AN EXPLORATION OF THE ORGANIZATIONAL ATTRIBUTES THAT ATTRACT HIGH QUALITY PILOTS TO REGIONAL AIRLINES.

by

Andrew Perry Reitz

Doctoral Study Submitted in Partial Fulfillment of the Requirements for the Degree of
Doctor of Business Administration

Liberty University
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Abstract

The purpose of this study was to identify which organizational attributes affected the decision to apply to or accept an employment offer as a pilot for a regional airline. The regional airlines in the United States faced a significant shortage of qualified pilot applicants. The shortage was expected to worsen over the next decade. It came from an increase in mandatory retirements, major airline growth and hiring, an increase in pilots leaving the profession coupled with a reduction in the number of candidates beginning flight training. Those regional carriers that could meet the most needs and desires of applicants would be able to fill their cockpits, while those that ignored these needs would continue to cancel flights as a result of crew shortages. Completing these flights would provide the successful airlines with a significant competitive advantage. The study was qualitative in nature, utilizing focus groups consisting of aviation management or flight students at four universities. By identifying the variables that attracted applicants, an airline could more clearly understand how to attract pilots. This would allow a company to focus its finite resources on a particular area, attracting enough high-quality pilots to properly staff the airline.

Keywords: Pilot Shortage, Pilot Recruitment, Pilot Retention, Organizational Attraction, Grounded Theory, Focus Groups
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Section 1: Foundation of the Study

Regional airlines are struggling to fill their new-hire pilot classes with qualified applicants. As the pilot supply continues to dry up, the regional airlines struggle to find new and unique ways to attract candidates (Higgins, Lovelace, Bjerke, Lounsberry, Lutte, Friedenzohn, Pavel, Chase, & Craig, 2013). These approaches range from offering flow-through agreements with the mainline carrier to cash bonuses at the end of each year of service. Earlier studies have investigated both the cause of the pilot shortage and the potential impact of that shortage (aviationweek.com, 2015; Bachman, 2014; Blair & Freye, 2012; Learchmont, 2008; Miller, 2015; Preudhomme, 2012; Russell, 2014). Other research has evaluated the attributes defining the most desirable candidate for the airline (Campbell, Castaneda, & Pulos, 2010; Damos, 2014; Seales, 2014; Smith, NewMyer, Bierke, Niemczyk, & Hamilton, 2010). Research is needed to evaluate which attributes make an airline the most appealing to the ideal candidate. There were studies from other industries, including the hospitality industry, the financial services industry, and general corporate management concerning applicant attraction (Auger, Devinney, Dowling, Eckert, & Lin, 2013; Chhabra & Sharma, 2014; Murray & Ayoun, 2011; Lieber, 2012; Ryan & Tippins, 2004). However, either these findings were no longer being studied or were not being applied to the airline industry.
Background of the Problem

An abundance of literature exists on the desirable qualities and characteristics of airline pilot applicants (Campbell et al., 2010; Damos, 2014; Seales, 2014; Smith et al., 2010). Airlines utilize this information to develop screening tools for the pilot recruitment process. There is also considerable literature concerning attracting desirable applicants to firms in the hospitality industry, the financial services industry, and of graduates seeking general management positions following an MBA program (Auger et al., 2013; Chhabra & Sharma, 2014; Murray & Ayoun, 2011; Lieber, 2012; Ryan & Tippins, 2004). The researchers utilized the results of these studies in determining which organizational attributes were the most relevant in increasing a company’s attractiveness to potential applicants. Research identifying which factors are most important to pilots seeking their first, entry-level airline job does not exist, or has not been published.

Problem Statement

At the time of this study, and continuing after completion, there is a shortage of experienced pilots willing to apply to or accept employment with certain regional airlines in the United States. Regional airlines are unable to hire enough pilots to maintain proper staffing levels (Higgins et al., 2013). Several airlines, including Republic Airways, have already parked aircraft and terminated fee-for-departure agreements with mainline partners as a result of this shortage (Bachman, 2014; Miller, 2015; Russell, 2014). This shortage of qualified applicants is expected to worsen significantly over the period of five to seven years following this study, as the wave of retirements peaks at the major airlines. Thousands of pilots will be reaching the mandatory retirement age of 65 while fewer new pilots are entering the training pipeline (aviationweek.com, 2015; Blair & Freye, 2012). Adding to this problem is a strong economy, in which demand for air travel continues to increase. The airlines not only need to replace retiring
pilots, but also need to hire additional pilots to cover this increased flying, further exacerbating the problem (Learmount, 2008; Preudhomme, 2012). As the shortage grows, regional carriers will be forced to find new and creative ways to attract the few pilots that are available. The problem that was addressed in this study was a lack of knowledge concerning which attributes are important to candidates in the hiring and staffing process at regional airlines.

Purpose Statement

The purpose of the study was to identify which organizational attributes identified in previous studies of other industries, including compensation, career prospects, job profile, organizational brand, corporate culture, employee empowerment, and professional development, were important to prospective applicants at regional airlines (Anseel & Duyek, 2008; Auger et al., 2013; Barber, 1998; Chhabra & Sharma, 2014; Chun, 2005; Lacy, Bokemeier, & Shepard, 1983; Lieber, 2012; Men & Stacks, 2013; Murray & Ayoun, 2011; Ployhart, Schneider, & Schmitt, 2006; Pollitt, 2008; Resto & Sethi, 2007; Ryan & Tippins, 2004; Trank, Rynes, & Bretz, 2002). The focus was on determining which attributes attract different types of pilot candidates, particularly the types of high-quality pilots that these carriers sought. These attributes were developed from the views and opinions of those persons most likely to seek employment at regional airlines – students enrolled in university flight programs. The results were potentially beneficial to the airlines by helping them develop more effective recruiting strategies based on what prospective applicants desire, rather than on the less effective, traditional recruiting programs in place at that time.

Nature of the Study

The current research adopted a qualitative design. The researcher chose this method for its flexibility. A qualitative method is ideal for deeper examination of a problem and formation
of a general theory pertaining to it (Moore, 2009). This method is also particularly useful for problem solving from the constructivist viewpoint, emphasizing understanding reality rather than explaining it (Moore, 2009). Parobek (2013) defined the main focus of qualitative research as exploring how man relates to his surrounding environment based on his ideologies, social relationships, and personal experiences. Horvat (2013) further defined qualitative research as discovering, identifying, and understanding meaning assigned to actions and decisions in a natural setting. Qualitative research is useful in studying people, the decisions they made, and their reasons for making them.

Qualitative research is the most suitable method for research in which both the participants’ and the researcher’s subjective views are an essential part of the surrounding reality (Flood, 2010). One of the purposes of this type of research is to understand not only the “what” in decision-making, but also the “why,” or the reasons behind them and relationships between them. Understanding the reasons for decision-making is often subjective and changes with each group. Much of the subjective meaning hinged on the language used by participants to describe their individual view of reality. Qualitative research also utilized a study of the words used to define the surrounding reality. By studying the language, both spoken and transmitted non-verbally, the researcher was able to better understand the participants’ perceptions of reality (Kafle, 2013).

One of the main reasons that a qualitative method was chosen for this study is that the reasons for desiring to work at a particular regional airline are subjective. The various attributes are not concrete absolutes, but rather are judged through the eyes of the participant. An attribute that is viewed positively by one could be considered negatively by others. Therefore, the reality is subjective, or unique to each participant. By studying the problem from a subjective
perspective, utilizing flexible methodology, the researcher was able to determine which factors influence how potential applicants view these attributes. Another reason that a qualitative method was chosen for this study is that the researcher, including biases and personal belief system, was an integral part of the qualitative process. As an active pilot at a major airline, this researcher introduced personal bias about which organizational attributes might be important to potential pilot recruits. As an active participant in the study, the researcher had the ability to compensate for that bias. The interactions between the researcher and the participants were an essential part of developing an understanding based upon their ideas and perceptions.

Establishing a relationship based on trust in a safe, natural environment was essential to eliciting honest responses from the participants (Creswell, 2014; Parobek, 2013). By being integrally involved, the researcher had the ability to shape the direction of a flexible study. The researcher rejected quantitative methods because they are primarily confirmatory in nature. These methods typically involve assigning numbers to data so that the data can be measured or compared, in order to validate or disprove hypotheses (Creswell, 2014; Parobek, 2013). This method was rejected as there were no preliminary theories to be tested or data to be confirmed. Rather, a flexible method is necessary in order to formulate a new theory. Mixed-method research was also rejected, primarily because the results of the mixed-method study would have gone well beyond the stated purpose of the study – identifying which attributes are most important to potential applicants. Two of the mixed-methods, convergent-parallel and explanatory-sequential, were rejected as they both require the use of existing theories. The convergent-parallel design requires that the qualitative and quantitative studies be conducted simultaneously and the results compared, in order to confirm the theory. The explanatory-sequential design requires that the quantitative study be completed first, and then the qualitative study be conducted as a follow-on
to examine why the results of the first phase were what they were (Creswell, 2014). As no one had previously designed a quantitative survey, neither of these designs was appropriate. The exploratory-sequential mixed-method design, while potentially effective for this type of study, was not selected because it goes beyond the stated purpose. This approach would begin with a qualitative study to formulate the new theory, which would then be confirmed in the second half of the study, the quantitative survey (Creswell, 2014).

The researcher chose grounded theory as the design for this study. Grounded theory design is a way to gather data, categorize it, classify it, and then build a theory from the classifications (Birks & Mills, 2011). This design allows the researcher to collect the data from multiple sources concurrently. By collecting the data simultaneously, the researcher is able to compare initial results and modify the follow-on stages of data collection to answer the research question more precisely (Birks & Mills, 2011). It is essential that the participants feel comfortable in answering the questions or discussing the topic. This comfort level allows for more honest and in-depth answers. According to Locke, Spirduso, and Silverman (2007), focus group research, a specific type of grounded theory experiment, is an ideal way to create a safe environment, gathering the required viewpoints in a limited period of time. Focus groups are a way for the researcher to better understand both the decisions made and the feelings, thoughts, and interactions that influence that process. The interactions stemming from the group dynamic in a focus group add to the reliability of the data, providing opportunities for differing opinions and the reasoning behind them to be flushed out (Brinkman, 2013). It is often easier for individuals to speak out in a group setting, and to openly express opinions during group interactions and conversations than it would be in a one-on-one interview setting (Edmunds, 2000). Finally, there are fewer privacy concerns with group interviews than there would be with
individual interviews. With a less-invasive topic, such as the one in this study, there are no privacy issues with recording the focus group and then having the conversation transcribed. This gives the researcher the ability to go back and listen to the interview multiple times as well as read it. This increases the accuracy of the analysis (Cooper & Schindler, 2006; Maxwell, 2012; Stewart & Shamdasani, 2014). Transcribing the data also makes it possible to enter the data into a qualitative analysis software package, such as NVIVO.

The researcher rejected several other qualitative research designs because they either did not apply to this type of study or they would not have been useful at developing a new theory. He rejected phenomenological design because it is primarily utilized to explain a specific phenomenon solely from the perspective of the participants. The biases and perspective of the researcher would have been specifically excluded. The researcher’s background, experience, and connection to the industry introduced bias into the data collection and analysis processes, making this an unsuitable approach. Ethnography was not chosen because it is primarily based on researcher participation in or observation of the participants’ lives for an extended period of time. This type of design involves either overtly or covertly studying the behavior and actions of the participants (Flick, 2009). Ethnography is also an analysis of human actions (Parobek, 2013). As the participants had not yet applied at the airlines, their application decisions could not be analyzed. Additionally, observing the application process over an extended period of time would have yielded data about which airlines the participants applied at, but not their reasoning of why they chose those airlines. The researcher also rejected action research and participant observation because they would have involved watching people in their natural environment (Parobek, 2013). It would have been time consuming and rather pointless to watch a subject complete job applications for various airline jobs. Little insight into the reasons for attraction
would have been gained by watching data entry into a computer. Finally, the researcher rejected case study design simply because the cases, or other studies, that were available for review were specific to other industries, not to aviation (Auger et al., 2013; Chhabra & Sharma, 2014; Lieber, 2012; Murray & Ayoun, 2011; Ryan & Tippins, 2004).

**Research Question**

1.) Which organizational attributes positively or negatively contribute to employer attractiveness for university students planning to seek employment as pilots at regional airlines in the United States?

**Conceptual Framework**

This study took a systems approach to develop a new theory. Systems theory is a means to discover an objective reality by studying the combined effect of the inputs rather than the sum of the individual parts (Mele, Pels, & Polese, 2010). The central theme to this type of approach is that the interactions between the various parts create a synergistic total effect that is greater than the sum of the individual parts (Flood, 2010). In this study, the researcher sought an objective reality which was those organizational attributes that were important in the decision-making process of university students planning to pursue pilot jobs at regional airlines. The significance of each attribute changed through interactions with other attributes. Rather than simply searching for the existence of specific attributes, the researcher sought to utilize a systems theory approach, to discover how the presence of multiple, different attributes affected the entire outcome, or the application decision-making process. A general system includes inputs, system processes, outputs, and some form of feedback loop (Drack & Schwarz, 2010).
Figure 1. Systems approach
Figure 1. Systems approach graphically represents the application of systems theory to this study. The inputs to the system were the research concerning the organizational attributes. This research came in the form of a review of current literature based on the three primary theories, the theory of reasoned action, expectancy theory, and signaling theory, studies of organizational attraction in other industries, and the focus groups conducted in the study. The system process was gathering and analyzing the data from these various sources, with an emphasis on how the attributes interacted. The output was a set of codified data, which was then used to formulate the theory. The feedback loop was derived from the output, in the form of refining the questions for additional focus groups, and the discovery of additional terms and theories for continued development of the literature review. As the literature review and focus groups were updated, they provided additional input to the system, and the study evolved.

The specific theory that was the primary input to this study was Fishbein and Ajzen’s (1975, 2010) Theory of Reasoned Action. This theory postulated that human behavior is a function of individual attitudes, subjective beliefs, and intentions. Individuals will actively choose behaviors based on their worldviews, their desires, their beliefs, and the outcomes they hope for (Fishbein & Ajzen, 2010). Betsch and Haberstroh (2014) suggested that an individual’s attitudes are formed by expectations of what will occur as a result of the chosen behavior. This was developed from Vroom’s (1964) expectancy theory. There are three parts to his theory, expectancy, instrumentality, and valence. Motivational force is a sum of these three parts. Expectancy, or a belief that something specific would occur as a result of a choice or decision (Shweiki et al., 2014) was the part of Vroom’s theory most relevant to this study. The participants had certain expectations based on accepting employment at a specific airline. These expectations were based on a variety of organizational attributes, including both tangible and
intangible factors. However, as the majority of participants had little, if any, real experience with the company, these expectations were often derived from their first impressions of the company. Spence (1974) developed Signaling theory within the recruiting realm. This theory states that candidates present themselves in a specific manner to organizations, in order to increase the likelihood of being selected. Connelly, Certo, Ireland, and Reutzel (2011) noted that this also applies in the opposite direction. They suggested that firms also present themselves in a specific manner in order to appear more attractive to outsiders (Connelly et al., 2011).

Particularly important in this positioning, in both directions, are the interactions between the potential candidates and the recruiters. It is from these early interactions that applicants will begin to form their expectations and views of the organization (Celani & Singh, 2011). The signals the firm chooses to send influences the expectations of the candidate. These expectations, in turn, drive behavior and the decision-making process.

These theories were identified through research in other industries, including the hospitality industry (Murray & Ayoun, 2011; Pollitt, 2008), the healthcare industry (Rutkowski, 2007), the tech and information systems industry (Resto et al., 2007), and general management positions (Ollington, Gibb, & Harcourt, 2013; Trank et al., 2002). Murray and Ayoun (2011) noted a strong correlation between applicant perceptions of a firm and the firm’s positive behaviors. Pollitt (2008) also noted that a happy workforce made recruiting efforts easier due to the higher numbers of candidates submitting applications. Ollington et al. (2013) found that candidates with limited knowledge about a firm generally form an opinion of the entire firm based on the appearance, actions, and attitudes of the recruiter with whom they first come in contact. Ollington et al. (2013) also noted that the recruiting process and recruiting websites influenced the candidates’ opinions of the firm. All of these signals from the companies had an
effect on the candidates’ opinions and expectations. Research (Rutkowsi, 2007; Trank et al., 2002) suggests that contractual factors play a large role in setting candidates’ expectations of what the result of job acceptance would be, particularly when there was limited knowledge about or exposure to the firm. Resto et al. (2007) also noted that expectations are shaped by firms’ previous actions, not solely through contractual provisions. All of these attributes contributed to applicant attraction, in various degrees. The purpose of this study was to determine which attributes were significant and what the effects of their interactions would be in the regional airline industry.
Figure 2. Decision process.
The actual process that was studied was the application decision process found in Figure 2. Decision process. The decision to apply is a combination of factors identified by Motivation Theory (Vroom, 1964) and Attraction Theory (Highhouse, Lievens, & Sinar, 2003). There are several sub-processes or sub-theories within these two primary theories. Social Identity Theory (Ashforth & Mael, 1989; Tajfel, 1974, 2010) and Signaling Theory (Spence, 1974) are affect the processes within Attraction Theory. Expectancy Theory (Vroom, 1964) and the Theory of Reasoned Action (Fishbein & Ajzen, 1975, 2010) affect the variables that form Motivation Theory. These primary and secondary theories interact to form a single output, the decision to apply at an airline. The first decision concerning employment as a regional airline pilot is deciding where to apply. There are a multitude of organizational attributes that influence this decision. Some of these factors, such as corporate culture, reputation of approach to labor relations, and adherence to collective bargaining agreements are within the firm’s control. Other factors, such as location (pilot bases), equipment operated, and the routes flown, are beyond their control. These factors are dictated by contracts with mainline partners. There are also certain attributes that are indirectly controllable by an airline’s leadership such as workforce culture and reputation. These are also major determinants in the decision-making process which are influenced by leadership styles, perceptions, and goals, as well as by labor relations approaches. The three leadership styles that have the most impact on reputation and perceptions are transactional leadership, transformational leadership, and servant leadership. Once the candidate applies for a job, the firm offers an interview, and a candidate accepts the interview offer, there are two potential outcomes – either the interview is successful and the candidate is offered a job, or he is unsuccessful and not offered a job. If the candidate is unsuccessful, he simply applies elsewhere. If the interview is successful, the candidate has a second major decision – to accept
or decline the offer. The same organizational attributes that influenced the decision to apply continue to influence this decision. There is one additional factor that also influences this decision – other job offers. This second decision also has two potential outcomes – accepting the job, or declining the offer. Declining the offer has the same outcome as failing the interview, application elsewhere or acceptance of another offer.

The key to this study was to interview potential applicants, upper-classmen enrolled in flight programs at the university level and flight instructors at large Part 141 schools, and determine which of the factors influenced their attraction to the regional airlines. As the data collection process began, it became clear that several of the attributes that were thought to influence attraction did not have an effect on it. Likewise, several unanticipated attributes had an effect on attraction to the airline. Additionally, it became clear that not all of the attributes influenced attraction in each step of the process. As a result, the conceptual framework was modified to reflect the revised decision-making process.
Figure 3. Revised conceptual framework
Figure 3. Revised conceptual framework graphically illustrates the changes to Figure 1. Systems approach based on the data collected. The revised framework was organized around themes, or clusters of attributes sharing related characteristics rather than location within the airline’s span of control. As the data collection progressed, it became clear which attributes were significant in separating the airlines into tiers, or parts of the decision-making process. The framework was also updated to clearly show which attributes contribute to each step in the decision-making process. Finally, the attributes were updated, removing an routes and equipment from the framework, while training program reputation, the ability to commute, and safety reputation were added to it.

**Definition of Terms**

*Career advancement expectations:* concerned with traditional promotions within the same job category, First Officer to Captain, which is strictly a function of company need and seniority. The primary concern is the expectation of how long it will take to be promoted to Captain, as all of the Legacy airlines require pilots to have been Captains at smaller airlines in order to apply. Prospective pilots are also concerned with career progression into pilot-based, but different jobs, including Instructor Pilot, Check Airman, Supervisory Pilot (Chief or Assistant Chief Pilot), or Safety Department positions (Lee & Singer, 2014).

*Company attributes:* the characteristics unique to each company, used to differentiate between the various airlines. These attributes include geographical location, career advancement possibilities, and reputation (Jarvinen & Suomi, 2011; Piaget, 2013).

*Equipment:* refers to the various type of equipment the airline operates, the age and condition of the fleet, and the ability for pilots to rotate between these different types (Smith & Johnson, 2006).
Industry attributes: the general characteristics of the airline industry that will affect the pilot’s career. These include both predicted changes, such as remote piloted vehicles reducing the demand for pilots, and the possibility of unforeseen events that cause major employment shifts, such as the September 11, 2001 attacks and the economic meltdown of 2008. They are both long-term in nature, including expected long-term profitability and health stemming from the current round of consolidation, and short-term in nature, including abnormally high entry-level pay due to the current shortage of qualified pilots (Seristo & Vepsalainen, 1997).

Job attributes: the characteristics specific to the job, specifically, pilot at a regional airline. The three primary aspects of job attributes are compensation, work rules, and equipment types (Bundy & Norris, 2011).

Legacy airline: a traditional airline that began operations prior to 1978 when the US Airline industry was deregulated. They have traditional route structures and older organizational styles (Holloway, 2012). These airlines have higher pay rates, better work rules, and more diverse flying than either the low-cost carriers or the regional airlines. This is the goal for most airline pilots.

Location: primarily concerned with pilot domiciles, the seniority required to hold positions at each, and the location of training facilities and headquarters. It also concerns the ability to transfer between the various locations (Lee & Singer, 2014).

Longevity: the term used to denote the length of time that a pilot is employed at an airline. This calculation is used to determine pay rates, amount of vacation, and various other non-seniority benefits (Lee & Singer, 2014).

Organizational attraction: the level of attraction that an individual has for a specific company. It is both polar and graduated, in that it is either positive or negative having varying degrees.
Organizational attraction is more than a simple feeling towards the company. It arises from the perceived compatibility between the individual and the firm, in terms of beliefs, goals, and working conditions (Van Hoye & Turban, 2015). These perceptions are formed through analysis of the information provided to the prospective candidates based on their previous experiences (Uggerslev, Fassina, & Kraichy, 2012). Organizational attraction is significant in that it has a direct effect on recruiting efforts by the firm (Van Hoye & Turban, 2015). It can be used as a predictor of recruiting process outcomes and the decision-making process (Benks, Kepes, Joshi, & Seers, 2015).

**Organizational attributes:** In the context of recruiting are the qualities that define or describe the firm. There are three main categories of organizational attributes, including job attributes, company attributes, and industry attributes (Turban, Forret, & Hendrickson, 1998).

**Regional airline:** An airline that typically operates smaller aircraft on thinner routes, on a contract basis for a Legacy airline. The seats are marketed and sold by the main-line (Legacy) partner. The regional carries the same branding as the main-line carrier, however operates as either a wholly-owned subsidiary or as a contract partner (Baker, 2013). Traditionally, this is the entry-level job for the civilian-trained airline pilot.

**Seniority:** The term used to define a pilot’s position relative to the other pilots in the company. It appears similar to longevity, but in actuality is quite different. It is initially determined by the date one is hired at an airline. A new hire is placed at the bottom of the list, and only advances when someone senior to him leaves the company, typically via changing employers or retiring. However, in the case of mergers, a panel of arbitrator hears arguments and then decides how to fairly blend the lists. A pilot will not be relocated on the list relative to his pilots from his company. But it is quite feasible that he will move forward or backwards significantly in
relation to the date of hire for pilots from the other company. Seniority is critical to airline pilots as it impacts every aspect of their lives from type of aircraft flown and position to domicile to daily schedules (Lee & Singer, 2014).

Social identity: how individuals see themselves within the context of the group they identify with (Banks, Kepes, Joshi, & Seers, 2015). It is a combination of analysis of present conditions and expectations for a future situation (Uggerslev, Fassina, & Kraichy, 2012).

Upgrade: the term used to describe the process of transitioning from a First Officer (co-pilot) to Captain at an airline. It is based on seniority, rather than merit or achievement. It also has a dramatic impact on pay. Typical First Officer pay is set at 60% of a Captain’s salary (Hodges, 2015).

Assumptions, Limitations, and Delimitations

Assumptions

The most significant assumption concerned the systems approach to the study. In order for the study to have relevance, it must be assumed that an objective, discernable reality exists. In this case, there must have been a general set of attributes that the majority of candidates agreed upon as being important or influential. This majority constituted the objective reality. If the preferences were subjective to each person, with no overlap, the study could not have been applied to a larger group, rendering it meaningless. Along those same lines, one must also have assumed that a system is made up of various parts whose whole equals more than the sum of the individual parts. The system is complex and the interactions between the parts alters the total sum (Mele et al., 2010). If this was a false assumption, then the result of the process, the whole, would have been equal to the sum of the various inputs. In this case, the study could have been completed by simply identifying the attributes, and there would have been no need to study the
interactions between them. The risk was that significant time and effort would have been wasted on attempting to identify and understand these interactions, with no new theory being developed as a result of the research. This risk was mitigated by analyzing the individual data set following each focus group interview to identify relationships between variables. If no interaction or relationship was noted, the interview questions would have been reviewed and revised as necessary to ensure their depth.

A second major assumption concerned the application of the study. This assumption was that the focus group participants were able to answer the questions. In order to do this, they needed a thorough understanding of the attributes they were discussing as well as enough self-reflection to know what was truly important to them. This study worked on the assumption that respondents knew, and were able to identify their own needs and desires when discussing the various organizational attributes (Curtis & Curtis, 2011). The risk to the study if this assumption was false was that the participants’ answers could have been random, leading to an incorrect theory emerging from the analysis of the faulty data. This risk was minimized by the moderator clearly and carefully explaining each aspect of the topic guide. The same questions were utilized in each focus group, with the moderator asking probing questions which ensured complete understanding of what was being discussed. The interview questions were also evaluated following each focus group for clarity. Any changes would have been noted in the final data summary.

A third assumption also concerned the administration of the study. This assumption was that the students felt comfortable to speak openly and candidly in the focus groups. Only through frank, honest discussions could the interviewer hope to identify the factors that contribute to the decision-making process when applying at various airlines (Brinkman, 2013;
The risk if this assumption was false was that participants would not have been open and forthcoming in the discussions. This could have also provided random or false data, leading to incorrect theory development. The researcher minimized this risk by being open with the participants in the introduction, working to build trust and rapport based on common, shared experiences.

A fourth major assumption concerned the nature of the entire recruiting process. It was assumed that the recruiting process is bi-directional in nature. That is to say that both the organization and the individual have choices to make and play a role in the process. The organization must decide what type of candidate they seek, and the applicant must know which attributes are the most important in the decision-making process (Resto et al., 2007). If the applicant’s choice was discounted, the study could not have provided any definitive answers to the research question. Rather, the decision-making process would have been a random activity. Alternatively, if this assumption was false, and the organization’s role in the process was discarded, the study lacked any real purpose. The organization must be willing to share responsibility and to modify recruiting practices according to the study’s results for it to have had relevance and usefulness. The firms must attempt to use recruiting based on the findings as a source of competitive advantage, as the pool of available applicants shrinks (Ployhart et al., 2006). This risk was minimized by thorough research of previous studies that clearly demonstrated that both parties play important roles in the recruiting process. It was further minimized by noting participants’ perceptions of their roles in this process in the focus groups.

Limitations

The major limitation of this study concerned reliability. Creswell (2014) defined reliability as a consistency across experiments as well as applicability across the general
population. As the results of the study, a theory as to which attributes motivate or attract potential pilot recruits, were based on the subjective experiences of the participants, it was essential to include as many different parts of the population as possible. Specifically, this limitation dealt with the demographics of the focus groups. There was a concern about the homogeneity of the focus groups if participants from too few universities were utilized. It is likely that the experiences of the participants would have been too similar, limiting the results of the study. One potential solution was to add additional focus groups at other universities that had different demographics within the student body in general, and within the flight program in particular. Additionally, follow-on focus groups would have been scheduled with different participants, focusing on the various demographic groups under-represented in the initial study, as necessary. It was also important to recognize that the major universities do not account for all of the potential candidates at regional airlines. Applicants from smaller colleges and universities, two-year community college programs, large Part 141 training schools, and private Part 61 individual flight training programs also exist. These groups were represented in order to make the results of this study applicable across the industry.

A second major limit involved researcher bias. The researcher for this project was a captain and former supervisory pilot at a legacy airline. Previously, the researcher was a pilot for a regional airline, two supplemental (ACMI) carriers, and multiple foreign carriers. His wide variety of experience exposed him to many different organizational attributes. This exposure left him predisposed towards certain attributes and against others. It also created a risk of knowing too much about the attributes being investigated. Corbin and Strauss (2014) warned that this level of knowledge could have caused the interviewer to be less receptive to new ideas and concepts. There were several techniques, including journaling and interpersonal-process recall
that were used to identify and minimize these biases (Chenail, 2011). The key to minimizing this bias was to recognize that it existed, particularly in a qualitative study. Once it was acknowledged, it was identified and utilized for positive rather than negative results (Corbin & Strauss, 2014).

**Delimitations**

The delimitations set for this study existed primarily to prevent it from becoming too large to manage. The researcher had a deep personal interest in the problem chosen for this study. When the study began, the researcher was an instructor pilot, training both new-hire and current pilots at a Legacy airline in the United States. The new-hires came to the airline with a wide variety of experience and backgrounds, including military pilots, heavy cargo pilots, corporate pilots, and many different regional airline pilots. Exposure to these regional airline pilots brought the looming pilot shortage to the researcher’s attention. With all of the major airlines recruiting the most talented and experienced pilots from the regional carriers, it made the researcher curious as to how these regional partners would continue to properly staff their cockpits with competent, experienced aviators. As the study began in depth, the researcher began to understand both the vastness and the complexity of the pilot shortage, as well as the severity of the potential impact.

