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An Industry Assessment: Are Aircraft Dispatchers in a Holding Pattern?

Georgiann Sailer

AN INDUSTRY ASSESSMENT:
ARE AIRCRAFT DISPATCHERS IN A HOLDING PATTERN?

by

Georgiann M. Sailer
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This thesis, submitted by Georgiann M. Sailer in partial fulfillment of the requirements for the Degree of Master of Science from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This thesis meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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DEDICATION

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ABSTRACT

This industry assessment provided an in-depth view of the aircraft dispatcher industry. An assessment of the industry was needed to project the future of the aircraft dispatcher profession, as well as indicate the necessity of additional aircraft dispatcher training facilities in the United States. The position of an aircraft dispatcher originated in 1938 as a result of numerous aircraft accidents. It was believed that the repeated accidents occurred due to the lack of ground assistance to the pilot, therefore a new Airman Certificate was created, the aircraft dispatcher certificate. Some of the duties of an aircraft dispatcher include aircraft navigation, emergency procedures, weight and balance calculations, flight planning, and meteorological knowledge. This position is regulated by the Code of Federal Regulations that is administered by the Federal Aviation Administration. This paper examined programs that were offered to train aircraft dispatchers. In addition, the study identified any current or projected shortages of aircraft dispatchers in the airline industry, and addressed those needs accordingly. The research utilized a quantitative and qualitative descriptive design using information obtained through the survey research methodology.

The findings revealed that the majority of the aircraft dispatcher programs are similar in nature with most offering a standardized program of study leading to certification. The programs varied in types of certification, length of study, graduate services, and tuition costs. The air carriers surveyed reported a slight

shortage in aircraft dispatchers, yet also stated that current workload levels were appropriate for the given staffing levels. Both small and large air carriers projected a future need for aircraft dispatchers with large carriers forecasting a significantly higher need over the next one year period. The air carriers reported that an explanation for this future need of aircraft dispatchers is attributed to anticipated growth of the company. Additionally, respondent air carriers indicated that a newly formed collegiate aircraft dispatcher program would be of a moderate to high benefit.

Recommendations from this study include aircraft dispatcher schools ensuring uniformity amongst the programs for the purposes of competitive parity and cautious implementation of a collegiate aviation program. Possible future research activities may consist of a repeated study every five years in order to accommodate the changing industry conditions, trend information being established using longitudinal or time-series design, and a feasibility study being initiated specific to a college. Scientific explorations, such as this study, serve to further reveal the nature of the aircraft dispatcher profession.

CHAPTER I

INTRODUCTION

An airline has many different personnel positions that are key to its success. Such positions include: pilots, mechanics, managers, aircraft dispatchers, and other professionals. Recently there has been a perceived shortage of aircraft dispatchers.

Background Information

An aircraft dispatcher is a vital link in the safe operation of an aircraft that is in service for a domestic air carrier. The responsibility of the aircraft dispatcher is to "accept the responsibility of planning and controlling all phases of flight operations and work directly with the pilot and flight crew" (Michigan Institute of Aeronautics (MIOA), n.d., ¶ 1). The position consists of evaluating meteorological information to identify potential hazards during flight, choosing the safest, most economical route of flight, preparing the flight plan that contains the maximum takeoff and landing weights, field conditions, and any other pertinent information for the flight (Airline Dispatcher Federation, 2004). The duties also include computing the amount of fuel required for the aircraft to complete the flight, having knowledge of the aircraft maintenance requirements and limitations, and computing the route of flight (Airline Dispatcher Federation, 2004). Following this thorough process, the aircraft dispatcher is responsible for determining if the flight can be completed based on the above information and, if

so, they will sign the dispatch release authorizing the flight to depart (Airline Dispatcher Federation, 2004). "Although they do not have the visibility or prestige of an airline captain, aircraft dispatchers are, legally, just as responsible for planning a successful airline flight as the captain" (Wall, 2003, ¶ 1). An aircraft dispatcher is certificated by the Federal Aviation Administration (FAA) and shares the responsibility of the safety and operational control of a flight with the captain (Wall, 2003). According to Title 14 CFR Part 121.533 and Title 14 CFR Part 121.535 (Code of Federal Regulations (CFR) 2004), "The pilot in command and the aircraft dispatcher are jointly responsible for the preflight planning, delay, and dispatch release of a flight in compliance with this chapter and operations specifications." In essence, an aircraft dispatcher is the "pilot on the ground" and is integral to the safe operation of a flight.

Statement of the Problem

The aircraft dispatcher position is neither an understood nor a well-known profession. It is also unclear how people can be trained for this profession and if there are any facilities available for training purposes. Another unknown factor is whether there really is a current shortage of aircraft dispatchers, or one projected in the future.

Purpose of the Study

The purpose of this study is to determine 1) what type of training is available to become a certified aircraft dispatcher; 2) if a shortage of aircraft dispatchers currently exists; 3) what are the future demand needs of the aircraft dispatcher profession.

Significance of the Study

This study is significant because the aircraft dispatcher profession is not well-known and it is important to create awareness regarding the occupation, including assessing if a shortage currently exists or if a shortage is projected in the future. Additionally, the study will investigate how and where aircraft dispatchers are currently being trained in efforts to help schools, such as the John D. Odegard School of Aerospace Sciences at the University of North Dakota, determine if a program should be offered to help fill the need.

Research Questions

1) What programs are currently offered to train aircraft dispatchers in the United States and how do the various programs differ?
2) Does a shortage of aircraft dispatchers exist in the United States?
3) What are the future demand needs of the aircraft dispatcher profession in the United States in the years to come?

Conceptual Framework

The concept of this study is to conduct a needs assessment of aircraft dispatchers in the United States. According to the Community How to Guide (2001), a comprehensive needs assessment includes the following:

- Collection and analysis of data
- Survey information
- Focus or discussion groups
- A public policy review
- A review of current programs, activities and resources

Definitions

Title 14 Code of Federal Regulations Part 121 (Title 14 CFR Part 121): Title 14 is the Aeronautics and Space section of the Code of Federal Regulations. Part 121 comprises the rules governing the operating requirements for domestic, flag and supplemental operations (CFR, 2004).

Title 14 Code of Federal Regulations Part 65 (Title 14 CFR Part 65): Title 14 is the Aeronautics and Space section of the Code of Federal Regulations. Part 65 is the part that prescribes the requirements for issuing the certificates and associated ratings for airmen other than flight crew members. This section also includes general operating rules for the position of the Aircraft Dispatcher (CFR, 2004).

Aircraft dispatcher: Ground personnel that share the responsibility for the safe and economic operation of an air carrier flight with the pilot. Their areas of concentration on a typical shift include: aircraft navigation, aircraft specifics, emergency procedures, weight and balance calculations, communicating with the pilot and air traffic control, meteorology, and flight planning (MIOA, n.d.).

Airman: "Any individual who engages, as the person in command or as pilot, mechanic, or member of the crew, in the navigation of aircraft while under way; and (except to the extent the Administrator may otherwise provide with respect to individuals employed outside the United States) any individual who is directly in charge of the inspection, maintenance, overhauling, or repair of aircraft, aircraft engines, propellers, or appliances; any individual who serves in the capacity of aircraft dispatcher of air-traffic controller" (Kane, 2003, page 718).

Domestic Operations (Domestic air carrier): "Flight stages within the 50 States of the United States and the District of Columbia including operations between States separated by foreign territory or major expanses of international waters" (Kane, 2003, page 723).

Federal Aviation Administration (FAA): "Formerly the Federal Aviation Agency, became part of the Department of Transportation in 1967 as a result of the Department of Transportation Act. The FAA is charged with: regulating air commerce to promote its safety and development; achieving the efficient use of the navigable airspace of the United States; promoting, encouraging and developing civil aviation; developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and promoting the development of a national system of airports," (Kane, 2003, page 724).

Flag Operations (Foreign-flag air carrier): "An air carrier other than a U.S. flag air carrier in international air transportation," (Kane, 2003, page 725).

John D. Odegard School of Aerospace Sciences (JDOSAS): The aerospace college located on the University of North Dakota campus in Grand Forks, ND.

Notice to Airmen (NOTAM): A notice containing information pertaining to any changes that occur within the National Airspace System that pilots need to receive in a timely fashion. These changes can be of any nature ranging from conditions hazardous to flight, to general information (AIM, 2005).

Operational Control: When in flight, operational control is the exercise of authority over initiating, conducting, or terminating a flight (CFR, 2004).

Pilot in Command (PIC): "The Person who has final authority and responsibility for the operation and safety of the flight; has been designated as pilot in command before or during the flight; and holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight" (CFR, 2004, Title 14 CFR Part 1.1).

Supplemental air carrier: "A class of air carriers that hold certificates authorizing them to perform passenger and cargo charter services which supplement the scheduled service of the certificated route air carriers" (Kane, 2003, page 731).

Assumptions

The research will be conducted with the following assumptions:

1) The aircraft dispatcher is an integral part of the airline management team.

2) The individuals that are interviewed will cite valid information regarding the profession, as well as the perceived shortage.

Limitations

The research will be conducted with the following limitations:

1) The analysis of the aircraft dispatcher position will only include airlines in the United States and a global study will be considered out of the scope of this research.

2) The airline population studied will only include the airlines that are Title 14 CFR Part 121 Domestic and Flag air carriers. Title 14 CFR Part 121 Supplemental air carriers have been omitted from this study.

3) The study will only include FAA approved Title 14 CFR Part 65 aircraft dispatcher schools.

Literature Review Introduction

Aircraft dispatchers are key employees for the safe and efficient daily operations of an airline. Although the position is not well-known, aircraft dispatchers have the important duty of sharing the responsibility of a flight with the PIC. In order to complete an industry analysis, it is important to review the duties of the aircraft dispatcher, the historical past of the profession, regulations governing the industry, hiring requirements, and explore the related industry of train dispatchers.

Responsibility for Operational Control

It is important to note that Title 14 CFR Part 121.533 (b), Responsibility for operational control: Domestic Operations and Title 14 CFR Part 121.535 (b), Responsibility for operational control: Flag Operations both state that "The pilot in command and the aircraft dispatcher are jointly responsible for the preflight planning, delay, and dispatch release of a flight in compliance with this chapter and operations specifications" (CFR, 2004). This differs from Title 14 CFR Part 121.537 (b), Responsibility for operational control: Supplemental Operations, which pronounces that, "The pilot in command and the director of operations are jointly responsible for the initiation, continuation, diversion, and termination of a flight in compliance with this chapter and the operations specifications. The director of operations may delegate the functions for the initiation, continuation, diversion, and termination of a flight but he may not delegate the responsibility

for those functions" (CFR, 2004). For the Supplemental Operations, there is not an aircraft dispatcher that is required to be on staff, and any ground support there is would be considered flight following personnel who do not share operational control with the PIC. According to Jansen (2005), when evaluating the aircraft dispatcher profession, it is important to only study Title 14 CFR Part 121 Domestic and Flag air carriers as they are required to have true aircraft dispatchers who are jointly responsible for the flight with the PIC. Jansen (2005), continued by explaining that a Supplemental air carrier may call their personnel aircraft dispatchers, but they are not adhering to the same regulations, which is a common misconception in the industry.

Description of the Aircraft Dispatcher Profession

The position of the aircraft dispatcher can be described as the safety net to the operational control of a commercial airline flight (Cass, 2005). These individuals provide an essential link in the safe operation of an aircraft that is in service for a domestic air carrier. Their function is vital due to the fact that an aircraft dispatcher not only provides a higher level of safety, but also an important role in operating the flight as economically and as efficiently as possible (Cass, 2005).

The duties of an aircraft dispatcher are very extensive, as they share the responsibility for the safety and operational control of the aircraft with the PIC (Airline Dispatchers Federation, 2004). In order for a flight to be released, there has to be complete agreement between the PIC and the aircraft dispatcher (Cass, 2005). Essentially, the PIC and the aircraft dispatcher have a contract regarding the operation of that flight. This is regulated by Title 14 CFR Part 121.533 (b)

and Title 14 CFR Part 121.535 (b) (CFR, 2004), “the pilot in command and the aircraft dispatcher are jointly responsible for the preflight planning, delay, and dispatch release of a flight in compliance with this chapter and operations specifications.”

