, specifically with helicopters in the logging industry.

Seven participants are willing to consider going out of state for school. One participant talked about Embry-Riddle, where she intends to study aviation management. This is because there is currently not a program in Texas, she said. Another student is considering either going out of state or attending Texas State Technical College (TSTC); but he noted the problem with TSTC is that you exit the program with only 200 hours of flight time and, therefore, are not eligible for employment with a major airline.

Participants who attend public schools noted that they are required to take a class called Senior Transitions. This is how they receive some information about college possibilities. Many looked at specific school websites that they had previously heard about. One noted that he googled "great aviation colleges" and searched through the results. Collegeboard.com is another popular site. It allows an individual to compare schools based on different variables including price, location, and degree programs. School counselors were not knowledgeable and subsequently were not able to assist participants in aviation areas of study.

Cost is a factor for all participants when considering a path of study. Ten are currently looking for scholarship opportunities to fund their studies, either entirely or partially. The group is also looking for work study opportunities. Loans are considered as a last resort. One participant noted that he would not take any loans out to complete his education under any circumstance. If a program exists in state, then participants would rather remain in Texas.

The group likes the idea of college fairs as a way of learning about academic programs and schools. They noted that this is an efficient and effective way to research possible choices in choosing an academic career. Ten of the participants have gone to or at least heard about college fairs. Most learned about them from college counselors or college information boards in their school. Three participants had not heard of them but expressed interest in attending. College recruitment via mail was noted as effective but care should be taken not to over utilize this option. Several participants stated that it became excessive at times, and they were overwhelmed, opting to simply discard the mail as opposed to looking through it.

The group receives their news primarily through a TV source. Secondary was via a website such as MSN or Yahoo. If a topic caught their interest, then participants said they would research it further (mostly through the Internet).



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Two participants noted that their college search began with people they know, including family and friends. These individuals had a strong influence in those participants' college choices. Questions asked of participants by family and friends are where are they going and why they are attending. One participant noted that there are military recruitment offices in the Parks Mall but they are only open during the week during daytime hours. They do provide pamphlets outside all the time.



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FOCUS GROUP FINDINGS AND RECOMMENDATIONS

APPENDIX B

Focus Group Two (Tarrant County College, Northwest Campus)

June 23, 2009

11 Participants

6 females; 5 males

8 Anglo

3 African American

Michael Mallonee, NCTCOG transportation planner, began the discussion with an explanation of the goal of the North Texas Aviation Education Initiative. None of the participants had experience participating in focus groups. Linda Pavlik emphasized that there was no right or wrong answers to the questions.

Five of the participants are currently enrolled in the A&P certification program at TCC. One student in the TCC A&P program identified himself as a recipient of a General Education Diploma (GED). Another participant has a semester of college experience prior to enlisting in the military. After serving in the Air Force, he enrolled in the TCC A&P program. Another student currently enrolled has a Bachelor of Arts in Liberal Arts from Midwestern University. He is considering returning to school after receiving his A&P certification to earn a Master's of Business Administration if it can benefit his career. Two participants graduated from the TCC A&P program in May of 2009. One is planning to attend Embry-Riddle (online Fort Worth Campus) for a bachelor's degree after another semester of basic classes at TCC. The second participant already has a Bachelor of Science degree in Aeronautical Technology from Arizona State University (ASU). One participant is planning to attend Texas Tech University in the fall of 2009. One has some college experience but is currently working for a non-profit organization. She plans on returning to college in the near future. One participant has a Bachelor of Arts degree in Psychology and Spanish from the University of Michigan at Ann Arbor. Currently unemployed, she is looking for a job in the aviation industry as a flight attendant.

Three of the participants are first generation college students. One of these participants has family currently employed in the aviation industry. Another participant is not a first generation college student but her father and brothers are all involved in aviation. Two participants have family who previously served in the military, and two had served in the military. Both veterans were involved in aviation during their military service. One participant's husband works at the Dallas/Fort Worth International Airport in security. She explained that airplanes fascinate both her and her children.

Two participants have a pilot's license. One took some training through ASU and then earned a Private Pilot's License independently. Five of the participants plan to earn their licenses sometime in the future. One participant explained that she wants to learn the mechanics of planes before pursuing a pilot's license for working in corporate aviation.