The first delimitation was to set boundaries on the variables to be studied. As mentioned above, there were two primary sources of pilots for the major airlines, the military and regional airlines. There were, however, many more sources of pilots for the regional airlines, including university aviation programs, non-university flight schools, private flight instruction, corporate aviation, and other time-building jobs such as banner towing, aerial survey, flying skydivers, pipeline patrol, or aerial tours to name a few. The majority of new-hire pilots at the regional
airlines, 72%, had a university degree. AABI accredited programs, while only accounting for 23% of these degrees, were still the biggest source of pilots (Bjerke, Smith, Smith, Christensen, Carney, Craig, & Niemczyk, 2016). Graduates of AABI accredited university programs also had the highest success rate in initial training events at the regional airlines (Fanjoy, Young, & Suckow, 2006). Therefore, the first delimitation was to define the general population from which the sample would be drawn. This population was defined as students enrolled in AABI accredited university aviation programs, having the desire and intent to fly for regional airlines after graduation.

At the time of the writing of this paper, there were approximately 60 schools in the United States that were members of the Aviation Accreditation Board International (AABI). With that many schools, spread across the entire country, attempting to conduct focus groups at every one of them would have resulted in a study that would be difficult, if not impossible to complete. Therefore, it became necessary to further limit the number of participating universities in order to keep the study at a manageable size, without compromising its reliability and validity. As complete, generalizable results applying to the entire pilot population were not sought, the researcher opted to utilize convenience sampling. The second delimitation was to define the sample as students in universities to which he had easy access, either geographically or in willingness to participate. Conversely, universities that would have involved complex travel arrangements or that failed to respond to requests from the researcher were excluded from the study.

The third delimitation was to set limits on the objectives of the research. Determining which organizational attributes were most important to candidates at all three phases of the recruiting process would not have been possible by interviewing university students, the majority
of which had not participated in the second and third phases of the recruiting process yet. Thus, the third delimitation was to limit the goal of the study to determine which organizational attributes were prevalent in the first stage of the recruiting process, initial attraction and application.

**Significance of the Study**

The forthcoming shortage has been well publicized in the United States (aviationweek.com, 2015; Bachman, 2014; Blair & Freye, 2012; Learmount, 2008; Miller, 2015; Preudhomme, 2012; Russell, 2014). However, given how the problem has only recently developed, little research exists on the topic. The existing articles already painted a bleak picture beginning to emerge. Higgins et al. (2013) noted that US carriers would need 95,000 new pilots between 2013 and 2023. However, there were only 60,000 pilots in the training pipeline in 2017. That amounted to a shortage of 35,000 pilots in that six year period. Learmount (2008) accurately predicted that the shortage would begin overseas, as the US began its recovery in 2010 and 2011. Learmont (2008) went on to predict that as the foreign carriers began to experience a shortage, they would improve salaries and work rules, drawing candidates back from the US carriers, particularly the regional airlines.

Smith et al. (2010) and Damos (2014) both noted that selecting qualified applicants is crucial to the financial success of a regional airline. Republic Airlines was cancelling flights, parking aircraft, and deferring future deliveries because of a shortage of qualified applicants. Hiring unqualified (or less qualified) pilots could have increased the airlines’ operating costs, through additional training costs, lost productivity, and human resource costs associated with employee separation and replacement. The researcher noted that specific knowledge, skills, and
attitudes make a pilot candidate highly qualified. Airlines need to recruit candidates with these attributes, if they desire to minimize these costs (Tracey & Hinkin, 2008).

**Reduction of Gaps**

There was a gap in the current literature concerning what attracted pilot candidates to regional airlines. There were studies concerning what made candidates attractive to airlines and how to screen for that specific type of candidate. Campbell et al. (2010) studied the effectiveness of personality tests of forecasting success in military flight training environments. They found that traditional screening tools were only partially successful at predicting failure rates. They found that there were as many failures within the personality types that should have passed easily as there were success stories from the group that should have faced certain failure. Thus, airlines need additional methods by which to screen employees, not only utilizing simple personality screenings or aptitude tests.

A second gap in the current literature involved the relationship between an airline’s safety culture and its reputation. There were previous studies that examined the negative effects of an accident on an airline’s reputation (Graham & Bansal, 2007; Siomkos, 2000), as well as studies that examined the relationship between safety and economics in the airline industry (Rose, 1990, 1991). Barling and Hutchinson (2000) also studied the effect of implementation of commitment-based safety programs on reputation in the chemical industry. Their research found that effective commitment-based safety programs increased employee commitment and trust towards leadership. This increased commitment and trust led to a more positive human-resource reputation (Barling & Hutchinson, 2000). However, at the time of this study, there were no studies that applied this concept to the airline industry, with the intention of investigating the positive effects of the safety-reputation relationship. Additionally, the previous research was
focused on occupational safety rather than regulatory compliance and the positive effects on reputation and attraction derived from this compliance.

A third gap, similar to the second was also discovered during the data collection and analysis process. This gap in knowledge involved the relationship between the quality of an airline’s training program and its reputation. Studies in other industries have been conducted examining the relationship between training reputation and effectiveness of training (Aginis & Kraiger, 2009; Facteau, Dobbins, Russell, Ladd, & Kudisch, 1995; Switzer, Nagy, & Mullins, 2005). There have also been studies examining the effects of training programs on both job performance and on motivation (Chong, 2007; Clardy, 2005). However, the researcher was unable to find any research that examined the relationship between training reputation and either overall reputation or attractiveness.

**Implications for Biblical Integration**

Paul wrote to the church in Corinth, “Remember this: Whoever sows sparingly will also reap sparingly, and whoever sows generously will also reap generously.” (2 Corinthians 9:6, NIV). While that verse is often used in reference to giving, it can also easily be applied to the subjects of this study. When a leader cultivates a positive culture, and treats employees fairly, it can be expected that his firm will have an abundance of applicants, particularly in an industry not known for equitable treatment of employees. By the same token, a leader that allows a negative culture to pervade the organization can expect the best and brightest applicants to shy away from working there.

The author of Proverbs warns that “Pride goes before destruction, a haughty spirit before a fall” (Proverbs 16:18, NIV). Pride is one of the biggest blocks preventing a leader from seeing their own shortcomings or failures, or the organizational shortcomings of their firm. By
comparing the leader’s perceptions to those of the pilots at his airline, the true organizational culture can be identified. In a healthy, vibrant company, these perceptions will be very similar. However, identifying the differences in those that are deluding themselves is the first step in removing the stumbling-block of pride and preventing a fall.

The same author also wrote, “For lack of guidance a nation falls, but victory is won through many advisers” (Proverbs 11:14, NIV). The same can be said for a large company or organization. When the leader fails to listen to wise and moral advisors, he is doomed to failure. However, a leader in a firm with an open and positive corporate culture will listen to all points of view and consider every aspect before making decisions. This type of inclusive leadership style will attract more and better candidates than the airline that is closed and cold.

Finally, as Paul said to the church in Philippi, “Do nothing out of selfish ambition or vain conceit. Rather, in humility value others above yourselves” (Philippians 2:3, NIV). Again, the toxic cultures that flow from selfishness, vanity, and arrogance point to destruction. Well qualified pilots do not want to work for this type of company or leader. Rather, these companies with this type of conflict will struggle to find qualified applicants, while the firms with strong, positive cultures have less trouble attracting candidates. This study will help firms identify which type of culture they have and help to meet recruiting goals.

**Relationship to Field of Study**

Pilots choose to apply at different regional airlines for a variety of reasons, including contracts, pilot-base locations, projected upgrade times, equipment flown, and the airline’s reputation (Fraher & Gabriel, 2014). Some of these factors are beyond the direct control of leadership, such as aircraft operated, routes flown, and crew bases. These are directly dependent on the contracts with the major air carriers that the regionals support (Canaday, 2014). However,
reputation is directly controllable by the leadership. The actions and words of senior leadership can create, sustain, or even destroy the organizational culture of a firm. Culture plays a large role in both the internal and external reputation of the company. A leader can make or break the culture of a company (Liu, Liao, & Loi, 2012; Men & Stacks, 2013; Zhu, Sun, & Leung, 2014). Gordon Bethune converted Continental Airlines from a company with a poor reputation to one of the best airlines in the world, in less than two years. On the other hand, Bethune’s predecessor took the best airline in the world (Bethune, 1999) back to the bottom of the US rankings (Wang, 2012).

Reputation is more than a simple attitude towards or judgment about a firm. Senior leaders at a regional airline have control over many factors that define this reputation. Baum and Kabst (2014) studied the effectiveness of recruiting advertisements and utilizing websites for recruiting. A large part of both mediums is image control. The image that the company projects is often the extent of what the candidate sees. Thus, if reputation really does play a role in recruitment, advertising aimed at improving reputation is money well spent.

Chapman, Uggerslev, Carroll, Piasentin, and Jones (2005) also noted that attraction to a firm plays a substantial role in recruiting activities. They found that reputation alone was significant, but not the only factor in accepting employment decisions. Factors such as perceptions of the recruiting process played a role in the decision, as did recruiter characteristics and perceived alternative choices. Leadership can direct and control this process by being actively involved in it. Thus, building a reputation at an earlier stage would create competitive advantage in the recruiting process. This study should help regional airlines determine which attributes are most important and how to best use their finite recruiting resources to increase applicant attraction.
Once it is determined how important the various attributes are in the application process, a determination can be made as to how much time and how many resources should be spent on positively influencing the perceptions of the airline’s culture for both current employees and potential employees. Transactional leadership, transformational leadership, or servant leadership approaches are all effective leadership styles for effecting culture. The most appropriate leadership style would be firm and situationally specific.

A Review of the Professional and Academic Literature

The literature review begins with background information about the problem, including an overview of the pilot shortage, the causes of the shortage, and the potential effects of this shortage. The next section of the review is an overview of the recruiting process, based on current theory and recent studies in a variety of industries. The third section of the review is a summary of various theories applicable to this study that impact recruiting efforts. This includes theories on candidate targeting criteria, the effect of reputation and perception on organizational attraction, and the theories that control the decision-making process, including motivation theory, expectancy theory, and signaling theory. The next section of the review contains an examination of specific variables, or attributes in the recruiting process, identified in studies of other industries. Finally, the literature review concludes with a summary of the potential themes and perceptions of this study.

Background of the Problem

Overview. There is a shortage of qualified applicants for pilot positions at the regional airlines in the United States. Some carriers are already cancelling thousands of flights per month, deferring deliveries of new equipment, and even parking older jets simply because they cannot hire enough pilots to cover their contracted flying. At the time of this writing, one carrier
has filed for bankruptcy protection. The problem is forecasted to considerably worsen by 2023 (aviationweek.com, 2015; Bachman, 2014; Blair & Freye, 2012; Learmount, 2008; Miller, 2015; Russell, 2014).

There are several schools of thought concerning the impending shortage of qualified pilots in the United States. On one hand, Higgins, et al. (2013) believe that the United States is on the verge of a major shortage of qualified pilots. These authors estimate that US airlines will need to hire more than 95,000 pilots between 2013 and 2023. However, with more than 45% of new commercial pilot certificates being issued to foreign pilots, the US flight training industry will only provide 60,000 pilots in that same time frame, leaving a projected shortage of 35,000 pilots. This will be devastating to the US airline industry, both in financial terms and in terms of safety. It is anticipated that airline labor costs will increase dramatically in order to attract qualified candidates (Higgins et al., 2013). Duggar, Smith, and Harrison (2010) estimated that the shortage could reach 44,000 by 2028. Blair and Freye (2012) also predict a shortage of pilots. However, their numbers are slightly more conservative. They estimate that the US airline industry will need to hire 82,800 pilots between 2012 and 2032, leaving the industry with a shortage of 22,800 pilots over the same two decades.

Safety will also be adversely affected as the candidate pool dries up and airlines are forced to fill classes with barely qualified, inexperienced pilots. The 45,000 retirements will drive rapid career advancement and promotions, which could potentially lead to less experienced, less trained, and less qualified pilots in command of airliners. Seales (2014) noted that risk increases inversely proportional to a pilot’s experience level. Therefore, it can be anticipated that as experience of new hires decreases, the risk to flight safety will increase linearly (Seales, 2014).
There are several factors involved in mitigating this risk, several of which are beyond the scope of this study. The factors that will not be addressed in this study include specific types of safety data gathering programs, including Flight Operational Quality Assurance (FOQA), Aviation Safety Action Program (ASAP), and Safety Management Systems (SMS), as well as specific types of training programs like Advanced Qualification Programs (AQP), and specific risk mitigation programs, such as Threat and Error Management (TEM). The study does, however, address one of the most important factors in mitigating this risk – hiring and retaining the most competent pilots available.

However, the idea of a pilot shortage is not universally accepted. Lee Moak, the former chairman of the largest pilot union in the country, ALPA, wrote that “the truth about the bogus pilot shortage is out. Increasingly desperate attempts by those who promote this fallacy are inevitably losing ground to the facts” (Moak, 2014, p. 58). Moak argues that there are plenty of qualified pilots available but, they choose not to work as pilots based on the poverty-level wages paid to regional (commuter) pilots. Furthermore, he argues that if the lower-tier airlines paid more and had better working conditions, they would have no trouble filling classes. His belief is that it is strictly economics, not reputation that plays the deciding role in the pilot-hiring decision-making process.

Furthermore, there have been dire predictions of a pilot shortage for decades. Taylor, Moore, and Roll (2000) predicted operational crises resulting from pilot shortages in the United States Air Force in the late 1990’s. They warned that with thousands of pilots leaving the military for the airlines in 2000-2001, units would lose combat effectiveness. They even went so far as to claim that the entire USAF would only be 60% combat effective in the event of a national emergency or war (Taylor et al., 2000). These crises never materialized. Following the
attacks on September 11, 2001, the Air Force was able to deploy units with 100% effectiveness in less than one month.

**Causes of the pilot shortage.** Researchers suggest that there are several causes of this shortfall, including fewer pilots in the training pipeline, fewer people choosing to pursue a career in aviation, and a drastic increase in foreign pilots training in the United States (Blair & Freye, 2012; Higgins et al., 2013; Seales, 2014). Only 53% of current flight instructors hope to eventually fly for the airlines. Of the 43% that have no desire to fly for the airlines, 78% reached that decision based on a risk/reward process. They believe that it is too expensive to become an airline pilot without a significant chance for a payoff. The group’s projection is that there will be disruptions in the pilot supply in the next 5 to 7 years based on these declining numbers (Higgins et al., 2013). This decline in new entrants is marked by a year-over-year decline in the issuance of new pilot certificates (Blair & Freye, 2012; Seales, 2014). The number of student pilots that took FAA mandated written exams decreased by 18.92% from 2002 until 2009, and by an additional 17.53% from 2008 to 2009. The annual number of FAA issued pilot certificates declined from 150,000 in 1990 to 90,000 in 2009. That is a decline of 40% over two decades. The greatest decline was in the issuance of commercial pilot certificates and Airline Transport Pilot certificates declining by 60% (Blair & Freye, 2012). The airlines are also facing a hiring wave based on increasing numbers of mandatory retirements at age 65. This wave was originally scheduled to begin in 2008, but was pushed to 2013 with the change in mandatory retirement age from 60 to 65 through the Fair Treatment and Experienced Pilot Act, HR 4343, passed in December 2007 (Blair & Freye, 2012; Cary, Nicas, & Pasztor, 2012; Higgins et al., 2013; Preudhomme, 2012; Seales, 2014).
New Federal regulations are also affecting the shortage. Preudhomme (2012) and Higgins et al. (2013) identified additional regulatory causes of this impending shortage beyond the simple explanation of more pilots retiring than entering the field. Public Law 111-216 (originally HR-5900) increased the requirements for pilots to fly for airlines. This law requires that all pilots now hold an Airline Transport Pilot certificate to fly for any scheduled airline. This certificate requires 1,500 hours of total flying time and significant training. Thus, it will now be even more difficult and costly for new pilots to accumulate enough hours and experience to seek employment at the regional airlines. It is anticipated that this law will drive more pilots away from the profession (Preudhomme, 2012). New flight time and duty time limits introduced by FAR 117 are also expected to contribute to the shortage by requiring airlines to schedule less efficiently, giving pilots longer rest periods between duty periods, which will increase staffing requirements (Higgins et al., 2013).

Significantly increased costs for flight training also contribute to fewer people choosing to pursue an aviation career. Modern aircraft are becoming more exponentially more expensive to acquire, increasing the costs passed on to flight students. Increased fuel and liability insurance costs have also increased the hourly cost of aircraft operations. Regulatory changes in financing flight training have made funding flight training difficult, if not impossible, for many people (Blair & Freye, 2012; Higgins et al., 2013; Preudhomme, 2012). Even simulators used for procedural training, once a less-expensive alternative to training in an aircraft have become expensive to acquire. This increase in acquisition costs makes it nearly the same cost to utilize a simulator or an aircraft (Preudhomme, 2012). Additionally, the majority of new hire pilots at regional airlines come from employment as flight instructors where they logged the hours necessary to be hired at an airline (Preudhomme, 2012). As airline hiring continues to increase,
the turnover rate for flight instructors will also increase, and the average number of pilots obtaining Flight Instructor certificates has declined by 38%. Having fewer and less-experienced flight instructors providing primary flight training typically increases the number of hours required to acquire the FAA certificates and ratings. This also increases the costs of flight training for new pilots, with some estimates reaching as much as $159,700 to gain the necessary 1500 hours to apply to an airline (Blair & Freye, 2012).

Finally, the military was traditionally a key source of pilots for the airlines. However, this is no longer the case. A slowing operational tempo and an increase in retention bonuses for military pilots has led to fewer pilots leaving the military for civilian airline careers and for a reduction in new pilots being trained in the military today. This reduction in new pilots will cause an even further shortage for the airlines in ten years, when initial commitments are complete (Higgins et al., 2013).

There are several other factors that will contribute more to the pilot shortage that were not included in Higgins et al. (2010). These factors include the additional staffing requirements stemming from the implementation of FAR 117, the new reserve/rest rules. They simply estimated the airlines’ staffing requirements to increase by 2.7%-3.1%. However, Cary et al. (2012) now show that the increase is closer to 5%. A second factor that must be determined is the hiring of US pilots at foreign carriers. While the US airlines were operating with bankruptcy-era labor agreements, the foreign carriers were more attractive, both financially and in terms of work rules. However, as the US carriers now have better contracts, the foreign carriers are less attractive. It is assumed that this will draw fewer pilots out of the US hiring pool, but how many is yet to be determined. Finally, the effect of the 1500 hour rule on career aspirations must be determined. It will become increasingly difficult and expensive for new
pilots to reach the required experience level to get entry-level airline jobs. The assumption is that this will have additional negative effects on the supply side of the equation, however, how much is unknown (Higgins et al., 2013).

**Effects.** The airline industry currently contributes 1.3 trillion dollars to the American economy annually, representing 5.2% of the GDP. It provides roughly 376,000 jobs in the US. Every major forecast shows an increased worldwide demand for pilots. There are currently 18,000 regional pilots in the pipeline to fill the 45,000 retirements at the major airlines scheduled to occur in the next 20 years. Any shortage that leads to the termination of service will have a dramatic impact on the US domestic economy (Higgins et al., 2013).

Flight disruptions will be the most pronounced at the regional airline level, and will likely lead to widespread schedule cancellations, particularly to smaller communities. Today, 476 out of 681 airports in the US have regional airline service only. That means that 70% of the airports that have service in the US are at risk if a solution to this shortage cannot be found (Blair & Freye, 2012; Higgins et al., 2013; Preudhomme, 2012).

**Recruiting Overview**

Recruiting is an essential part of a strategic talent management program. Berger and Berger (2011) noted that talent management is a key process in building and sustaining a culture of excellence. Every level of leadership must be involved in developing and implementing an effective recruiting strategy. The enterprise-level leadership must set the standard (Berger & Berger, 2011). These leaders determine the value of the program and make it part of the strategic goals. The division-level leaders decide what is important or sought in candidates. These leaders transition the recruiting program from the strategic/planning level into the practicable, applicable plane. The manager-level leaders then carry out the program. These leaders complete
the recruiting and training processes (Barber, 1998; Berger & Berger, 2011). Lewis and
Heckman (2006) list three parts of the talent management process, putting the right person in the
right job, leadership continuity and individual advancement, and managing the overall flow of
people. Recruiting helps to achieve all three of these goals. Harvey (2013) lists attraction as the
first of four parts of the Human Resource cycle. A recruitment strategy and development of a
pay and benefits strategy are the two primary activities in this part. He also notes four critical
parts to attracting talent. First, as Berger and Berger (2011) noted, recruitment must be a priority
to senior management. It must be part of the strategic goals of the organization. Next, the
recruitment process must be honest, providing accurate previews of both the company and the
firm. Finally, the processes and promised benefits must be real. It is essential that a firm carry
out programs that are promised. Hypocrisy or false promises can quickly destroy a recruiting
effort. There are tangible benefits for a firm with an effective recruiting strategy (Newell, 2005;
Walker, 2010). Hiring the right person can increase productivity, reduce absenteeism and
disciplinary issues, improve customer satisfaction and relationships, and can lower turnover
leading to additional recruiting costs.

The recruiting process can be divided into two main areas, internal recruitment and
external recruitment. Internal recruitment is most concerned with developing talent from within
and retention of existing employees. External recruiting, on the other hand, is most concerned
with identifying and attracting outside talent (Ployhart, Schneider, & Schmitt, 2006). The
external recruiting process is the focus of this study.

divided the recruitment process into three stages, the initial outreach, holding the applicant’s
attention, and then persuading the applicant to accept the job offer. The first phase, known as
attraction, is primarily concerned with perceived fit. Person-Organization fit is one of the
driving theories in this phase (Ployhart et al., 2006). It is also important to note that their study
found that informal recruiting methods are more effective than formal methods in this stage. The
second stage is holding the applicant’s interest. In this phase, the recruiter and the recruiting
process have the greatest effect on the candidate. Signaling Theory is the primary theory in this
phase. In the final phase, convincing the applicant to come accept employment, the critical issue
concerns the specific job attributes. Ployhart et al. (2006) separate attributes into five primary
categories. They also used the previous work from Lacy, Bokemeier, and Shepard (1983) to
order the importance of these five attributes. Another major factor in this phase is the image of
the company to the “outside” world. Equality is an essential part of this image. It is critical that
a firm be seen as fair in comparison to other firms. Perceived fit is important in this phase, but
varies in importance based on the number of alternatives the candidate has and the level of
desperation for employment.

Ployhart et al. (2006) also noted that the importance placed on various organizational
attributes changes, depending on the phase of the recruiting process. Barber (1998) noted that
perceived fit, or the person-organization relationship is an important factor not only in the
decision to apply, but also in the decision to accept an employment offer. Good initial
impressions of the organization are critical through the entire recruitment process.
Organizational image has two components, evaluative and cognitive. The evaluative potion of
image is how the organization is perceived. Perception is based on knowledge, beliefs, and
feelings of the external observer. The cognitive component of image is based on factual
observations of how the firm treats employees and customers. This component is based on
tangible, measurable behavior rather than feelings or subjective perceptions. Social identity
theory is an essential part of phase two. However, it also plays a role in phases one and three of the recruiting process. Ployhart et al. (2006) noted that the interaction between the company and the candidate throughout the recruiting process, and, more importantly, perceptions of that interaction, is important in all three phases. Signaling theory is the idea that applicants form an opinion about the organization based on this interaction with recruiters and other representatives of the company. Lacy, Bokemeier, and Shepard (1983) also noted that the nature of the work and the potential for advancement are the two most important attributes in the third phase of the recruiting process, but also affect the decision to apply in the initial phase.

Banfield and Kay (2008) divided the recruiting process into three phases, pre-recruitment, post-selection, and post-employment. This study is concerned primarily with the first phase, the pre-recruitment phase. They further divide this first phase into recruitment and selection activities. While there is some overlap between the two, they are distinct activities. There are four primary recruiting activities in the pre-recruitment phase. These include a job analysis, determining where to seek candidates, determining how to reach candidates, and determining the most desirable qualifications in candidates (Harvey, 2013).

Theories on Recruiting

Targeting. The first phase of the recruiting process, the attraction phase, is where the company begins to locate potential applicants. The first crucial decision is determining whom to target, or attempt to attract to fill a specific position. The organization must determine which desired characteristics, skills, and employee attributes are essential for the vacant position (Resto & Sethi, 2007). Once the ideal candidate is defined, the organization must decide from where to draw talent in order to reach the candidate who most closely resembles this ideal. The choices for recruitment sources include traditional, external searches or internal sources, such as
promotion, retraining, or reassignment of current employees (Barber, 1998). The decision on where to begin the search is based on a multitude of factors from within and beyond the firm’s control, including government regulations pertaining to minimum qualifications and the availability of desired talent.

Ployhart, Schneider, and Schmitt (2006) noted that there are two primary sources of candidates, internal recruiting and external recruiting. Internal recruiting is more focused on turnover decisions and employee retention in order to recruit from inside the organization, whereas external recruiting is more focused on perceived fit in order to attract candidates from outside the organization. Perceived fit, in regards to Person-Organization (P-O) fit, is most concerned with individual choice and the applicants’ attraction to firms that are most similar to the applicant (Ployhart, Schneider, & Schmitt, 2006). This perceived fit is based on both subjective and objective factors. The objective factors are how well the firm’s traits match the applicant’s personality, while the subjective factors involve the applicant’s desires and level of importance given to the objective traits. The individual needs to get the objective information from either the firm or other external sources. The information, however, can be either correct or incorrect. The firm has a certain amount of ability to influence the information and how the information is viewed (Ployhart, Schneider, & Schmitt, 2006). The external recruiting process is the focus of this study.

Another major emphasis in recruiting is targeting, which has the goal of identifying and attracting a very specific type of candidate (Newman & Lyon, 2009). The most important aspect of targeted recruiting is to know the audience or pool from which recruiting is drawn. A recruiter must identify and understand the desires and expectations of, and generational differences between types of applicants. Then a firm needs to tailor its efforts to reach that
specific audience. The more closely the offer aligns with the desires of the target candidates, the more successful the recruiting efforts will be.

In the case of the current Millenial generation, high performers are more concerned with career advancement and less concerned with money. These high performing Millenials are constantly looking forward at what is next. They are self-focused and inward-looking, less concerned with the health of the firm. Rather, they want to know that opportunities for advancement and promotions exist. Money is important, but takes a backseat to moving up the career ladder. Resto and Sethi (2007) also identified other factors that are less important to this current Millenial generation, but still should be considered. These include location and mobility, the products or services the company provides (freebies for the employee), and organizational/cultural reputation (Resto & Sethi, 2007).

A major part of preparing for external recruiting is for the firm to perform an accurate assessment of their organization and of the job they are seeking to fill. Ployhart, Schneider, and Schmitt (2006) noted that external candidates are most attracted to organizations that are deemed a good fit with values, personalities, and interests. Alternatively, internal recruits are more concerned with job satisfaction and primarily with three specific attributes, pay, opportunity for promotion, and the leadership style of supervisors, and to a lesser extent, interpersonal relationships with coworkers and the work setting, including job security, working conditions, and forms of recognition (Ployhart et al., 2006).

Trank, Rynes, and Bretz (2002) noted that candidates with high cognitive ability and previous demonstrations of high achievement are most concerned with interesting and challenging work. Applicants with higher abilities and skill sets seek work that offers additional challenges. These challenges offer more opportunities to compete against others and
differentiate themselves. Thus, high achievers are more concerned with the specific job attributes as opposed to general organizational attributes. The specific job characteristics high achievers seek include opportunities for additional training, broad job paths that offer the ability to move in different directions, and flexibility in work. Notably, Trank et al.’s (2002) study found that these high performing candidates are more concerned with wealth-generating opportunities than a secure pay system and are more concerned with the ability to move between “exciting” projects than being restricted to what they were trained for. These desires translate into a preference for a pay structure that is based on individual performance rather than group based, as long as a chance to excel is provided (Trank et al., 2002).

One of the most important personality traits in pilot applicants, identified in previous studies is the team-player attitude. However, this attitude must be clearly defined for an organization to develop a recruiting program aimed at individuals with that skill-set. Keller (2014) espouses that individuals within the firm are assets, with both tangible and intangible benefits. Furthermore, Keller (2014) defines a team as a bundle of individual resources that works together as a cohesive unit in support of the organization’s goals. Keller (2014) then asserts that each individual’s performance is directly affected by the performances of the other individuals on the team, both positively and negatively. The overall performance of the team is based on the concept of synergy, that the total output of the team exceeds the sum of the outputs of each individual. This synergy comes directly from the compatibility of the team members having shared strategic goals (Keller, 2014).

Lencioni (2016) identified three key virtues found in team players. These include humility, a hunger for success, and what he refers to as people smarts. Humility is a three part trait, having the desire to compliment and praise others, the willingness to admit mistakes, and
the ability to share credit with others. The hunger for success is the internal drive for the team to succeed. It is a passion for the organizational mission. It is also a willingness to go the extra mile, doing what needs to be done to accomplish that mission. This hunger for success is also the internal desire for advancement, looking for other areas in which to contribute. People smarts can be equated to emotional intelligence. It includes the personal traits of compassion and empathy for others. A key part of this is the ability to be an active listener (Lencioni, 2016).