Also, under Title 14 CFR Part 121.601 (a) (CFR, 2004), “the aircraft dispatcher shall provide the pilot in command all available current reports or information on airport conditions and irregularities of navigation facilities that may affect the safety of the flight.” The PIC and the aircraft dispatcher must work together to ensure that the PIC does not receive incorrect or incomplete information, which could compromise the safety of the flight (Cass, 2005).

Although there is a great deal of joint coordination between the PIC and aircraft dispatcher, the final determination for the release of a flight is made by the aircraft dispatcher. They prepare and sign the dispatch release which is the legal document providing authorization for the flight to depart (Airline Dispatchers Federation, 2004). According to Title 14 CFR Part 121.593 (CFR, 2004) pertaining to domestic operations, “except when an airplane lands at an intermediate airport specified in the original dispatch release and remains there for not more than one hour, no person may start a flight unless an aircraft dispatcher specifically authorizes that flight.” If flag operations are being conducted, Title 14 CFR Part 121.595 (CFR, 2004), states that (a), “No person may start a flight unless an aircraft dispatcher specifically authorizes that flight,” and (b), “No person may continue a flight from an intermediate airport without redispatch if the airplane has been on the ground more than six hours.”

In addition to sharing the responsibility of the flight with the PIC, the aircraft dispatcher analyzes and evaluates meteorological information to determine potential safety hazards so the most desirable route will be selected for the flight (Airline Dispatchers Federation, 2004). This is regulated under Title 14 CFR Part 121.601 (b) (CFR, 2004), "before beginning a flight, the aircraft dispatcher shall provide the pilot in command with all available weather reports and forecasts of weather phenomena that may affect the safety of flight, including adverse weather phenomena, such as clear air turbulence, thunderstorms, and low altitude wind shear, for each route to be flown and each airport to be used."

As well as selecting the safest route, the aircraft dispatcher must select the most economic route possible. Choosing the most economic flight is important, especially during this stressful economic time in the industry as airlines struggle to reduce high costs (Cass, 2005). While considering economic costs, the aircraft dispatcher must still meet fuel requirements in order to conduct a safe flight. They compute the amount of fuel required for the safe completion of the flight according to the type of aircraft, distance of flight, maintenance limitations, weather conditions and minimum fuel requirements prescribed by Federal Aviation Regulations (Airline Dispatchers Federation, 2004).

There are many additional elements in the flight planning process. The aircraft dispatcher prepares flight plans containing information that includes maximum allowable takeoff and landing weights, weather reports, departure and destination airport field conditions, and many other informational components required for the safe completion of a flight (Airline Dispatchers Federation,

2004). The gathering of this information is crucial to the safety of the flight. If the aircraft dispatcher feels that unsafe conditions threaten the safety of the aircraft or passengers, they have the authority to delay or cancel the flight (Airline Dispatchers Federation, 2004).

Although the position is not well understood, (Cass, 2005) the aircraft dispatcher is a major component in the process of flight planning and operation of an aircraft. While the PIC has the expertise to fly the aircraft, the aircraft dispatcher has a greater immediate resource base of flight operations and can incorporate items such as the economics involved in a flight plan, and also possesses an overall larger picture of airspace (Cass, 2005). The PIC is working with limited information, mostly pertaining to that flight, while the aircraft dispatcher can observe all flights and make a more informed decision about that particular flight (Cass, 2005).

The aircraft dispatcher's work continues when the flight is airborne and until the time the aircraft reaches the destination airport. According to Title 14 CFR Part 121.601 (c) (CFR, 2004), "during a flight, the aircraft dispatcher shall provide the pilot in command any additional available information of meteorological conditions (including adverse weather phenomena, such as clear air turbulence, thunderstorms, and low altitude wind shear), and irregularities of facilities and services that may affect the safety of the flight." They monitor weather conditions enroute, aircraft position reports, and aeronautical navigation charts to evaluate the progress of the flight (Airline Dispatcher Federation, 2004). In addition, the aircraft dispatcher updates the PIC of significant changes in

weather while enroute, and recommends flight plan alternates. These recommendations include items such as changing course altitude or suggesting alternate airports in which to deviate in the event of an emergency (Airline Dispatcher Federation, 2004).

History of the Aircraft Dispatch Profession

The profession of the aircraft dispatcher has an extensive history, as the position has been in existence for quite some time and has continued to evolve with many of the changes that the aviation industry has experienced (Airline Dispatchers Federation, 2004). The need for the aircraft dispatcher was immediately evident in the early years of aviation. At that time, it was standard practice for pilots of commercial airlines to load the mail, passengers, and cargo, board the aircraft and depart without a flight plan, with limited weather information, and no plan of action in the event of changing conditions enroute (Airline Dispatchers Federation, 2004). The pilots would depart the airfield and fly in the general direction of their planned destination with only a compass, known landmarks, and little navigation equipment to help find their way (Airline Dispatchers Federation, 2004). Communication equipment and a method of tracking flight progress were also not available as a guide for pilots (Airline Dispatchers Federation, 2004).

This was an unsafe way to conduct operations and as a result, many accidents occurred. "After years of increasing accidents, which were growing more costly in terms of equipment and lost lives, the state and federal authorities sought to put

the fledging industry on safer ground through regulation" (Airline Dispatchers Federation, 2004, ¶ 1).

In 1938, the United States Congress passed the Civil Aeronautics Act which created regulations to ensure that all air carriers operated in as safe a manner as possible (Airline Dispatcher Federation, 2004). According to Kane (2003), there were three agencies that resulted from the implementation of this act: The Civil Aeronautics Authority, The Administrator of Aviation, and The Air Safety Board. With the creation of these agencies, the airline industry had a firm regulatory system that would make it possible to plan for safe future development through a system of checks and balances by each agency reporting to the other (Airline Dispatcher Federation, 2004).

Another result of the conception of the Civil Aeronautics Authority was the creation of a new Airman Certificate, the aircraft dispatcher certificate (Airline Dispatcher Federation, 2004). The initiative was implemented in an effort to provide ground assistance to the pilot and ultimately share responsibility for the flight. Since the creation of the Civil Aeronautics Authority, the regulatory bodies have evolved, however the concept of the aircraft dispatcher position has remained the same (Airline Dispatchers Federation, 2004). The result of the creation of the position has been a dramatic decrease in the number of accidents and a better overall safety record (Airline Dispatchers Federation, 2004).

Related Industry

An industry that also utilizes the crucial service of a dispatcher is the rail system. According to the Federal Railroad Administration (1997), the definition of a train dispatcher is "the railroad employee assigned to control and issue orders governing the movement of trains on a specific segment of railroad track in accordance with the operating rules of the railroad that apply to that segment of track." They also supervise the safe and efficient movement of trains by authorizing the occupancy of main track and siding for train operations, track inspection and maintenance personnel (Union Pacific Railroad, 2005).

As in the aviation industry, the dispatcher in the railway system is essential. According to Union Pacific Railroad (2005), the duties of a train dispatcher are considerable as they are the individuals responsible for the safety and performance of the railway system. They constantly monitor train movements and conditions that may affect movements, such as weather, crew availability, engine and equipment availability, track bulletins, timetables, track and speed restrictions, and train classifications. In addition to these items, the train dispatcher coordinates responses to unplanned events and emergency situations (Union Pacific Railroad, 2005).

The train dispatcher also "monitors and adjusts the auto-routing system as indicated by conditions, inputting train delays, assuring movement of priority trains, aligning switches and adjusting signals not automatically generated, and coordinating the movement and protection of high/wide loads and special movements" (Union Pacific Railroad, Employment Information, 2005). The heart

of the communication network throughout the railway system relies on the train dispatcher. They speak with the train crews, yard supervisory personnel, maintenance personnel, and many others regarding train movements and instructions, train orders, and authorities (Union Pacific Railroad, 2005).

The train dispatcher is responsible for performing various administrative duties as well. They have to be familiar with requirements relative to hours-of-service regulations regarding expired train crews (Union Pacific Railroad, 2005), to ensure there is not a rule violation. Additionally, they have to document train movements, as well as movement of hazardous materials. Authorizing the occupancy of main track and sidings by issuing track bulletins is also the duty of the train dispatcher (Union Pacific Railroad, 2005).

The duties of the train dispatcher are parallel to those of an aircraft dispatcher, according to Cass (2005). This is due to the fact that both professions require the constant and precise monitoring of conditions such as weather, enroute conditions, and constraints that could inhibit the safe arrival of passengers or goods. Cass (2005) continued on to state that, "dispatchers of any industry provide a higher level of safety and economics to that organization."

Regulatory Requirements for Aircraft Dispatchers

The aircraft dispatcher is a licensed airman who is certificated by the Federal Aviation Administration (FAA) (Airline Dispatchers Federation, 2004). According to Title 14 CFR Part 65.51 (CFR, 2004), "no person may act as an aircraft dispatcher (exercising responsibility with the pilot in command in the operational control of a flight) in connection with any civil aircraft in air

commerce unless that person has in his or her personal possession an aircraft dispatcher certificate."

Title 14 CFR Part 65.53 (CFR, 2004) outlines the eligibility requirements as (a), "to be eligible to take the aircraft dispatcher knowledge test, a person must be at least 21 years of age." Title 14 CFR Part 65.53 (CFR, 2004) (b) states that to be eligible for an Aircraft Dispatcher Certificate a person must be at least 23 years of age, be able to read, speak, write, and understand the English language, pass the required knowledge test, pass the required practical test, and comply with the experience and training requirements.

In the following discussion, Title 14 CFR Part 65.55 (CFR, 2004) discloses the knowledge requirements prescribed for the test that a person must take in order to apply for an Aircraft Dispatcher Certificate. An applicant must be familiar with the Federal Aviation Regulations that relate to airline transport pilot privileges, limitations, and flight operations. Knowledge of air traffic control procedures is also required with an understanding of pilot responsibilities as they relate to enroute operations, terminal area and radar operations, and instrument departure and approach procedures. With that, it is essential that the prospective aircraft dispatcher has an understanding of the principle of air navigation under instrument meteorological conditions in the National Airspace System.

Title 14 CFR Part 65.55 (CFR, 2004) emphasizes knowledge of meteorology, which includes understanding the effects of fronts, frontal characteristics, cloud formations, icing, and upper-air data. An applicant must be aware of the general system of weather and Notice to Airman (NOTAM) collection distribution,

interpretation, and use. The person needs to be able to interpret and use any weather charts, maps, forecasts, sequence reports, abbreviations, and symbols. The knowledge test also includes questions regarding the National Weather Service functions as they pertain to operations in the National Airspace System. The final meteorological element that the applicant must comprehend is wind shear and microburst awareness, identification, and avoidance procedures.

In order to receive an Aircraft Dispatcher Certificate, per Title 14 CFR Part 65.55, a person must pass the aerodynamics portion of the knowledge test in areas relating to an aircraft's flight characteristics and performance in normal and abnormal situations (CFR, 2004). Adding to that, a person needs to be knowledgeable about aircraft loading, weight and balance, use of charts, graphs, tables, formulas, and computation and how they have an effect on aircraft performance.

The final elements of the knowledge test as described in Title 14 CFR Part 65.55 (CFR, 2004) are human factors, aeronautical decision making and judgment, and crew resource management. The applicant must also understand crew communications and coordination.

According to Title 14 CFR Part 65.57 (CFR, 2004), an applicant for an Aircraft Dispatcher Certificate must present documentary evidence that they have either the necessary experience or training. The prescribed experience includes a total of at least two years experience of in the three years before the date of application, in any one, or in any combination of the following areas. An applicant who has experience in military aircraft operations as a pilot, flight

navigator, or meteorologist may apply for a certificate (CFR, 2004). Another form of qualifying experience may be in aircraft operations conducted under Title 14 CFR Part 121 as an assistant in dispatching air carrier aircraft or doing so under the direct supervision of licensed aircraft dispatcher. Experience as a pilot, flight engineer or meteorologist operating under Title 14 CFR Part 121 is also a form of qualifying experience (CFR, 2004). An individual working in aircraft operations as an air traffic controller, a flight service specialist, or performing any other duties of which the Administrator considers to be qualifying experience can also apply for an aircraft dispatcher certificate (CFR, 2004).

