

Evaluation Report: Missions Aviation

Program History

In March of 1992, Air*Ways and Lancaster Bible College met concerning a possible cooperative venture to begin a missions aviation program. After considerable work by an ad hoc committee and several contacts with other institutions offering aviation maintenance programs, the College developed a curriculum for a missions aviation program within the Missions Department. The program stipulated that students take courses at Air*Ways toward achieving FAA licensing as a private pilot, instrument and commercial pilot, and flight instructor. Further, the College reached a cooperative agreement with the Upper Bucks Institute of Aeronautics whereby aviation students could achieve FAA airframe and power plant certification. The faculty approved the curriculum at their April 29, 1993, meeting and the first students enrolled in the program in September of 1993. To date, no student has completed the program nor received instruction at Upper Bucks Institute of Aeronautics.

Committee Directive

On January 25, 1999, an ad hoc committee convened for the purpose of offering recommendations to the Education Curriculum Committee and the Administration as to the future of the Missions Aviation Program. The committee, which included faculty members, student representatives, and outside consultants, submitted an initial report on July 7, 1999. The Administration discussed the findings therein, and requested additional research.

On September 9, 1999, Dr. Peter Teague, President of LBC, requested the reconvening of the Missions Aviation Evaluation Committee to further develop two of the Committee's previous recommendations. The recommendations needing further research were:

- 1. We recommend a complete evaluation of the Missions Aviation curriculum. Several areas of concern include the sequence of training, required components of the program, and the effectiveness of the program in preparing pilots for missionary aviation.*
- 2. We recommend a complete evaluation of the Air*Ways and Upper Bucks facilities to determine if they have the means to support a viable Missions Aviation program, (i.e. types of aircraft used on the missions field, training that simulates missionary aviation techniques, etc.).*

To research these recommendations, the committee decided to conduct site visits to Air*Ways and Upper Bucks Institute of Aeronautics, as well as Moody Aviation, Piedmont Baptist College, and JAARS. These visits proved instrumental in providing data for in-depth research. The following summarizes the rationale for conducting site visits.

Air*Ways: This is the site of the flight portion of the Missions Aviation program. It is located at the Lancaster Airport.

Upper Bucks Institute of Aeronautics: This is the site of the maintenance portion of the Missions Aviation program. It is located at the Quakertown Airport.

Moody Aviation: Moody is considered the premier missionary aviation training school by many mission boards. Located in the mountains of Tennessee, this facility provides training in flight, avionics, and aircraft maintenance.

Piedmont Baptist College: Located in North Carolina, Piedmont's program offered a different perspective on missions aviation training. The school is smaller than Moody, with somewhat rougher facilities.

JAARS: A service branch of Wycliffe Bible Translators located in North Carolina, JAARS provided a viewpoint from prospective employers of missions aviation students.

Findings

Enrollment

The following numbers are from new student data. Excluded from these numbers are five students who changed their program of study to Missions Aviation after enrolling in LBC.

Semester	Applied	Enrolled	
Fall 1993	0	0	
Spring 1994	1	0	
TOTAL	1	0	0% enrolled
Fall 1994	13	0	
Spring 1995	2	2	
TOTAL	15	2	13% enrolled
Fall 1995	9	4	
Spring 1996	2	1	
TOTAL	11	5	45% enrolled
Fall 1996	0	0	
Spring 1997	2	2	
TOTAL	2	2	100% enrolled
Fall 1997	5	2	
Spring 1998	2	1	
TOTAL	7	3	43% enrolled
Fall 1998	12	0	
Spring 1999	2	1	
TOTAL	14	1	7% enrolled
Fall 1999	13	3	
Spring 2000	0	0	
TOTAL	13	3	23% enrolled

Total Number of Students involved in Missions Aviation 1993 - Present:	21
Total number of students currently involved in the Missions Aviation Program:	5
Total number of students who graduated from LBC with some aviation training:	5
Total number of student who have graduated from the Missions Aviation Program:	0

The application interest since the inception of program is 63. This indicates that there is a valid interest in the program. The poor conversion (25.6%) of applicants to enrolled students indicates a possible internal problem with the program.

Missions Aviation Curriculum at Lancaster Bible College

1. There is a lack regarding *primacy of learning*. This is defined as an integrated, systematic, and purpose-driven mentality that students are missionary pilots, not just pilots. The JAARS personnel communicated that they are not interested in pilots who are meeting a checklist of minimum criteria; rather, they are seeking pilots who have learned from the first day of flying that they are missionary pilots. Moody and Piedmont both establish this primacy of learning as a priority in their training.
2. The sequence of training is neither efficient nor practical. The current curriculum places the flight training within the first year of the student's experience. After a student receives their private pilots license in the freshman year, they break for an eighteen-month period to conduct the maintenance portion of the program. In those eighteen months, students spend no time in flight. (After students complete the eighteen month training, they return to LBC to complete their training at LBC and Air*Ways). Moody, Piedmont, and JAARS reacted negatively to this sequencing. Learning how to fly is not a one-time learned skill-it involves progressive, sequential, and multiple experiences.