Two types of knowledge, tacit knowledge and explicit knowledge can also be added to this list of personal traits which comprise people smarts. Tacit knowledge is general knowledge, skills, or abilities that are the foundation of the job. A team player needs base competence in the activities of the team in order to contribute to the team’s effort. Explicit knowledge includes knowledge, skills, or abilities specific to the task at hand. This type of knowledge is necessary to comply with the rules and procedures within which the team operates. This tacit knowledge comes from either organizational learning or experience. The organizational learning can come from formal education or from informal learning, knowledge transferred from other team members. Either type of knowledge has value when it has three attributes – it is transferrable between team members, it is appropriate to the task assignments of the team, and it can be absorbed or learned by others. The more transferable the knowledge, the more value it contains (Keller, 2014).

Spinellis (2015) noted that there are two main risks when seeking candidates with these traits. The first danger is making the application criteria too strict, resulting in too few applicants for available positions. Alternatively, there is a danger in utilizing too few selection criteria, resulting in an unmanageable number of applicants. Spinellis found that by utilizing technology to screen the applicants from an open application system, he was able to winnow the number of applicants for a certain position to a manageable level, without missing valuable applicants. The
screening tool had two functions. The first was to identify and match applicants with open positions based on applicant traits. The second and equally important function, was to match applicants with open positions based on their desires and expectations, which ultimately resulted in greater P-O fit. The upside to this approach was that the computerized system helped to identify the team players, both from their experiences, and from their expressed desires. The downside was that this process involved a higher cost and greater manpower needs in developing the matching system (Spinellis, 2015).

It is important to specifically define diversity. It has become a commonly used word in business vocabulary, and is often a generic, unspecified term. Ferdman and Deane (2014) distinguish between the terms diversity and inclusion. Diversity is defined as simply the existence of multiple identity groups with unique cultures within a single organization. The differences between cultures can be based on individual traits or collective, group identities. Inclusion, on the other hand, is a specific, intentional means to increase the diversity of the group. It is a program, or programs that allow each individual to be a unique person with their own attributes, but fully integrating them into the organization (Ferdman & Deane, 2014). Essentially, they are fully engaged without losing their individuality. This is an important distinction as it is possible to claim diversity within an organization, without actually having inclusion. In that situation, many of the competitive advantages of having a diverse workforce are minimized, or even lost.

There are several advantages to seeking a diverse workforce when determining the characteristics of the ideal candidate. Legal and regulatory advantages exist when complying with affirmative action statutes. There are also educational and social benefits, in that exposure to a variety of different cultures can create a richer learning environment through a broad base of
experiences (Ison, Herron, & Weiland, 2016). There are also numerous business advantages found in a diverse workforce. Contact with different cultures and belief systems will lower individual bias and acts of discrimination, reduce or at least mitigate the effects of interpersonal conflicts, and increase fairness and the perceptions of fairness (Ferdman & Deane, 2014). Combined, these factors increase creativity in the thought process which leads to greater flexibility and problem solving within the firm. This increased flexibility leads to a more efficient utilization of resources, reducing waste and ultimately lowering costs for a firm (Ferdman & Deane, 2014).

The aviation industry, specifically in the job of professional pilots, is particularly universe. In the 2010 US Census, the population of the United States was 72.4% white and 27.6% non-white. Yet, only 9% of professional pilots are non-white. When women are included in the percentage of professional pilots, that number only increases to 18.4%. That number is expected to rise slightly, as 27.3% of students in collegiate aviation programs are minorities, up from 16.5% in 1997, 17.1% in 2004, and 22.2% in 2014 (Ison, Herron, & Weiland, 2016). What this means is that the US aviation industry is lagging other industries in terms of diversity.

Jackson and Bruns (2011) studied the lack of minorities in the CPA field and came to several conclusions that are easily transferrable to aviation recruiting. They found three main reasons for lower numbers of minorities working as CPAs. First, there are not enough students entering the field to replace those active CPAs currently leaving it. This is not limited to minorities, but the entire population. Accounting firms are facing a shortage of CPAs. Second, there exists a lack of specifically qualified, credentialed candidates in the general population as well as in minority groups. It is a time consuming and expensive process to earn the credentials required. Third, there exists a larger educational and societal issue that students from socio-
economically disadvantaged schools are not getting the necessary base skills necessary to get the advanced credentials required. They noted that the lack of entry into the field, particularly by minority applicants is based on six main factors. These include a lack of engaged role models, a lack of education about the career, the attractiveness or glamor of other professions, a lack of value or respect for the necessary credentials, a perceived lack of career advancement within the field, and a fear of failure in the credentialing process. They offer several suggestions to solve this shortage, including starting programs in high schools, run by volunteer professionals in the field aimed at teaching the required base skills for later study and aimed at increasing long-term interest in entering the field (Jackson & Bruns, 2011). If they are able to link successful professionals with students, it is possible that they will eventually be able increase the number of qualified applicants, ultimately increasing diversity.

While that long-term approach will work to increase diversity, the short-term goal of increasing diversity in the immediate future still remains. Madera, Dawson, and Guchait (2016) studied the hospitality industry and found that the psychological diversity climate has a direct effect on both current performance and on recruiting activities. They defined psychological diversity climate as the perceptions of stakeholders that the policies and practices of an organization are fair, and that these policies, practices, and procedures actually help to create and sustain a multicultural workforce. In other words, this climate is defined by the firm’s words and actions, and the effectiveness of both at fostering a healthy, inclusive atmosphere in the workplace. These perceptions are based on people’s cognitive judgements, and contain both formal and informal aspects. The formal aspects come from the tangible, measurable environment, including stated policies, procedures, and programs. The informal part of these judgments is based on personal experiences within the firm – employees’ personal perceptions of
reality. They noted that firms that had formal diversity initiatives in place had a more positive climate than those that did not. This positive climate is associated with higher job satisfaction, lower turnover, and a higher organizational commitment. The firms with high positive climates also had less stress between different working groups leading to more and better group interactions (Madera et al., 2016). Ultimately, this led to greater productivity and lower costs.

A second factor that led to a greater positive climate was positive perceptions of organizational justice. When a firm is viewed, both internally and externally, as fair, the overall perception of that firm is positive. This is particularly true for minority applicants. The most important characteristics that minority applicants sought were opportunities for advancement and equal chances for success – organizational justice. It is hypothesized that the reason minority applicants are more concerned with organizational justice than their Caucasian counterparts is the increased exposure to discrimination, both overt and implied, that minority applicants face (Madera, Dawson, & Guchait, 2016).

These findings are significant for this study in that one of the necessary attributes of successful pilot applicants is a higher than average cognitive ability. Banich, Stokes, and Elledge (1989) identified six key cognitive abilities that are essential in pilots. These cognitive skills are spatial orientation, working memory, perceptual-motor skills, attentional performance, processing flexibility, and sequential planning ability (Banich, Stokes, & Elledge, 1989, 1991). Three key personality traits, often associated with individuals with high cognitive ability and high achievement are self-sufficiency, forthrightness, and creativity (ability to be imaginative). These traits were found to reduce the risk of an accident caused by pilot-error. Conversely, accident risk was increased significantly for individuals lacking maturity and stability, and those that could not determine personal limitations. The Federal Aviation Administration, Office of
Aviation Medicine designed a battery of tests, including personality testing, intelligence testing, and neuropsychological testing with nine individual components meant to assess a pilot’s fitness for duty. The minimum scores set for a “passing” grade are average or high-average in all of the cognitive abilities (Kay, 2002). Therefore, it behooves an airline to build their recruiting process to attract these high achievers, in order to maintain a higher level of safety and operational performance than competitors.

Smith, NewMyer, Bjerke, Niemczyk, and Hamilton (2010) reported eleven key predictors of successful completion of a pilot training program. These included “quantitative ability, spatial ability, mechanical ability, aviation information, general information, gross dexterity, perceptual speed, reaction time, biographical information, and job sample” (Smith et al., 2010, p.75). Fanjoy, Young, and Suckow (2006) used the results of Hunter and Burke (1994)’s meta-analysis to make a list of traits that encompass those predictors. The traits that have the most effect on success as a pilot include trainability, the ability to work with others in a team environment, current flying and training experience, and good crew resource management skills. Karp (2004) proposed incorporating lessons to ingrain these traits in student from the beginning of the flight training program. Smith et al. (2010) studied the correlation between various attributes and the need for additional training at regional airlines. They found that graduates from accredited aviation programs that incorporated the Karp (2004) training recommendations had a considerably lower non-completion and additional training rate than those pilots that learned to fly in non-accredited or non-collegiate aviation programs. However, their findings differed from Fanjoy, Young, and Suckow’s (2006) recommendations, in that Smith, et al. (2010) found no difference in the completion and retraining rates between pilots with previous airline or corporate flying experience and those with no previous experience. According to Wakcher (2003), the
predominant personality traits of successful pilots include emotional stability, intelligence, enthusiasm, self-confidence, precision, and conscientious decision-making. These are also common traits found in high achievers (Wakcher, 2003). Therefore, regional airline recruiting efforts should focus on locating and attracting high-achieving candidates that are college graduates, trainable, and team-players.

Campbell, Castaneda, and Pulos (2010) supported Wakcher’s findings in their meta-analysis of studies that examined personality and success in military flight training. Their analysis used 26 individual studies, each using a different measurement tool or scale. The 26 studies were from a variety of different agencies, including the United States Air Force, US Navy, the United Kingdom Royal Air Force, and the UK Royal Army Air Corps. They found that the lower the score on the neuroticism scale, the greater the likelihood of success in the training program. That means that the more team-oriented and less self-centered the candidate, the more likely they are to succeed in flight training. Coupled with that, a higher score in the extroversion scale also correlated with a higher likelihood of success. This serves to reinforce the idea that regional airlines need to target outgoing, teamwork-oriented high achievers in order to minimize training costs and to maximize safety.

Another advantage to attracting high achieving candidates with high cognitive abilities is an innovative workforce. An organization needs two things in order to be truly innovative – innovative personnel and a supportive environment. Seales (2014) found that pilots have a higher propensity to accept risk than non-pilots. He notes that risk-averse people will tend to shy away from pilot careers. France, Leahy, and Parsons (2009) note that the personal attributes of innovative employees are deep professional expertise, exceptional creativity, motivation to take risks, and an ability to admit when they are wrong and to start over. These are similar to Kay’s
traits that reduce accident risk in airline pilots. The second part of that equation is the necessity for a supportive culture (Seals, 2014). The organizational attributes that encourage this type of innovation, and more importantly, attract the candidates with the desired personal qualities are a supportive environment that encourages (managed) risk taking, real feedback loops, access to challenging programs, and a personal manner that encourages individualism rather than a culture that is systematic in nature. Specifically, the organization needs a less-hierarchal structure that encourages overlap and close cooperation and relationships between departments, self-direction built around small teams with individual projects and opportunities, a balanced management team that equally supports various stakeholder needs, and most importantly, a sponsorship or mentoring program that provides feedback, encouragement, and direction to these high performers (France, Leahy, & Parsons, 2009).

Lieber (2012) noted that minorities are underrepresented in the average workforce. This is particularly true in the US aviation industry. Only 4.1% of the current FAA Airline Transport Pilot certificates are held by women, 2.7% by African-Americans, 5% by Hispanics, and 2.5% by Asian-Americans (Zirulnik, 2014). Lieber (2012) also noted that there are tangible benefits to pursuing a diverse workforce when determining whom to target. Some of these benefits include enhanced creativity and problem solving abilities, improved advertising and marketing campaigns, increased attraction and retention, reduced risk to legal liability, and positive community and customer perceptions of the firm (Lieber, 2012).

Reputation. Another essential part of this first stage is the applicants’ decisions to apply. Recruitment is a bi-directional process. While the recruiter has the power to decide whom to hire, the applicant has the power to choose where to apply and where to avoid. Early impressions of the organizational image are essential in the initial attraction phase for attracting
candidates. The image of the firm weighs heavily on this decision (Barber, 1998). An organization’s reputation plays a significant role on the image of the firm. Perceived organizational reputation has been defined as “a collective assessment of a company’s ability to provide valued outcomes to a representative group of stakeholders” (Men & Stacks, 2013, p.173). In other words, reputation is based on an aggregate of the different views of the various stakeholders, as they see the firm meeting their needs and desires. It is not based on a single viewpoint, nor is it based on a single metric. Reputation interacts with trust, which is based on credibility and relationships with stakeholders. These previous experiences and relationships lead to certain expectations. How well these expectations are met forms the reputation of the organization. It is a loop that repeats itself, constantly updating the firm’s reputation. The relationships are both internal and external in nature and linked together. The organization makes statements, both written and verbal, based on their own internal expectations. These statements influence how the stakeholders feel, which influences what they say or write. The organization then responds to the stakeholder statements, potentially altering the relationship. The process is repeated when the organization responds and issues new statements. An organization with a good reputation, based on trust and positive relationships with stakeholders can expect to see an increased commitment to its mission, values, beliefs, and objectives. This increased commitment leads to an increased identification with the organization, which leads to increased attraction by outsiders. The increased identification also leads to increased loyalty, motivation, and engagement, which all translate into increased performance (ibid, 2013).

Perception

Men and Stacks (2013) defined perception as a collection or amalgamation of assessments by a group of individual stakeholders as to the company’s ability to deliver on
desired outcomes. Perception is simply the overall view of the firm, based on a combination of desires/expectations. Reputation, on the other hand, is an evaluation of trust and credibility as they pertain to the expected return on investment, be it tangible or intangible. Reputation is the opinion, earned or perceived, of the company’s ability (and willingness) to meet expectations. It is both internal and external in nature. The internal portion is how an individual feels, while the external portion is what that individual verbalizes or expresses. The internal and external forces are woven together. How a person perceives the firm influences what is said or written about that firm. When others see or hear these statements, their own internal perceptions are changed. This, in turn, changes their own internal perceptions, which changes their words and actions. It is a continuous process that can ultimately build or destroy a reputation. They noted that two general factors affect the trust and relationships that define organizational reputation – management competence and quality of leadership (Men & Stacks, 2013). Management competence is self-explanatory. A competent management team can lead the organization to meeting operational and financial goals, providing long-term stability for employees, returns on investment for shareholders, product value for customers, and value for the surrounding community. The competent management team can balance these various stakeholder needs, as appropriate (Van Duzer, 2010). The quality of leadership is based primarily on leadership style.

Leadership Style

Men and Stacks (2013) also noted that there are two main types of leadership style, transformational and transactional leadership. Transformational leadership is a charismatic approach, based on a genuine concern for employees, while transactional leadership is based on an exchange process, stemming from reinforcement and reward based on performance. The genuine concern found in transformational leadership builds trust and confidence in the leader,
while the transactions found in transactional leadership motivate employees by appealing to personal desires and offering economic rewards. Transactional leadership is often associated with organizations identified by bureaucracy, policies and procedures, and linear power structures. While they are very different in approach, they are not mutually exclusive. A quality leader can recognize which approach is most appropriate for the current situation and be able to switch styles (Men & Stacks, 2013). A transformational leader is not prevented from utilizing transactional approaches to motivate employees, just as a leader utilizing a transactional approach is not prohibited from showing genuine concern for the well-being of all stakeholders. Leaders that are able to appropriately blend the two approaches are often the most successful.

Auger, Devinney, Dowling, Eckert, and Lin (2013) lent support to Hill and Knowlton’s (2008) position that a firm’s reputation alters its ability to recruit talented individuals. Auger et al. (2013) assert that there are multiple factors that are important in choosing an employer, including internal and external career opportunities, and the job attributes – compensation, benefits, and working conditions. Equally important are company attributes, including corporate style, reputation, the quality of products or services offered, financial performance and growth potential, and corporate governance and ethics. Auger et al. (2013) identified reputation as the most important attribute, with 96% of respondents indicating that reputation played an important role in the recruiting process. Furthermore, they made a distinction between three types of reputation, corporate, social, and workplace. Corporate reputation is external recognition and respect for the company, while workplace reputation is an internal view of the company as a quality employer. Social reputation is an indicator of corporate social responsibility. They noted that each type of reputation has a considerably different impact on candidates depending on the level of reputation. The highest effect is felt at the extremes, both positive and negative. They
also noted that the job attributes, salary, compensation structure, time demands, and promotion opportunities, affected employer attraction nearly as much as reputation (Auger et al., 2013).

Chun (2005) stated that corporate reputation is the most important part of attracting high quality candidates. Her definition of reputation has two distinct attributes, financial aspects and organizational aspects. The financial aspects of reputation are the ability to secure and defend market position and the ability to meet financial goals or targets. The organizational aspects are cultural-based. She also provides three viewpoints from which reputation can be measured. An evaluative viewpoint is solely concerned with the financial aspects and the performance of the firm. The impressional viewpoint is solely concerned with the non-financial, or organizational aspects of the firm. This viewpoint is based on an amalgamation of the perceptions of the various internal and external stakeholders. This viewpoint seeks to combine the various perceptions to form a single image or identity, or overall impression. The relational viewpoint judges reputation based on a comparison of the internal and external viewpoints. This viewpoint emphasizes differences or gaps between these views, with neither internal nor external views being more important than the other (Chun, 2005). Post and Griffin (1997) define reputation as a combination of the perceptions, specifically attitudes and opinions, of all of the various stakeholders. The stakeholders include internal stakeholders, such as employees and investors, and external stakeholders, including customers and the surrounding community. This most closely matches Chun’s impressional viewpoint, which is the definition used in this study.

Chun (2005) divides reputation into three key parts, image, identity, and desired identity. She defines image as how external stakeholders view the firm. Again, this image is a single view derived from all of the perceptions, opinions, and impressions of the various external stakeholders. Identity is the single viewpoint derived from combining all of the internal
stakeholders’ individual views. It is how the organization is viewed from the inside. These internal views are heavily influenced by culture, or the attitudes, beliefs, and values of the organization. However, it is grounded in actual perceptions. This is quite different than the third part of reputation, desired identity. This desired identity is how the organization wishes to be perceived. It is also what the firm uses to project that desired identity, including logos, mission statements, or published values. This is the image the firm projects to all stakeholders, internal or external. Reputation is a combination of these aspects over some period of time. Gaps or differences between these three aspects cause a decline in reputation, and therefore should be analyzed and addressed by senior leadership on a routine basis.

Walker (2010) also differentiated reputation from identity and image and noted that the three terms are often used interchangeably. This, however, is not a correct or accurate use of the words. Rather than being comprised of image and identity, reputation is a distinct part. Citing Whetten and MacKey (2002), Walker (2010) defines identity as the main attributes of the organization that are unique or distinctive and lasting. This identity is derived from the perceptions of the internal stakeholders. Identity can be further divided into two distinct types, actual identity and desired identity. Walker (2010) found that 80% of the literature reviewed defined the second aspect, image, with respect to external stakeholders, specifically excluding perceptions by internal stakeholders. More importantly, image was described as intentional and projected. Image is what the organization wants people to associate with it. His definition of image is similar to Chun’s (2005) definition of desired identity. Reputation, on the other hand, is seen as a combination of the perceptions of all stakeholders, both internal and external. Walker (2010) identified five distinct attributes making up an organization’s reputation. First, reputation is based on perceptions, feelings, and opinions. It is subjective in nature. Second,
an aggregate of individual perceptions, from all stakeholders. Third, reputation is comparative in nature, meaning that it can be measured and the used to differentiate between organizations. Fourth, reputation can be either positive or negative. Finally, reputation is stable and enduring. Reputation is based on historical actions and perceptions. As such, it can be difficult to change (Walker, 2010).

None of the participants in this study was an internal stakeholder in regional airlines. Therefore, it is essential to clarify that what was studied was an individual part of reputation, image, not reputation in its entirety. LeBlanc and Nguyen (1996) noted that image is formed in the external stakeholder’s mind by processing information and organizing it according to preconceived categories. These categories include tradition, ideology, and business reputation which includes name recognition, services offered, and perceived quality of services rendered. It has both functional and emotional aspects (LeBlanc & Nguyen, 1996). The functional aspects of image are similar to Chung’s (2005) financial and performance aspects of reputation. The emotional aspects of image are the feelings and attitudes stemming from individual experiences, much like Walker’s (2010) subjective attributes of reputation (ibid, 1996).

LeBlanc and Nguyen (1996) identified five factors that influence external perception of image, including corporate identity, reputation, services offered, the physical (aesthetic) environment, and contact with personnel. They define identity as the personality of the organization. These are the characteristics that distinguish it from other firms. This is the same as Walker’s (2010) comparative attribute of reputation. They define reputation as how the organization acts over a period of time. These are credible actions that the firm can be relied upon to continue (LeBlanc & Nguyen, 1996). Reputation could then be described as an
expectation of future behavior predicated on previous action. Image, being a combination of all of these factors, is a key way in which an organization can differentiate itself from competitors.

Wilden, Gudergan, and Lings (2010) use a different word to describe a combination of the functional, economic, and psychological aspects of the perception of an organization. Rather than refer to this as image, they use the term brand. They assert that it is possible for a firm to manipulate these factors in order to effectively change opinion. By changing these opinions, they can differentiate themselves from competitors, increasing their attractiveness to potential applicants.

Perception of brand also effects attraction to a company in a wide variety of industries. Chhabra and Sharma (2014) offer a distinction between internal marketing, or the internal treatment of employees, and employer branding, which is how a firm differentiates itself based on recruitment and employee relations. This branding is both internal and external in nature, in terms of how it treats employees and how this treatment differs from competitors. A firm will highlight these differences and seek to exploit them as a strategic advantage. The study identified multiple benefits to be had when a firm is considered a “high” brand. However, these advantages can only be capitalized on if the brand is clearly and honestly articulated. They noted that employee branding is a deliberate three step process, involving planning, implementation, and articulation of the plan. If it is not clearly, and honestly communicated, the results are worse than not having a plan at all (Chhabra & Sharma, 2014).

There is both a conscious and an unconscious reaction to brand perceptions. Anseel and Duyek (2008) noted that job choice results from deliberate, rational thinking as well as emotional reactions. The emotional stimuli have the greatest effect when they are unexpected and provocative in nature. They studied name-letter effect and found that people were more likely to
have a favorable opinion of a firm that shared initials with them. They were also more likely to accept employment with those firms, sharing their initials (Anseel & Duyek, 2008). That is not to say that firms should target recruiting efforts by name. Rather, it is meant to illustrate the emotional, and often unpredictable nature of perception of brand.

Saini, Rai, and Chaudhary (2014) noted that effective management of the brand can be a strategic advantage for a firm. By positioning themselves as an employer of choice, an organization can attract the highest quality applicants, as well as reduce employee turn-over and increase customer retention. The key to success is distinguishing themselves from competitors. They note that employee brand is not simply a binary proposition, positive or negative, but rather is a constantly moving linear scale. Position on the scale is not limited to their own actions, but also on actions and reactions of competitors. A firm may have a positive brand, but is still not seen as the employer of choice because a competitor offers a better employee value proposition. One key point to maintaining a strong brand is consistency. Their study found that it was more advantageous for a firm to follow through with promised conditions than it was to promise better terms and conditions (Saini, Rai, & Chaudhary, 2014). Conversely, it harmed a firm’s brand more to promise a lot and fail to deliver a little than it did to simply offer less, but to deliver completely. Maintaining a strong brand is an essential part of projecting a strong image and reputation.

The effects of developing and maintaining a positive image and reputation are also evident in Pollitt’s (2008) review of the InterContinental Hotel chain’s efforts in China to recruit quality talent. The chain opened twelve centers in six cities for education and on the job training. The developed a three part program known as the talent and leadership development chain. The purpose of this program is to develop individual leadership styles, give potential
managers a deeper understanding of the entire business, and to give them hand-on experience running a hotel under supervision. One key factor emerged from studying this program. A happy workforce makes efforts to recruit talented individuals significantly easier. Candidates that view existing staff as happy are more likely to apply to work at a firm. They found that InterContinental has 82% employee satisfaction, compared to 62% in the rest of the hospitality industry. They found that the easiest way to increase satisfaction was to through publicized career advancement programs. They noted that instituting the program raised employee satisfaction slightly, but had negligible effects on recruiting. However, when they began advertising the program on university campuses, perceptions of satisfaction increased significantly, as did employment applications. As these candidates joined the firm, general satisfaction increased, further increasing InterContinental’s reputation and numbers of applications (Pollitt, 2008).

Schwaiger, Raithel, and Schloderer (2009) used a broader definition of reputation. They defined reputation simply as a general evaluation of an organization by all of the stakeholders. This evaluation comes from a combination of direct experiences and the intentional messages or signals that a firm sends out. They divided reputation into two components, an affective component, or the likeability of the organization, and a cognitive component, or the competence of the organization. The affective component is purely subjective, and is based on both individual and collective perceptions. The cognitive component is objective and is based on financial and operational performance. These criteria are similar to Chun’s (2005) aspects of reputation.

Schwaiger et al. (2009) studied the benefits of a firm maintaining a strong reputation. They found that a firm with a favorable reputation can expect to receive fewer customer
complaints and have a greater level of customer satisfaction. These firms with the higher reputation will also have more access to capital markets in the form of higher stock prices and lower costs to obtain capital. They will also have greater recruiting opportunities and higher retention rates. Schwaiger et al. (2009) found a strong correlation between the desire to apply for a job and strong reputation, as well as willingness to work for a considerably lower salary, at least in the first few years. Their study found that firms with a weak or unfavorable reputation need to pay 18.65% more than a strong firm, in order to attract high quality applicants (Schwaiger, Raithel, & Schloderer, 2009). All of these benefits should be considered when calculating the cost of a reputation-improving program.

Gardberg and Fombrun (2002) stated that it is necessary to measure reputation before managing it. Furthermore, it is necessary to define reputation in order to measure it. The Global Reputation Quotient (RQ) was the first attempt at building a measurement tool that could be used across nationalities, cultures, and industries. The developers of the scale defined corporate reputation as “a collective representation of a firm’s past actions and results that describes the firm’s ability to deliver valued outcomes to multiple stakeholders. It gauges a firm’s relative standing, both internally with employees and externally with its [other] stakeholders, in both the competitive and institutional environment” (Gardberg & Fombrun, 2002, p. 304).

It is important to note that by utilizing a more objective approach, analyzing past behavior and performance, Fombrun, Gardberg, and Sever (2013) assert that reputation can be used as a predictor of future behavior. Reputation should then be considered as an indicator of the reality of the firm and how it is viewed by various stakeholders, rather than its ideal or desired characteristics (Fombrun et al., 2013). When viewed in this light, reputation becomes a significant variable in the application decision-making process.
Motivation theory. Highhouse, Lievens, and Sinar (2003) noted that a firm’s reputation was only a small part of the decision-making process, but a part of the process none-the-less. They tested a hypothesis developed from Fishbein and Ajzen’s (2010) theory of reasoned action. Fishbein and Ajzen (2010) spent numerous decades studying what motivates people to various behaviors. They found that the largest predictor of behavior is intention. Furthermore, perceptions of control were the biggest factor that influenced intentions. In other words, when individuals positively believed that they had control over events in their lives, they had positive intentions towards taking a certain action or behaving in a specific manner. When they had positive intentions, they were more likely to follow through on those intentions. Conversely, when they had negative feelings of control, they had little or no intent to take action, making it almost certain not to take action. They also found that perceptions of control can be changed in two main ways – through informational interventions and social or policy changes. And, for long-term change to occur, there must be actual increases in control, not simply perceptions of control (Fishbein & Ajzen, 2010). Furthermore, Fishbein and Ajzen’s (1975) theory of reasoned action stated that attitudes, which include beliefs, desires, and feelings, form intentions in individuals. These intentions, when combined with perceptions of social appropriateness, lead to individual behavior (Fishbein & Ajzen, 1975).

Expanding on this concept, Highhouse, Lievens, and Sinar (2003) stated that perceptions of social appropriateness stem from a combination of prestige and reputation. While both prestige and reputation are both subjective in nature, they are differentiated by the perspective from where they are drawn. Highhouse et al. define reputation as the perceptions of the individual, while prestige is based on the consensus of society as a whole. It is the normative, or generally accepted sentiment about an organization. They then determined that there are three
distinct, measurable parts to organizational attraction – attractiveness, prestige, and intention.

Attractiveness and prestige are concerned with the organization, while intention is based on individual attitudes and desires combined with perceptions of social appropriateness. In their testing, they found that prestige and attractiveness influence each other to a high degree. They also found that both influence the intention variable. However, only intentions were a statistically significant predictor of behavior. While there was some correlation between prestige and action, or between attractiveness and action, it was not statistically significant enough to determine causation (Highhouse et al., 2003).

Murray and Ayoun (2011) also tied reputation to motivation theory. They then tied motivation to a five part definition of sustainability, the most important part being that firms practice what they preach. Concerning sustainability, actions must follow words, or people are quickly demotivated. When they are demotivated, they express this displeasure on various social media outlets. Potential candidates view these opinions, whether factual or not, and worry that being equated with this firm will reflect poorly on them. This decreases attraction and the willingness to accept employment at a firm. In much the same way, the actions of the recruiter must match the organization’s words and attitudes. When a candidate sees hypocrisy from a recruiter, the resulting loss of attraction often exceeds the loss stemming from initial negative information.

According to Shweiki, Beekley, Jenoff, Koenig, Kaulback, Lindenbaum, Patel, Rosen, Weinstein, and Zubair (2015), work-motivation theory is simply a means to explain why people make certain choices and perform certain work-related tasks. It is a way to try and understand the specific factors that influence motivations, specifically concerning achievement. There are two main types of work-motivation theory. Self-determination theory states that an internal
desire to be better is what motivates people to action or decisions. People always want to be competent, thus they will make choices that help them improve themselves. The other work-motivation theory is expectancy-value theory, and be either efficacy or outcome based. Both types of motivation theory state that motivation is the sum of expectations, perceptions, and values.