According to Title 14 CFR Part 65.57 (b), if an applicant lacks the required experience to apply for an aircraft dispatcher certificate, that individual may qualify by attending an FAA approved aircraft dispatcher course and presenting a statement of graduation to prove that the individual has successfully completed the course (CFR, 2004). The aircraft dispatcher course includes training in accordance with Title 14 CFR Part 65.55, which has been previously discussed

Industry Hiring Requirements for Aircraft Dispatchers

Although strict regulatory requirements exist for aircraft dispatcher certification, there are also general industry guidelines that can apply when a person is seeking employment. Northwest Airlines utilizes a hiring matrix in order to allow applicants to gain points for their achievements (Cass, 2005). Elements of the hiring matrix include aircraft dispatch certification, experience, pilot licenses held, prior supervisory or leadership positions, recommendations, and education (Cass, 2005). The candidate with the most points is hired as an

aircraft dispatcher. A college education is not required for certification, but as indicated by Cass (2005), employment with Northwest Airlines is unlikely without a college degree due to the structure of the points assigned on the hiring matrix. Without the education points, very few applicants can accrue a high enough score to be interviewed (Cass, 2005). Williams (2005) of Horizon Air agrees that a college education will increase chances of employment, "a degree is not required, but definitely helpful in the process of selecting applicants."

Summary of Literature Review

Aircraft dispatchers are crucial to the safe and efficient completion of an airline flight. Their importance was apparent from the beginning of commercial aviation due to the fact that there were many aircraft accidents because of a lack of guidance from personnel on the ground. With safety their primary duty, it is evident that they are essential to an air carrier as they have to abide by many regulatory requirements and concurrently, be an expert on the operations of the aircraft and the environment in which it operates.

CHAPTER II

METHODOLOGY OF THE STUDY

Introduction

A descriptive research design was performed to determine 1) What programs are currently offered to train aircraft dispatchers in the United States?, 2) Does a shortage of aircraft dispatchers currently exist?, and 3) What are the future demand needs of the aircraft dispatcher profession in the United States in the years to come?

Sample

In order to answer the research questions, there will be two separate populations. One population of this study is the 36 FAA approved aircraft dispatcher courses within the United States (Federal Aviation Administration, 2005). A list of these schools is provided in Appendix A.

The second population is 69 air carriers that are listed in Title 14 CFR Part 121 Domestic and Flag Operations and Domestic Operations certificate holders (Federal Aviation Administration, 2005). A list of these air carriers is available in Appendix B.

Study Design

All three research questions were answered by using a qualitative and quantitative descriptive design utilized by the survey research methodology. Two surveys were developed to send to each population. The aircraft dispatcher school population received a survey that encompassed questions to identify the

types of programs, tuition for programs, annual enrollment, exams that are offered at the school, placement with airlines, and where their students are located. An example of the survey for the aircraft dispatcher schools is located in Appendix C.

The population of the air carriers received a survey that examined the number of dispatchers that they employ, where the airline locates their aircraft dispatchers, would the airline support a baccalaureate program, expected future aircraft dispatcher openings, and would the airline benefit from an aircraft dispatcher collegiate program. For an example of the air carrier survey, refer to Appendix D.

Data Collection Methods

The data for the aircraft dispatcher schools and the airlines was collected through a voluntary survey, along with a cover letter explaining the research purpose and the intent of the collected data. A copy of the cover letter sent to the aircraft dispatcher schools is provided in Appendix E, and an example of the cover letter sent to the air carriers is available in Appendix F. Each population was accessed through the postal system and self-addressed, stamped, return envelopes were provided. A follow-up postcard was mailed three weeks later to encourage those that have not done so already, to complete and return the survey. An example of the follow-up postcard is available in Appendix G.

As the completed surveys returned, the researcher kept the data in a locked desk drawer. This ensured the confidentiality of the returned surveys.

Instrument Validity and Reliability

Instrument validity was achieved by having each survey presented to a panel of industry, as well as academic experts. The panel was composed of the following five people: Brett Venhuizen, J.D., Paul Lindseth, Ph.D., Kimberly Kenville, Ph.D., James Higgins, ATP, M.S., and Warren Jensen, M.D. In addition to their validity and reliability tasks, the panel also reviewed the surveys and made recommendations to improve quality. All comments were considered, and applicable comments were incorporated.

Data Analysis

The data was collected from the two survey instruments. For the aircraft dispatcher schools, the collected data was cross tabulated in the areas of FAA region, different types of aircraft dispatcher programs, the length of the programs, the number of sessions per year, tuition cost, number of students enrolled per year, certification offered, the presence of a designated examiner on staff, placement of students, and where the schools locate their students.

The data collected from the airline survey also was cross tabulated. The following areas were encompassed: the current airline utilization of the service of aircraft dispatchers, number of operations per day, number of aircraft dispatchers currently employed at the airline, where the airline locates qualified aircraft dispatchers, number of hired and terminated aircraft dispatchers, does the company pay for schooling of the aircraft dispatchers, and would the airline provide support for an aircraft dispatcher program.

Protection of Human Subjects

For this study, there was not any sensitive or personal information asked of the subjects. Additionally, there were not any medical, gender, or personal demographic questions asked, nor will any respondents be named. The respondents' identities will be protected as there was a strict confidentiality procedure applied by coding the surveys through a numbering system. This was only to track and tally the responses. At the completion of the data analysis, the surveys were be locked in a cabinet for a period of one year, but not used for any purpose other than this study. Due to the nature of this survey, approval from the Institutional Review Board at the University of North Dakota was not required as there were no questions pertaining to the individuals responding.

CHAPTER III

RESULTS

Introduction

There were two populations examined for this study. One population was the 36 FAA approved aircraft dispatcher schools, and the other population was the 69 Title 14 CFR Part 121 Domestic and Flag Operations certificate holders. Both populations were mailed a survey and two weeks later, those that had not returned the survey were mailed a follow-up postcard urging the remaining population to complete the survey. In addition, the researcher attempted to contact all of the aircraft dispatcher schools and many of the airlines which had yet to complete the survey, by phone, to encourage participation.

Survey Respondents

Although 36 FAA approved dispatcher schools were surveyed, through the survey results and phone calls, it was found that seven of the schools were never activated or had ceased operations. Therefore, the true population of the FAA approved aircraft dispatcher schools is 29. Consequently, of the 29 FAA approved dispatcher schools surveyed, 15 responded. This sample of 15 represented 51.72% of the population.

There were 69 air carriers surveyed that are Title 14 CFR Part 121 Domestic and Flag Operations certificate holders. Of the 69 surveyed, 26 responded which equates to a sample size of 37.68%.

Research Questions

Through the collection of the surveys, the researcher was able to ascertain 1) What programs are currently offered to train aircraft dispatchers in the United States?, 2) Does a shortage of aircraft dispatchers currently exist?, and 3) What are the future demand needs of the aircraft dispatcher profession in the United States in the years to come?

Aircraft Dispatcher Schools

There were 15 survey respondents from the aircraft dispatcher school population. For the first question, the respondents were asked to indicate the region in which they are located. This question was asked to establish a geographical dispersion of the sample. The FAA is divided into nine regions: New England, Eastern, Southern, Great Lakes, Alaska, Central, Southwest, Western Pacific, and Northwest Mountain. Figure 1 depicts the distribution of aircraft dispatcher schools throughout the nine regions.

There were five of the nine FAA regions represented in the sample, with the "other" category being an international school located in the United States, but not representing one of the nine FAA regions. There are not any aircraft dispatcher schools located in the Central or New England regions. There was a reported range of zero to five schools in a region, with the majority of five in the Southern region.

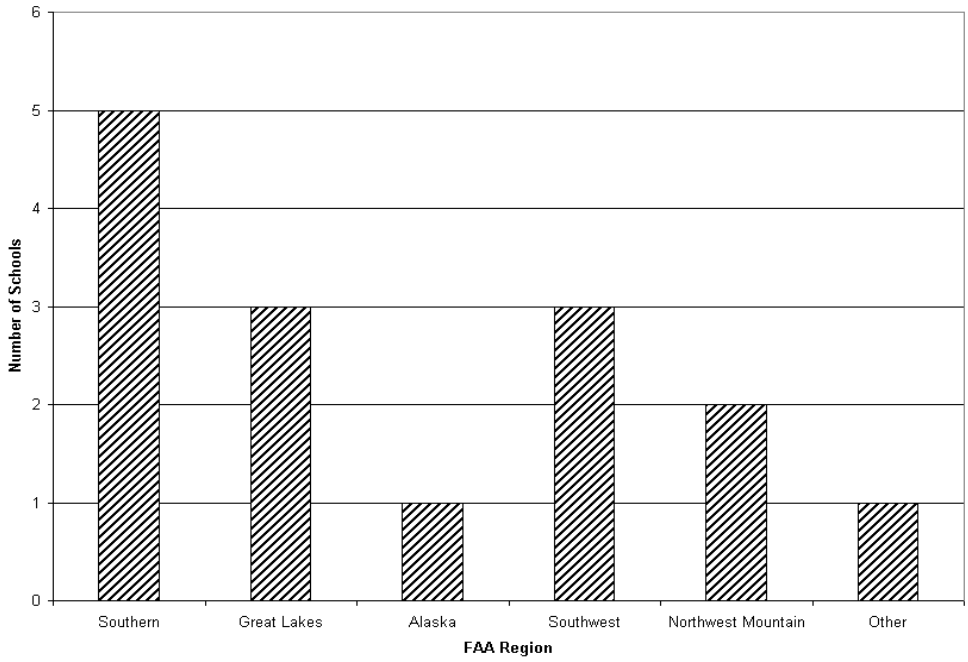


Figure 1. Number of Aircraft Dispatcher Schools Located in each FAA Region.

Further inquiries were made in regards to the different types of aircraft dispatcher programs offered at the schools, the length of the each program, number of sessions per year, cost of tuition, and the number of students enrolled per year. This information was sought in an effort to directly answer research question one-- what programs are currently offered to train aircraft dispatchers in the United States and how do the various programs differ?

There are several types of programs available for potential aircraft dispatcher students. Many of the schools only offered the standard certification course, however, some offered the opportunity to earn an Associate's degree, take the course through correspondence, become a dispatcher in a foreign country, attend classes in the evening, or take an accelerated course. Figure 2 illustrates the types of programs available.

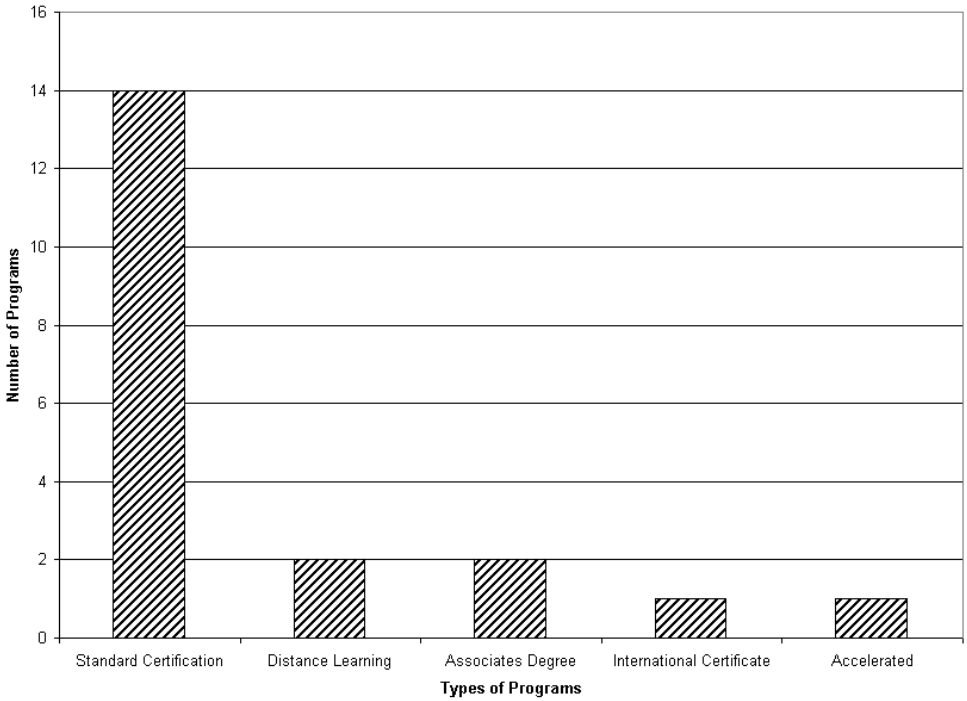


Figure 2. Number of Aircraft Dispatcher School Programs by Type.