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Although one participant expressed a fear of heights and said she has no interest in flying an airplane, the other ten participants continually emphasized their fascination and love of aircraft. One participant said he wants to obtain his pilot's license to have fun while other participants demonstrated a broad knowledge of the wide range of possibilities for employment associated with a pilot's license or A&P certification. One participant is aware of companies beyond major airlines that hire individuals with A&P certifications (i.e. Six Flags Over Texas Amusement Park). Another participant is interested in every aspect of the aviation industry but is not quite sure how to narrow her interest. Thus, she decided A&P certification is a good place to start. A different participant likes the aviation industry because of the wide range of possibilities. He explained that he likes the opportunity to work both as an individual and as part of a team. Helicopters originally interested another participant, but the lack of local educational opportunities for this type of aviation frustrates him.

When asked if a bachelor's degree was necessary for employment, no one responded. Two participants believe that certifications such as A&P often are the most logical and only truly necessary training for a career in the aviation industry. One participant clarified by saying a bachelor's degree is desirable only in order "to better oneself," but not a necessary qualification to meet her career goals. All 11 participants plan on earning an associate's degree, if they have not already done so. Five participants plan on earning a bachelor's degree if they have not already done so. Two participants are considering studying for a master's degree.

All of the participants said the internet is their primary news source as well as identified it as good place to look for information on colleges and universities. One participant noted that he still reads the newspaper. Four participants agreed that billboards are also good places to receive information. Three of the students noted the internet is the primary source of information while researching educational opportunities. Two students recognized their high school college counselors' roles in the college research and application process. One student expressed frustration that she did not receive any guidance or help in the college research process. Her sister attends TCC so she looked through the course manual and found that the A&P program interested her. Two participants found TCC through the FAA website.

Education costs are paramount to the participants. Two participants noted that they are local residents and that the price and proximity of TCC were deciding factors in their decisions. The participant who plans to go to Embry-Riddle heard about the program through TCC's department chair. She also noted that Embry-Riddle awards 30 hours of credit for an A&P certificate. Another participant expressed frustration that all other programs are too expensive and that out of state tuition is simply unreasonable.

One participant went to Bell Helicopter and received a recommendation for the T & P program at TCC from an on-sight mechanic. He also noted that TCC was an institution where he could use his GI benefits. Another participant, who was not enrolled in an aviation-related program, described her college decision process. She applied to seven universities with the help of her high school college counselor and TRIO, a club in the Hurst-Euless-Bedford public school district that helps high school students research colleges, universities, financial aid, and scholarship opportunities.



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Although many participants noted the importance of an institution's webpage in the decision making process, many did not know how to go about looking for institutions involved in the aeronautical/aviation industry.

When asked for further comments or suggestions regarding aviation education, one participant suggested the need for career guidance and aid in job placement.



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APPENDIX C

Focus Group Three (Mountain View Community College)

July 13, 2009

6 Participants (13 were confirmed)

4 males; 2 females

5 Anglo

1 African American

Linda Pavlik began the discussion with a short explanation of the purpose of the focus group as well as the overall project goals. None of the participants have participated in prior focus groups, all though one individual formerly worked as a survey administrator in a mall.

One participant is a senior in high school. His brother, also a participant, is a junior at OSU. Another participant completed one semester of college but had recently left the “phone business” after working there for 30+ years. He currently is enrolled at the Aviation Electronics School at the Greenville campus of PJS. The fourth participant stated that he is classified as a junior, but thinks he is approximately four hours short of a bachelor’s degree. He originally majored in biology but is currently enrolled in the Aviation Electronics Program at PJS. A fifth participant is a senior at the UNT studying aviation logistics. She explained that it is a new, four-year degree program. Aviation has been her passion since she was 14-years-old. She began UNT as a general business major and switched her major when UNT began offering an aviation degree. The sixth participant is a recent graduate of Texas Wesleyan University. Her husband currently serves in the military as a Marine aviation mechanic stationed at the Naval Air Station Joint Reserve Base Fort Worth. He will be out of the military in October and plans to pursue a college education (possibly in aviation at the Embry-Riddle campus on base though it is expensive).

Three out of the six participants are first generation college students. Although none have ever served in the military, three have family (parents, grandparents or siblings) who had. One recalled that he tried to enlist in the Air Force, but failed an examination. The father of the two brothers is a commercial pilot at Southwest Airlines, and another participant has a brother-in-law who is studying for his pilot’s license at Texas A&M.