Vroom (1964) developed Expectancy Theory to uncover the underlying motivations involved in the decision-making process. Vroom’s (1964) theory states that people do certain things or make certain choices because they desire the expected outcome. There are three parts to this theory, the product of which equals motivational force. Expectancy is simply the belief that a certain action will have a specific outcome. It is the belief in cause and effect relationships. Expectancy also takes into account the degrees of effort required and the probability of the result occurring. When there is a stronger correlation between effort and outcome, or cause and effect, motivation will be greater. The same is true in the inverse. When there is the connection is less clear, or weaker, there will also be a lower motivational force.

Instrumentality is the likelihood of the expected outcome occurring. There are three factors that have an effect on instrumentality. First, policies and procedures linking performance to reward must be in place. These programs require clear, well-developed metrics to monitor performance. Second, the employee must have adequate control over the performance factors that will be monitored and measured. A reward based on factors outside of a person’s control will have little or no motivation on performance. Finally, valence is the desired reward, or the value placed on the expected reward. These desires include both tangible and intangible rewards, and will vary with each individual. The key point is to understand individual desires in order to meet them. When these three factors, expectations, likelihood, and desires, are multiplied together, the result
is motivational force (Shweiki, Beekley, Jenoff, Koenig, Kaulback, Lindenbaum, Patel, Rosen, Weinstein, & Zubair, 2015).

**Social identity.** One of the key variables in Fishbein and Ajzen’s (2010) motivation theory is social identity. Social identity theory is based on perceptions on how a candidate believes he or she will be treated by peers and other social networks if they are a part of a specific firm. It is based on the theory that people are equated by their peers with the values, ideas, and goals of the firm they work for. It is based on the question about what people will think (Murray & Ayoun, 2011).

Social identity theory also asserts that behavior can be explained by membership in various social groups. A person will naturally be drawn to groups they identify with. Organizational identity has two components, internal and external. The internal component stems from employees’ views, while the external component is the firm’s reputation with those outside the company, including potential candidates. The internal component includes common values, goals, and desires as viewed by people inside the firm. The external component is based on how others view both one’s affiliation with the firm and the firm in general. A candidate’s individual identity is formed by perceptions of fit with both parts of the organization’s identity. A candidate will view a firm with a good reputation as having a positive effect on social identity. Alternatively, being affiliated with a firm having a poor reputation usually decreases self-identification with the group (Celani & Singh, 2011).

Moingeon and Soenen (2002) studied individual and organizational attributes that interact in a business, helping to form a corporate identity. This identity is what individuals use, both consciously and unconsciously in various decision-making processes. They defined identity as a collective representation of individual perceptions of an organization. It is formed from both
internal and external viewpoints. Identity includes desired conditions, actual conditions, and perceived conditions which are some combination of projected and actual conditions. All of these identities interact in a dynamic nature to form a single descriptor.

There are five types of organizational identity in Moingeon and Seonen’s (2002) definition. Professed identity is based on statements and claims, for example mission statements or internal statements about culture. These statements are used to intentionally shape perceptions of the firm. Projected identity is based on communications, behaviors, and symbols used to present a desired or professed identity to other stakeholders. Experienced identity is a collective representation of what various shareholders actually experience in their interactions with the firm. Attributed identity is how outsiders view the firm, or the attitudes formed by the outsiders about the firm. It can be based on actual experiences, projected messages, the experiences and perceptions of others, or more likely, some combination thereof. Finally, manifested identity is simply a combination of the various other identities that emerges over a period of time. It is long-range in nature.

Professed and projected identity can both be described as what an organization says, as opposed to what it really does. The farther apart professed and experienced identity are, the greater the ambiguity in the individual perception. It becomes more difficult for the observer to know which is real – what the firm claims or what it actually does. As noted earlier, greater ambiguity or confusion, referred to as dissonance, leads to an erosion of trust and an overall negative view of a firm. As dissonance grows, individuals will rely more on subjective perceptions, which may or may not be accurate portrayals of the company.

Experienced identity becomes engrained in the organization through repetition over time, becoming the manifested identity, or a permanent part of the firm. This manifested identity then
begins to influence individual behavior and decision-making within the firm. This can reinforce or alter the professed identity, which then potentially changes the projected message. The projected message influences the experienced identity, which become engrained in the organization over time, continuing the cycle. These different aspects of identity interact, merging to form a single, collective identity.

Moingeon and Soenen (2002) distinguish between five categories of influencers on identity, known as referents. Ecological referents are the characteristics of the system in which the organization operates. The physical referents are the possessions of, the possibilities for, and the physical experiences of the firm. The historical referents include the origin of the firm, key events, and the firm’s historical legacy including rites and rituals. The cultural referents make up the cultural system of the firm. These include ideology, values, and the modes of expression. The social-psychological referents are the organization’s affiliations and social references, such as status, age, and general prestige (Moingeon & Soenen, 2002).

The general idea behind social identity theory is that people seek to reduce dissonance between an organization’s identity and their own personal identity. This dissonance stems from ambiguity, uncertainty, or inconsistencies with values, beliefs, and actions. The more alike these factors are, the more closely the individual will identify with an organization. Fishbein and Ajzen (2010) claim there is a link between identity and behavior, particularly with regards to strategic decision-making. However, as identity is a combination of internal and external perceptions, the identity-behavior relationship is not a simple, linear cause-and-effect system. The external perceptions of the results of the behavior can reinforce, modify, or refine an organization’s identity. As this identity changes, so does the decision-making process. Thus, it
is more appropriate to view this process as a loop, continuously being reevaluated and changing with changes in identity or perceptions of identity.

Hofstede, Neuijen, Daval Ohayv, and Sanders (1990) used the term organizational culture to describe what later became better known as identity. This culture, or at least manifestations of the culture are used by stakeholders to form an opinion about an organization. These perceptions and valuations are the foundation of identity. They distinguish between visible and invisible manifestations of culture. Visible manifestations are referred to as practices, and include symbols, rituals, and an organization’s heroes. The invisible, or unconscious manifestations of culture are the organization’s values which influence individual behavior. These values include general beliefs, leadership and management styles, and the goals of the firm. The practices are most notable in the behavior of typical, individual members of the group as well as perceptions of and judgments about that behavior by others. Their study clearly showed that the key to understanding the culture of an organization comes from observations of individual behavior (Hofstede, Neuijen, Daval Ohayv, & Sanders, 1990). This supports the suggestion that direct contact, i.e. experience with an organization and its individual members, plays the most significant role in the commonality-based attraction part of social identity theory.

Hofstede, Neuijen, Daval Ohayv, and Sanders (1990) also found that perceptions of culture are influenced by the industry the organization operates within, by the nationalities of the firm, its members, and external observers, by the nature of the task or job being observed, and by the structure of the organization. They noted that flat organizations tended to be results-oriented, while highly-structured, formalized organizations tended to be process-oriented. This is significant because they found that results-oriented firms were viewed as having a stronger culture. Furthermore, the burden of culture change falls on the top leadership in these process-
oriented, highly-structured organizations, while change can originate at a lower level in the flat, results-oriented organizations (Hofstede et al., 1990). Airline pilots operate in an extremely specialized job function in companies that are highly structured. This means that senior leaders at regional airlines must take an active role in improving culture if they want to project a positive identity and attract enough candidates.

One tool that leaders have to improve perceptions of identity and culture is online social networking. Ollington, Gibb, and Harcourt (2013) estimated that 45% of companies used some form of social networks in 2009. The number was less than half of that in 2008, and is expected to continue to increase. Social media sites, such as Linkedin or Facebook, provide firms a means to distribute defined, controlled messages to large groups of people with relatively few resources. The authors defined a social network as a group of individuals that are linked together through some shared characteristic. These networks tend to self-govern, which increases trust among members (Ollington, Gibb, & Harcourt, 2013). Individuals have the innate desire to connect with other people that share similar values, goals, beliefs, or interests, including or perhaps especially through electronic social media (Spears & Postmes, 2015). The links, or ties, that connect people can be described in terms of strength or density. Tie strength is based on the depth of commonality between members, while tie density is based on the number of different commonalities between them (Ollington et al., 2013).

Organizations can project a desired image as well as promote an actual image to the members of online communities that share both common and dense ties with the firm. By emphasizing commonalities with the group as a whole, the firm has the added benefit of building trust with the individual members. This trust helps remove some of the dissonance between organizational and individual identities, increasing attraction.
**Signaling theory.** Connelly, Certo, Ireland, and Reutzel (2011) defined signaling theory as a means of balancing the information flow between parties. In the early 1970s, Spence noted that applicants often try to manage the signal during job interviews in order to differentiate themselves from other candidates. This observation led to studying the entire process, including signals sent from both the applicant and contacts at a firm.

Signaling theory stems from an information asymmetry, or an imbalance between the sender and the receiver. People make decisions off of the information they have available. There are generally two types of information, public and private. Public information is open and available to everyone. Private information is only available to some people. Information asymmetry is the difference between the public and private information, or what is available to everyone and what is only available to some people. This gap leads to imperfect decision-making, which can be exploited as a strategic advantage by one side, or must be overcome by the other side. Connelly et al. (2011) identified two different types of information, information concerning quality and information concerning intent. The information about quality is used to describe the characteristics of the sender or signal. Information about intent is concerned with behavior or the behavioral intent of the sender. Both types of information are essential in the decision-making process.

The signal loop consists of four parts, the signaler, the signal, the receiver, and the feedback from the receiver to the signaler. The signaler is the insider, the part of the loop with the information. They possess the information and have intention to share it with the receiver. The signaler has two key traits in order to send the proper message, honesty and reliability. The signaler must not only be genuine, truthful, and credible, but must also convey those characteristics to the receiver. The receiver, on the other hand, is the outsider. This is the part of
the loop that lacks the information, or at least part of the information, and has a need or desire to possess it (Connelly et al., 2011). There are also two key traits that affect how the message is received, attention and interpretation. Attention is the vigilance that the receiver exercises by constantly scanning the environment. The receiver must first notice a signal in order to receive it. Interpretation is how one understands the message being sent. This involves being properly calibrated with the sender. It also means noticing the distortion that comes from differences between sender and receiver and minimizing or eliminating that distortion. Interpretation also requires recognition of internal bias that can, and will, affect meaning. This bias must also be identified and intentionally accounted for (Connelly et al., 2011).

The signal is simply the message or the information to be transmitted. It can be either positive or negative. It can be public, private, or semi-private. However, studies have shown that signalers are primarily involved in sending positive messages. There are five aspects of the signal that must be considered when crafting a message. Cost is simply what is required to send the message. These requirements can be tangible, such as time or money, or intangible, such as good will, trust, or loyalty. Observability is concerned with how well outsiders see and understand the message. The strength and intensity of the message affect its visibility, while clarity affects the understanding of it. Fit concerns the value or quantity of the message. It is how the signal, or description, correlates to unobserved qualities of the sender. Frequency is the timing of the message and how often it is repeated. Many times, a message repeated multiple times can be heard and understood more clearly. However, there is a danger of sending conflicting messages the more often a signal is repeated. The final aspect of the signal that is critical is consistency. Consistency concerns the signal’s internal reliability – ensuring that it carries one message, not a contradictory message. The authors identified five different types of
signals, each with a unique role. Activating signals are meant to activate a quality in the receiver, to cause a reaction or start a process. Pointing signals are meant to indicate a difference between the sender and other rivals. Intent signals are meant to convey future actions by the sender, conditional upon the receiver’s response or actions. Camouflage signals simply hide potential liabilities. Finally, need signals clearly state the sender’s requirements to the receiver, or demonstrate what is needed.

The final part of the signal loop is feedback from the receiver to the sender. This feedback helps to ensure that the message was sent and understood correctly. There are two factors that affect feedback, the external or environmental distortion and intentional countersignals from the receiver. Distortion is the same external noise or distraction that affects the signal. It will have similar effects on the feedback message as well. Countersignals are responses from the receiver. Just like a signal, these can be positive or negative, true or false, and are subject to cost and observability constraints.

The authors noted that the most significant part of signal theory is the quality of the signal. Yet, the majority of studies focus on the sender and receiver, ignoring the properties of the signal. Therefore, many recruiting approaches also do not consider the signal in plan development. They note that an effective approach will include valid signals, of the correct type (Connelly, Certo, Ireland, & Reutzel, 2011).

Celani and Singh (2011) begin their discussion of signaling theory with the assertion that the nature of work is changing dramatically. As such, firms need to change their recruiting and retention programs if they want to gain and maintain a strategic advantage over competitors. Specifically, they assert that firms need to be concerned with applicant reactions, both positive and negative, to the information delivered by the firm and those representing the firm. Signaling
theory states that the information transmitted, the manner in which it is transmitted, and the non-verbal cues from the representatives affect the level of attraction the candidate has towards the firm. The level of attraction will contribute to the acceptance decision-making process. However, they do not believe that simple signal theory adequately explains levels of attraction. They propose a multi-level theory in which several processes work simultaneously to alter attraction. Simple signal theory emphasizes a top-down approach in which the firm’s representatives have the only effect on the candidates. Multi-level signal theory proposes that applicants receive signals from at least two sources throughout the process – individual sources and organizational sources. The individual sources include personal interaction with recruiters, employees of the firm, and even other candidates. The organizational sources are group projections from the firm, such as advertisements, presentations, or articles. Celani and Singh (2011) propose that attraction is influenced by some combination of general and personal signals, coming from both the top and bottom.

**Recruiting Variables**

Chapman, Uggerslev, Carroll, Piasentin, and Jones (2005) conducted a meta-analysis of six articles concerning applicant attraction. Their main purpose was to test whether employer attraction is affected by perceptions towards a firm. The first step in testing it was to identify five key recruiting variables. The general variables they identified were found in all six studies they analyzed. These included job and organizational characteristics, recruiter characteristics and perceptions of the recruitment process, perceived fit including both person-organization fit and person-job fit, perceived alternatives, and hiring expectancy. They tested the levels of importance for each variable in different stages of the recruiting process. For this, they utilized Barber’s (1998) three stages of the recruiting process. These stages are generating applicants,
maintaining applicant status, and influencing job choice. These stages are roughly equivalent to the three stages in this study of the application decision-making process, the interview stage, and the job acceptance decision-making process.

There were several significant findings from this study. First, Chapman et al. (2005) noted that perceived person-organization fit and job/organizational characteristics played the largest role in job pursuit intentions. More specifically, the type of work and the organizational image were the most important factors in the application decision-making process. They also noted that pay and benefits were less significant during that first stage of the recruiting process. They found that during the middle phase of the recruiting process, the key variables concerned perceptions of the work environment, including organizational image and perceptions of justice or fairness in the recruiting process. Surprisingly, they found that while the signals sent by the recruiters concerning the work environment were important, actual recruiter demographics had almost no effect on applicant attraction. Finally, in the third phase of the recruiting process, perceived work environment, the nature of the work, and future advancement opportunities were the most important factors. Pay was one of the lowest attributes until alternative job offers became available. Pay and benefits became more significant factors as the candidates received more job offers (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005).

The most significant part of this article is the role of both person-organization fit and job-organization fit in the decision-making process. Both revolve around the perceptions of the candidate. These subjective perceptions have the strongest influence on both the decision to apply at a firm and the decision to accept employment with that firm. This supports Celani and Singh’s (2011) assertions that identity plays a key role in the recruiting process. More
importantly, it also ties a firm’s reputation to that process (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005).

Chhabra and Sharma (2014) adopted a focus group approach to study fifteen organizational attributes of which seven played a direct role in perceptions of a firm. They also examined various methods to communicate the brand information to prospective candidates. They noted that four of the five most common means of transmission were somewhat effective, while job fairs, the most common method in use today are basically ineffectual. They also noted that there were generational and occupational shifts in priorities. The significant attributes changed across generational differences and across educational requirements for specific positions.

The most significant part of Chhabra and Sharma’s (2014) research findings is the clearly defined list of what the authors consider the most important fifteen organizational attributes. This is a good starting point for designing the focus groups for this study. A second point that adds to this study is that it supports the theory that perceptions, whether accurate or not, have considerable influence on employee attraction. Candidates will make the decision based on what motivates them. They have a certain expectation as to what will occur based on their perceptions of the company. For an internal recruit or former intern, this is less important, as they already have an understanding of the company. However, for the potential recruit with little or no previous contact with the firm, it is essential that the company get the message out in a timely manner. This relationship linking communication and decision-making through perceptions demonstrates the amount of power that leaders wield in the recruiting process. It shows that leaders have a certain amount of direct control over the process, whether intentional or not. It is
essential that these leaders realize this, and act in an honest, consistent manner if they desire to maintain positive perceptions of their firm (Chhabra & Sharma, 2014).

Murray and Ayoun (2011) noted that there are generational differences in what most attracts candidates. They studied nine traditional attributes, or career anchors. Some generations focus on employer loyalty, while others are more concerned with the specific job attributes. The most recent generation is more concerned with corporate culture and relationships within the workplace. However, across the generations, one important theme emerged – their expectations for the job and their views of the company are also important. These views are primarily concerned with external reputation. Sustainability plays a large role in the formation of a firm’s reputation. The second major determination they made concerned how the candidates form opinions of the firm (Murray & Ayoun, 2011).

Pollitt (2008) noted that career advancement possibilities are one of the essential attributes for attracting the current Millenial generation. While the actual advancement possibilities are different from hospitality to airlines, the same general principle applies – this generation wants to know that they will be advancing and progressing in their chosen career (Pollitt, 2008). Resto, et al. (2007) provide information on the key attributes that young, skilled professionals seek – those being included in this study. While the industries are different, the same personality types, those of high achievers, are drawn to both. Thus, it can be reasoned that there will be some cross-over in what the typical candidate seeks. These attributes include attitudes towards pay, job/career advancement, and reputation (Resto et al., 2007).

Rutkowski (2011) found that preliminary attraction, in the application phase, is based primarily on pay, location, and working conditions. However, the actual acceptance decision is based on perceptions of actual working conditions, as obtained in the application and interview
process. This means that the image presented by the company throughout the recruiting process is more important than the terms and conditions offered to the prospective candidate (Rutkowski, 2011).

O'Connor and Fiola (2004) noted that top performers in the medical field are primarily attracted to organizations by six main attributes or areas. These parts of an offer include training, development, and support programs for newly hired employees, individual, performance-based incentive programs, career development programs, including specific, defined paths leading to career growth and advancement, individual and team recognition programs, clear, honest, open, bi-directional flow of communications, and lifestyle support, in the form of individually-tailored benefit packages. They also found that the most important aspect of the recruiting process is honesty and transparency. It is absolutely essential that an organization, as well as representatives of the organization accurately represent working conditions, contractual agreements, and corporate culture throughout the entire recruiting process. High achievers were less likely to accept a job when a firm attempts to hide or cover shortcomings than they were with a firm that was honest and forthcoming with the same drawbacks (O'Connor & Fiola, 2004).

**Potential Themes and Perceptions**

Ryan and Bernard (2003) defined potential themes of a study as the recurring ideas found in the existing literature on a subject. These are the main theories that will be explored or tested in the course of the research project. They suggested utilizing a four-step method to identify the potential themes of a study during the review of current literature. The first step in their process was to identify all of the various themes and subthemes explored in previous studies. The researcher must look for key words or ideas that are repeated frequently in multiple sources.
These are the most common themes. The researcher then groups these themes into categories, based on both similarities and differences. Once the themes are organized into separate categories, the second step is to determine which themes are the most important to the current study. For a theme or category to be considered important, it must be relevant and manageable. A relevant theme is one that helps answer or explain the research questions. A manageable theme is one that can be studied or measured. Themes or categories that are irrelevant or unmanageable are then removed from the list of potential themes to be studied. Once the important themes are identified, they must be inserted into some form of hierarchy. This hierarchy can be based on the order in which they will be studied, an order of importance, or any other logical, methodical order as necessitated in the study. The final step in this process is to then link the identified themes to theoretical models in order to test them (Ryan & Bernard, 2003).

**Summary of themes.** The central theme of this study was recruitment, specifically the first stage of the recruiting process, attraction and selection of qualified candidates. Recruiting is an essential part of a business’s strategic plan. Effective recruiting can provide a firm with a distinct advantage over competitors, particularly when all firms are facing a sizable shortage of suitable applicants. There are three separate stages of the recruiting process, each with a unique emphasis or focus. The three stages are the initial outreach or attraction phase, the post-selection phase or holding the applicant’s attention, and the employment phase during which the firm must convince the applicant to accept the job offer (Banfield & Kay, 2008; Barber, 1998). This first phase, attracting suitable candidates was the focus of this study, and has four primary aspects, a job analysis for the position sought, an analysis of the most desired traits in a candidate, an exploration of where to find the most suitable candidates, and then an analysis of how to reach
those desired candidates (Banfield & Kay, 2008). In the case of this study, the job analysis was already completed. Regional airline pilot jobs were clearly defined. The traits or characteristics of desired in pilot applicants have also already been identified in previous studies. These included high cognitive ability, a “team-player” attitude, a desire to be a high achiever, and racial and cultural diversity (Jackson & Bruns, 2011; Madera, Dawson, & Guchait, 2016; Resto & Sethi, 2007; Trank, Rynes, & Bretz, 2002). Previous studies have also determined that one of the largest sources of pilots that have many of those traits and the knowledge and skills to perform the job is accredited collegiate flight programs. The fourth part of this stage, attracting candidates was then the emphasis of this study.

The previous literature showed that one primary concern of applicants in the first stage of the recruiting process is their perceived fit with both the job and with the organization as a whole. Person-Organization fit is based on how closely individual values are aligned with those of the organization. The judgment of this fit is based upon initial perceptions of organizational image. These perceptions are based on knowledge, beliefs, and feelings towards a specific firm. Person-Job fit is similar, in that it is also based on an applicant’s perceptions, however, it is a comparison of individual expectations and the specific job rather than with the entire organization. There are two parts to both of these perceptions, cognitive and evaluative. Cognitive perceptions are tangible, factual perceptions of company behavior and actions, while evaluative perceptions are based on the applicant’s feelings and beliefs.

Reputation also has a direct effect on both cognitive and evaluative perceptions. There are three different types of reputation, corporate, social, and workplace. General reputation, which is a combination of the three different types of reputation, has three distinct parts; image, identity, and desired or projected identity. Of these three parts, image has the greatest impact on
applicant perceptions, being based on the generally accepted external views of the firm (Ployhart et al., 2006).

Perceptions are formed based on how the words and actions of the firm. These words and actions can be influenced, and in some cases controlled, by the actions of leadership. A leader can influence perceptions either by guiding or managing expectations or by influencing the conditions on which judgments are formed. Specifically, in the regional airline industry, leaders have a tremendous amount of control on how the contracts are adhered to and on the non-monetary working conditions for pilots. In a volatile and rapidly changing industry, minor changes in policy can have strong repercussions for the line pilots’ quality of life.

Social identity theory (Ashforth & Mael, 1989; Tajfel, 1974, 2010) states that an applicant has a view of where they are in society as well as where they desire to be, influencing the decision making process by altering perceptions. The applicant will seek to reduce dissonance caused by differences between personal values and goals and the values and goals of the organization. In other words, applicants will seek out firms that most closely share their beliefs, values, and goals.

Finally, Fishbein’s (2010) theory of reasoned action states that perceptions combined with attitudes and beliefs form individual intentions. These intentions are the greatest predictors of behavior. Alternatively, Vroom (1964) theorized that action was a direct result of motivation, and that motivation was a result of the sum of expectations, perceptions, and values. Vroom’s (1964) expectancy-value theory states that individuals make decisions based on the level of desire for expected outcomes.

The important themes to be explored in this study were the three levels, or categories of attributes that attract candidates to regional airlines. On the most basic level, there were three
general types of attributes, job attributes, company-specific attributes, and airline industry attributes. The job attributes were those which related to the position, and were subdivided into three more primary areas, compensation, work rules, and equipment type. These subdivisions were then further divided into unique, individual attributes, including pay, retirement, and bonus packages, contractual provisions, concessions or give-backs, the variety of aircraft types, and the age of the aircraft type in the fleet. The company attributes were those that were unique to individual airlines. These attributes were loosely divided into the subdivisions of location, career advancement, and reputation. The individual attributes that comprised these subdivisions were bases or pilot domiciles, the history of changing these domiciles, the history of personnel movement, upgrade time, opportunities for ancillary duties, and flow-through programs or preferential interviews to the mainline partner, company adherence to the contract, treatment of employees, employee assistance programs, and the long-term viability of the company. The general industry attributes included both forecast and unforeseen changes in the industry, alternative opportunities outside the industry, and general predictions of the airline business cycle.

**Perceptions.** Perceptions differ from potential themes in that they are more subjective in nature. They are based on the researcher and the study participants rather than data gleaned from previous studies or publications. In the case of a qualitative study, perceptions refer to the viewpoint of the various parties to the research process. These views have an effect on opinion and judgment, which in turn influences expectations and desires (Golafshani, 2003). In the case of this study, there were two main perceptions that would have potentially influenced the data collected and the following analysis of the data. These perceptions were those of the principle investigator and those of the participants.
Transition and Summary

Section one is the foundation on which the study is built. It was an examination of the problem, including an in-depth look at the history and background of the pilot shortage. It included both problem and purpose statements. Section one was also a high-level examination of the study itself, including the nature of the study and the specific research question that the researcher hoped to answer. As part of this high-level view, the researcher defined terms utilized in the study. The researcher also clearly identified the limitations, or potential weaknesses of the study and the self-imposed limits which defined the scope of the study. The researcher examined the significance of the study including reducing current gaps in knowledge about the pilot shortage, this study’s relationship to the leadership field, and the implications for biblical application of the knowledge gained in the course of the study. Finally, this section concluded with a review of the most important literature concerning the problem, including the prominent theories related to solving it and the assumptions that form the foundation of these theories.

Section two is the practical information concerning the study. It is the detailed description of the study itself. It begins with a reiteration of the purpose of the study – to identify which organizational attributes contribute to attraction to regional airlines by soon-to-graduate collegiate flight students. Next, the roles of the researcher and of the participants are discussed. After the roles of the parties involved in the study are explained, this section covers the research method and design used to complete the study. The research method is grounded theory, while the research design utilized is focus group interviews. Major parts of any experiment or study are the sample and the population from which the sample is drawn. The next part of this section examines these aspects of the study, explaining which universities were selected for participation and how the sample was drawn from the student population. The next
part of section two concerns the data collection and analysis methods utilized in this study. Specifically, this section examines data collection techniques that are effectively utilized with focus groups and how that data is then organized for analysis. The data analysis portion is primarily concerned with the application of grounded theory to identify and categorize the data uncovered in these interviews. There is also an explanation of the use of Stanford Topic Modeler software to assist with the creation of a taxonomy system. Finally, section two concludes with a discussion about the reliability and validity of the study. Specifically, the actions necessary to mitigate bias and to ensure the reliability of the results of the study are addressed.

Section 2: The Project

Section two begins with a review of the purpose of the study, followed by a discussion of the roles of the researcher and of the participants. Next, the research method and design used to complete the study are covered. Major parts of any experiment or study are the sample and the population from which the sample is drawn. These aspects of the study, explaining which universities were selected for participation and how the sample was drawn from the student population are then reviewed. The next part of section two concerns the data collection and analysis methods utilized in this study. Finally, section two is concluded with a discussion about the reliability and validity of the study, including ways to mitigate bias and to ensure the reliability of the results of the study.

Purpose Statement

The purpose of the study was to develop a theory which identified the traditional organizational attributes identified in previous studies, including compensation, career prospects, job profile, organizational brand, corporate culture, employee empowerment, and professional
development, that are important to prospective applicants at regional airlines (Anseel & Duyek, 2008; Auger et al., 2013; Barber, 1998; Chhabra & Sharma, 2014; Chun, 2005; Lacy, Bokemeier, & Shepard, 1983; Lieber, 2012; Men & Stacks, 2013; Murray & Ayoun, 2011; Ployhart, Schneider, & Schmitt, 2006; Pollitt, 2008; Resto & Sethi, 2007; Ryan & Tippins, 2004; Trank, Rynes, & Bretz, 2002). The focus was on determining which attributes attracted different types of pilot candidates, particularly the types of pilots that these carriers seek. This theory was developed from the views and opinions of those persons most likely to seek employment at these airlines – graduating students from university flight programs. This study could potentially benefit the airlines by helping them develop more effective recruiting strategies based on what prospective applicants desire, rather than on the less effective traditional recruiting programs in place today.

**Role of the Researcher**

The researcher played the most significant role in a qualitative study, particularly in a focus group interview (Curtiss & Curtiss, 2011). There were two distinct parts to the researcher’s role in the data collection process, preparation for the focus group interview and moderation of these interviews. The first part of the data collection role was to prepare for the focus group interviews. Locke et al. (2007) stated that this preparation was the key role of the moderator in order to conduct a successful focus group. The moderator must understand the material to be discussed and must be thoroughly prepared to lead the discussion. This preparation included a review of the current literature on various aspects of recruiting, employer attraction, and the job-selection decision-making process. A key attribute of the moderator was to have thorough knowledge and understanding of the issues that were discussed (Langer, 2001). Part of the preparation process was to secure permission from the universities prior to conducting
the research. The researcher contacted the schools requesting permission and soliciting their assistance in recruiting volunteers for the study. The researcher asked the universities to refer volunteers directly to him by email. Volunteers were then screened and selected based on completion of the screening questionnaire (Templeton, 1994). The final part of the focus group preparation process was to build and refine the discussion guide (Templeton, 1994). The researcher then practiced with this guide to ensure time constraints could be met.