The length of the programs varied from 6 days to 2 years with a mean of 18.14 weeks, a mode of 6.00 weeks, and a range of 1.00 to 104.00 weeks. Because the difference between the mean and mode was noteworthy an investigation for outliers was conducted. The definition of an outlier is an extreme value (Howell, 2002). Due to the presence of outliers, the data was reanalyzed with the outliers removed in order to create a more accurate representation of central tendency. This yielded new results of a mean of 7.36 weeks and a range of 1.00 to 20.00 weeks. The length of the various programs is displayed in Figure 3.

The number of aircraft dispatcher school sessions per year is shown in Figure 4. The mean of the sessions per year offered at the respondent schools is 5.68 sessions per year and the range is 1.00 to 40.00 sessions per year.

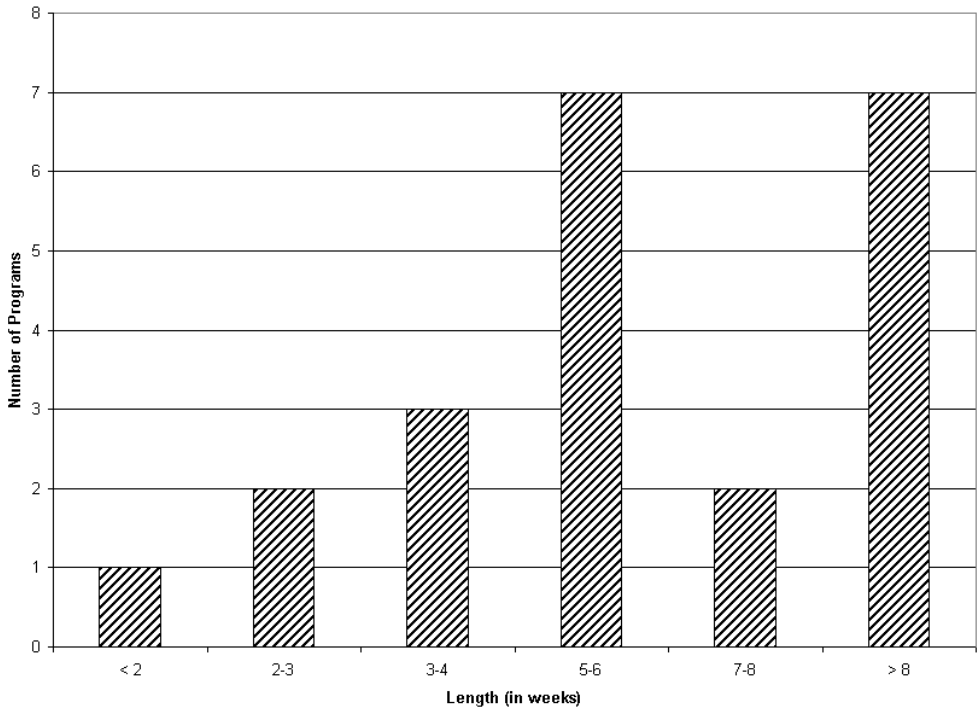


Figure 3. Length of the Aircraft Dispatcher Programs.

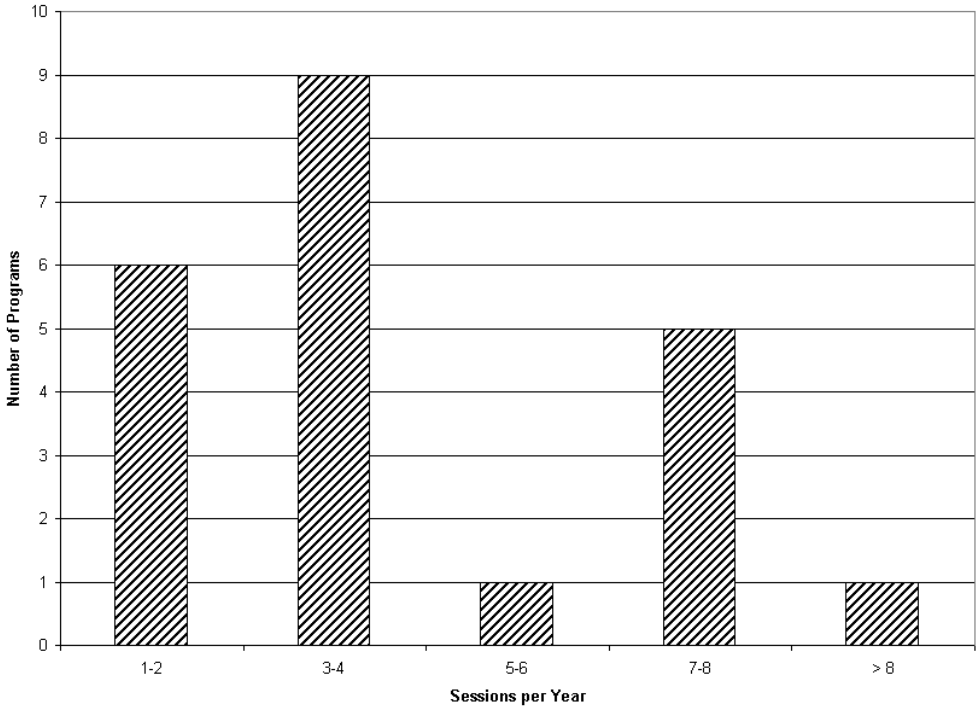


Figure 4. Number of Sessions at the Aircraft Dispatcher Schools.

The mean cost of the various aircraft dispatcher school programs was $3736.05, with a range of $1405.00 to $9700.00. This information is illustrated is Figure 5.

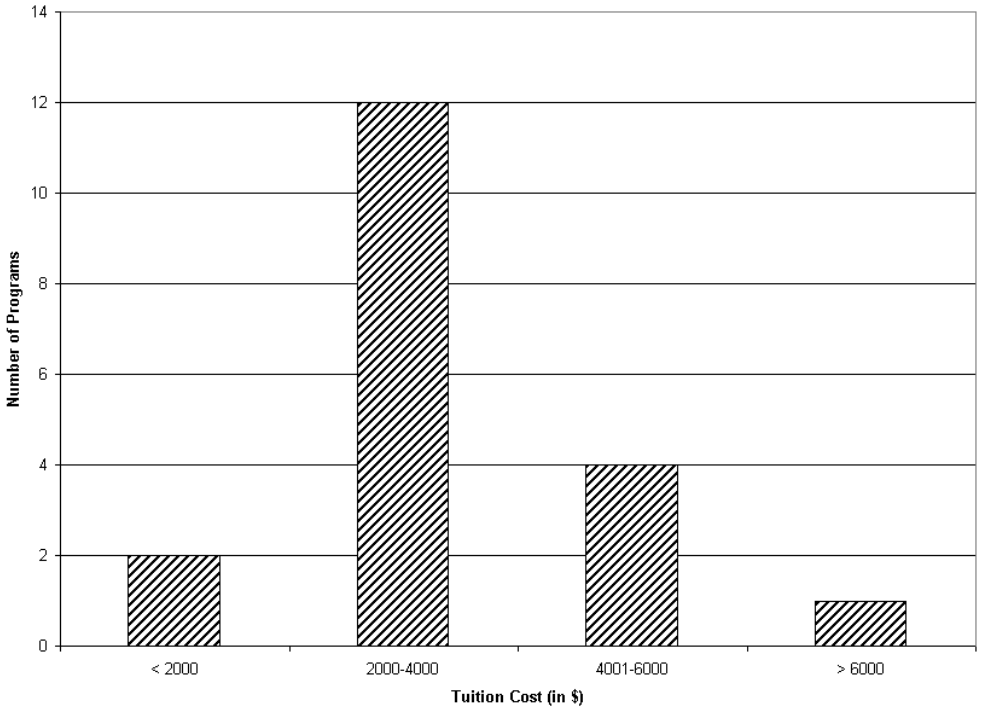


Figure 5. Tuition Cost for the Aircraft Dispatcher Programs.

Figure 6 portrays the number of students attending the aircraft dispatcher programs per year. The central tendency was measured using the mean and the mode (46.76 and 125.00, respectively) and yielded a range of 1.00 to 125.00. Once again because of the discrepancy between mean and mode, a reanalysis was conducted with outliers removed. The adjusted mean was 23.08 and the range was 1.00 to 60.00 students.

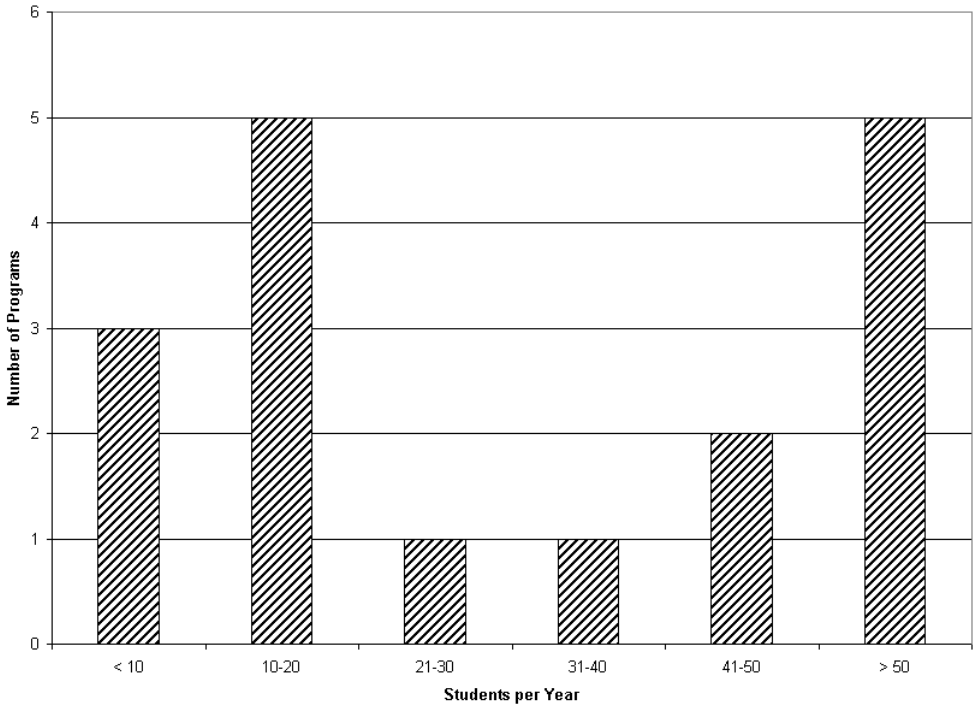


Figure 6. Number of Students Attending Respondent Schools.

The surveyed schools were further queried to continue to ascertain the differentiation between the aircraft dispatcher schools. Figure 7 depicts the certification processes in use at the various facilities. It is important to note that the oral exam is offered at all but one of the respondent programs, and a designated examiner was available at 60% of the programs.

The programs further indicated that 66.67% offer placement for their graduates with the airlines while the others surveyed did not. Of those that offer placement services, 33.33% offer a contract with the airlines to hire their graduates, and 20% have existing incentive agreements with the airlines. The information describing the placement services offered is indicated in Figures 8 and 9.