Several of the participants expressed a longtime interest in aircraft and aviation. The current high school student and his brother both logged flight hours at MVC during their respective high school careers. The older participant said he used to participate in drag races, and flying planes is the only activity that still matches that adrenaline rush. Another individual stated that aviation started to interest her at a young age after a childhood visit to a flight museum with her father. Her high school goal was to become a commercial pilot, but she explained that she watched the market “tank” after September 11th and then decided to fly corporate airliners. She went on to explain that this sort of career allows more opportunities (than commercial pilots have) to fly internationally and also to fly smaller aircraft. One of the participants from PJC said that he had



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always been mechanically inclined and that the job opportunities that L-3 IS provides for the Greenville community are too good to pass up.

All the participants had very different methods for finding out about educational opportunities. The UNT student attended TCC, Northeast Campus to earn her associates degree. After finishing there, she looked at a variety of other schools. She agreed with the other participants that OSU is a great educational opportunity with a good flight school. On the other hand, UNT is close to home and a great university. She also noted that it is close to a flight school and is considerably more affordable to attend than OSU is for an out-of-state-student. The OSU student chose to attend the university because he knew other students there and also found out from his father that it has a flight school where he could work as an instructor. The high school participant noted that the college counselors at his school (Jesuit of Dallas) largely are unaware of aviation programs. Instead of relying on them for information about colleges and universities, he is depending more on online research. He identified the Apply Texas (www.applytexas.org) website as extremely helpful because users can enter any amount of search parameters and the website will pull up a list of schools that meet the criteria. At this point, the OSU student noted that he also found out about OSU through a college fair that his high school hosted. He said he did not identify OSU as his university of choice until late in his senior year.

The high school student said that he currently is trying to find an aviation program at a smaller school or an institution that is close to a location where he can work as a flight instructor. He said that OSU does not interest him because the university is too large. One PJC student recalled that he found out about the college's program through an ad in the newspaper. He said that he was unemployed at the time and saw an ad seeking applicants for a scholarship. At that time, he was "looking for something to do" so he applied for the scholarship and the college accepted him. The other PJC student said he heard about the college's program because he was still on the "previous student" email list. He received an email about the program that was starting up, and he was attracted to it because at the end of an eight-week course, L-3 IS provides job placement.

Participants stressed that cost is a very important factor in their educational decisions. The participant from UNT chose not to go to OSU because it is very expensive and it does not offer a four-year degree in aviation. The OSU student received several merit-based scholarships through the university. Both students from PJC said that the college "pays" them to go to school. This combined with the fact that they believe they have job security with L-3 IS after their training made PJC extremely attractive. They both further explained that any other decisions about their education or career path after finishing the PJC program would depend on their acceptance into the L-3 IS Company. One also noted that he thinks he is too old to complete a four-year degree. He said that he will retire so soon that this education (along with the factor of cost) would not return enough benefit to make it worth his efforts. The participant whose husband is considering pursuing a degree after his military service said that they are planning to use his GI bill to fund his education.

Five out of the six participants expressed a willingness to relocate based on aviation career opportunities. Two of these five participants said they would like to stay in Texas. The other three said they would move almost anywhere, as long as the opportunity and timing is right. One participant noted that his dream job would be working as a commercial pilot for Southwest Airlines. Another noted that since he has three children, his ideal job would be to earn his A&P



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license and to work on engines. Another participant expressed awareness that DFW is, in fact, a huge aviation hub. Therefore, she is fairly confident she will eventually enjoy ample job opportunities here. She believes that a master's degree is not necessary for a career in aviation. Instead, she is more interested in flying immediately.

Four out of the six participants said they use the internet as a source for current events or information research. Three participants said they read the newspaper, magazines, billboards, and listen to the radio. One participant said he does not keep up with current events at all, but does use the internet for some research. At this point, one participant remembered that he used Naviance (www.naviance.com) to research colleges, which shows you in depth descriptions of most colleges and universities. Several participants noted that they also monitor aviation websites for news. A few said they watch television for mainstream and financial news.

Most of the participants agreed that word-of-mouth opinions way heavily in their decision making. Two of the participants used the word "networking." They also noted that word-of-mouth often necessitates some further research into matters, which would then point them to the internet for more information.



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APPENDIX D

List of Referenced Websites

Apply Texas (www.applytexas.org)

College Board (www.collegeboard.com)

Naviance (www.naviance.com)