The two schools we visited sequenced their training differently but effectively. Moody's was most strict, requiring all the Bible training at the Chicago campus first, followed by a two or three year program in Tennessee. Once in Tennessee, Moody students complete all maintenance training first, followed by the flight training program. Piedmont integrates flight, Bible, and maintenance into their entire program. Students spend three days on the main campus taking non-aviation courses, and two days at the aviation school. (This aviation program consists of ten courses, covering all the requirements of the program).

3. The requirements of the LBC curriculum are built around FAA minimum requirements, which are not necessarily the requirements that best prepare missionary pilots. The curriculum does not address many missions aviation issues. For example:
 - the types of aircraft used at Air*Ways are not the type typically used on the field. (i.e. planes with tail wheel landing gear and high performance planes). Air*Ways planes only meet FAA minimum requirements, not necessarily the requirements found on the field;
 - flight physics and weight/balance theory are not thoroughly covered for mission field flight;
 - Specific missionary aviation maneuvers are not practiced;
 - Students are not always trained to think beyond the standard workshop.

Meeting FAA requirements is only the beginning. Both Moody and Piedmont surpass the requirements. Many missions boards look for pilots and mechanics that also far surpass FAA requirements.

4. There is no gate-keeping mechanism in place to ensure the students in the program are capable of completing the program. Aviation in general is a very technical field requiring a high aptitude of technical abilities. This ability is amplified on the mission field as the facilities available for technicians and pilots overseas are often substandard to those typically used in the U.S.

Moody Aviation filters their students by way of a rather complex process. Students indicating a desire to enroll in the aviation program must first attend two years of Bible, missions, and general education training in Chicago. During the first year, personnel from the aviation school in Tennessee visit the Chicago students to administer a technology aptitude test and to conduct personal interviews. Students who fail this test, or are deemed not acceptable through the interview, are not permitted to enroll in the aviation program. Student who pass the aptitude test and are approved through the interview attend the aviation camp conducted the summer after their first year. During this two week camp, instructors conduct further evaluations in the areas of flight, maintenance, and Christian walk. At the conclusion of the camp, 20 students are invited to enroll in the aviation program upon completion of their second year of Bible training in Chicago. Each year thereafter, the students must sign a statement of intent, reiterating their desire to use their abilities on the mission field. In addition, the aviation faculty meet on a yearly basis to evaluate each student. If students do not pass this evaluation, they are dismissed. Clearly, Moody seeks a pure finished product. Their mission drives their enrollment.

Piedmont does not filter their students to the extent of Moody, nor do they enroll anyone who just wants to fly. The sequencing of their curriculum automatically weeds out those who are not as serious about their intent. Students do not have the choice of training for flight only; they must complete all ten courses of the missions aviation program.

5. The Missions Aviation curriculum consists of 178 credits, the most of any program at LBC. Typical programs consist of 120-128 credits; Elementary Education is second after Aviation with 161 credits.
6. The program is segmented, lacking integration and communication from the various external inputs. The piecemeal approach to the various aspects of training segments the program into a non-unified entity. Air*Ways conducts the flight training but does not understand missionary aviation. Upper Bucks Institute of Aeronautics provides maintenance training, but does not tie it into the student's flight training, nor can they simulate experiences on the mission field. LBC does not know what Air*Ways and Upper Bucks Institute of Aeronautics do, let alone how that fits into missionary aviation. Essentially, all three function without knowing how the entire program fits together. (Students site frustration in billing and not knowing how the program works. This frustration is understood as they often self-advise their programs).

Air*Ways and Upper Bucks Institute of Aeronautics

1. Both institutions provide a unique service but neither understands how their training fits into the larger picture of producing a missionary pilot. This speaks to a prior finding regarding the lack of communication between these facilities and LBC. This is not to say, however, that these institutions cannot be used. Both provide adequate facilities needed to train a missionary pilot. What is lacking is a common thread between LBC, Air*Ways, and Upper Bucks.
2. Upper Bucks Institute of Aeronautics is located approximately two hours from Lancaster. This poses a problem for potential students should they decide to commute from LBC. Students would have to commute four hours a day for eighteen months. Having to relocate to Bucks County halfway through their program also creates an inconvenience.

This is a significant reason why no one from LBC has started, let alone completed the training at Upper Bucks.

3. Flight training is a unique type of education. Air*Ways provides instruction through certified flight instructors. Unlike traditional education, these instructors are mostly brand new pilots trying to earn flight hours toward their careers. Typically, experienced pilots do not spend their time instructing since the remuneration is rather limited. This means that LBC students are subject to the possibility of sitting under pilot-teachers with limited aviation experience and little and/or no understanding of the **missions** aviation experience. To date, LBC has been fortunate to have experienced instructors work with our students. However, the issue is that LBC does not control the quality of instruction at Air*Ways. What we have now could easily change tomorrow.
4. No written articulation agreements could be found between LBC and Air*Ways and Upper Bucks. Such documents are crucial in communicating the expectations of all entities involved. The legal implications of not having the documents are uncertain.