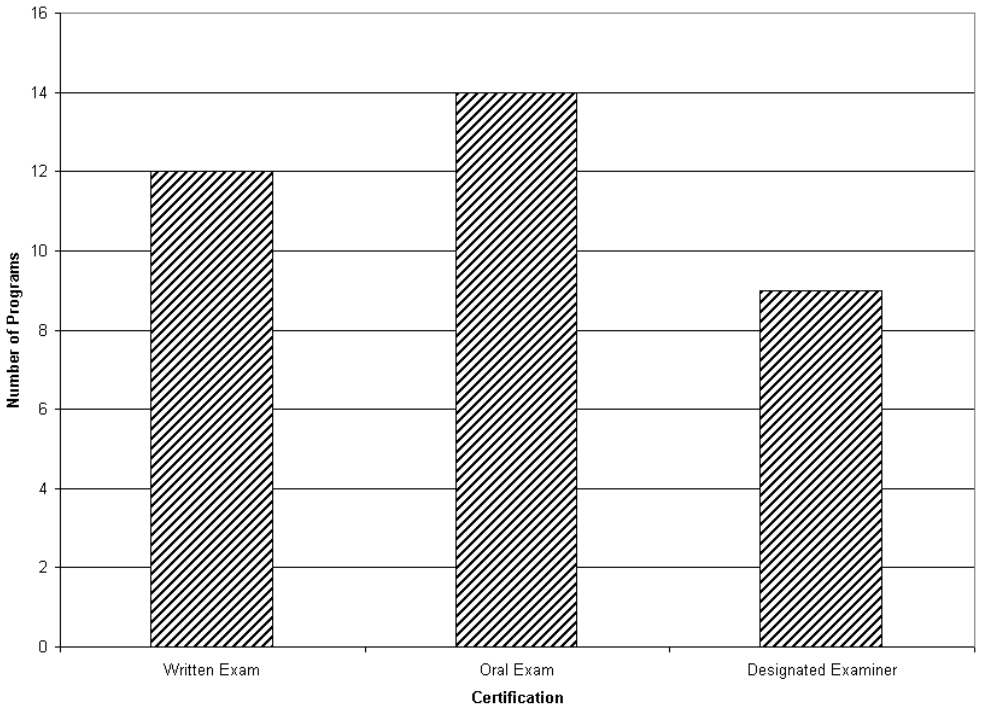


Figure 7. Types of Certification Available at the Aircraft Dispatcher Schools.

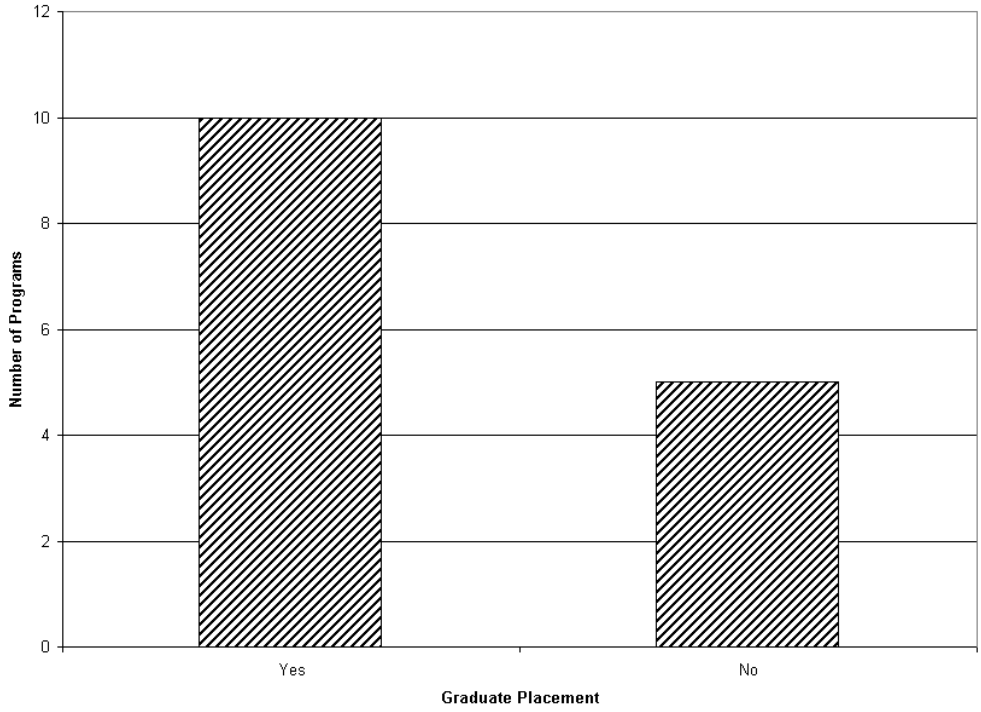


Figure 8. Graduate Placement Service by Aircraft Dispatcher Schools.

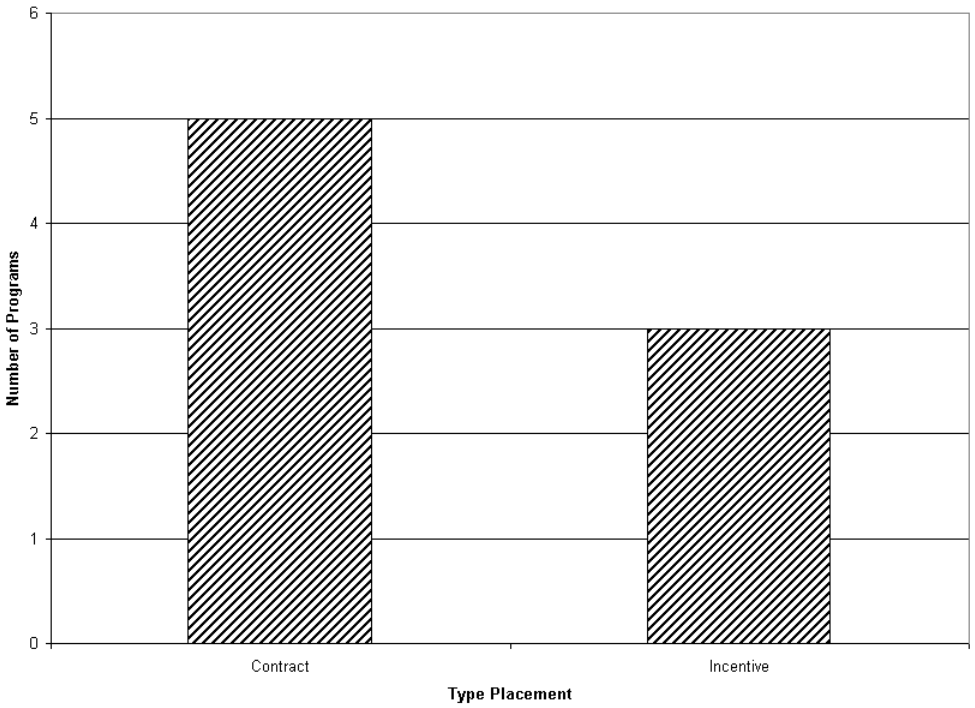


Figure 9. Types of Graduate Placement Offered by the Respondents.

Figure 10 depicts the sources utilized by the surveyed schools to recruit prospective students. When completing the survey, the respondents were not limited to one choice of recruitment sources. The majority indicated they use web-based recruiting, as well as referrals and direct advertising. The "other" category answers varied from tradeshows to listing the course in the school catalog.

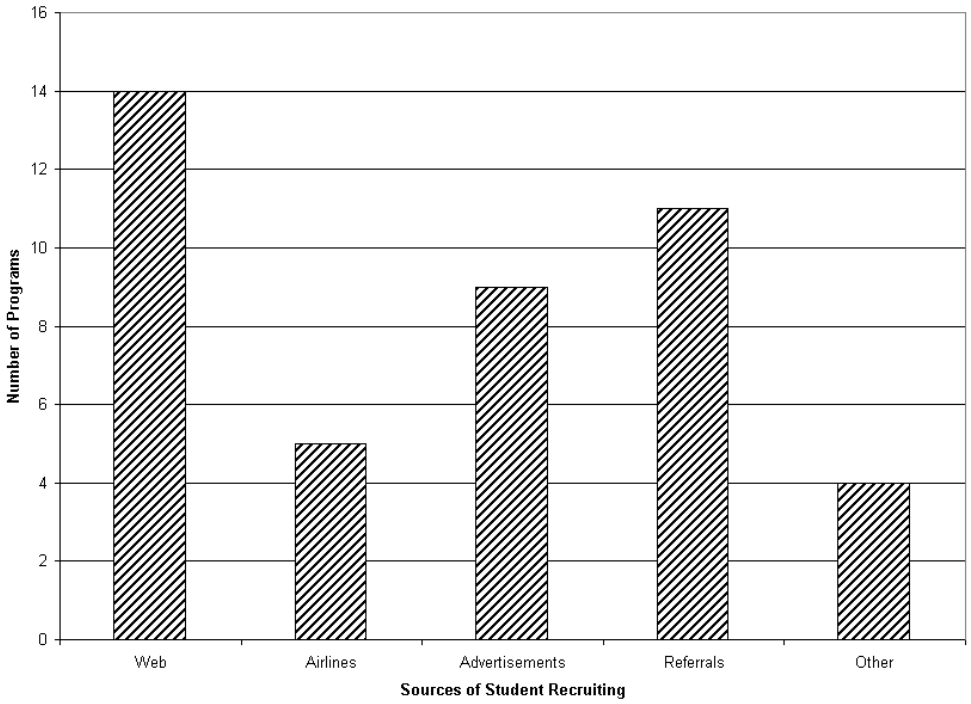


Figure 10. Sources of Student Recruiting for the Aircraft Dispatcher Schools.

Finally, the respondents were asked to comment in regard to the challenges they feel both their school and the aircraft dispatcher profession face. Several of the following themes emerged:

- The hardships of recruiting students
- Overcoming a general lack of knowledge on the part of the public in regards to the aircraft dispatcher profession
- Coping with the FAA
- Competing with unethical aircraft dispatcher schools
- The challenges of increasing training standards for students attending aircraft dispatcher schools
- Low entry level salaries often found in the profession

- Unavailability of financial aid for students
- Industry economic hardships that diminish focus on the aircraft dispatcher profession
- Age constraints imposed by the regulatory underpinnings of obtaining dispatch certification

Title 14 CFR Part 121 Air Carrier Aircraft Dispatcher Programs

A quantitative and qualitative analysis was conducted on the completed surveys returned by the air carrier aircraft dispatch department. Answers were sought to the primary research questions 2) Does a shortage of aircraft dispatchers exist in the United States? and 3) What are the future demand needs of the aircraft dispatch profession?

Figure 11 represents the average number of flights per day reported by the survey participants. It is imperative to note that 73.08% averaged between 0 and 300 flights per day. The range was 4 to 1600 flight operations per day.

The mean number of flights reported was 412.87. For the purposes establishing an operational definition of a large and small carrier, larger carries will be designated as above the mean, and small carriers will be designated as such if they fall below the mean. By dividing the airlines into two groups (large and small air carriers) quantitative analyses can be conducted in order to determine whether any significant differences exist between these two groups.

Several interesting post hoc peripheral research questions developed. Specifically, is there a significant difference in perceived aircraft dispatcher shortages between large and small carriers? Table 1 reflects values obtained from

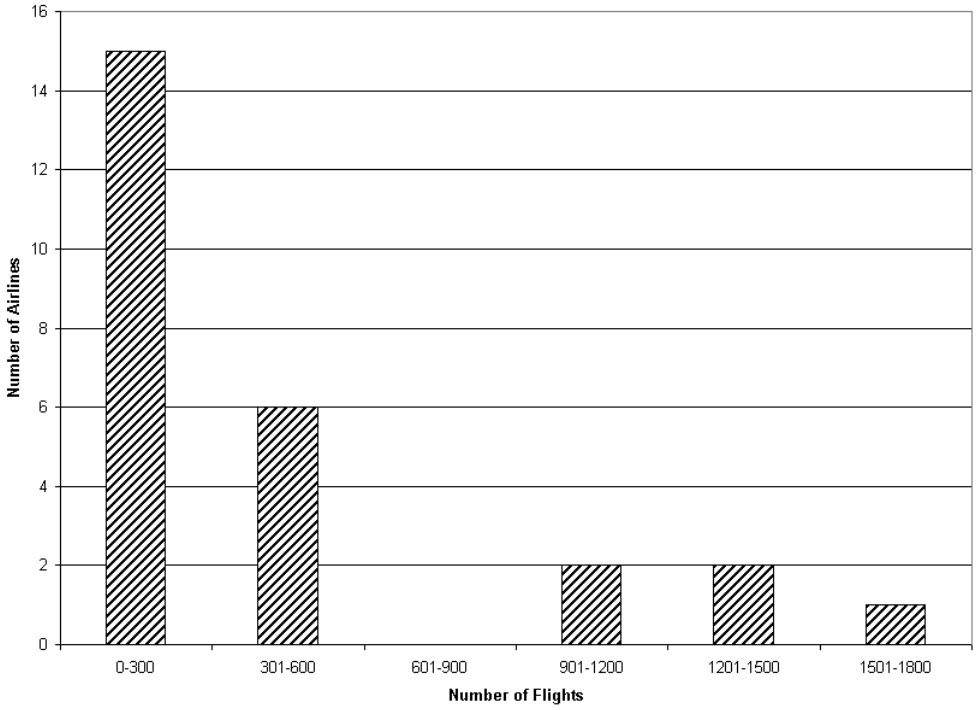


Figure 11. Number of Flights Reported by the Air Carriers.

a t-test of independent samples (large and small air carriers) applied to the reported perception of whether or not a shortage of aircraft dispatchers exists.