The second part of the role of the researcher was to conduct the study. In this role, the researcher was the moderator or facilitator of the focus group. The focus group interview began with distribution, explanation, and collection of the consensus forms. Once the participants reviewed and signed the forms, the researcher began the discussion. Researchers agree that the essential parts of the role of moderator include focusing solely on the participants and ensuring that they know their contributions are appreciated (Edmunds, 1999; Langer, 2001; Templeton, 1994). This focus on the participants is critical in order to encourage active participation by all of the participants. Another part of the moderator’s role was to keep the discussion moving without leading it in too specific a direction. This role of the moderator was simply to encourage the flow of the discussion, allowing it to develop freely while still ensuring that all of the necessary questions from the Topic Guide found in Appendix D were asked and discussed. This part of the role involved raising new ideas as well as probing deeper into areas previously addressed on a superficial level (Templeton, 1994). The key to this role was to be able to allow the discussion to unfold naturally while still participating without dominating or leading.

Another aspect to the moderator role was managing the group dynamics, ensuring that all of the differing viewpoints were heard and that all participants had the chance to express thoughts, feelings, and observations (Brinkman, 2013). In this case, the researcher was acting as a referee
or facilitator. The researcher also recognized and recorded the social interactions between participants, including body language and expressions. These interactions were a key part of discovering the relationships between the variables (Creswell, 2013). Finally, the role of the moderator included a certain amount of flexibility. The moderator had to analyze data on the fly, adjusting the discussion as necessary. A major advantage of utilizing focus group interviews was that their dynamic nature granted the researcher the ability to change in mid-study. However, this was only an advantage if the researcher was able to adjust with the changes (Curtiss & Curtiss, 2011).

**Participants**

The researcher utilized participants at three universities. The researcher gained access to the participants by emailing industry contacts at each of the schools and requesting permission to conduct the focus-group interviews at their locations. After explaining the purpose and nature of the study, the researcher was referred to the appropriate research department. After completing the IRB process at each of the institutions, the researcher gained permission to utilize participants from four universities. However, one of the universities had only one volunteer, who was not qualified based on financial ties to a specific regional airline. See Appendix C for the permission letters from each university.

Once approval was granted, the researcher contacted the aviation or flight departments to assist with locating volunteers for the study. The departments were requested to post fliers and make announcements seeking volunteers for a two-hour study. Potential volunteers were instructed to contact the researcher via email or to sign up with the professor assisting with the study, expressing their desire to participate. The principal investigator then emailed the screening questionnaire, Appendix A, to the volunteers to complete and return to him at the
beginning of the interview. The results were then entered into the screening matrix, Appendix B, to determine which candidates met the eligibility requirements for participation, as described in the following part of this section titled sample. All of volunteers that met the eligibility criteria were included in the focus group. Any responses received after selection or any respondents that did not meet the selection criteria were thanked for their desire to participate, but were advised that they were not selected for the study and the reasons why. The researcher continued to build a working relationship with the participants by responding to emails and phone calls in a timely manner and by sending email reminders about the study in the days leading up to it.

The ethical protection procedures for the study were primarily based on encrypting and securing the collected data, including both the identified screening data and the audio recordings and transcriptions of the focus group discussions. During the interviews, participants were directed to refrain from addressing one another by name, nickname, or pseudonym. They were not assigned any marks of identification or specific positions at the table in order to minimize future identification in the recordings or transcripts. The recordings and resulting transcripts from each session were stored on a password-protected, 128-bit encrypted external hard-drive with no outside (i.e. network) access. It was stored in a safety-deposit box controlled by the Principal Investigator at the home in Miramar, FL. Furthermore, there was minimal risk to participants because it was simply a moderated discussion about the general attributes that would encourage the participant to apply at a regional airline. No specific airlines or programs were discussed, and there was no direct benefit for participation.
Research Method and Design

Method

The researcher chose Grounded Theory as the method for this study. Parobek (2013) describes Grounded Theory as a way to collect and analyze data. It was particularly useful in identifying and understanding interactions between the variables. It primarily involved collecting and codifying data in a systematic, yet flexible way. The coding process involved first creating broad categories and then creating more specific classifications within those categories. Charmaz (2014) noted that Grounded theory was developed by Glaser and Straus in the 1960s. They believed that qualitative research could be used to generate theories, as long as it was logically and sequentially based. This was particularly true for developing theory concerning social processes.

Charmaz (2014) noted that there are six important aspects to conducting Grounded Theory research, in order for it to be valid and reliable. Most importantly, the data collection and analysis processes must have been coordinated simultaneously. By analyzing the data while collecting it, the questions and topics for future interviews could have been modified to accurately focus in on the issue. This means that the initial categories were built in the beginning stages of data collection. These categories could have been, and were, modified as more data was gathered. It was essential that the initial classification system be built in a methodical manner, utilizing rigorous and empirical methods, rather than arbitrarily. One way that ensured that the codification process followed empirical standards was to constantly compare the data gathered from each interview and discussion. This comparison led to refining the codification process, more accurately reflecting the views of the participants. As this data was gathered and refined, the foundation of the theory began to emerge. Developing and then modifying the
theory during the data collection process allowed the researcher to further refine the ideas being studied. Another point she made was that a Grounded Theory study should not strive for a representative sample. Rather, theoretical sampling techniques were used, as the whole point of this study was to develop a theory, or explanation, of a process. Finally, it was recommended that the literature review be written and modified after the theories emerged from initial data collection and analysis. Or, at the bare minimum, the literature review was refined based off the study findings, as the underlying theories that form the foundation of the study changed.

Curtiss and Curtiss (2011) expanded on the data codification process, dividing it into a three stage process. The first stage, referred to as open coding, was defining broad, general categories of response. The second stage, axial coding, involved developing subgroups of category by the values and types of variables. As the variables were further divided, the researcher noted connections and relationships between these variables. The third stage of data coding was selective coding. In this stage, the researcher identified core concepts, or themes, found in the open and axial stages. Furthermore, the researcher built the general theory, or explanation of the decision-making process, from these core findings and the underlying commonalities and links between them.

The researcher chose grounded theory because of its flexibility. This type of study gave the researcher the flexibility to modify the data collection process throughout the study. By analyzing the data concurrently with the collection, the researcher was able to determine when changes were necessary to answer the research questions (Birks & Mills, 2011). Another reason the researcher chose grounded theory was because it was an effective way to study social interactions (Lingard, Albert, & Levinson, 2008). Social interactions are a major part of social identity theory, and he found that identity has an effect on the recruitment decision-making
process. This made a grounded theory study an appropriate way to study the rationale behind these application decisions. Furthermore, grounded theory was an effective way to clarify an existing problem or to identify contributing factors to an existing problem, rather than test a hypothesis (Moghaddam, 2006). One of the goals of this study was to identify the attributes that affect organizational attraction. A grounded study was an effective way to discover these attributes. Finally, grounded theory was selected because it was the most effective way to analyze large amounts of raw data in a scientific, systematic manner. Most importantly, it allowed creativity in the data organization process without compromising scientific integrity (Lingard, Albert, & Levinson, 2008; Urquhart, Lehmann, & Myers, 2010).

The researcher rejected three other qualitative methods, narrative or action research, phenomenology, and ethnography, for various reasons. Narrative research, sometimes referred to as action research involves teaching the subjects a lesson, then administering an exam to measure their understanding and retention of the material. Ethnography is a study of a social construct or activity in the context of a particular ethnicity, or the role that ethnicity and culture plays in that specific situation (Parobek, 2013). He rejected the narrative approach because there are no lessons to be taught. Rather, the purpose of this study was to uncover the reasons behind decision-making and formulate a new theory identifying attributes. Additionally, in action research cases, the observer attempts to identify behavioral patterns by watching the participants complete actions associated with the study. While this would answer the question of which regional airlines prospective candidates applied to, it would not answer the underlying question of why they chose which ones they did. Thus, this approach would not answer the research question. He rejected ethnography because ethnicity was not a consideration, or variable, in this study. This study sought to identify the organizational attributes that attract all candidates to
airlines, regardless of race, gender, culture, or any other demographic factor. Ethnography would also not answer the research question. Phenomenology is a method normally used to understand an event, or in this case the decision-making process through the viewpoint or perceptions of the people that were directly involved (Creswell, 2012). This method was designed to gather data after an event. The subjects chosen had not applied to regional airlines when the study was completed. This application process was a future event for them. A phenomenological approach would be useful to determine why new-hire pilots chose the airline they chose, however, that is well beyond the scope of this study.

**Research Design**

The researcher chose a specific design for this study in the form of in-depth interviews known as focus group interviewing. Krueger (2000) stated that a focus group is a group of individuals with a common trait, purpose, or goal. This group reflects upon and voices their opinions concerning a chosen topic in an organized and moderated discussion. In this case, the participants were all university students, enrolled in collegiate flight programs, with the common goal of eventually flying for the airlines. The central topic of discussion was which attributes attract them to regional airlines. The main point of a group discussion is that the interaction between participants can stimulate thought, generating more ideas than a simple question-and-answer survey or individual interview. The synergies that were developed are greater than the sum of the individual answers.

Curtiss and Curtiss (2011) described the focus group as a form of interactive interviewing that typically lasts for several hours. The normal focus group utilizes a single researcher who acts as a moderator, as described in the previous section. The group is normally comprised of between six and nine individuals (Brinkman, 2013; Curtiss & Curtiss, 2011; Kreuger, 2000).
The discussion began with an introduction and a short explanation of the research followed by a list of topics to be discussed. The actual discussion then proceeded based on the form of moderation, formal direction, topical steering, or dynamic steering. The researcher utilized a topical steering moderation approach for this study. He supplied the general topic and then allowed the discussion group to develop it as subcategories emerged. When that topic was sufficiently developed, the moderator then introduced a new topic and the process was repeated (Curtis & Curtis, 2011). In this study, the major topics were the general attributes that attract candidates, including compensation packages, job advancement possibilities, career development, company culture, and location. Within these categories a myriad of other, interconnected subtopics existed. The goal of this research was to flush out all of these various subtopics in order to develop a survey tool to be used at a later date to measure each of the subtopics.

The main advantage to utilizing focus groups was that the researcher gathered large amounts of detailed data in a relative short period of time from a large number of participants. A second reason for using the groups was that it allowed a researcher to probe specific areas of interest with gentle, unobtrusive steering (Brinkman, 2013). This allowed the researcher to explore not only types of attraction but also degrees or intensity of attraction based on subtle differences in body language or expression rather than simply relying on language (Curtis & Curtis, 2011).

There were significant dangers in using a focus group that had to be addressed in order to have an effective focus group that provided accurate and relevant data. The biggest danger was that bias could be introduced by the moderator leading too much. The moderator was careful to simply introduce topics and ask questions, not steering participants towards a specific answer.
The moderator could also have introduced bias by limiting the variables by cutting off the discussion too soon. The moderator was careful to allow the discussion to play out fully, while minding the time constraints involved. Finally, interpersonal relationships and conflict could pose a danger to the process. Loss of control of the group or domination of the discussion by one individual or a small group would lead to a withdrawal of participation by the other members of the group. Personal attacks and insulting speech or other lacks of decorum would have caused an interruption of the process or even non-applicable answers. It was crucial that the moderator maintained a highly professional atmosphere throughout the entire process (Curtis & Curtis, 2011).

The researcher rejected three research designs within grounded theory, participant observation, case studies, and surveys, primarily because these designs would not have been an effective way to answer the research questions. Participant observation involves watching the participants complete the tasks, gathering information from their actions (Parobek, 2013). In this case that would have been watching the participants complete applications at various airlines. While this would have been useful for collecting quantitative data on which airlines students prefer, it would not have provided any qualitative data as to why they applied where they did or any level of preferences towards attributes. Thus, this approach would not have answered any of the research questions. Case studies are a review of previous cases, all sharing a common theme (Parobek, 2013). Pertaining to this study, it would have been an examination of which regional airlines received applications from prospective candidates. The same weakness that applied to participant observation applied to utilizing a case study – a researcher could have determined which airlines candidates preferred, but not why or which attributes were the most important to them. Surveys are a way to pool information from a select group of people with a common
connection (Parobek, 2013). A survey would have been useful in determining a preference for various organizational attributes. However, one of the goals of this study was to determine which attributes were important to potential candidates in the application stage of the recruiting process. A comprehensive list, from which a survey would have been built, did not yet exist. Therefore, utilizing a survey from randomly selected attributes would have introduced researcher bias and potentially tarnished the study results.

**Population and Sampling**

The researcher drew the sample from the populations of several different colleges and universities. The population for the study consisted of students from three collegiate aviation programs. The colleges were selected based on size, location, and willingness to participate. The inclusion criteria also included accreditation, type of degree program, diversity of the student body, and reputation within the industry. All of the included schools offered regionally accredited degrees, and the three of the universities were privately accredited by the Aviation Accreditation Board International (AABI), with either flight or aviation management degrees. All three programs offered in-residence programs. The schools were also selected based on program size, having an adequate number of participants for at least one focus group. Another factor that affected inclusion was ease of access. All three of the schools were located within one-half day travel of the researcher’s residence.

Having a desire for a diverse participant pool, the researcher included different types of schools. Both public and private universities which had either two-year or four-year degree programs were included. By utilizing different types of schools, the study had a racially, culturally, and economically diverse population. University A was chosen because it is arguably the most well-known aviation university in the world, they had the largest professional pilot
program in the United States, and it had students from all 50 states and 125 countries at their two campuses. They also had participated in each of the other pilot shortage studies identified by the researcher. Furthermore, their Daytona Beach location was easy to reach from the researcher’s location in South Florida. University B was chosen for similar reasons – location, size, reputation, and student body diversity. However, as a private, research-university offering more than 50 different degrees, it offered more diversity in the student population. University C was chosen because it was a local two-year program that was considerably less expensive than the other universities. However, its program was reputable with the ability to transfer selected credits to other Florida state-universities or private universities with flight programs. It also had a diverse student body including many older students and foreign students, both offering a different perspective to the focus groups.

Each focus group consisted of between six and nine members. This was the commonly accepted size for academic research focus groups. Having at least six members allowed a group dynamic to occur, encouraging interaction between the members. This increased interaction lead to a richer, fuller discussion, making the data collected more reliable. Limiting each group to nine participants made it possible for the moderator to maintain control of the discussion, giving each participant adequate time to present his or her views on the subject matter (Brinkman, 2013; Curtiss & Curtiss, 2011; Kreuger, 2000).

The researcher chose to use a form of nonprobability sampling for this study. Nonprobability sampling is a form of sampling that does not include a specific likelihood of being selected for participation. The actual likelihood, or probability for inclusion is unknown. This led to the conclusion that the sample may or may not be representative of the general population. Therefore, conclusions applicable to the general population of all pilot applicants
should not be inferred from results. The goal of this type of sampling was primarily to gain a better understanding of the issue being studied, making it ideal for the initial stages of exploratory research. Blackstone (2012) described nonprobability sampling as a means of gathering initial data which can be utilized later to create and conduct a larger, often quantitative study.

The researcher utilized a specific sampling method known as convenience sampling. Convenience sampling was a method which draws the sample from nearby, readily-available groups, to which the researcher had convenient access. That is not to say that the participants were arbitrarily selected. They still met the inclusion criteria set forth in the requirements for the study (Blackstone, 2012). In the case of this study, participants were drawn from the different universities comprising the general population. There was a chance that this method oversampled part of the student pilot population, while missing other parts entirely. It was also possible, even probable, that this method introduced a certain amount of bias to the study, based on the close proximity of the schools to one another. Therefore, the researcher took appropriate steps to include as many different participants as possible in the sample. One way he overcame this bias was to use different types of universities, having different types of programs and radically different student demographics, as detailed in the population section.

Finally, this sample was a mix of heterogeneous and homogeneous composition, rather than either one or the other. In a totally heterogeneous sample, the participants would have been completely different, and have had no common attribute or characteristic. Rarely do any central themes emerge from this type of sample in a purely exploratory study. In a totally homogenous sample, there would be no differences between participants. This would have led to limited, if any, differentiation in answers and discussion, bringing little value to the results (Templeton,
This study was homogeneous in a broad sense, in that all of the participants were close to graduation from accredited flight programs, intending to pursue careers as airline pilots, starting at the regional airline level. It was heterogeneous at the macro level, by utilizing participants from different universities each with slightly different programs and by utilizing participants with very different demographics which created drastically different perspectives and viewpoints.

The eligibility criteria for inclusion in the sample were based upon enrollment in a flight training program or an AABI accredited degree program at a college or university. Students selected were all enrolled in aviation science/flight or aviation management degree programs. Specifically, the researcher only selected students that planned to fly for a regional airline after graduation. He also selected students within two years of graduation as they were the closest group to actively seeking employment with a regional carrier and they were the most likely to know what they wanted and did not want in an aviation job. He avoided or rejected several types of participants, including students enrolled in the ROTC program or with plans to seek an active-duty military flying position after graduation. These participants were rejected as they are unlikely to seek employment at a regional airline upon completion of military service (Preudhomme, 2012). Students with an attachment or commitment to a specific airline, through either scholarship, or contract, or previous employment, were also rejected as participants.

The researcher rejected the other nonprobability sampling methods for a variety of reasons. Quota sampling is a form of sampling in which the researcher would have identified different categories and subclasses of the population which had discernable differences. The population would have been divided into groups based on these differences, and the sample would have been drawn in equal numbers from each group until the quota of each type was
reached (Blackstone, 2012). The researcher rejected this method because while there were differences between participants, such as age, race, or gender, these differences were not recorded. Thus, the composition of the focus groups was not affected by these demographic differences. Snowball sampling, often called chain referral sampling, is a sampling method in which the researcher would have asked early participants to refer other people that they are familiar with to participate in the study (Blackstone, 2012; Templeton, 1994). One participant would often bring in several additional participants (Suddaby, 2006). The researcher rejected this method because the participants were recruited and pre-screened at the same time. The data was gathered at one time, not sequentially or at various times. The third type of nonprobability sampling that he rejected was purposeful or maximum variation sampling. This type of sampling is based on identifying all of the varying perspectives and including all of these in the sample (Blackstone, 2012). In the case of this study, that would have involved identifying and including focus groups from all of the various AABI accredited university programs, not a select number. He rejected this method on the grounds of feasibility. The size and distances between these schools would have made this a study with no visible end. Furthermore, several of the universities contacted for inclusion failed to respond to multiple email requests from the researcher. Thus, without their assistance and approval, it would have been impossible to collect data from all of the various sources.

Data Collection

Instruments

The researcher utilized two instruments in this study, the screening questionnaire, Appendix A, and the screening matrix, Appendix B. The screening questionnaire was developed in order to screen volunteers for participation in the focus groups. It contained questions with
yes or no answers as well as questions with multiple choice type answers. The questions pertained to career goals (planning to fly for a regional airline), academic standing, and pre-existing connections or obligations to specific airlines. The instrument also contained a place for name and contact information to identify who was selected and who was excluded. Students that met the requirements for the inclusion in the study were accepted, while those that did not were rejected. The questionnaire was a reference form used by the researcher to manually screen volunteer attributes, not a tool for measuring any specific concepts or theories. Therefore, there were no concerns about reliability or validity as one would have with a measurement instrument. The same logic applied to the Screening Matrix. It was a form utilized by the researcher for reference only during the focus group interview. It was used for measurement, negating reliability and validity concerns (Tong, Sainsbury, & Craig, 2007). The questionnaires and matrixes were scanned and saved, and then transferred to and stored on a password-protected, 128-bit encrypted external hard drive with no outside (i.e. network) access. It was stored in a safety-deposit box controlled by the principal investigator at his residence.

**Data Collection Technique**

The researcher chose focus group interviews as the type of data collection technique for this research project. The researcher divided the data collection process into two main parts – a screener questionnaire and audio recordings of the focus groups, which were later transcribed for data analysis purposes. A focus group was defined as a group of individuals with a common trait, purpose, or goal (Krueger, 2000). The purpose of the focus group interviews was to gather large amounts of detailed data in a relative short period of time from a large number of participants, allowing a researcher to probe specific areas of interest (Brinkman, 2013).
The focus groups consisted of 6-9 participants and a single moderator, the researcher. It was assumed that the participants in each individual group knew one another, as they were upper-division students in aviation programs at the same academic institutions. The participants were all physically present in the same location for their group. Each focus group lasted approximately 2 hours. The moderator utilized a facilitated discussion style to encourage dynamic interactions. This style was an essential part of assuring that all participants had an equal opportunity to express their views and participate in the discussions. The researcher also worked to ensure validity, reliability, and consistency in the process, which will be discussed in the following section on reliability and validity.

The focus group followed a four part framework, consisting of a brief introduction and explanation of the goals of the research. The participants were then asked to sign the consent form, found in Appendix E, allowing the researcher to record the session. All participants signed the form and remained for the session. The second part was a brief rapport building stage, in which the basic ground rules were laid out and a brief explanation that every opinion was welcomed and there were no right or wrong answers to the questions generated in the discussion. The third part of the framework was the actual interview. This part began with two simple questions for the participants – “Do you know which regional airlines that you would like to work for? And, “why would you like to work there?” This served as the foundation of the discussion concerning which attributes the applicants seek in a regional airline. A secondary role of the moderator included data collection and capture of the nonverbal responses of the participants during interactions. These responses and interactions were later correlated with the discussion transcripts. These detailed notes included elapsed time, the subject being discussed, and nonverbal reactions, including body language, tone and volume of voice, and interpersonal
reactions to the various ideas being discussed. These notes greatly assisted in the data organization process. Finally, each interview closed with a brief conclusion, thanking the students for participating and explaining how they can obtain a copy of the final results of the study.

**Data Organization Techniques**

The data organization process was relatively straight-forward. The researcher transferred the recordings from each session from the recording device to a laptop computer and saved. The recordings were organized with a simple three-part naming system. The system utilized was based on the name, date, and time of the specific interview. The files were named by the name of the university followed by the date, in four digit day-month numerical format, and a letter corresponding to which session the recording is from. For example, the morning session at University A on September 1 was UniA0901A. The researcher then transferred the organized files to a thumb drive and delivered them to a dictation company for transcription. The transcribed files were then saved as Word documents utilizing the same naming system used for the raw recordings. The researcher then printed a hard copy of the transcripts in order to manually enter notes taken from observations during the interviews. After checking the transcriptions and correlating notes for accuracy, the researcher made the changes to the Word documents and saved them utilizing the same naming system with an additional notation that it was the final version. The original recordings and transcripts, as well as the scanned copies of both, and the final version of the transcripts were then transferred to the same hard drive. The researcher then erased and shredded all of the collected data, other than the copy on the hard drive. Only the final data set was kept on a laptop for data analysis purposes. After the
researcher analyzed the final data set and the results were transferred to the hard drive, all of the data was deleted from the laptop.

**Data Analysis Technique**

The researcher used computer assisted qualitative data analysis software known as QSR*NVIVO to assist with the data analysis process. Developed by Qualitative Research Solution International, or QSR, Non-numerical Unstructured Data, Indexing, Searching, and Theorizing in vivo, or NUD*IST VIVO is commonly referred to as NVivo or QSR*NVIVO. This software was typically used for textual analysis, data organization and codification, and data modelling (Bringer, Johnston, & Brackenridge, 2004). The researcher primarily used the software in this study for data organization/codification and data modelling.

NVivo was useful in all stages of the qualitative research process. In the early stages, it was helpful in identifying concepts derived from key words found in existing literature. It was also useful in the early parts of the data collection stage by identifying key words used in the focus group interviews. This identification of key themes helped in the open coding phase. The software was also helpful in the axial coding stage by identifying relationships between the key words identified in the open coding phase. The software was also helpful at developing categories of data based on the identified relationships, known as theoretical coding. Finally, the software was useful at counting node usage, assisting the researcher in defining how common a particular attribute is in the various discussions (Hutchison, Johnston, & Breckon, 2010).

The researcher used classical content analysis as the general form of analysis in this study. According to Kohlbacher (2006), classical content analysis is simply a way to codify oral communications into a dataset that can then be numerically analyzed. It is a multi-step process that involves dividing the information into unique, individual parts, sorting those parts into
categories, then analyzing the relationships between those parts. He selected this form of analysis because it was the most useful way to answer the research questions. The initial identification of nodes was useful in discovering which attributes were significant to applicants, while the assistance with axial coding was useful in helping the researcher identify the relationships between the attributes and how they affected one another. Finally, a simple node count assisted the researcher in determining the relative importance of each attribute, based on how much it was discussed.

Nvivo was the ideal software for this type of study. The main advantage to utilizing Nvivo dealt with organizing the collected data (Bringer, Johnston, & Brackenridge, 2006). The software helped the researcher collect the data from multiple sources, store it in a single location, and connect the themes and main ideas (Hutchison, Johnston, & Breckon, 2010; Wiltshier, 2011). In the case of this study, data was stored by location and separated by group within each location, eliminating manual clerical tasks (Bringer, Johnston, & Brackenridge, 2004). Also, multiple forms of data, including plain text, rich text, audio, or photo files could have been entered into the program (Bringer, Johnston, & Brackenridge, 2004; Wiltshier, 2011).

A second advantage to utilizing the Nvivo software was the functionality of the software. The software was easy to use and had high levels of customer support in the form of free tutorials as well as live support and online instruction (Bringer, Johnston, & Brackenridge, 2004). It also allowed objective analysis across multiple datasets, through easier search functionality in the form of Boolean searches between all data and datasets (Hutchison, Johnston, & Breckon, 2010). NVivo allowed either inductive or deductive coding to be used, based on researcher selected settings. The software had the capability of assisting with open coding, identifying the initial nodes, axial coding, or the identification of relationships between the
individual attributes, and theoretical coding, or categorization of the individual codes and their relationships. NVivo was capable of coding the data automatically while still allowing manual additions or corrections and changes (Bringer, Johnston, & Brackenridge, 2004, 2006). The software was also helpful for the researcher to visualize relationships (Wiltshier, 2011). A variety of output formats were available, including models, charts, and matrices useful at quickly seeing links between variables and easily modifying categories as necessary, based on these relationships (Welsh, 2002).

Finally, the researcher added to the validity and reliability of the study and its results by utilizing qualitative data analysis software. First, utilizing NVivo recorded the decision train and the decision process, providing detailed notes about nodes identified throughout the open coding process. (Bringer, Johnston, & Brackenridge, 2004). This decision train was an essential part of the audit trail (Bringer et al., 2006). Utilizing the NVivo software was also helpful in verifying the accuracy of the transcription service. By loading the raw audio files into NVivo and then comparing them with the loaded transcribed text files, the researcher ensured the accuracy of the data being analyzed (Wiltshier, 2011). Utilizing the autosearch and autocoding functions of the software minimized the risk of human error. When combined with a manual review of the coding process including adjustments and changes, the software ensured that no data was missed (Welsh, 2002). When combined, these processes helped make the entire research process transparent, increasing the overall validity of the study (Leech & Onwuegbuzie, 2011; Welsh, 2002).

NVivo is not, however, without limitations or disadvantages. The biggest risk in using any qualitative data analysis software involved over-reliance on the software. Without proper training, it would have been easy to allow the software to do everything, particularly in the open
coding phase (Bringer, Johnston, & Brackenridge, 2004, 2006). It would also have been easy to stop the analysis too soon when over utilizing the software. A common mistake would have been to open code the data without performing any axial coding, failing to identify the relationships between variables. This could have led to the development of a conceptual analysis rather than a theory (Hutchison, Johnston, & Breckon, 2010; Leech & Onwuegbuzie, 2011). Over-reliance on the software could also have led to data, categories, or links between them to have been missed when the researcher failed to manually check the codification process, modifying it as necessary (Welsh, 2002).

The second major risk in utilizing software was the opposite, which could have led to over-analyzation of the data. The researcher could have collected too much data and attempted to utilize it all, as a result of the ease of inputting and analyzing it using a high-end software program like NVivo. If this had happened, the analysis could have resulted in too many categories of variables with no clear links between them. It was essential that the researcher collected data until saturation was reached, but not analyze it too much or too many times (Bringer, Johnston, & Brackenridge 2006).

The third disadvantage to using NVivo came about as a direct result of its advanced capabilities. The software was easy to use and had a multitude of resources useful for learning it. However, it still took significant time and effort for the researcher to master NVivo (Bringer, Johnston, & Brackenridge, 2004). There was also a cost associated with utilizing NVivo. It was not free, open-source software. While the cost for a one-year student subscription was quite reasonable, it still had to be purchased from the researcher’s personal funds. Finally, it could have been difficult to use the software, as limited information was available on the screen at the same time. There was a lot of data available that required a large amount of scrolling back and
forth to make use of it all. Also, it was difficult to print certain outputs, requiring a lot of hand-written notes and hand organization (Bringer et al., 2006).

Several steps were necessary in the data analysis process to overcome these potential limitations and risks. Training on how to use the software is not part of the analysis. Therefore, the researcher first completed all of the available tutorials and watched several informative YouTube videos prior to data entry and analysis. Second, in order to avoid the dangers of over or under analyzing the data, the researcher utilized both automatic and manual coding, initially coding the data manually. The researcher then utilized the automatic coding function of the software on the first pass over the data. The second pass over the data, again utilizing the software, was a manual review of the initial autocoding and the resulting nodes, making adjustments as necessary. The third pass was an initial codification/categorization based on both the automatically defined and manually adjusted codes.

After compiling the initial list of attributes, the researcher manually categorized them into themes. These themes were based on similarities between the individual attributes. The researcher utilized a similar approach when examining the relationships between the nodes, starting with axial coding by the software, then a manual review with adjustments, followed by a second automatic pass with the categories and relationships defined. This ensured that the relationships were discovered and could then be explained.