Advertising/Recruitment Tools

1. Little has been done to promote and recruit for the Missions Aviation program.
 - In 1993, an initial brochure was printed, detailing the program. It was included with the other material used by the Admissions Office in recruiting students.
 - On June 2, 1994, an open house was held at the Lancaster Airways facility for prospective Missions Aviation students. 560 letters were mailed to local churches inviting students to attend the open house. About 15 students attended the event.
 - A full color brochure was printed in 1995 and accompanied the other literature used by the Admissions Office in recruiting students. The new program was promoted in presentations and college fairs.
 - On March 31, 1996, a tour of Airways was scheduled as part of an Admissions Student Day for interested students. About 12 students took the tour.
 - In 1998, new full-color program brochures were printed. In these brochures, Missions Aviation was listed as a program within the Missions Department brochure.
2. Missions Aviation is such a distinctive program that it often aids in general recruitment to LBC. While no hard data can be collected to prove this, one often hears prospective students mentioning that LBC has an aviation program.

General Findings

1. Based on a 1990 Task Force Study conducted by Moody Bible Institute and through the expertise of the outside consultants, it was determined that mission organizations are expressing a great need for missionary pilots and maintenance technicians.
2. The Missions Aviation program contributes value and benefit to the LBC and Christian communities through the unique nature of the curriculum. LBC is among a limited number of Bible colleges offering a program in missions aviation.

Recommendations

We recommend the discontinuation of the current Missions Aviation program as presented in the 1997-2000 LBC catalog, allowing current students enrolled in the program the opportunity to complete their program. Due to the reasons cited throughout this report, the Missions Aviation program fails to achieve its stated purpose: “The Missions Aviation program has been developed for those wishing to move directly into final stages of preparation for missionary aviation ministries” (LBC Catalog, Page 81).

If LBC decides to continue offering the Missions Aviation program in an altered form, we recommend the following for consideration:

1. Provide leadership and direction for the Missions Aviation program. The trip to Moody and Piedmont crystallized that fact that there is no one right way to run a Missions Aviation program. LBC’s program does not have to be a carbon copy of either Moody or Piedmont, but it does need direction with short and long-term goals. Moody did not become what it is today overnight. It started in a shack at an airport and progressed to a 2.3 million dollar a year operation. What Moody did have fifty years ago was someone who provided vision for the program.
2. Begin investing financially in the program. Aviation is very expensive. It is difficult to figure a minimum number of students for a viable program since it is so expensive. Investments should be in the area of:
 - Personnel - (see recommendation #3)
 - Student scholarships – to offset the cost of aviation
 - Aircraft(s) - for instructional and college use. How can we be dedicated to a program if we do not actually utilize what the program produces?
 - Recruitment
 - Instruction
3. Hire a fully qualified and experienced missionary pilot. Such an individual would provide leadership, instruction, and direction to the Missions Aviation program. It became obvious through the process that appointing *any* individual to head the program is not sufficient. That is precisely what is missing from the program. This individual could become the common thread linking LBC, Airways, and Upper Bucks, thus allowing us to use the institutions with which we have an established relationship. Most likely, they would welcome such interaction. For example, Upper Bucks Institute of Aeronautics expressed a willingness to work with a liaison from LBC and allow that person to use their facilities to instruct students after hours (currently their program ends at 3:00 p.m.) in the areas related to missionary aviation. Only someone who has been on the field as a missionary pilot could take advantage of such an offer.
4. Restructure the sequence of the program allowing for a realistic and effective outcome. Suggestions include requiring the maintenance training before the flight training, developing a program at Upper Bucks whereby LBC students feel connected to the main campus, and integrating **missions** aviation at all levels of instruction.

5. Consider offering an associates degree in Bible along with the flight training instead of a bachelors degree. Missions boards typically require 30 credits of Bible. Lessening the credits allows for a more realistic program length and cost.
6. Establish written articulation agreements with Air*Ways and Upper Bucks, citing specific expectations and responsibilities each entity has in the program.
7. Require guided field experience with missionary pilots throughout the student's educational experience. This could easily be accomplished through current Christian Service requirements.
8. Join the International Association of Missionary Aviation (IAMA), the sole cross-organizational group for missionary aviators. Its purpose statement reads, "A non-profit organization of missions, flight schools, and individuals who are using aircraft to facilitate the cross-cultural spread of the Gospel of Jesus Christ, and those who use aviation as their objective to aid the needy in Christ's name" (IAMA pamphlet).
9. Communicate with mission aviation boards to monitor the program's relevancy in preparing missionary aviators. This will allow LBC to maintain relevancy in the program to real-life missionary aviation.

While visiting JAARS in North Carolina, the director summed up LBC's missions aviation predicament when he stated, "The country is littered with attempted and failed missions aviation programs." The question at hand is whether LBC will add to the litter or will initiate a viable Missions Aviation program.

Respectfully Submitted,

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