The small carriers reported a mean of 2.53 (SD = .624) while large carriers indicated a mean of 2.78 (SD=.441). Neither mean differed significantly from each other, t (25) = -1.057, p >.05.

Another peripheral question that was examined involved the investigation of whether any significant differences existed regarding reported aircraft dispatcher workload between large and small carriers. Large carriers (M = 3.00, SD = .686) and small carriers (M = 3.29, SD = .500) produced no significance differences, t (25) = 1.132, p > .05 (Table 2).

Table 1

Perceived Aircraft Dispatcher Shortage Between Large and Small Carriers

Group	n	M	SD	t
Small Carriers	17	2.53	.624	-1.057
Large Carriers	9	2.78	.441	

*p < .05

Table 2

Perceived Aircraft Dispatcher Workload Between Large and Small Carriers

Group	n	M	SD	t
Small Carriers	17	3.29	.686	1.132
Large Carriers	9	3.00	.500	

*p < .05

The respondents were asked to report the number of aircraft dispatchers that had left their organization in the past one, three, and five years. The results are rendered in Figure 12. Likewise the respondents were asked to forecast their projected need of aircraft dispatchers over the next one, three, and five years also shown in Figure 12.

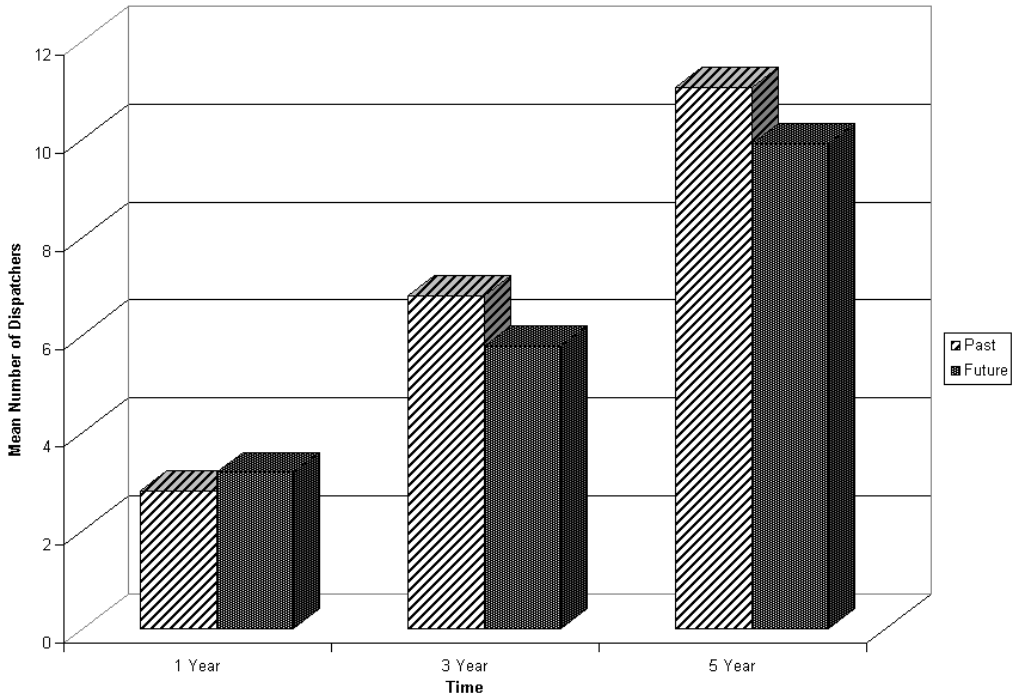


Figure 12. Past and Future Aircraft Dispatcher Personnel Changes.

Again, an interesting secondary research question occurred. Is there a difference in the number of aircraft dispatchers leaving larger carriers versus small carriers? Table 3 displays the means, standard deviations, and obtained t-statistics divided between large and small carriers. There was no significant difference found.

Another t-test was accomplished in order to answer the secondary research question pertaining to whether any significant differences occurred between large and small carriers on the question of projected future aircraft dispatcher needs. Worthy of note, the difference between projected aircraft dispatcher need over a one-year period approached significance, $t(25) = -2.348$, $p < .05$ (two-tailed).

Table 3

Reported Aircraft Dispatcher Personnel Reductions Between Large and Small Carriers.

Group	n	M	SD	t
Past 1 Year				
Small Carriers	17	2.35	2.849	-.930
Large Carriers	9	3.67	4.359	
Past 3 Years				
Small Carriers	15	5.67	5.024	-1.072
Large Carriers	9	8.67	8.775	
Past 5 Years				
Small Carriers	13	9.85	8.061	-.578
Large Carriers	9	12.78	15.643	

*p < .05

Table 4 further elaborates the results of the t-test carried out on the remaining three and five year projected future needs.

Finally, the last peripheral research question raised post hoc asked is there any significant difference in perceived benefit of a aircraft dispatcher course as part of a collegiate undergraduate program between large and small carriers.

Table 4

Projected Aircraft Dispatcher Personnel Growth Between Large and Small Carriers.

Group	n	M	SD	t
Future 1 Year				
Small Carriers	17	2.29	1.795	-2.348*
Large Carriers	9	4.89	3.887	
Future 3 Years				
Small Carriers	15	4.80	4.346	-1.252
Large Carriers	9	7.86	7.128	
Future 5 Years				
Small Carriers	13	6.93	7.173	-1.660
Large Carriers	9	15.86	17.780	

*p < .05

Table 5 demonstrates that no significant difference was found, t (25) = -.082, p > .05.

The air carriers were further asked for the total number of aircraft dispatchers they currently employ. The mean was reported at 29.73 (SD = 40.71), with a range from 3 to 165. Figure 13 graphically depicts the reported number of dispatchers currently employed by each air carrier.

Table 5

Perceived Benefit of Collegiate Dispatch Training Program Between Large and Small Carriers

Group	n	M	SD	t
Small Carriers	17	3.41	1.121	-.082
Large Carriers	9	3.44	.527	

*p < .05

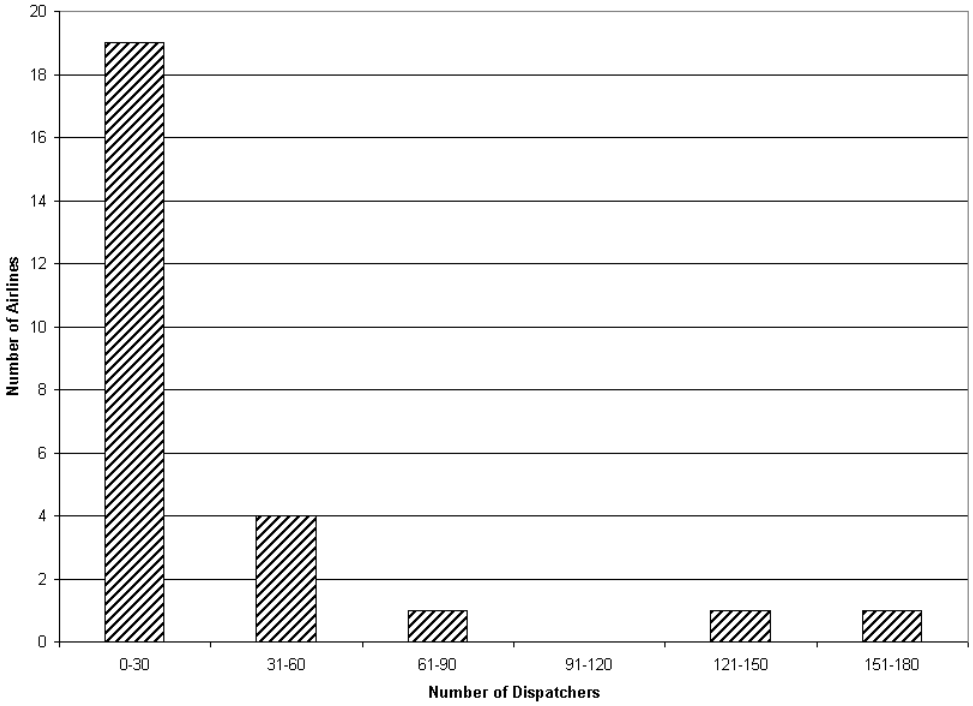


Figure 13. Number of Aircraft Dispatchers Currently Employed.

Furthermore, respondents were asked where they located the qualified dispatchers that are currently employed. 76.92% of the air carriers indicated that

they rely on FAA approved aircraft dispatcher schools, while only 34.62% hired internally (Figure 14).

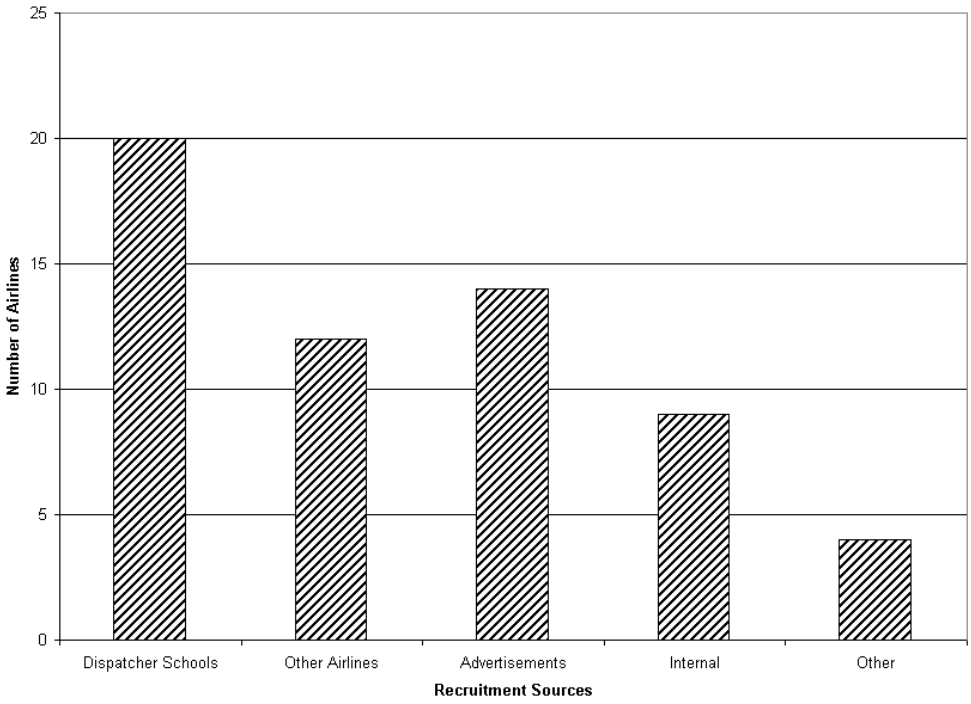


Figure 14. Air Carrier Recruitment Sources.

In regards to future hiring practices, the survey recipients were asked to identify why they will conduct any future hiring. Interestingly, the majority (61.54%) indicated hiring will occur due to anticipated growth at their air carrier. Only 19.23% stated that they would need to hire because of retiring employees. The "other" category encompassed items such as employees leaving to work at larger air carriers or upgrading to pilot status (Figure 15).