The researcher chose classical content analysis as the qualitative data analysis approach for this study. This approach was similar to the most commonly used approach, constant comparison analysis, with one additional step – counting the codes and categories for statistical purposes. A constant comparison analysis utilized an approach that developed the coding system, including both nodes and categories (or themes), from the text rather than utilizing a
predetermined coding system (Leech & Onwuegbuzie, 2011). It was a multi-step process that analyzed the data more than once to ensure both completeness and accuracy. The first step in this process was open coding. Open coding was the initial search of the text for the unique organizational attributes identified in each focus group (Hutchison, Johnston, & Breckon, 2010). Each individual data point was then assigned to a specific node, based on its general characteristics, for example compensation, location, etc. The researcher performed this initial coding both manually and then automatically with the software, cutting the data into discrete, identifiable parts (Bringer, Johnston, & Brackenridge 2006). After NVivo analyzed all of the data, noted all of the individual data points, and distributed them into similar, concept-based categories, the researcher manually reviewed the focus group transcripts. A manual review of the transcripts was completed ensuring that all of the discussed attributes were accounted for. Following this manual review, the researcher reviewed the characteristics of each node, ensuring that each attribute fell within that category and that the categories were not too broad, including multiple differing ideas. The researcher manually adjusted the nodes and moved the data from node to node, as necessary. Minimal movement was necessary at this point in the analysis. The software only coded a single attribute in two separate themes.

The second step in the coding process was to organize the nodes, or basic categories, into groups based on how they affect the decision-making process. This was done with the software, utilizing the set function within tree mapping to build tree nodes (Bringer, Johnston, & Brackenridge 2006). NVivo grouped the attributes together based on commonalities. The researcher added memos documenting the decision-making process in which individual attributes were manually moved from one node to another or how nodes were manually clustered within the general theme. The researcher also added comments and notes from the discussion groups in
memo format, in order to create a more transparent description of the decision-making process. Once the tree was automatically mapped, the researcher manually assessed it for accuracy. It did not require adjustment. He then examined the nodes within each cluster for similarities and differences, ensuring that they fell within the larger general theme (Wiltshier, 2011). As the examination resulted in no manual adjustments, the tree mapping function did not have to be run again, to ensure consistent use of codes and to ensure that the nodes did not appear in multiple categories (Bringer, Johnston, & Brackenridge 2006).

Step three in the coding process was axial coding. The researcher examined and evaluated the relationships between themes and identified the steps in the recruiting process during this part of the coding process. He used NVivo to automatically identify relationship nodes, or how each individual attribute within the node related to the broad category (Hutchison, Johnston, & Breckon, 2010). The output from this function was a relationship matrix. This matrix was manually reviewed to identify the relationships (Welsh, 2002). It was essential that the researcher note when and under what conditions the relationship occurred in these memos as well as the outcome changes resulting from the identified relationships (Bringer, Johnston, & Brackenridge, 2006). As an example, a student might have been willing to apply at a regional airline if it had a verifiable, sustained faster upgrade times based on a flow-through agreement to the major airline partner. Rather than simply noting the characteristics of the attribute, i.e. acceptance of lower pay and the desired attribute of a faster promotion, the researcher noted that these characteristics were directly linked together. The researcher then went back and revised the tree nodes based on the identified relationships and the conditions that caused the change.

The final step, which distinguished classical content analysis from the constant comparison analysis, as described above, was to perform a content count on the coded data. The
researcher completed this step after all of the data was categorized and all of the relationships were identified and explained, and the nodes, categories, and relationships were manually adjusted. The analyst used NVivo to count the number of times an attribute fell within each theme was mentioned in the focus group discussions. This led to a total count for each node and theme. Then, the software analyzed the data a second time, identifying how often each broad category was discussed. Unfortunately, the resulting output, a total count for each attribute and a separate output of for each general theme was not accurate, based on too many variations in the verbal descriptions of each attribute. Upon manual review, the count varied greatly. Therefore, it was not possible to use this count in a statistical analysis meant to gauge the relative importance of each attribute, based on how often it was discussed (Leech & Onwuegbuzie, 2011).

The researcher helped logically and sequentially answer the research question by utilizing the classical content analysis approach. The open coding process discussed in step one of the analysis answered the first research question by identifying all of the various attributes that attract candidates and grouping them into specific categories, providing a comprehensive list based on the participants’ own words and ideas. The second and third steps of the process, grouping the specific attributes into categories, or nodes, by relationship and the axial coding process clearly identified the relationships between the themes and the decision-making process. Identifying these relationships helped determine how the attributes affect the decision-making process, moving an airline from one group to another. This type of analysis was also helpful in adding to the validity of the study by creating a transparent decision-making process.
Reliability and Validity

Reliability

In a traditional quantitative study, rigor describes the integrity of the study. For a study to be rigorous, it requires reliability. A qualitative study has similar requirements in order to be rigorous, albeit with slightly different terminology (Morse, 2015; Noble & Smith, 2015). Lincoln and Guba (1990) suggested utilizing the terms consistency and neutrality to describe a qualitative study’s reliability. Consistency and neutrality are roughly equivalent to reliability, meaning that the procedures used in the study are consistent and the research process is transparent (Lincoln & Gupta, 1990). More recently, Morse (2015) utilized the term trustworthiness in place of rigor, in the case of a qualitative study. He used the terms dependability, and confirmability in place of reliability (Morse, 2015).

Regardless of whether one uses the term reliability, or one uses the terms consistency and neutrality, or the terms dependability and confirmability to describe this aspect of rigor, the requirements for the study to be reliable were the same. Several strategies were useful in ensuring the reliability of this qualitative study. Rich and thick descriptions, triangulation, stepwise replication, or inquiry audits, also known as an audit trail, could have been utilized to ensure dependability or consistency. The researcher could have utilized triangulation or an audit trail to provide confirmability, or neutrality. Creswell (2012) noted that a qualitative study that utilized at least two strategies for both reliability and validity could be considered rigorous.

The researcher utilized two of the suggested strategies useful for ensuring reliability, while holding one in reserve to be used in case the data or conclusions were suspect (Morse, 2015). He utilized the strategies of thick and rich descriptions and triangulation to ensure reliability in this study. The strategy of a peer review was available to the researcher, but was
not necessary. A rich and thick description of the data collection process was associated with the number of interviews and the number of participants. The researcher was predominantly concerned with the sample size and the appropriateness of the sample. It was impossible to predetermine a sample size in this qualitative study, as one would have done in a quantitative study. Rather, the researcher collected data until saturation was reached (Morse, 2015). Saturation is defined as the point in which different focus groups are providing the same answers as other groups, with no new categories being identified in the coding process. Interrupting the data collection process prior to reaching saturation would have resulted in a study containing a data set too small to draw reliable conclusions. This could have resulted in drawing either no conclusions or incorrect conclusions based on cherry-picked data (Fusch & Ness, 2015).

Additionally, the sample utilized was appropriate for the problem that was studied. The researcher chose a sampling method which had a critical impact on the reliability of the study. Convenience sampling was an acceptable method for the beginning stages of a study or for a study that simply sought to identify the basic attributes to be codified. However, as patterns emerged, theoretical sampling could have been used for follow-on or additional studies in order to target a specific group (Morse, 2015). The researcher utilized convenience sampling with specific characteristics required for participation in the study. However, as no follow-on studies were required to reach saturation or to clarify a specific issue that arose, targeted sampling was unnecessary.

Traditional triangulation is a method of utilizing both qualitative and quantitative methods on two or more data sets to answer the same question (Bryman, 2004). Another type of triangulation is data triangulation. Rather than utilize different collection techniques, data triangulation utilizes comparisons between data sets collected from different sources (Flick,
This process increased both the scope and depth of the study. It was possible that different data sets could have provided different answers to the research question. However, when the various data sets all provided the same answers, these answers were considered reliable. This method was often not utilized due to the time and expense of analyzing the data multiple times (Morse, 2015). The researcher utilized triangulation by dividing each focus group into an individual data set. He then combined these data sets into a single data batch for the initial coding process. The researcher used the Nvivo software for the initial coding, with a separate manual pass to ensure that all of the attributes were codified correctly. Once he established the coding framework, he compared the individual data sets to the master list. He then compared the results of each individual pass to one another for overall consistency. In every case, the results of each individual analysis were consistent. As such, the data analysis methods were considered reliable (Kidd & Parshall, 2000).

If inconsistencies between the individual results were discovered, the researcher would have conducted a peer review of the methods and findings. A peer review would have been used to identify either researcher bias or unnoticed errors in the analysis methodology (Morse, 2015). The researcher would have provided a summary of the data collection and analysis methods, as well as a summary of the findings to the professors at the three participating schools for review and input. Noble and Smith (2015) noted that there is a danger of introducing other people’s bias into the findings when utilizing a peer review, particularly if they are in a position of authority or are relatively unfamiliar with either the research topic or the research methods used. Their recommendations were to utilize this strategy only if a problem arose and to listen to alternative points of view, but to remember that the researcher is the final authority on conclusions drawn.
This technique was not necessary as the data collected was consistent across all four focus groups.

The researcher chose to use an expert review of the interview guide to ensure the reliability of the instrument utilized, the focus group interview guide. A copy of the finalized Literature Review and the topic guide were provided to the researcher’s expert contact. This contact was considered to be one of the leading practitioners of aviation safety in the airline industry. He sat on several industry-government information sharing committees. He was also an expert in safety information data gathering, with more than a decade of experience designing and conducting cognitive interviews of crewmembers involved in safety incidents. He also designed, implemented, and ran safety-related data collection, codification, and analysis at two major airlines. He was instructed to validate the instrument based on inclusiveness of the major concepts found in the literature review and the usefulness of the topics at answering the research questions. The researcher then modified the guide as necessary to include his suggestions.

Additionally, the researcher ensured that the instruments utilized in the study were reliable. In the case of this study, that meant that the interview guide used by the moderator in the focus group interviews was reliable. The primary way that one ensures the reliability of the interview questions is also through an expert review of the focus group interview guide, prior to conducting the interviews. The evaluation of this topic guide had two aspects, summative and formative. The summative aspect was simply ensuring that the topics to be discussed were useful at answering the research questions. The formative aspect of the review was used to ensure that all of the topics, drawn from the background research, were covered in the guide. This review ensured that the guide was inclusive and suitable for the study (Simon, 2011).
It must be noted, however, that in order to collect reliable data from the focus groups, the moderator allowed the interviews to progress at a natural pace, directed by the participants. It was critical that the questions were non-directive in nature, allowing for spontaneous responses from the group members (Kidd & Parshall, 2000). Relying too heavily on the guide or by following it in too structured a manner, the researcher would have introduced bias into the study by directing or controlling responses. This would have invalidated the results of the data analysis process. Therefore, while part of ensuring reliability of the instruments was to make it inclusive and useful, a second, equally important part was to ensure that it was not overly directive in nature. The primary questions concerning each general topic were the same for each focus group, ensuring consistency. However, the follow-up and probing questions varied based on the participant-led direction of the discussion.

Reliability has two distinct aspects in a qualitative study, the soundness of the research methods and the integrity of the results and conclusions (Noble & Smith, 2015). Sound research methods are trustworthy, meaning that the same data collection process was used across all of the various groups, referred to as stability. It was necessary to utilize sound methods with established, accepted procedures for focus group research. The researcher did not select these methods randomly or haphazardly (Kidd & Parshall, 2000). Furthermore, he chose the methods which supported the process useful for answering the research questions which formed the backbone of the study (Morse, 2015). One important aspect of consistency in the data collection process was that any confusion about the material being discussed or problems within the focus group were addressed immediately within that particular group. Failure to clarify the issues being discussed would have caused the researcher to rely on tainted data, in the form of erroneous or untrue information from the group. The researcher ensured that there was complete
understanding of the issues being discussed which assisted in keeping the process consistent across the various focus groups (Breen, 2006). With sound research methods, another researcher should reach the same conclusions with the gathered data. This was made easier by the researcher giving a clear and transparent description of all phases of the research process, particularly the explanation of how the data was analyzed (Welsh, 2002). This description was in the form of a decision trail (Noble & Smith, 2015). The Nvivo software was extremely helpful in documenting this trail (Bringer, Johnston, & Brackenridge, 2006). The researcher followed the procedures outlined in the proposal with every focus group, in order to maintain the necessary consistency (Creswell, 2012).

The integrity of the results and the conclusions drawn from the data analysis was the second aspect of reliability. Neutrality, or confirmability was an essential part of this reliability. Objectivity by the researcher was a critical part of that neutrality (Morse, 2015). In order to maintain objectivity, the researcher’s philosophical positions were detailed and differentiated from those of the participants when discussing the results. The researcher also recognized that bias arose from his philosophical positions and consciously worked to remove that bias from the data analysis (Noble & Smith, 2015). Objectivity would also have been adversely affected by domineering participants that steered the conversation in a limited direction, suppressing opposing viewpoints. The moderator would have documented any necessary corrective measures or interventions within the individual focus groups in data summary. In this study, there were no over-bearing participants who necessitated corrective action. The researcher also noted the intensity of participant interactions and comments in the data summary, ensuring objectivity in the data analysis process (Wong, 2008).
Consistency was a second part of integrity in the data analysis process. Kidd and Parshall (2000) recommended utilizing a single coder to classify the data in a grounded theory study, ensuring that the same set of coding rules were equally applied to all data sets. They recommended beginning with a high-level view, focusing on the broad categories into which the individual responses fell (Kidd & Parshall, 2000). The Nvivo software helped the analyst accomplish this by applying the same coding and sorting rules to all of the data sets (Bringer, Johnston, & Brackenridge, 2006; Wiltshier, 2011).

The researcher ensured that enough data was gathered to reach logical conclusions, as a third part of integrity in the analysis process. This meant that for this focus group study, data was collected until saturation was reached. The researcher identified the saturation point by the continuing emergence of the same themes in each new focus group. More specifically, he identified the saturation point in this study when the same specific organizational attributes were repeated, with no new attributes being suggested in new groups. Had the research not utilized enough groups to reach saturation, it is possible that the resulting conclusions would have been misleading or blatantly erroneous. The analyst discussed and demonstrated how and when the point of saturation was reached in his findings, as a part of transparency (Hutchison, Johnston, & Breckon, 2010). The researcher also tested for saturation by evaluating the consistency of the answers given between groups. The researcher examined the extent to which participants in a single focus group agreed or disagreed with one another concerning the main categories of attributes. A high level of agreement combined with a low frequency of opinion shift was indicative of a stable discussion group. A high level of shift or a low level of agreement would have been indicative of an unstable group, requiring additional focus groups to have been conducted (Breen, 2006; Sim, 1998).
There was one area of concern with regards to consistency in the data analysis process. The trustworthiness of the process was dependent on the methods chosen to both collect and analyze the data (Noble & Smith, 2015). The accuracy of the data analysis was directly dependent on the skill of the researcher (Sim, 1998). As noted in the data collection section, there was a danger that an inexperienced researcher would misinterpret the data by either failing to fully analyze the data or by overanalyzing it. It was also possible for the researcher to rely too heavily on the data analysis software, failing to verify and correct omissions or errors (Bringer, Johnston, & Brackenridge, 2004). To minimize that risk, the researcher also utilized the same industry expert that reviewed the interview questions. This industry expert was an expert at codifying qualitative data in the aviation safety industry, specifically with experience building taxonomy systems for pilot-reported safety related events, and codifying thousands of reports on a monthly basis. Once the data was transcribed, loaded in Nvivo, initially analyzed, and reviewed by the researcher, the expert reviewed the initial coding process and the final data summary. This expert offered suggestions and corrections, ensuring that the process was completed accurately and there was consistency in the codification process. This peer review of the analysis process helped ensure that the researcher did not misclassify data or omit data from the analysis, increasing the reliability of the study.

Validity

For a study to be rigorous, or trustworthy, it also required validity. There are two types of validity, internal validity and external validity. Morse (2015) referred to these types of validity as credibility and transferability. Credibility is the same as internal validity, while transferability describes the external validity or generalizability of the study (Morse, 2015). Alternatively, Noble and Smith (2015) referred to them as truth value and applicability. Truth value is the
equivalent of internal validity, meaning that the findings accurately reflect the data collected. Applicability is used to describe generalizability or external validity, meaning that the results could be transferred to other groups (Lincoln & Gupta, 1990; Noble & Smith, 2015).

There were multiple strategies available ensuring the internal and external validity of a qualitative study. The strategies of prolonged engagement with and persistent observation of participants, triangulation, peer debriefing, negative case analysis, referential adequacy, member checks (Morse, 2015), as well as reflexivity and reflection on the researcher’s perspectives could have been utilized to ensure the internal validity of the study. External validity could be ensured by utilizing the strategy of thick, rich descriptions of the data (Noble & Smith, 2015). Again, Creswell (2015) noted that utilizing at least two of these strategies in any qualitative study is adequate in ensuring its validity. The researcher utilized four of the strategies for internal validity and the single recommended strategy for ensuring external validity in this study. The strategies used for ensuring internal validity included prolonged engagement and persistent observation. These techniques involved the researcher spending a longer time period with the participants or having multiple contacts with them. This gave the participants time to assess the interviewer, building trust and intimacy. Once the participants trusted the interviewer and the other participants, they were more open and more willing to share what they really thought and felt. This led directly to better, more rich data. Part of the trust building process was for the researcher to relate to the participants, by sharing common experiences with them. In this case, the researcher was a civilian-trained major airline pilot that both attended and taught in a flight program at a private, Christian college. Sharing this experience in the beginning of the focus group helped the participants relate to the researcher, eliciting more open responses, which led to deeper discussions (Morse, 2015). Along those same lines, the researcher reflected on previous
experiences, including flying background and thoughts concerning attraction to a regional airline. Reflection on this background helped to identify any pre-existing biases and tendencies towards any of these specific attributes. By identifying these in advance, the interviewer ensured that the discussion was not led in a particular direction nor were differing participant views disregarded. This was an intentional reflection, done in advance, and recorded for entry into the results (Noble & Smith, 2015). The analyst would have utilized negative case analysis as a method of addressing any outlying or conflicting answers. This case analysis process would have identified and discussed the attributes that fell outside of the main body of attributes discovered in all of the other focus groups. These outliers would not have been ignored. The researcher would have examined the outliers, comparing them to the common attributes in order to develop a reasonable explanation for their occurrence, with the occurrences and explanations included in the final data summary (Morse, 2015). However, in the case of these four focus groups, there were no inconsistent answers or outliers. Therefore, it was not necessary to utilize this technique.

The researcher used the thick and rich description strategy to ensure external validity. This was the same strategy that was used to ensure reliability. This strategy was primarily concerned with the number and composition of the focus groups. The researcher found that there were an adequate number of focus groups utilized to reach the data saturation point, or the point at which the key themes drawn from the data were repeated in each new group. Additionally, each focus group contained enough participants to stimulate the discussions. Each focus group in this study was planned for no less than six and no more than nine participants, which ensured adequate stimulation while allowing for ample opportunity for input into the discussion topics (Brinkman, 2013; Curtiss & Curtiss, 2011; Kreuger, 2000). The researcher analyzed the data
collected from each focus group as soon as practical after collection and tested it for consistency with the data gathered from the other groups as a means to determine when the saturation point was reached. The high level of consistency with other groups, once the saturation point was reached, indicated that this study had external validity, or transferability.

Internal validity, also known as truth value or credibility, was a cornerstone for establishing the rigor of this qualitative study. Internal validity is often referred to as the goodness of the study. The researcher ensured that the participants’ perspectives were clearly and accurately presented in the findings, in order for the study to have internal validity. Of equal importance, the differences between the participants’ perspectives were articulated. The final report included an accurate depiction of participants’ views and opinions (Morse, 2015). The second part of internal validity was that the findings and conclusions correctly reflected the data (Noble & Smith, 2015).

External validity concerns the transferability of the conclusions to other groups or to the general population. In this study, external validity is the ability to apply the findings to a broader population. The interviewer discovered which attributes attracted pilots from a specific segment of the pilot population, university flight or aviation management students, to regional airlines. It was not the intent to build a theory applicable to the general population, all pilots. Therefore, as the study intentionally ignored several other segments of the pilot population, it needed only to be externally valid between other groups within the specific, smaller segment of the population, university students. Any attempt to apply these findings to all segments of the pilot applicant population would have invalidated the findings. The researcher achieved limited external validity by ensuring that adequate data was collected, and the data was reliably analyzed. Once
saturation was reached in data collection, and the data was analyzed with the common attributes identified, limited transferability existed.

Additionally, there were two main issues that could have adversely affected the validity of the data collection portion of this study. These issues were based on the use of focus groups, and they needed to be accounted for in order to maintain validity. The first issue concerned data acquisition. The researcher recorded and transcribed the focus group interviews as the primary means for data collection. On a limited budget, it was not possible to utilize high-end equipment to record the groups. Using standard, affordable recording equipment, it was possible that there were portions of the recordings that were inaudible or missed completely (Kidd & Parshall, 2000). The researcher addressed this concern by using two separate devices at opposite ends of the table to record the conversations. The recorders were designated as primary and secondary, using the same designation for all the groups. The secondary recordings were used to fill in the missing sections from gaps or inaudible sections in the primary recordings. A second concern was that it was difficult to determine who was speaking when listening to the play-back of the recordings. Associating statements with notes taken about intensity and non-verbal cues was an essential part of the data collection process (Sim, 1998). The researcher utilized a timer synced with the start of the audio recordings in each group. All notes concerning non-verbal cues, interactions, and levels of intensity were accompanied with a specific time stamp for future correlation. While this added additional time and effort to the transcription process, it increased the validity, ensuring that what the participants said was accurately captured.

**Transition and Summary**

Section two began with a reiteration of the purpose statement. It then discussed the role of the researcher and details concerning the study participants. Students from four colleges and
universities, all actively enrolled in flight training or aviation management degree programs, were utilized in this study. The next portion of section two dealt with the general research method and design as well as the specifics concerning the population and samples selected. This study utilized convenience sampling to select participants from the population. The participants were all students enrolled in either flight training programs or aviation management programs at the participating schools, with the stated goal of pursuing careers as airline pilots, starting at regional airlines. Next, data collection, organization, and data analysis was discussed. Specifically, data collection instruments, data collection and organization techniques, and data analysis techniques were clearly defined. The final part of section two is a discussion concerning the reliability and validity of the study.

Section three of this study was primarily concerned with the results of the study, the implications of those results, and their application to professional practice. This section began with an overview of the study and then moved into a presentation of the findings. Once the findings were presented, section three contained a discussion on the application of the results to professional practice. These applications included recommendations for action, recommendations for further study, and reflections on the researcher’s experience with the study. Finally, the third section concluded with a summary of the study and final conclusions.
Section 3: Application to Professional Practice and Implications for Change

Section three of the ADRP report was primarily concerned with the findings of the study. It began with a brief introduction and an overview of the study. This overview contained reasons for conducting the study, as well as a brief summary of the findings. Specifically, this part of section three addressed the findings in relation to the research question, the conceptual framework, and the literature review.

The second major component of section three was primarily concerned with how to utilize the data collected and the findings of the study. It began with a discussion of the application of the findings to professional practice in the regional airline industry. This part also included recommendations for action as well as recommendations for further study.

Finally, section three concluded with a summary of the researcher’s reflections on the study, including background, biases, and preconceived ideas based on those experiences and biases. It also included a discussion on changes in thoughts as a result of the study. Section three concluded with a brief, concise summary of the study and a reiteration of the conclusions reached.

**Overview of the Study**

The study was chosen because there was a major shortage of pilots in the United States. That shortage was predicted to worsen over the decade and a half following the study, reaching a total shortfall of nearly 18,000 pilots by 2026 (Higgins et al., 2013). It takes a considerable amount of time to train pilots and for them to reach the minimum experience requirements to serve as a crewmember on an airline flight deck. This shortage could have resulted in cancellations of service to smaller communities throughout the United States. These cancellations would have had a negative economic impact on those communities. There was no clear, easy solution to the
problem. As such, the goal of this study was to identify which attributes would attract high quality candidates to regional airlines. Individual carriers could then compare these results to their existing strengths and weaknesses. They could develop personalized recruiting programs that would attract candidates based on existing strengths. They could have also utilized the findings to develop programs to minimize or even eliminate the adverse effects of their weaknesses. This would have helped the individual airlines use staffing as a strategic advantage over competitors.

The researcher identified sixteen individual attributes that influence attraction, either positively or negatively, to regional airlines. These attributes were categorized into four distinct themes, based on similarities between attributes. The four themes identified were location, pay, job stability, and reputation. These themes influenced the decision-making process in different ways. The researcher found that potential applicants classified airlines into one of three categories based on attraction. Tier one airlines were the airlines they would initially apply to. Tier two airlines were the “backup choices,” where they would apply if they were not successful at obtaining a position with a tier one choice. The tier three choices were those airlines that potential applicants rejected, based on certain attributes, where they would not apply. The final aspect of the study was to compare the themes to the classification system, determining how they were related. Ultimately, the researcher made changes to the conceptual framework based on these findings.

Presentation of Findings

The study identified four core themes based on commonalities of the individual attributes. The themes were then organized according to how they influenced attraction. These themes were comprised of sixteen individual attributes that influenced attraction to a regional
airline. Individual applicants grouped airlines into different tiers, based on specific attributes and the relationships between them, applying at a few carriers at a time. Each attribute or theme has a different effect on the decision-making process.

**Themes**

The individual attributes that influenced attraction to a regional airline were clustered into four general themes. These four themes were reputation, location, security, and pay. Reputation had two additional subcategories. These subcategories were public reputation/image and culture. These sub-themes were comprised of seven individual attributes. The other three themes were made up of nine individual attributes.

**Reputation.** The reputation theme consisted of four distinct parts, two subcategories and two individual attributes. These were the subcategory of culture, the subcategory of public image, the individual attributes of safety record and training program reputation. The culture subcategory was comprised of four individual attributes including employee satisfaction or happiness, employee support and development programs, adherence to contractual obligations, and perceptions of meeting the expectations of current employees. The public image subcategory consisted of three individual attributes, the general public reputation, customer complaint statistics, and Department of Transportation operational statistics.

**Location.** The location theme included two distinct attributes, the location of crew bases or pilot domiciles and the ability to commute to those bases.

**Security.** The theme labeled security consisted of the individual attributes of career advancement possibilities, and company stability. Career advancement possibilities included both the projected upgrade time within the airline and a clear path to a major airline.
Pay. The final theme that emerged was pay. The pay theme had three individual attributes. These individual attributes were compensation, bonuses, and benefits.

Attributes

The individual attributes fell into one of the themes, based on similarities with other attributes. They were then examined within the context of their overriding theme, reputation, location, security, or pay. The subcategories of culture and public reputation were treated as attributes and discussed within their main theme, reputation.

Reputation. Participants identified nine individual attributes related to the theme of reputation of an airline that contributed, either positively or negatively to their level of attraction to that airline. The individual attributes included general public reputation, customer complaint statistics, and Department of Transportation operational statistics, including on-time rating and lost/misconnected bag numbers, employee satisfaction or happiness, employee support and development programs, adherence to contractual obligations, perceptions of meeting the expectations of current employees, safety record, and training environment.

Culture was the most often discussed attribute related to reputation in all of the interviews. Participants discussed an airline’s culture in terms of employee satisfaction or happiness and employee support and development programs. They measured employee happiness by observing employee behavior that was visible to the average passenger. They networked with contacts in the industry, asking them how happy they were. They also measured employee satisfaction by observing employee to employee interactions. They expressed concern about how the various work groups got along and how they treated one another. The word “family” was used extensively in all four of the focus groups to describe the environment in which they would like to work.
The participants also judged a company’s culture, or attitude towards employees, through its adherence to contractual provisions and through the various support and development programs in place at the airline. A carrier with a good support structure that followed the contract was viewed as having a positive culture.

An airline’s safety record was also critical in attracting high quality candidates. An airline’s reputation in complying with maintenance regulations and the quality of the equipment operated, including both routine maintenance and cleanliness, was how participants judged this record. Participants indicated their understanding that, except in certain public cases, it can be difficult to assess a company’s maintenance compliance. Therefore, each participant forms a unique judgment based on available information, including that gathered from friends and acquaintances employed there, personal observations when travelling as a customer, and even comments made on public web-boards.

The public perception of the airline was also seen as an important part of an airline’s reputation. The participants expressed a desire to work for an airline of which they could be proud. They wanted to have a sense of pride in the company and its product. They measured this public image through the Department of Transportation metrics, including on-time and completion factors, baggage statistics, and customer complaints. They viewed these complaints as a measure of the general public’s opinion of the airline. The participants also expressed a desire to work for a company that seemed to be a good fit with their own personal goals and desires, based on their reputation.

Finally, the reputation of the airline’s training program was also an important part of the overall reputation. All of the participants realized that it was extremely competitive to obtain a pilot position at a major airline. They expressed the belief that only a small percentage of pilots
would reach that level. However, that was still the goal for the majority of them. They noted that in a hyper-competitive market, even the slightest flaw, such as a training failure or the necessity for remedial training, could make it difficult to reach that goal, of a position at a major airline. For all of the participants, this would be their first attempt at an airline training program, resulting in a certain amount of apprehension or nervousness. This fear of the unknown coupled with an intense desire to maintain a perfect training record resulted in the reputation of an airline’s training department having a greater influence on this generation of applicants than on previous generations. Specifically, the statistical completion factor and the programs that an airline had in place played a large role in the attraction that an applicant had for an airline.

The findings indicated that potential candidates desired to work for an airline that had a strong, positive corporate culture, including a family atmosphere, with employee support programs in place. They also wanted to be proud of where they would work. There was a strong desire to work for an airline with a positive reputation and strong operational performance. They also sought the lowest amount of personal stress and risk to their careers, seeking out airlines with a reputation for a strong, supportive training environment.