Figure 16 displays whether the respondent's company pays for a portion or all of the schooling required of aircraft dispatcher candidates and 80.77% responded in the negative. Additionally, Figure 16 depicts the answer to whether

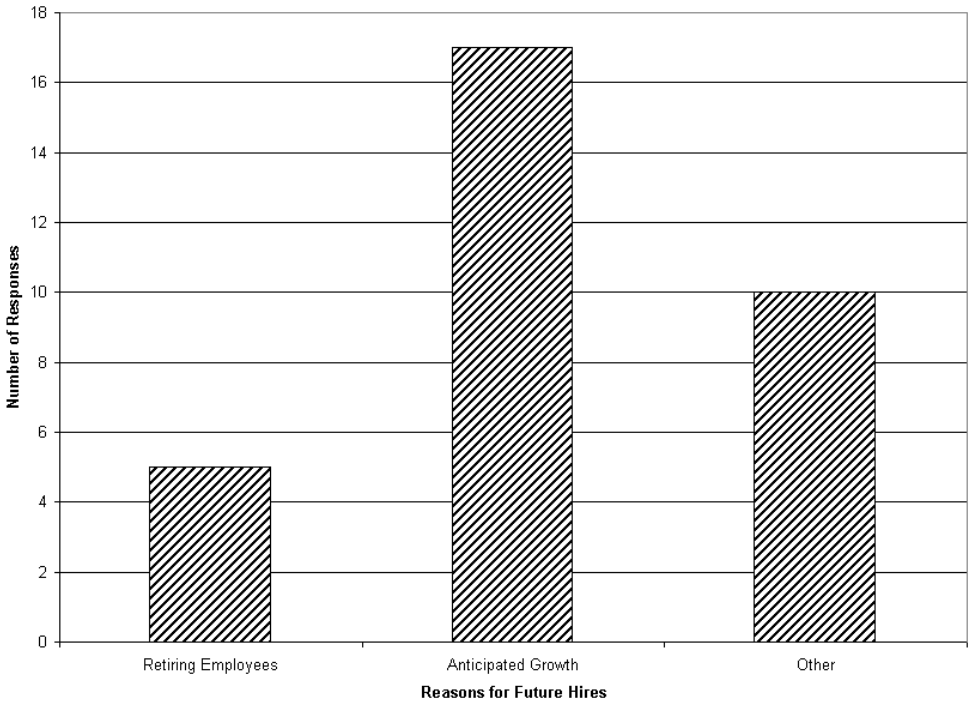


Figure 15. Reasons Air Carriers Reported for Future Hiring Needs.

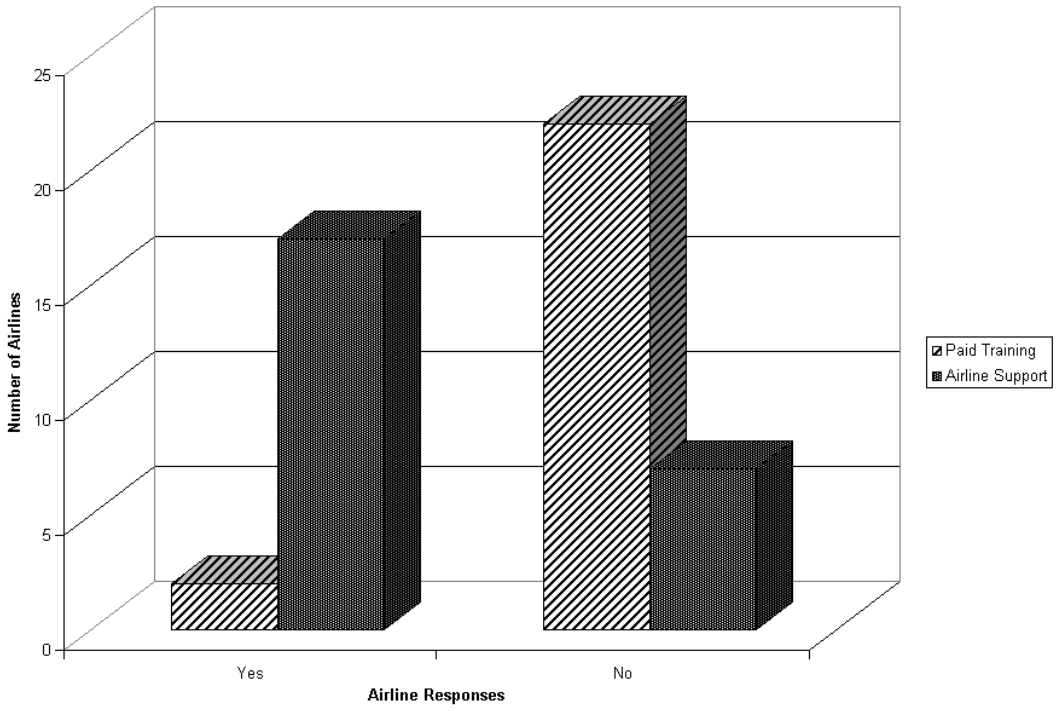


Figure 16. Air Carrier Responses to Paid Training and Support of Collegiate Training.

the air carrier would support an approved aircraft dispatcher collegiate program with 61.54% indicating yes.

For surveyed air carriers that indicated they would support an approved aircraft dispatcher collegiate program, an exploration into the nature of that support was conducted. The results (Figure 17) indicate that the companies were most interested in a direct hire program (52.38%). Very few (9.52%) appeared interested in offering tuition assistance. The majority of the "other" category reported that the air carrier would be interested in an internship type program.

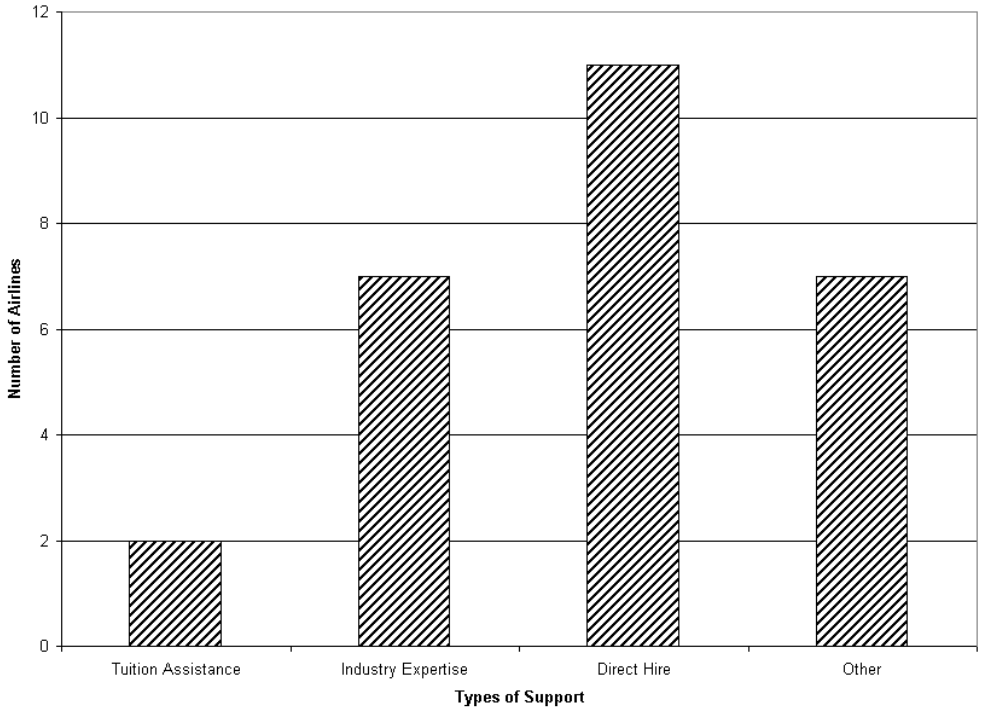


Figure 17. Types of Support Offered to Collegiate Aircraft Dispatcher Programs.

As a final point, respondents were asked to make any comments they have in regards to their aircraft dispatcher program. The predominant ideas were:

- The air carriers only hire aircraft dispatchers with industry experience, not a recent graduate
- There is a shortage of “qualified” aircraft dispatchers to cope with the highly stressful environment
- Challenges of educating the public about the profession
- The industry is currently struggling, consequently the aircraft dispatcher department is following suit
- Aircraft dispatchers with aviation experience lead to more qualified aircraft dispatchers
- The small airlines rely on good relationships with the aircraft dispatcher schools in order to staff their airline

CHAPTER IV

DISCUSSION

Introduction

This industry assessment provided an in-depth view of the aircraft dispatcher industry. An assessment of the industry is needed to project the future of the aircraft dispatcher profession, as well as indicate the necessity of additional aircraft dispatcher training facilities in the United States. The position of an aircraft dispatcher originated in 1938 as a result of numerous aircraft accidents. It was believed that the repeated accidents occurred due to the lack of ground assistance to the pilot, therefore a new Airman Certificate was created, the aircraft dispatcher certificate. Some of the duties of an aircraft dispatcher include aircraft navigation, emergency procedures, weight and balance calculations, flight planning, and meteorological knowledge. This position is regulated by the Code of Federal Regulations that is administered by the Federal Aviation Administration. This paper examined programs that were offered to train aircraft dispatchers. In addition, the study identified any current or projected shortages of aircraft dispatchers in the airline industry, and addressed those needs accordingly. The research utilized a quantitative and qualitative descriptive design using information obtained through the survey research methodology.

Research Questions

Aircraft Dispatcher School Characteristics

The results clearly indicate a wide variety of the available programs for the certification of aircraft dispatchers exist, and are still within the regulatory requirements outlined by Title 14 CFR Part 65. It appears some programs are relatively large and robust, containing over one-hundred students, having many training programs and sessions as well as industry opportunities for their students. Smaller programs were found to be more specialized, sometimes having only a few students in a single program, and only convening a few times per year.

Most schools offered standard certification as the predominant method for potential students to obtain an aircraft dispatcher license. The time spent in training also varied greatly with some programs only lasting a short time, one week, while some programs require a two-year time commitment. The most prevalent tuition costs were between $2000.00 and $4000.00. Almost all schools offered at least one form of certification, with all but one offering oral exam certification, and over half employed a designated examiner. The programs offered throughout the industry can best be described as a miscellany.

An examination of services offered to graduates denoted that the majority of schools have some form of job placement. Some had contracts with existing carriers for placement, while others offer some form of incentive agreements with the airlines. Even though some schools had a formal agreement with air carriers,

it appears the job market existing for recent aircraft dispatcher school graduates is mostly laisser-faire.

When studying overall school recruiting efforts, it becomes clear that a diverse set of potential sources are utilized. Nearly all schools employed some form of web-based recruiting and referrals were also reported. Based upon the importance of referrals, it is clear that a school's reputation is paramount.

Title 14 CFR Part 121 Air Carrier Aircraft Dispatcher Programs

Aircraft Dispatcher Staffing

When examining the question as to whether a shortage of aircraft dispatchers exist in the United States, both small and large carriers indicated a perception of a slight shortage within the industry ($M = 2.53$ and $M = 2.78$, respectively). There is no significant difference in perception of a shortage between small and large air carriers (Table 1).

Another method of investigating this notion of a shortage involves analyzing the respondent perception of current aircraft dispatcher workload (small carriers, $M = 3.29$; large carriers, $M = 3.00$, Table 2). Logic would dictate that if there were no shortage of dispatchers the mean would be near 3.00; in fact it is exactly 3.00 for the sampled large carriers, and since there is no significant difference between large and small air carriers ($t(25) = 1.132$, $p > .05$), the perceived workload is emblematic of normalcy.

There is no congruency between the reported slight shortages of aircraft dispatchers, and the normally reported aircraft dispatcher workloads. This incongruence presents three possibilities: aircraft dispatcher departments are

slightly understaffed, aircraft dispatchers are slightly overworked, or the workload was not accurately reported. In order to guard against this third possibility, this study utilized sound research protocols including the assurance of respondent anonymity.

Future Demand Needs

Both small and large air carriers anticipate hiring more aircraft dispatchers in the next one, three, and five years (Table 4). Based upon the projected hiring needs of the air carriers, large carriers anticipate requiring more aircraft dispatchers than small air carriers. This disparity is significant over the next one year ($t(25) = -2.348$, $p < .05$). However, while the large carriers foresee hiring more aircraft dispatchers than small carriers over the three ($M = 4.80$ versus $M = 7.86$) and five year ($M = 6.93$ versus $M = 15.86$) period, these differences were not significant.

While all air carriers state that they will be hiring additional aircraft dispatchers over the next one, three, and five years, large carriers will have a greater need for aircraft dispatchers than small carriers. These future hires are primarily due to anticipated company growth as reported by the majority of sampled air carriers. Other reported factors included employees leaving for larger air carriers and general attrition through retirement.

Collegiate Programs

When considering a perceived benefit of a collegiate undergraduate aircraft dispatcher program, most air carriers felt that such a program would be of either a moderate or high benefit (small carriers, $M = 3.41$; larger carriers, 3.44) to their

company (Table 5). The size of the air carrier did not alter this perception ($t(25) = -.082$, $p > .05$).

Recommendations

1) Due to competitive pressures and a thinly-margined market, it would behoove all aircraft dispatcher schools to ensure at least parity in the categories of testing resources, graduate placement services, and types of placement programs.