**Location.** The location attribute was part of the location theme. This attribute was primarily concerned with where the airline had established crew bases and the ease of commuting to those bases from other cities where they desired to live. The participants were concerned with the location of bases and the ability to commute to those bases. The participants indicated that the ability to be stationed at a location where they lived or would like to live was an important part of their attraction to an airline. If an airline did not have bases in a desired location, it was equally important to candidates that they would be able to easily commute to those bases. This ability to easily commute, or commutability, included both the availability of
flights between home and base, flight schedules or rosters conducive to commuting, and the airline’s staff travel benefits and policies. The findings indicated that potential candidates were attracted to airlines that had crew domiciles in locations where they wanted to live. However, the ability to easily commute to the pilot bases was equally important, particularly for those airlines with multiple bases or bases in less desirable locations.

**Security.** Career advancement possibilities and job security were part of the theme of security. The greatest number of responses concerned a clear path to a desired major airline. Participants viewed a flow-through agreement, in which applicants would automatically move from the regional carrier to the main-line partner without additional interviews or screening as extremely desirable. They also noted that upgrade times, or the anticipated time necessary to move from the right seat (First Officer) to the left seat (Captain) heavily influenced their attraction to an airline. They expressed an understanding that Pilot-In-Command time was necessary for most applicants to get hired at a major airline. Thus, they all desired to work for an airline with rapid seniority advancement. When questioned about how they determined these anticipated times, participants based these estimates on three factors – the time the airline recruiters expressed, historical upgrade times obtained from current employees, and expectations of seniority movement through anticipated growth, including expansion and new aircraft deliveries, or through attrition, retirements or resignations. The perceived stability of the airline influenced the application decision. Participants viewed wholly-owned subsidiaries as more stable than their contract-based counterparts. They also viewed the historical stability of the airlines, including recent bankruptcy, opening or closing of bases, or the loss of contracts as important indicators of the airline’s health.
The findings indicated that potential candidates were motivated by the potential of moving from a regional airline to a major airline. They were attracted to airlines that had guaranteed movement to the mainline partner as well as attracted by the possibility of a rapid upgrade to Captain. The findings also indicated that candidates were more attracted to stable airlines, and they rejected airlines with a long history of instability, marked by changes in feeder contracts or bankruptcy.

**Pay.** The pay theme consisted of three individual attributes, compensation, bonuses, and financial benefits. However, the participants did not consider these attributes individually in their decision-making process. Rather, they viewed them as a single factor in the process. Furthermore, while pay was a factor in the decision-making process, it was treated as a simple binary decision, based on a minimum standard. This minimum standard was based on the participants’ perceptions of fairness. They all expressed the desire to be adequately compensated for the training and work required to secure the required credentials to fly for an airline. The pay needed to be adequate for the candidate to meet financial obligations including student loan payments and living expenses. All of the participants recognized that regional airline pay is considerably lower than that at the major airlines, which was a major factor in viewing these jobs as stepping-stones, with the ultimate goal of acquiring a pilot position at the major carrier of choice. They unanimously noted that they were willing to accept this lower pay as long as it met a certain level meeting their individual needs. The participants also perceived that in this competitive market stemming from the shortage of qualified pilots, most airlines were paying a “livable wage,” making pay a less significant attribute than in previous hiring cycles.
Analysis of Findings

The basic premise of these findings was that individual applicants group airlines into different tiers, based on specific attributes, applying at a few carriers at a time. The attributes that attracted candidates are different for each tier of airline. Applicants viewed airlines as being in one of three tiers. Tier one airlines were the carriers that they desired to fly for. These were the only carriers that the students would initially apply to. The second tier airlines were those that were viewed as less desirable than the first tier airlines. Applying at these airlines was the backup plan for applicants. Pilots would apply at the tier two carriers if they were turned down or not contacted by the tier one carriers within a reasonable period of time. Participants defined a reasonable period of time as anywhere between two and nine months. The tier three carriers were those at which the applicants did not plan to ever seek employment for various reasons.

Each tier, or step in the decision-making process had different attributes that influenced attraction. It was significant to note that all twenty-six participants identified a similar systems process in seeking employment with an airline. They planned to apply at the tier-one airlines first and wait for an invitation to an interview. There was a universal belief that they would get called and likely be hired by their first choices. They believed that the current pilot shortage made it an applicants’ market. The prevailing expressed opinion was that nearly anyone that applied would be hired at tier one choices in the current hiring market.

An airline’s perceived reputation was related directly to the tier-one versus tier-three decision. An airline with a toxic or hostile culture was moved directly to tier-three status, in which there was no desire to work. An airline that was viewed as having a poor safety record was also not considered a tier-one choice. An airline that had a poor reputation with the travelling public or extremely low operational statistics was also immediately moved to tier-three
status, and disregarded by applicants. Airlines that had a reputation for supporting their new-hire pilots through the training process were greatly desired, while those with reputations as having hostile training programs were moved into tier-three status and avoided.

The attributes associated with location were utilized to distinguish between tier-one and tier-two airlines. Airlines that had crew bases in locations where the applicants lived or desired to live were placed in the tier-one category. Those airlines that had less desirable or undesirable crew bases were moved into tier-two status. However, the ability to commute to a less desirable crew base, through an official commuter policy and established staff travel benefits, including jumpseat agreements with other airlines, could potentially move an airline from the tier-two category back to tier-one category.

The individual attributes associated with security were also utilized by candidates to differentiate between tier-one and tier-two airlines. A carrier with a flow-through agreement was more likely to be considered a tier one airline than one without an agreement. Airlines with verifiable career progression possibilities, particularly a combination of historical and projected times to upgrade to Captain, were also moved into the tier-one category. A lack of stability moved a carrier from tier-one to tier-two status. Applicants were willing to work at a less stable carrier, but only as a backup if not hired at a first choice carrier.

Pay was also utilized by candidates to eliminate airlines from consideration. Carriers that paid less than the minimum required level were moved into the tier-three category and excluded from consideration. Another significant finding concerning pay was that variances in pay structure, bonuses, or pay rates played little or no role in differentiating between tier-one and tier-two carriers. Participants indicated that they liked and would accept varying types of bonuses. However, no amount of bonus was enough to attract pilots to carriers that were placed
in tier-three status based on reputation, or airlines placed into tier-two status based on location or a lack of security. In summary, while low pay was a factor that could remove a carrier from consideration, higher pay or bonuses were not enough to overcome the more important factors of reputation, location, or career progression.

Conclusions

Relation to the Research Questions. The findings answered the research question concerning which attributes attract candidates to regional airlines. The findings identified four themes and sixteen individual attributes which were the key elements that attracted university flight students to airlines. While primarily concerned with the attributes that attracted potential candidates, they also identified which negative attributes repelled a candidate from applying at a regional airline. The individual attributes that attracted candidates were domicile, the ability to commute, compensation, bonuses, benefits, career advancement possibilities, stability, and reputation, which included public perceptions of the airline’s product, operational performance, safety reputation, training program reputation, and corporate culture. These attributes, both individually and in conjunction with one another influenced the decision to apply at a regional airline.

Relation to the Body of Knowledge.

Theory of Reasoned Action/Expectancy Theory. The findings confirmed that Fishbein and Ajzen’s (1975, 2010) Theory of Reasoned Action, in conjunction with Vroom’s (1964) Expectancy Theory, helped explain why pilots chose to apply at certain airlines and not at others. The theory of Reasoned Action stated that an individual would actively choose a behavior based on their worldview, their desires, their beliefs, and the outcome they hoped for (Fishbein & Ajzen, 2010). Vroom’s (1964) Expectancy Theory had three parts, expectancy, instrumentality,
and valence. Motivational force was a sum of these three parts. Expectancy was the belief that something specific would occur as a result of a choice or decision (Shweiki et al., 2014).

The findings indicated that pilot applicants had specific desires in relation to the attributes of a regional carrier. They desired to live and work in a specific area or to be able to readily commute to that area. They also had a desire for career progression and job security. Finally, the results of the study indicated that high quality candidates had a desire to be a part of a high quality, reputable organization. Potential candidates also developed internal expectations, or probabilities, of achieving those desires based on multiple external factors. The findings indicated that potential candidates gathered information from a variety of sources, including university professors, airline recruiting programs, networking with current airline employees, and various websites and forums. They reviewed the most readily available information and developed internal, individual expectations. They then compared the probability of those expectations occurring at different airlines and made a decision on whether to apply at an airline or to pass by and explore alternative possibilities.

**Signaling Theory.** The potential candidates acquired information that they utilized to develop expectations from a variety of sources. The findings indicated that the primary source of information concerning specific work rules and the working environment at an airline came from recruiters and recruiting presentations. Signaling theory played a crucial role in that expectation process. Signaling theory stated that firms presented themselves in a specific manner in order to present a certain image to outsiders (Connelly, Certo, Ireland, & Reutzel, 2011). Particularly important was the interaction between the potential candidates and the recruiters. It was from these early interactions that applicants began to form their expectations and views of the organization (Celani & Singh, 2011). Since these students were not yet part of the airline
industry, they relied on information disseminated from the airlines directly, specifically both from recruiters and from current employees, to form their expectations.

**High Quality Candidates.** The findings also confirmed that previous research in other industries concerning the attraction of high quality applicants also applied to the aviation industry. Chun (2005) determined that corporate reputation was an important part of attracting high quality candidates. She defined reputation as having two distinct parts, financial aspects and organizational aspects. Rutkowski (2011) noted that while reputation was the most important aspect of attraction of high quality candidates, pay and location also played a significant role. Finally, Resto and Sethi (2007) noted that high performers were more concerned with career advancement and less concerned with money. They were constantly looking forward to what was next. They were also self-focused and inward-looking.

The findings indicated that candidates for pilot positions at regional airlines had similar desires as candidates in other industries. Superior pilot candidates were primarily concerned with five factors. These factors included pay, location, career advancement possibilities, the amount of support they would receive from the company in developing their careers, and most importantly, the airline’s industry reputation.

**Social Identity Theory.** Finally, as expected, Social Identity Theory also helped to explain candidate attraction to an airline. Social Identity Theory stated that a candidate believed he or she would be treated a certain way by peers and other social networks based on their connection to a specific firm or organization. This was based on the idea that people are judged based on the values, ideas, and goals of the firm they work for. It was also based on the question “What will people think of me?” (Murray & Ayoun, 2011). People would naturally be drawn to
groups that they identified with, and that they viewed as being a good fit with their own values, beliefs, and goals (Celani & Singh, 2011).

The findings indicated that candidates desired to fly for an airline that “they could be proud of.” The candidates formed judgments based on their perception of the airline’s reputation. This reputation came from both public opinions of the airline and current operating statistics. They compared these judgments to their internal needs and desires. The candidates were most attracted to airlines that they identified with and which they viewed as being a good personal fit. None of the candidates wanted to be associated with a carrier that was publically viewed in a negative light, regardless of other attributes or characteristics, as this would have reflected poorly on them by their peers in the industry.

**Relation to the Conceptual Framework.** The findings provided an explanation and description of the workings of the application decision process for initial prospective pilot candidates at a regional airline. The basic premise was that individual applicants grouped airlines into different tiers, based on specific attributes, and applied at a few carriers at a time. The attributes that attracted candidates were different for each tier of airline. It was a systems theory approach based on categorizing the regional airlines into various tiers. Pilot candidates planned to apply at the tier-one airlines first and to wait for an invitation to an interview. There was a universal belief that they would get called and likely be hired by their first choices. They believed that the current pilot shortage made it a pilot’s market. The prevailing expressed opinion was that nearly anyone that applied was hired in the current environment. The candidates then moved on to stage two based on feedback from their tier one choices. They indicated that they would apply at the tier-two carriers if they were turned down or not contacted by the tier-one carriers within a reasonable period of time. They would have then waited for
feedback from the tier-two carriers, in the form of a response to an interview, and then have continued the information-gathering process. If they were unsuccessful in step two, they would either repeat the process with tier-one and two airlines or seek employment in another section of the aviation industry. The findings led to a revised conceptual framework and a slightly different understanding of the decision-making process as noted below in Appendix F.

**Outliers and Discrepancies**

Finally, it is significant to note that there were no outlying answers in the four focus group interviews conducted. The data collected was consistent across all groups. It showed that this generation of students, which was about to enter the workforce, was extremely well educated on the operations of the various regional airlines. This was partially due to the availability of information on the internet, and partially due to the ability to create large networks with social media tools. The availability of information provided them with concrete numbers to use in the decision-making process, while the social networks provided them real-time information about the daily operation of the airline.

**Summary**

The researcher found that sixteen individual attributes contributed to a candidate’s attraction to a regional airline. These individual attributes included the location of crew bases, the ability to commute to crew bases, compensation, benefits, bonuses, stability, career advancement possibilities, safety record, the general public reputation, Department of Transportation operating statistics, contract compliance, employee satisfaction, employee support and development programs, the reputation of the training program, and how well the expectations of current employees were being met. The attributes were analyzed and related to four general themes. These themes were pay, location, job security, and company reputation.
Each attribute had a different effect on the decision-making process. Some attributes made an airline more desirable than competitors, while other attributes could have caused a pilot to reject the airline outright. The majority of the attributes were identified in the Literature Review and confirmed in the data collection and analysis process. However, two of the attributes, safety reputation and the reputation of the training program were unanticipated, emerging from the focus groups. The themes and attributes were used to develop specific recommendations for airlines to increase their attractiveness to potential candidates.

Applications to Professional Practice

Overview

The major result of the findings in this study was that regional airlines had control over the majority of the factors that attracted pilot applicants. Furthermore, the airlines had control over factors that influenced the attributes that they did not exercise direct control over. Through manipulation of the controllable attributes and through partnerships with the mainline carriers they support, regional airlines could minimize the negative attraction caused by the uncontrollable attributes. The findings also demonstrated that the attributes that attracted the next generation of regional pilots were different from those that attracted previous generations of pilots. This means that traditional recruiting processes would not have been effective, in light of the current shortage of qualified applicants.

Relevance to Improved Business Practice

Recruiting. Given the findings, increased pay rates and bonuses alone would not have solved the problem. Therefore, the airlines would need to alter their recruiting practices if they desired to attract those candidates. These findings were applicable to those regional airlines that desired to attract the highest quality pilot applicants. The results indicated that revised
recruitment programs would need to address four attributes – location, including pilot domiciles and commuting policies, job security, including career progression and advancement and pathways to a major airline, pay, including a measure of fairness and adequacy, and most importantly, the airline’s reputation, including safety record, training policies, public image, and culture. The culture was the part most affected by senior management and the leadership of the airline. The culture, as defined by the participants, included perceived compliance with the collective bargaining agreement, employee satisfaction and happiness, employee support and development programs, and perceptions of how well the airline was meeting the expectations of current employees. These changes to the recruiting process included both short-term, immediate initiatives and long-term initiatives that would require cooperation with the mainline partner.

Based on the current and projected shortage, there was an urgency associated with implementing these changes. The first airline that could successfully implement an effective recruiting program would have had a definite strategic advantage over competitor airlines.

**Negative consequences of failure.** This study was relevant to current business practice in the regional airline industry due to the current shortage of qualified pilot applicants. This shortage was very real, and was forecasted to worsen over the next decade. Those regional carriers that cannot recruit enough pilots would be forced to cancel flights, limiting their ability to fulfill their contracts with their mainline partners. Depending on the severity of the shortage at the particular carrier, these cancellations could lead to negative reactions ranging from financial penalties to termination of the contracts. The regional airlines could face consequences of financial losses, loss of profitability, or even liquidation depending on the severity of the mainline partners’ reactions. These cancellations would also have had an impact on the communities that airlines served. The shortage of pilots, resulting in cutting back the number of
aircraft flown would result in the major airlines being forced to make decisions concerning the level of service they provided. They would have been forced to eliminate flights to certain less profitable communities, possibly terminating service altogether in certain markets. This termination of service could have resulted in increased fares by the remaining carriers or even loss of all service if competitors also chose to withdraw. Communities rely on air service for economic sustainability and growth. The loss of this service could be catastrophic those local economies.

**Conclusions.** Eliminating the pilot shortage would be a difficult task. There were no short-term solutions that would immediately end this shortage. There were some ideas and programs being developed that would help ease the shortage. However, these programs would take time to develop and implement, before they began reducing the shortage. Furthermore, there was no guarantee that these programs would have been effective. Nevertheless, based on the findings of this study, there were programs that airlines could institute that would increase their individual recruiting effectiveness. These changes would allow them to attract enough high quality candidates to meet recruiting goals and complete the flight schedules specified by the contracts with mainline partners. Fulfilling these contracts would give them a strategic advantage over their regional airline competitors. When the regional partner was able to complete its scheduled service, the mainline partner also benefited. When a regional airline was properly staffed, the mainline carrier could offer service to the communities with the desired frequency. This increased service could be leveraged into a strategic advantage over other airlines. The airline could also leverage this service into a unique financial advantage through reduced fees, taxes, and costs associated with that service.
Biblical Implications of the Findings

The findings of this study also had Biblical implications. The reputation of an airline was a key attribute in attracting high quality pilot applicants. There were two major parts of this that related to a Biblical framework – employee satisfaction and happiness, specifically perceptions of the company meeting its obligations to employees, and employee support and development programs. When asked about the greatest commandment, Jesus responded “Love the Lord your God with all your heart and with all your soul and with all your mind.’ This is the first and greatest commandment. And the second is like it: ‘Love your neighbor as yourself.’ All the Law and the Prophets hang on these two commandments,” (Matthew 22:37-40, NIV). He commanded humanity to love one’s neighbor as one’s self. Paul described love in his first letter to the church in Corinth. He wrote, “Love is patient, love is kind. It does not envy, it does not boast, it is not proud. It does not dishonor others, it is not self-seeking, it is not easily angered, it keeps no record of wrongs. Love does not delight in evil but rejoices with the truth. It always protects, always trusts, always hopes, always perseveres” (I Corinthians 13:4-7, NIV). These attributes of love, while commonly used in matrimonial ceremonies to define individuals, could also be applied to a corporation. Patience, kindness, honesty, supportive, humble, and placing the needs of others first – these were all attributes of a Biblically sound company with a strong, positive culture. These were also the characteristics of a servant leader.

The findings of this study demonstrated that the participants all desired to fly for an airline that they could be proud of. Applicants desired to fly for an airline with a positive reputation. They wanted to go to work trusting that the airline would live up to its word, that promises would be kept. Those were all marks of an airline that loved its employees. The results of the study also showed that prospective candidates would avoid companies with severe
negative reputations. Paul warned the church in Corinth “Do not be yoked together with unbelievers. For what do righteousness and wickedness have in common? Or what fellowship can light have with darkness?” (II Corinthians 6:14, NIV). While written as a command to specific believers, it could also be read in reverse as a warning to companies with poor reputations. High quality candidates indicated that they avoid those airlines, because what did they have in common with such darkness. Therefore, it would behoove an airline to honestly, objectively evaluate its culture, and take strides to make it positive, if it desires to attract high quality applicants. Furthermore, Paul warned the Galatians “Do not be deceived: God cannot be mocked. A man reaps what he sows. Whoever sows to please their flesh, from the flesh will reap destruction; whoever sows to please the Spirit, from the Spirit will reap eternal life. Let us not become weary in doing good, for at the proper time we will reap a harvest if we do not give up” (Galatians:6:7-9, NIV). If a company fostered a negative atmosphere and a negative culture, that would return to haunt them. They would be unable to attract high quality candidates. However, a company that persevered, developing a strong, positive culture, would eventually reap the benefits of that work and of that love for employees.

The fairness or equity of pay also had Biblical implications. James warned of the dangers of hoarding profits and failing to pay a fair wage because of greed. He wrote, “Now listen, you rich people, weep and wail because of the misery that is coming on you. Your wealth has rotted, and moths have eaten your clothes. Your gold and silver are corroded. Their corrosion will testify against you and eat your flesh like fire. You have hoarded wealth in the last days. Look! The wages you failed to pay the workers who mowed your fields are crying out against you. The cries of the harvesters have reached the ears of the Lord Almighty. You have lived on earth in luxury and self-indulgence. You have fattened yourselves in the day of slaughter. You have
condemned and murdered the innocent one, who was not opposing you" (James 5:1-10, NIV). His warning was clear; those that chose to pay less than a fair wage would face negative consequences. The results of this study demonstrated that failing to pay a perceived fair wage would result in a decline in applicants and a decline in the overall quality of applicants, as the high quality applicants would simply pursue opportunities elsewhere.

The participants in this study also indicated that truth was an essential part of a positive culture at an airline. The results indicated that they would rather hear and understand the negative aspects of the job upfront than to be lied to about them. The Bible has multiple warnings against lying, and the harsh penalties for deceit. Jesus compared lying to murder. He warned that “You belong to your father, the devil, and you want to carry out your father’s desires. He was a murderer from the beginning, not holding to the truth, for there is no truth in him. When he lies, he speaks his native language, for he is a liar and the father of lies,” (John 8:44, NIV). Moses commanded the Israelites “Do not spread false reports. Do not help a guilty person by being a malicious witness,” (Exodus 23:1, NIV). Making false promises and misleading candidates by ignoring the negative aspects of the job would serve to decrease attraction to the airline. After all, as Paul wisely wrote, “But everything exposed by the light becomes visible—and everything that is illumined becomes a light,” (Ephesians 5:13, NIV). Candidates had access to information from other sources, including a vast network of current employees, thanks to social networking. The results of this study indicated that applicants moved away from companies that they caught misleading them about the culture or working conditions at the airline.

Finally, the results of this study demonstrated that the next generation of regional airline pilots wanted a spirit of cooperation in the workplace rather than an adversarial relationship.
They indicated that they sought a family atmosphere, based on trust and open communication. The Psalmist rejoiced over cooperation. He wrote “How good and pleasant it is when God’s people live together in unity! It is like precious oil poured on the head, running down on the beard, running down on Aaron’s beard, down on the collar of his robe. It is as if the dew of Hermon were falling on Mount Zion. For there the LORD bestows his blessing, even life forevermore,” (Psalms 133:1-3, NIV). Peter summarized this cooperative relationship by stating, “Finally, all of you, be like-minded, be sympathetic, love one another, be compassionate and humble. Do not repay evil with evil or insult with insult. On the contrary, repay evil with blessing, because to this you were called so that you may inherit a blessing” (I Peter 3:8-9, NIV).

The participants understood that there would be disagreements on interpretation, difficult contract negotiations, and even points when the relations would be strained. However, they all expressed the desire to work for an airline that handled those differences in a productive, positive manner. They did not wish to fly for an airline with a toxic culture full of conflict and contention. The Bible is clear that there are tangible benefits to fostering a cooperative, loving relationship with other people. One of these benefits is the ability to attract high quality, like-minded applicants.

Summary

The findings of this study showed that airlines had control over many of the factors that influenced attraction to the regional airlines. The pilot shortage was already causing staffing problems at regional carriers, and it was only forecast to worsen in future years, as hiring at the major airlines increased. The airlines that could attract the most high quality candidates would have been able to leverage their staffing into a distinct strategic advantage. This advantage could have then been translated into financial gain for both the regional airline and its mainline partner.
There were numerous specific recommendations that could be utilized to increase an airline’s attractiveness to prospective pilots, based on the findings of this study.

**Recommendations for Action**

The researcher had a large number of recommendations for regional airlines resulting from the findings of this study. Some of these recommendations were short-term in nature, while others would be longer-term projects. Some of them could be accomplished by the airline alone, while others would require cooperative partnerships with their main-line partners, their collective bargaining agents (unions), and even some with the local community governments.

**Specific Recommendations**

**Pay.** The first issue that should have been addressed was pay. As a binary input, pay was used by prospective pilots examine to determine whether to apply at an airline, or simply reject it. An airline needed to ensure that its pay was consistent with competitors and was adequate for the cost of living in the markets where it stationed pilots. Airlines should forgo complex compensation schemes and should not rely on pay as the main form of attracting pilots. Rather, recruiting efforts should emphasize that their pay was both industry standard and adequate for the new pilots to live in their bases. The airlines also needed to ensure that promised bonuses were being paid out, on time and correctly, or stop attempting to utilize them as a means of attracting applicants. There was a fear or nervousness among participants that airlines were finding reasons not to pay promised bonuses. Based on the findings, it would be better for an airline to eliminate the bonuses, rolling the money into an equivalent hourly rate. Should the airline choose to keep a bonus program in place, it was essential that they stated clearly and upfront the reasons for failure to pay and how often the bonuses were not paid. This was something that an airline could do alone and immediately.
**Location.** Location was an attribute that applicants used to distinguish between their first choice airlines and their backup choices should they not be interviewed or hired at those first choices. The recommendations related to this theme included specific suggestions concerning pilot domiciles and commutability.

**Domiciles.** Based on the findings of this study, regional airlines should focus recruiting efforts on schools in the vicinity of the airline’s bases, particularly schools with a more regionally-focused student body. The airlines should attempt to establish low-cost recruiting partnerships that focus on pathway/interview programs with these schools. It was also recommended that the regional airlines derive statistics concerning each pilot base for use in recruiting presentations and interviews. These statistics should include, at the minimum, the number of pilots in each base, the type of aircraft and routes at each base, and the rough seniority breakdown at each base. This seniority breakdown should include the seniority of the most junior First Officer in the base, the seniority necessary to hold a line (schedule) in the base, and the seniority necessary to upgrade to Captain in that base. The participants indicated that this information played an important role in classifying an airline as a tier-one choice or a tier-two choice. If this information was not provided from an accurate, company source, they would seek it out from more subjective, potentially less accurate sources.

**Commutability.** It was also recommended that the regional carriers addressed the issue of commutability in order to recruit more pilots. If an airline had a defined commuter policy and pass benefits, also known as staff-travel benefits, they should address this very close to the beginning of the recruiting presentation. If the airline did not have a defined commuter policy, it was recommended that they addressed this issue with the collective bargaining agent, and attempt to negotiate one. Concerning pass benefits, the major airline needed to recognize that
the regional carrier provided an essential part of the airline’s service and was an integral part of the route structure. The inability to provide the contracted upon lift could have negative consequences for both parties. And alleviating the shortage would provide potential strategic advantages to both parties. Therefore, it was also in the mainline carrier’s best interests to provide space-available passes to the regional airline’s employees. It was recommended that the regional airline negotiate pass benefits for its employees with the mainline carrier, and then emphasize these benefits in recruiting presentations. While the regional airline has little control over its pilot domiciles and route structure, it could focus on recruiting in those areas and it could exert some control over the difficulty for pilots to commute to and from those locations.

**Job Security.** The regional airlines must also address the issue of job security, including both stability and job advancement aspects. The recommendations for the job security theme encompassed both of these aspects.

**Stability.** It was recommended that the recruiting presentations emphasize the long-term stability of the regional carrier, including how long they have been in business and their partnerships with the mainline carriers. The results of the study indicated that participants were more attracted to wholly-owned subsidiaries. However, they were also attracted to non-wholly-owned airlines that had long-standing relationships with the mainline partners. By sending a representative to recruiting events for the regional airline, the mainline partner could clearly demonstrate the strength of the relationship with the regional carrier. It was recommended that the regional airline include a pilot recruiter from the mainline partner in recruiting events and presentations.

**Career advancement.** Job advancement should also be addressed in recruiting presentations. It was recommended that the regional airline collect statistics on the current job
advancement possibilities within the airline. This could be accomplished in conjunction with the collection of the base-specific statistics. The job advancement statistics should include details concerning movement in the airline, including the time necessary to hold a line, the current and historical time necessary to upgrade to Captain or to change equipment, and the company’s current projections on time to upgrade or transition to new equipment. The job advancement statistics should also include a summary of where employees that leave are going, particularly if there is a high turnover to major airlines. The regional airline should emphasize any available pathways to major carriers, including flow-through agreements or guaranteed interviews with mainline partners. The presentations should include details of the agreement, anticipated time for a candidate to go, the effects of the agreement on movement within the airline, and, importantly, the end date or ending conditions of the agreement. For those carriers that did not currently have a pathway program to a major airline, it was recommended that they negotiate one with the mainline partner. A direct flow-through agreement was the preferred program.

However, participants indicated that a guaranteed interview would also be viewed in a positive manner. Negotiating a pathway agreement would require the cooperation of both the regional carrier and the mainline partner. Inviting the collective bargaining agents from both carriers to provide input into the process from the beginning was also recommended. Developing a pathway program would require both parties to relinquish a certain amount of control over previously internal processes. The regional airline would be required to accept hiring input and guidance from the mainline carrier, as ultimately the new hires will end up flying at the major airline. The major airlines would have to accept that certain candidates that would otherwise not have been considered would end up at their airline. It was recommended that any flow-through agreement contain provisions to screen out candidates who had legal issues or severe training
deficiencies. Additionally, regional airline presentations should include information concerning job advancement possibilities within the airline. It was recommended that this include any additional duties and qualifications that could be attained and the requirements to do so. This included instructor or check airman positions, management or leadership possibilities, and possible roles in the safety department. It was also recommended that the airline include information concerning opportunities to volunteer with the collective bargaining agent, particularly in the roles having a cooperative relationship with the company. The participants expressed concerns about working in a unionized workforce. Illustrating many of the productive relationships with the agent could work to alleviate those fears. It was also recommended that the airline included a representative from the collective bargaining agent in recruiting events, particularly someone involved with the membership committee that could comfortably explain the role of the union and the cooperative benefits of involvement. Including this member would provide a clear demonstration of a positive, working-together type of culture.

**Reputation.** The researcher determined that the fourth attribute that should be addressed was reputation. Reputation was the most widely discussed attribute in the focus group interviews. The recommendations concerning reputation involved both short-term and long-term investments in the airline. The specific recommendations related to the theme of reputation encompassed the training and support programs, the public reputation, and the culture of the airline. These recommendations also included contract compliance issues and managing the expectations of the applicants.