2) There may be room in the industry for a limited number of collegiate aircraft dispatcher programs at this time; however, it would be advisable to combine resources, such as faculty, designated examiners, testing facilities, etc., over multiple existing programs to avoid saturation of the industry.

Future Research

1) Due to the timing of this particular study and the dynamics of the aviation industry, specifically aircraft dispatchers, the questions examined in this study can be revisited every five years.

2) Using the data from this study, a longitudinal or time-series investigation could be initiated for the purposes of establishing industry trends.

3) Based upon at least some positive indication of the industry's openness toward a collegiate aircraft dispatcher program, a specific market study could be generated in order to determine the feasibility of implementing a successful program.

Concluding Remarks

This was a challenging study due to the fact that it relied upon surveys from industry professionals. The industry is in a state of flux, and as such

participants may have tempered their responses, in that they may have felt proprietary pressures. Notwithstanding, this study endeavored to extract as much information under the auspices of all available confidential research methodology. The information contained herein is believed accurate, yet opportunity remains for further exploration.

The one overall prevailing theme is that the aircraft dispatcher industry is not well-known or understood. It is hoped that a scientific exploration, such as this study, has further revealed the enigmatic nature of the aircraft dispatcher profession.

APPENDICES

Appendix A

FAA Approved Aircraft Dispatcher Schools

Academics of Flight
Academics of Flight International
Academy College
Airline Flight Dispatch Group, Higher Power Aviation, Inc.
The Airline Academy
Anoka Technical College
Aviation Training Services
Airline Ground Schools Inc.
Career Academy
Delta Aircraft Dispatcher School
Embry-Riddle Aeronautical University
The Everett Group
Falcon Air Academy
Flight Dispatch Careers, Inc.
Flight Operations Strategies, Inc.
Flight Control Academy
Florida Institute of Technology
Flight Safety International (LGA)
Flight Safety International (STL)
Green River Community College
Insights
Institute of Flight Operations and Dispatch
Jeppesen Academy
Lewis University
Miami Dade Community College
Michigan Institute of Aeronautics
Middle Tennessee State University
Mountain View College
Phoenix East Aviation
Rocky Mountain College
San Jacinto College
Sheffield School of Aeronautics
Sheffield School of Aeronautics West
Sierra Academy of Aeronautics International Training Center
Technical Aviation Services, Inc.
World Airline Dispatcher Schools

Appendix B

Title 14 CFR Part 121 Domestic and Flag Air Carriers

Air Midwest, Inc.
Air Wisconsin Airlines Corp.
AirTran Airways
Alaska Airlines, Inc.
Allegiant Air, LLC
Aloha Airlines, Inc.
America West Airlines, Inc.
American Airlines, Inc.
American Eagle Airlines, Inc.
ATA Airlines, Inc.
Atlantic Southeast Airlines, Inc.
Atlas Air, Inc.
Big Sky Transportation Co.
Boston-Maine Airways Corp.
Brendan Airways, LLC
Caribbean Sun Airlines, Inc.
Champlain Enterprises, Inc.
Chautauqua Airlines, Inc.
Colgan Air, Inc.
Comair, Inc.
Continental Airlines, Inc.
Continental Micronesia, Inc.
Delta Air lines, Inc
Executive Airlines, Inc.
ExpressJet Airlines, Inc.
Falcon Air Express
Flying Boat, Inc.
Freedom Airlines, Inc.
Frontier Airlines, Inc.
Gemini Air Cargo
GoJet Airlines, LLC
Great Lakes Aviation, LTD
Gulfstream International Airlines
Hawaii Island Air, Inc.
Hawaiian Airlines, Inc.
Horizon Air Industries, Inc.
Independence Air, Inc.
JetBlue Airways Corp.
Lynx Air International, Inc.
MaxJet Airways, Inc.
Mesa Airlines, In**c.**
Mesaba Aviation, Inc.
Miami Air International, Inc.
Midwest Airlines, Inc.
MN Airlines, LLC
North American Airlines
Northwest Airlines, Inc.
Pacific Island Aviation, Inc.
Piedmont Airlines, Inc.
Pinnacle Airlines, Inc.
Polar Air Cargo, Inc.
Primaris Airlines, Inc.
PSA Airlines, Inc.
Regionsair, Inc.
Republic Airlines, Inc.
Ryan International Airlines, Inc.
Seaborne Virgin Island, Inc.
Sierra Pacific Airlines, Inc.
Shuttle America Corp.
Skyway Airlines, Inc.
Skywest Airlines
Southwest Airlines Co.
Spirit Airlines
Sunworld International Airlines, Inc.
TEM Enterprises, Inc.
Trans States Airlines, Inc.
United Airlines, Inc.
United Parcel Service Co.
US Airways, Inc.

Appendix C

SURVEY
Aircraft Dispatcher Schools

1. Please indicate the FAA region in which you are located.

a. New England
b. Eastern
c. Southern
d. Great Lakes
e. Alaska
f. Central
g. Southwest
h. Western Pacific
i. Northwest Mountain

2. Please list the different types of aircraft dispatcher programs you offer, the length of each program, number of sessions per year, cost of tuition, and number of students enrolled per year.

Types of Programs	Length of Program	Sessions per year	Tuition Cost	Students per year

3. What type of certification do you offer?

Written Exam? yes no

Oral Exam? yes no

4. Is there a designated examiner for aircraft dispatchers on staff?

yes no

5. Do you offer placement for your graduates with the airlines?

yes no

If placement exists,

Do you have a contract with the airlines to hire your graduates?

Does the airline offer incentive for your school?

6. Where do you recruit students? (Check all that apply)

Web
Airlines
Advertisements
Referrals
Other _____

7. What challenges do you see that face your school or the aircraft dispatcher profession in general?

Thank you for your participation. Your input helps to develop the aircraft dispatcher industry and create awareness to the triumphs and struggles that the profession faces. Please return the survey in the enclosed stamped envelope, or fax to (701) 777-3016.

Appendix D

SURVEY
U.S Airlines
CFR Part 121 Domestic and Flag Operations
Aircraft Dispatcher Program

1. Do you feel there is a current shortage of aircraft dispatchers in the United States? (Please circle)

1	2	3	4	5
extreme shortage	shortage	no shortage	surplus	extreme surplus

2. How many flights/ operations does your airline have per day? _____

3. Rate your impression of the workload of aircraft dispatchers. (Please circle)

1	2	3	4	5
extremely under worked	under worked	just right	over worked	extremely over worked

4. How many aircraft dispatchers do you currently employ? _____

5. Where do you locate the qualified aircraft dispatchers that you currently employ? (Check all that apply)

FAA approved aircraft dispatcher schools
Other airlines
Advertise for available positions
Internal employees that you train for the position
Other _____

6. Approximately how many aircraft dispatchers left your organization in the past

1 year? _____

3 years? _____

5 years? _____

7. Approximately how many aircraft dispatchers do you anticipate hiring in the next

1 year? _____

3 years? _____

5 years? _____

8. Are the above hires related to (check all that apply)

Retiring employees
Anticipated growth
Other _____

9. Does your company pay for a portion or all of the schooling required of aircraft dispatcher candidates?

yes no

10. Would your airline support an approved aircraft dispatcher collegiate program?

yes no

If yes, what type of support would your company possibly be willing to coffer? (Check all that apply)

Tuition assistance for students, such as a scholarship
Offer industry expertise in administering the course
Direct-hire program
Other _____

11. How well do you think an aircraft dispatcher course, that is part of a collegiate undergraduate program, would benefit your airline?

1	2	3	4	5
no benefit	some benefit	moderate benefit	high benefit	very high benefit

12. Please add any other comments that you may have concerning your aircraft dispatcher program:

Thank you for your participation. Your input will help to create awareness of the aircraft dispatcher profession, as well as determine the need for future aircraft dispatcher collegiate programs. Please return the survey in the enclosed stamped envelope, or fax to (701) 777-3016.

Appendix E

September 1, 2005

Re: Aircraft Dispatcher School Survey

Dear Aircraft Dispatcher School Director:

I am an air traffic controller and a graduate student at the University of North Dakota in the final phase of my work toward completing my Master of Science degree in Aviation. I would like to invite your participation in a research project that will lead to the completion of my thesis.

My study involves an industry analysis of the aircraft dispatcher profession. The profession is not well-known or understood, and it is important to create awareness regarding the occupation. This includes assessing what type of schooling is available to become a certified aircraft dispatcher. In addition, I would like to investigate how and where aircraft dispatchers are being trained, and to what extent these various programs differ. These items are significant because they will help to generate a greater understanding of the profession and determine what the future of aircraft dispatchers will entail.

Your response to this survey is greatly appreciated. There will be a strict confidentiality procedure that will apply to your responses. The surveys are numbered, but only to track and tally the responses. Following the compilation of the data, the surveys will be held in a confidential manner. This is a voluntary survey and by completing it you will be providing your consent to contribute to my research.

This survey has been distributed to all FAA accredited United States aircraft dispatcher schools and I would be happy to distribute the results to all involved, if requested. These data will be published as part of my thesis and no school will be singled out by name in the discussion of my results. This survey meets the approval of the University of North Dakota Research and Development Compliance Office pertaining to human participation, particularly as these policies pertain to maintaining anonymity of survey research respondents.

I appreciate your willingness to help fulfill my educational endeavor, and I hope to further serve the aircraft dispatcher industry in the future. If you have any questions, please feel free to contact me at (701) 777-2023 or sailer@aero.und.edu.

Sincerely,

Georgiann M. Sailer
Master of Science Candidate in Aviation

Brett D. Venhuizen, J.D.
Assistant Professor
Thesis Chair

Enclosure

Appendix F

September 1, 2005

Re: U.S. Airline Aircraft Dispatcher Survey

Dear Aircraft Dispatch Director:

I am an air traffic controller and a graduate student at the University of North Dakota in the final phase of my work toward completing my Master of Science degree in Aviation. I would like to invite your participation in a research project that will lead to the completion of my thesis.

My study involves an industry analysis of the aircraft dispatcher profession. The profession is not well-known or understood, and it is important to create awareness regarding the occupation. This includes assessing if a shortage of aircraft dispatchers currently exists or if a shortage is projected in the future. These items are significant because it will help the industry, including collegiate aviation, determine if there is a need to develop additional aircraft dispatcher courses.

Your response to this survey is greatly appreciated. There will be a strict confidentiality procedure that will apply to your responses. The surveys are numbered, but only to track and tally the responses. Following the compilation of the data, the surveys will be held in a confidential manner. This is a voluntary survey and by completing it you will be providing your consent to contribute to my research.

This survey has been distributed to all U.S. airlines that hold a CFR Part 121 certificate with domestic and flag operations. I would be happy to distribute the results with all involved, if requested. These data will be published as part of my thesis and there will be no airline singled out by name in the discussion of my results. This survey meets the approval of the University of North Dakota Research and Development Compliance Office pertaining to human participation, particularly as these policies pertain to maintaining anonymity of survey research respondents.

I appreciate your willingness to help fulfill my educational endeavor, and I hope to further serve the airline industry in the future. If you have any questions, please feel free to contact me at (701) 777-2023 or sailer@aero.und.edu.

Sincerely,

Georgiann M. Sailer
Master of Science Candidate in Aviation

Brett D. Venhuizen, J.D.
Assistant Professor
Thesis Chair

Enclosure

Appendix G

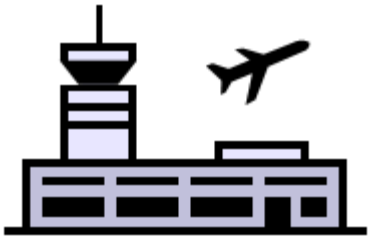
Follow-up postcard for Aircraft Dispatcher Schools and Air Carriers

Don't let this opportunity fly by….

Recently, you were mailed a survey in regards to an industry analysis of aircraft dispatchers. This survey will assess the needs of the aircraft dispatcher profession, as well as create the much needed awareness of the position. In order to complete a thorough analysis, your input is greatly needed. Please complete the survey and return it in the envelope provided. If you need a new copy of the survey, please contact me and I will send one to you.

Thank you for your participation.

Sincerely,



Georgiann M. Sailer
Master of Science Candidate in Aviation
University of North Dakota, Grand Forks
(701) 777-2023
sailer@aero.und.edu

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