**Training and support programs.** The first recommendation concerned the training program in place at the regional carriers. It was recommended that the company clearly explain the training process in recruiting events and again in the interview process. This explanation
should include a brief description of the training footprint, including materials covered in each part and the anticipated timeline for completion. It should also include a detailed description of the expectations the airline has of the student, including the standards for completion of training. This summary should also have a description of support programs the airline has in training for students in the training pipeline. Special emphasis should be placed on descriptions of programs in place to remediate students that are struggling to meet the standard as well as the criteria for inclusion in these programs. Although few of the participants anticipated having difficulty in training, they nearly unanimously indicated a strong preference for airlines that have a defined support structure in place, even at the expense of pay. For airlines that did not have a defined training support program, it was recommended that they develop a peer-pilot group. These support programs would typically be either union or company directed programs with trained volunteers from the pilot group available for confidential guidance and support. These programs should be made available to all pilots, regardless of time or status with the company. This type of support program should be available to provide mental health or stress relief for pilots in various stages of the training process. Several airlines had joint airline-union programs in place that could be utilized as a template for quickly starting such a program. The largest and most well-known programs were Project Wingman and the Checkmate Program at American Airlines. There was also a financial incentive to start programs like these, beyond increased recruitment. With programs in place, an airline could identify problems and deficiencies early and correct them before they became costly training failures or retraining events. These were also cost-effective ways to provide support services to the pilot group by utilizing unpaid, but trained, pilot volunteers.
**Public reputation.** A second recommendation was to incorporate favorable Department of Transportation statistics briefly into the recruiting presentation, particularly if these are high numbers of on-time performance and low numbers of customer-complaints. These numbers could be utilized to emphasize a strong corporate commitment to operational performance and efficiency, which could be translated into long-term stability. The low numbers of complaints could be tied in to a strong public image and a commitment to adhering to contractual obligations. It was also recommended that the airline mention any incentive or bonus programs in place that were tied to operational performance when discussing the airline’s current performance to reinforce the positive effects derived from that performance.

**Culture.** The third recommendation concerning reputation was also the one that would require the greatest effort to bring about. This recommendation was to improve the culture of the airline, or to ensure that the culture remained positive for an airline that already had a strong positive culture. It was recommended that each airline start with a top-down, honest review of the culture in place at the airline. The airline should identify both their strongest areas and its areas of greatest weakness. One suggestion was to conduct an employee satisfaction study meant to measure employee happiness and job satisfaction. If the airline did not have anyone in-house qualified to and experienced in conducting this type of study, it was recommended that it seek an outside agency’s help. This would be a costly and time-consuming process. However, it would help the airline do an honest self-evaluation, promote strengths, and identify areas that needed improvement. The specific measurement tool would vary with each airline.

Based on the results of the study, it was recommended that the airline evaluate the feasibility of initiating new culture-enhancing programs. The specific programs that would have an effect on participants’ attraction to an airline were employee development programs and
employee communication programs. Employee development programs included leadership training and development programs, educational support programs, and career development training. Employee communication programs were defined bi-directional communication processes including town-hall style meetings with senior management and suggestion/improvement programs available to employees at all levels of the company. Participants noted that open and transparent communications coming from senior leadership and the perception that all improvement suggestions would be considered, regardless of source, work together to create a team or family atmosphere at the airline, by increasing feelings of inclusiveness. These participants also noted that this “team mentality” or “family atmosphere” was more important than tangible attributes, including pay and location.

**Contract compliance.** It was also recommended that each airline review its internal level of contract compliance with the pilot group. Specifically, it should review the numbers and outcomes of grievances filed by the collective bargaining agent. It was recommended that this be a cooperative effort with the bargaining agent and include union negotiators or contract compliance committee members, flight operations managers, and company human resources or labor relations employees. The primary goal of this working group should be to identify areas of interpretational difference or areas where simple compliance could be improved. It should seek to find cooperative solutions that will minimize non-compliance issues, reducing the time and expense associated with the grievance process. The airline should also reeducate employees based on the findings of a compliance working group. It should ensure full understanding and commitment to adherence to contractual provisions and agreed upon interpretations. This included creating and distributing guides to various work groups and fast-tracking any disagreements into arbitration, as per the guidelines of the Railway Labor Act. The airline and
union should also consider rewriting ambiguous sections of the labor agreement, focusing on clear, concise language that was easy for all parties to understand. The airline should also empower lower-level managers to solve problems and correct errors before they escalate to the level of a grievance. This was particularly true for pay and scheduling errors, as participants noted that failure of the company to meet expectations in pay and quality-of-life issues was a large part of perceptions of an airline’s culture.

**Managing expectations.** Finally, it was recommended that the airline provide clear, realistic expectations for the pilot from the very beginning of the recruitment process. What the candidate could realistically expect as a line pilot and the expectations the company has of a line pilot should be addressed in the recruiting presentation and in the interview. This should be a very brief summary of the quality-of-life issues in the collective bargaining agreement, including annual vacation accrual, monthly scheduled days off, and most importantly, the rules for a pilot on reserve. The participants in all of the focus groups had questions concerning reserve. There was very little accurate information available concerning reserve at an airline, and this lack of information created a certain amount of apprehension in applicants. By addressing this early in the recruiting process, an airline could ease these fears and increase attraction. One other recommendation of note was that the recruiting events should include line pilots from varying bands of seniority in various positions in the company. These pilots should be available to answer questions from potential applicants, and provide accurate information concerning daily life as a line-pilot at the airline. The pilots sent to events to answer questions should be distinct from the actual pilot recruiters or interviewers, as participants in the study indicated a level of distrust of recruiters that they did not feel towards average line pilots. This increased trust would also increase attraction to the airline.
Impacted by the Study/Dissemination of Information

**Regional airlines.** The recommendations that emerged from the findings of this study would have a broad impact. Personnel from regional airlines, major airlines, university flight departments, and community aviation departments would be impacted by these recommendations. Within the regional airline, the human resource employees and pilot recruiters would be required to collect and analyze data and to prepare and present programs for recruiting events. The senior leadership would be required to lead change by instituting programs that ensured a positive corporate culture is in place at the airline. The collective bargaining agents, or unions, would be required to make cooperative efforts to work with management to solve problems in order to improve the quality of life for their members. And, line pilots would need to get involved in order to assist with recruiting efforts. The airline would need volunteers to man support committees and to attend recruiting events. This would require a commitment of time and energy from the average line-pilot. The results of this study could be disseminated to the various parties at the regional airline through presentations at the Regional Airline Association (RAA) annual conference and at the Air Line Pilots Association (ALPA) Pilot Training Conference. The results could also be provided directly to the pilot recruitment departments at the regional carriers in the form of a one page summary of the findings, or through a white paper.

**Major airlines.** Human resource departments, pilot recruiters, and the labor relations department at the major airlines would also be impacted by these recommendations. Human resources and pilot recruiting would need to build partnerships with the departments at the regional airlines in order to support recruiting efforts. Labor relations and human resources would also need to be involved with the development of pathway programs. These findings and
recommendations could also be presented directly to the major airlines at industry conferences. It was, however, recommended that the regional airlines contact the mainline partners directly to request assistance with recruiting efforts and to develop pathway programs. Each regional would have unique needs for assistance and could communicate that better than a third party.

**Universities.** University flight departments would need to schedule on-campus recruiting presentations in order to generate interest in these programs. They would also need to work with regional carriers to develop partnership and preferential hiring programs. The most effective means to distribute these findings to universities would be to seek publication in scholarly journals, to present the findings at an Aviation Accreditation Board International (AABI) meeting, to also contact the AABI directly with the white paper, and to publish this dissertation, making it available for public consumption.

**Local Communities.** Finally, community aviation departments would be impacted by these findings. They needed to recognize the importance of recruiting efforts and maintaining proper staffing levels at the regional airlines. They also needed to recognize the threat to the local economy should air service be reduced or eliminated. They could work with university flight programs and regional airlines to host recruiting events. They could also work with the airlines to develop incentives that would make certain bases more appealing. The most effective ways to distribute these findings to aviation departments would be through publication in scholarly journals and presentations at various airport management conferences. It was recommended that direct contact with local airport authorities come from the major airline, based on specific needs of the regional partner. This would increase the likelihood of community engagement.
Recommendations for Further Study

Relationship to Knowledge

While this study was able to identify which attributes influenced attraction to regional airlines, it did not identify how much each of these attributes influenced the decision to apply at a specific airline. Furthermore, it did not quantify the relationships between the attributes or how much they changed the amount of influence when applied together. Further research could be successful at answering new questions concerning these relationships and the interactions between attributes. Therefore, it was recommended that further research be conducted with the goal of quantifying the influence of each attribute and their relationships to one another. Specifically, the researcher recommended the development of a quantitative survey based upon the nineteen attributes identified in this survey. A discrete choice analysis which forces the survey participants to choose between various attribute combinations would help to quantify the level of importance of each individual attribute as well as to provide hard values to the relationships between them. Additionally, it was recommended that further studies include more universities and flight training providers in order to reach a wider, more diverse population. A more diverse population base would lead to results that are even more applicable to the pilot-applicant population.

Two other additional potential areas for future study emerged from these findings. All of the individual focus groups indicated that an airline’s reputation for safety and regulatory compliance had an effect on the attractiveness of the airline. Additionally, participants indicated that the training culture at an airline also had an effect on attractiveness. The effect of an airline’s safety culture on its reputation, as well as the effects of its training culture on reputation
should be examined. Future studies could potentially define training culture and how the airlines manage that culture.

**Relationship to Business Practice**

Conducting additional research that seeks to quantify how much each attribute influenced attraction to regional airlines would also yield benefits to the airlines themselves. This study identified many recommendations for airlines to increase their attractiveness to candidates. However, it did not identify how much each of these recommended programs would increase that attraction. A study that quantifies the effectiveness of each attribute individually would be useful for airlines in their budgeting and decision-making processes. By identifying which of the programs increased attraction the most, airlines could make a determination concerning which programs to pursue and which to ignore. The airlines could maximize return on their investments into human resource and recruiting programs, while minimizing waste by eliminating spending on ineffective ones. Findings from further research could help businesses determine where to spend their finite resources the most efficiently.

**Summary**

There were numerous programs that airlines could develop and implement in order to increase their attractiveness to potential candidates. These programs should address the major categories of attributes, including reputation, location, pay, and job security. These suggested programs included both long-term and immediate initiatives. Some of them could be implemented unilaterally by the regional airlines, while others would require cooperation and coordination between the regional airlines and their mainline partners, university flight programs, and local communities. Finally, while this study identified the attributes that increased or decreased attraction to regional airlines, it was recommended that additional
research be conducted to quantify and measure the amount of influence each attribute had and the relationships between attributes. This additional research could help airlines determine which programs to develop and implement and which programs to abandon in order to maximize return on investment.

Reflections

Professional Background of the Researcher

The researcher came from a civilian background, completing flight training at an accelerated part 141 flight school, rather than an aviation university. However, the researcher instructed in a collegiate flight program, while finishing a non-aviation degree with a minor in aviation science. The researcher’s first employment immediately after college was flying for a wholly-owned regional airline, which had exceptional career advancement due to a rapid increase in size and a high turnover of pilots. The turnover was a direct result of a flow-through agreement with the mainline airline. This first job included an upgrade to Captain on a regional jet within two and one-half years. While this regional airline had a flow-through agreement, the researcher opted to apply at other airlines, flying for several non-scheduled, wide-body, international airlines before being hired at a Legacy airline. Both of the non-scheduled airlines had rapid promotion to Captain, three months at one, and direct-entry at the second. At the current airline, the researcher has been a line First Officer, furloughed, recalled to line First Officer, an Instructor Pilot in the training department, and a line Captain. This airline had a training department that emphasized the key concepts of professionalism and customer service. The students were the primary focus. At the time of this study, the researcher was an international, line First Officer and a volunteer in the peer-pilot support program.
Bias

The researcher’s background created certain biases in his viewpoint. This background included rapid career advancement in the form of upgrades in both position and equipment type. Much of this advancement occurred because of a willingness to move to a new location whenever a new opportunity arose. This willingness to move provided the direct benefits of rapid career advancement. However, the researcher also experienced extremely low pay while flying for the regional airlines. This condition, while viewed unpleasantly, was accepted as the cost of rapid career advancement. Again, the researcher was willing to move for career advancement, or to commute as necessary, having commuted for more than half of the professional career. The researcher was also biased against remaining in a single location. The researcher also had the privilege of working at airlines with outstanding cultures and at airlines that had some of the worst cultures in the industry. While doing union work to try and improve things, the researcher pessimistically viewed the negative cultures as a cost of career advancement. Several of the airlines had excellent safety cultures and world-class training programs. This led to taking these attributes for granted. All of these experiences, when combined, led the researcher to be biased towards career advancement and upgrade opportunities as the most important attributes.

Preconceived Ideas and Values

This bias towards career advancement led to several preconceived ideas as to what the results of this study would yield. Based on personal experiences, the researcher assumed that getting to a major airline would be the primary goal of the students. As such, it was hypothesized that career advancement would be the primary sought-after attribute and that new pilots would be willing to make certain sacrifices to achieve that goal. Based on these biases, the
researcher felt that certain attributes, including pay, location, and reputation, would not be as important to the participants. It was also hypothesized that while other attributes, including culture and flow-through agreements, would be nice to have, these attributes would also not be major determinants in the decision-making process. Safety culture or the reputation of a training program were not considered in the beginning stages of the research.

**Changes in Thinking**

The researcher had a rather significant change in thinking as a result of this study. It became apparent that the next generation of airline pilots had a considerably different set of priorities than previous generations. The new generation was more focused on support and how it would be treated by a company. The participants indicated a desire to be a part of something bigger than themselves. They also had a broader view of career advancement than simple upgrade to Captain. They indicated that they were unwilling to compromise their core desires. They also recognized that they are in a unique position, having a distinct advantage as a result of the shortage of qualified pilots. As a result of that advantage, they were less likely to make short-term sacrifices to reach their long-term goals. As a result of this view, the researcher recognized the importance of developing supportive programs at the regional airlines. Additionally, he recognized the need to capture and disseminate accurate information in a timely manner. The potential candidates would get information from somewhere and utilize it in their decision-making process, regardless of its accuracy. Therefore, it was of critical importance that airlines made as much reliable information as possible available to recruits. Furthermore, the researcher’s thinking changed to include the importance of the other attributes and the relationships between them. This change in thinking identified the need for additional studies meant to discover these relationships.
Reflections on Biblical Principles

The researcher always subscribed to a servant-leadership view, in which the leader would strive to place others’ needs ahead of his own. Anchored in this servant-leadership view is the belief that to love others means to have a genuine interest in their thoughts, desires, feelings, and life. This interest would naturally be accompanied by compassion, empathy, and understanding. But, this Biblical worldview does not stop at feelings and emotional support. Rather, this understanding of Biblical love is based on action. It was based on not just recognizing the needs of others, but in meeting them, as well. The results of this study showed that the next generation of pilots would respond exceptionally well to this style of leadership. The participants indicated that they were less focused on using their company strictly for personal gain. Rather, they wanted to be part of something they could be proud of. They wanted to be valued as people with a specific skill-set. This meant that airlines need to move beyond the “profit at all costs” mentality that has dominated the industry for so long. If not, they would continue to struggle to attract enough pilots, jeopardizing their very existence. The airlines that could truly embody the Godly principals of love, mercy, kindness, and justice would be able to attract more candidates than necessary in order to properly staff the airline.

Summary and Study Conclusions

The findings of this study showed that while the pilot shortage would be difficult to solve, opportunities existed for individual airlines to capture a strategic advantage as a result of it. Airlines that created an encouraging, positive work environment, offered competitive pay and benefits packages, and supported a work-life balance were be able to attract enough pilots to properly staff the airline. It was recommended that airlines focus their recruiting programs on four key themes that prospective pilots desire – location, job security, pay, and most importantly,
reputation. A servant-leadership approach, built out of love and open, honest communication would attract many of the next generation of pilots. The airline that recognized this and spent the resources necessary to do it would win the war for talent, reaping the rewards of that victory.
Appendix A: Screener Questionnaire

Name: ________________________________________________________________

Email Address: __________________________________________________________

Telephone: ______________________________________________________________

1.) Are you planning to pursue a career as an Airline Pilot?
   
   Yes          No          Unsure

2.) What Career Path (select one) are you planning to pursue?

   Regional Airline    Military    Corporate    Charter

3.) Do you have previous experience working for any Airline(s)?

   Yes          No

4.) Do you have connections to any Airline(s)?

   Scholarship    Internship    Job Offer/Contract    None

5.) Are you within 2 semesters (30 credit hours) of graduation?

   Yes          No
Appendix B: Screening Matrix

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<th>Name</th>
<th>Airline Pilot Career?</th>
<th>Career Track</th>
<th>Previous Airline Experience</th>
<th>Conns.</th>
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Appendix C: IRB Permissions

December 22, 2016

Andrew Perry Reitz
IRB Approval 2589.122216: An Examination of the Organizational Attributes That Attract Pilots to Regional Airlines

Dear Andrew Perry Reitz,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
The Graduate School

Liberty University | Training Champions for Christ since 1971
September 12, 2016

G. Michele Baker
Administrative Chair of Institutional Research
Liberty University

Dear Ms. Baker,

The purpose of this letter is to provide approval for Mr. Andrew Reitz to conduct focus group interviews with Florida Institute of Technology flight students as a part of Mr. Reitz's dissertation research. I will act as the point of contact for Mr. Reitz and representatives from Liberty University, as needed, please see my contact information below.

Sincerely,

Timothy G. Rosser, PhD, AiP
Chair, Flight Education Committee
College of Aeronautics
Florida Institute of Technology
Email: trosser@fit.edu
Phone: (321)674-7633
Embry-Riddle Aeronautical University
Application for IRB Approval
Expedited Determination

Principle Investigator: Andrew P. Reitz  Other Investigators: Kenneth Byrnes, Ed Moore
Role: Student  Campus: Daytona Beach  College: COA
Project Title: An examination of the Organizational attributes that attract pilots to regional airlines

Submission Date: 11/22/2016  Determination Date: 12/5/2016

Exempt: No

Approved:

| Mike Wiggins       | M.B. Molatchey       | December 12, 2016  
| Haydee Cuervas     |                      | Expires: December 11, 2017  

Pre-Reviewer Signature  Chair of the IRB Signature  Date of Approval / Expiration Date

Brief Description: The purpose of this study is to identify what factors attract you, the pilot candidate, to various regional airlines. Likewise, we hope to discover which attributes also deter you from applying at various airlines. Once identified, these factors will be grouped into categories which should help regional carriers adjust recruiting practices and benefits packages in order to fill their classes with the highest quality applicants.

This research falls under the expedited category as per 45 CFR 46.110 under:

Research activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the following categories. The activities listed should not be deemed to of minimal risk simply because they are included on this list. Inclusion on this list merely means that the activity is eligible for review through the expedited review procedure when the specific circumstances of the proposed research involve no more than minimal risk to human subjects. (Bankert & Amdur 2006)

1. ☐ Prospective collection of biological specimens for research purposes by noninvasive means.

2. ☑ Collection of data from voice, video, digital, or image recordings made for research purposes.

3. ☐ Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, Bankert, E. A., Amdur, R. J., (2006) Institutional Review Board Management and Function, Second Edition, pp. 517-518.
16 September 2016

G. Michele Baker  
Administrative Chair of Institutional Research  
Liberty University

Dear Ms. Baker,

The purpose of this letter is to provide approval for Mr. Andrew Reitz to conduct focus group interviews with Florida Memorial University aviation management students as a part of Mr. Reitz’s dissertation research.

I will act as the point of contact for Mr. Reitz and representatives from Liberty University, as needed. Please see my contact information below.

Sincerely,

Captain Arnold Tolbert  
Chair, Department of Aviation & Safety  
(305) 623-4277 Office  
(954) 465-8778 Cell
15 December 2016
G. Michele Baker
Administrative Chair of Institutional Research
Liberty University

Dear Ms. Baker,

The purpose of this letter is to provide approval for Mr. Andrew Reitz to conduct focus group interviews with Broward College aviation management and flight students as a part of Mr. Reitz’s dissertation research. I will act as the point of contact for Mr. Reitz and representatives from Liberty University, as needed. Please see my contact information below.

Regards,

Mark Bergau
Faculty Aviation Operations
Transportation Technology
Broward College
7200 Pines Blvd, Bldg. 99, Rm. 122
Pembroke Pines, FL 33024
(954) 201-8074
Appendix D: Interview Guide

Introduction

Good morning and thank you all for coming today. I know how busy everyone is, and I appreciate you taking time out of your busy schedules to talk about airline hiring with me. My name is Andy Reitz. I am currently a Philadelphia-based First Officer on the A-330 with American Airlines. I am also working on my Doctorate of Business Administration at Liberty University.

Purpose

This focus group is part of my dissertation. I am trying to determine what attracts candidates to the regional airlines. Specifically, I want to know what attracts you, collegiate flight or aviation management students to apply to certain regionals. As you know, there is a massive shortage of pilots right now. The regional airlines are already having trouble filling classes. It will only get worse for the next 10 years as retirements at the majors accelerate. So, the purpose of this study is to talk to you, the most likely candidates for airline jobs, to determine what you want in an airline pilot job.

My Background

First, a little background about me. I have been flying at the airlines for 20 years. I started at Continental Express the same month I graduated college. I was an ERJ Captain there for several years. After September 11, when we were furloughing and the mainline Continental furloughs flowed back to Express, I took several Company Offered leaves of absence. I spent a year in west Africa and another nine months in Kuwait. After ExpressJet, I flew for several non-scheds as a 747-200 freighter Captain and then a direct entry 757 passenger Captain at a start-up. I went to US Airways in 2007, and was promptly furloughed in 2009-2010. I worked for Airbus
as an A-320 instructor and then went to Saudia as a line Captain and maintenance delivery pilot on the 320 until recalled to US Airways. I was an A-320 Instructor Pilot at USAirways, then an E-190 Captain after the American merger. I went back to the right seat of the 330 this year, as soon as my seniority could hold it again. So, like you, I come from a civilian background that started at the regionals.

Study Description

There are three main types of attributes that we want to talk about today, including job attributes, company attributes, and industry attributes. The job attributes are the differences in the job itself (pilot). These would be differences based on position, for example First Officer, Direct-Entry Captain, Second Officer, Flight Engineer, etc. They could also be differences based on the type of equipment flown, for example a jet, a turbo-prop, or a piston-twin. Finally, these are differences based on job duties or assignments, for example flying versus flying and other ancillary duties. The second general type of attributes we want to discuss, company attributes, are the specific differences between companies. There are four main parts to this group, compensation, working conditions, career advancement possibilities, reputation, and location. These are the differences that separate one company from another. The third set of attributes, industry attributes, are the factors that apply to all of the airlines that also weigh in on your general decision to be a regional pilot. These include general factors like the economy, the potential for job loss (furlough, loss of medical, or bankruptcy), technological changes (drones, single-pilot cockpits, etc), regulatory changes, cost of flight training, or any other factors that influence your decision on where to apply.
Procedure

There are only a few basic ground rules for the focus group. The first is that everyone’s opinion, no matter what you think, is equally valid. I will respect everything you say, and I would ask that you be respectful of one another’s thoughts and opinions. This research can only be valid if I get good data, and the data will only be good if we can have open and honest discussions. There are no right or wrong answers. And, it is acceptable to disagree with each other. I would only ask that the disagreements be respectful so everyone speaks up.

These discussions will be recorded. However, your names will not be used in the data collection or analysis process, so I would ask that you try to refrain from addressing one another by name during the discussion. The recordings will be kept until I defend my dissertation. After that, they will be erased for your privacy. After the discussion, if anyone wants to be removed from the study for any reason, you can notify me and I will manually remove your comments from the transcripts. Again, I want to reiterate that my role here is mainly to observe your discussion and interactions. I have a few questions that I will use to move the discussion along, but you are the main drivers. I want to know how you feel and to learn about your decision-making process. So please, feel free to speak up and present your views.

Interview

Job Attributes

Does the equipment that an airline operates affect your decision to apply there?

Do you have a preference for the type of position offered at the regional airline?

Probes: Specifically, F/O vs. DEC vs. Accelerated Command.

Company Attributes

Does location (bases/domiciles) affect your decision to apply at a regional airline?
Probes: Does an airline’s tendency to open and close bases (forced moves) affect this decision?

Do you look at the moving policies or commuting benefits prior to applying?

What parts of compensation do you consider when deciding where you would like to fly?

Probes: Do you consider bonuses (both guaranteed and potential)?

Do you consider retirement (defined contribution or 401K) plans?

Do you consider the work rules/contract at a specific airline when applying there?

Probes: How do you learn about these rules (word-of-mouth, internet, recruiters)?

Which career advancement possibilities do you consider when applying?

Probes: Do you consider upgrade time (historical vs. projected/promised)?

Do you look for opportunities for additional duties (safety, management, flight training, non-flying jobs)?

Do promises of movement to major airlines (flow-through agreements or preferential interviews) attract you to specific regionals?

Does a regional airline’s reputation affect your decision to apply?

Probes: How do you judge this reputation (factors)?

Does reputation for following the contract matter?

How do you judge this?

Where do you get the information (current employees, recruiters, websites)?

Do perceptions of the company’s long-term viability matter?

How does the company attitude towards employees affect your decision?
Specifically, which programs would encourage you to apply?

Does the recruiting process (time, friendliness, etc.) affect your decision to apply at an airline?

Industry Attributes

What industry attributes would discourage you from applying at a specific airline?

Probes: Does the thought of involuntarily leaving the industry influence your decision to apply at a specific airline (i.e. one would leave you in a better position should you go out on medical or get furloughed in a downturn)?

What factors would influence this decision?

Closing Questions

What additional factors that we have not discussed would either encourage you apply at a specific regional airline, or would prevent you from applying at an airline?

In closing, of all the factors we discussed, which ones are the most important to each of you in your decision on where to apply?

Closing

Thank you all again for taking the time to come in today. I will begin compiling the data from this discussion right away. I hope to be complete with all of my data collection and analysis by the end of April. If anyone wants a summary of the results, feel free to contact me, and I will provide it after my dissertation is complete and defended. Thank you again.
Appendix E: Approved Consent Form

The Liberty University Institutional Review Board has approved this document for use from 12/22/2016 to 12/21/2017.
Protocol # 2589.122216

CONSENT FORM

An Examination of the Organizational Attributes That Attract Pilots to Regional Airlines

Andrew P. Reitz
Liberty University
School of Business

You are invited to be in a research study of what will attract pilots to apply for a regional airline. You were selected as a possible participant because you are in your last year of studies, enrolled in an aviation science (flight) program, and plan to pursue a career as an airline pilot beginning at a regional airline. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

Andrew P. Reitz, a student/docent candidate in the School of Business at Liberty University, is conducting this study.

Background Information: The purpose of this study is to identify what factors attract you, the pilot candidate, to various regional airlines. Likewise, we hope to discover which attributes also deter you from applying at various airlines. Once identified, these factors will be grouped into categories which should help regional carriers adjust recruiting practices and benefits packages in order to fill their classes with the highest quality applicants.

Procedures: If you agree to be in this study, I would ask you to do the following things:
1.) Complete an initial survey, which should take no more than two minutes, in order to assess the fitness for participation.
2.) Participate in a focus group that will be recorded, lasting no more than two hours.
3.) Should you wish to withdraw from the study, you will need to provide me the date, time, and location of the interview, as well as your seat number. By doing so, I will be able to edit those particular comments out of both the audio recording and the transcription.
4.) Anyone that desires a copy of the final results can email the Principal Investigator at badany9733@yahoo.com and a summary of results will be provided when they are available.

Risks and Benefits of being in the Study: The risks involved in this study are no more than one encounter in a common-day classroom discussion.

Participants should not expect to receive any direct benefits, but there may be a benefit to society, in that the results might help regional airlines adjust their recruiting practices, which will increase the number of pilot applicants, helping to mitigate the current shortage of pilots. This will help smaller communities maintain airline service, which has a positive economic impact.

Compensation: You will receive no payment/reimbursement/incentives for taking part in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject.
Research records will be stored securely and only the researcher will have access to the records. We may share the data we collect from you for use in future research studies or with other researchers; if we share the data that we collect about you, we will remove any information that could identify you before we share it.

The data (recordings, transcriptions, and analyzed data) will be stored on a password-protected, 128-bit encrypted hard drive with no network access. It will be stored in a safety deposit box in a bank, to which only the Principal Investigator has access. Your confidentiality will be maintained by using the numbers placed at the table in front of you, rather than using any names during the discussions. Please be advised that there are limits to maintaining confidentiality. I cannot assure participants that other members of the group will maintain your confidentiality and privacy.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University, Embry-Riddle Aeronautical University, Florida Institute of Technology, or Broward College. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study:

If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you, apart from focus group data, will be destroyed immediately and will not be included in this study. Focus group data will not be destroyed, but your contributions to the focus group will not be included in the study if you choose to withdraw.

Contacts and Questions: The researcher conducting this study is Andrew P. Reits. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at badandy9733@yahoo.com/303-731-4120. You may also contact the researcher’s faculty advisor, Dr. Ed Moore, at emmoore3@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Green Hall Suite 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information to keep for your records.

Statement of Consent:

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(Note: Do not agree to participate unless IRB Approval Information with current dates has been added to this document.)
The researcher has my permission to audio-record me as part of my participation in this study.

______________________________  ________________________
Signature                              Date

______________________________  ________________________
Signature of Investigator             Date
Appendix F: Revised Conceptual Framework
References


*Corporate Reputation Review, 1*(1/2), 165-171.


