

Survey of Northern Air Operators

A. Survey Overview

The Human Resource Study of Commercial Pilots in Canada (ATAC 2001) identified a training standards and skills gap, as well as potential shortages in the future numbers of qualified commercial pilots across the country in 2001. The follow-up study (Sypher:Mueller 2003), indicated aviation industry growth across Canada would be seen in smaller, modern turbo prop and jet aircraft operations serving high frequency regional markets.

In northern British Columbia, and throughout northwest Canada, air services requiring commercial pilot licenses are vital for serving remote areas, not only for passenger transport, but also for medevac, fire, cargo services, etc. The global financial crisis has disrupted all corners of the globe, leaving one to ponder if northern aviation will stay as it is, or rebound to the forecasted pilot shortages from the beginning of the decade.

To assess the current need for commercial pilots and gauge the mindset of those operating aviation businesses in northwest Canada, the College of New Caledonia conducted a survey of air operators listed on the Transport Canada Air Operator list for 2008. The capture area for this survey included northern BC (north of Bella Coola and 100 Mile House), the Yukon, southeast Alaska, western Northwest Territories, and northwest Alberta. The delineation of the capture area was chosen because of the shared northern lifestyle within the five regions and the similarities of air operations and geography there vs. the operators and geography to the south and east. Although this is a vast area, pilots in Northwest Canada frequent the same limited number of airfields and interact with the same businesses supporting these airfields. Thus, they operate within the same Northern Pilot Network as their contemporaries and trade information accordingly.

At the time of the survey, a total of 134 companies were registered with Transport Canada in the capture area, specializing in fixed-wing (aeroplane) operations and/or rotary (helicopter) operations. Of this number, 120 companies were found to be valid contacts (not associated with a disconnected phone number or a duplicate or partner of another company already listed).

An attempt was made to contact all valid air operators in the capture area by phone to participate in the study during January and February 2009. Some companies declined to participate, others asked the survey be emailed to them, and others were unavailable after repeated contact attempts. In the end, 41 full surveys were completed, for a total respondent rate of 34% for the non-random population survey. In addition to those completing the survey, eight companies partially filled out surveys, sent emails, or called to discuss issues facing northern air operators. All of this supplemental input was collected, as it is valuable in helping assess the current state of aviation in northwest Canada and adding to this feasibility study. With the supplemental input, a total of 49 companies provided some form of feedback after being contacted, for a total response rate of nearly 41% for the survey capture area. **Appendix I** provides details of key survey results at the back of this study.

Air operators from all regions within the capture area responded to the survey. Northwest Alberta had the highest response rate (66%), followed by northern British Columbia (43%), southeast Alaska (36%), western Northwest Territories (29%), and the Yukon (25%). The response rate from northwest Alberta surpassed that of the local northern British Columbia

Table 1: Northern Air Operator Survey - Response Summary

Region within Survey Capture Area	# Companies listed on Transport Canada Operator List	# of Invalid Companies (out of business, disconnected phone, or is duplicate of another company)	# Presumed Valid Companies	# of Complete Surveys	Percentage Surveys Complete	# of Partial Surveys and Emails/ Phone Calls with Advice	Provided some form of feedback (Complete Surveys, Partial Surveys, Emails)	Total Response Rate
Northern BC*	55	1	54	20	37.04%	3	23	42.59%
Yukon**	22	2	20	5	25.00%	0	5	25.00%
SE Alaska**	19	5	14	3	21.43%	2	5	35.71%
West NWT	20	6	14	4	28.57%	0	4	28.57%
NW Alberta*	18	0	18	9	50.00%	3	12	66.67%
REGIONAL TOTALS	134	14	120	41	34.17%	8	49	40.83%

Notes:

*Unknown completed surveys = 2, one from BC and one from Alberta

**One unknown partial survey from Yukon or SE Alaska

Phone Calls = 2, one from BC and one from Alberta (neither caller completed the survey)

region, with the response rate from southeast Alaska closely behind that of northern British Columbia, in comparison to the remaining two regions (Yukon and Northwest Territories). These response rates may indicate a level of interest in a potential Vanderhoof program in each of these regions, or they may be a consequence of sample size.

Table 1 provides a summary of the survey response totals per region.

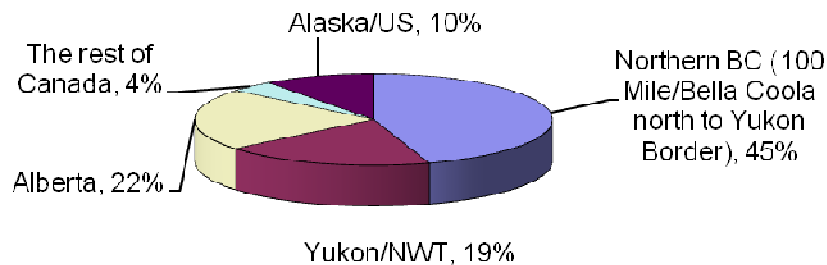
B. Company Operations

Air operators in northwest Canada vary from fixed-wing to rotary with specializations in bush, float, survey, commuter, cargo, fire and rescue, medevac, and corporate air services. No two operations are exactly alike and the number of pilots employed often varies with the contracts won from season to season. Respondents were asked basic questions regarding their operations to assess the current industry.

Results of Questions Regarding Company Operations

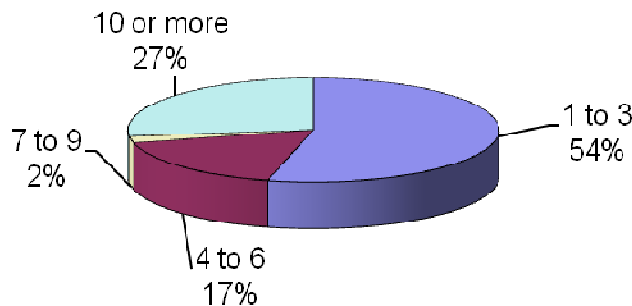
- The primary operating area for survey respondents was northern BC, followed by Alberta, Yukon/NWT, Alaska and the rest of Canada. (**Figure 1**)

Figure 1: Geographic Operating Area



- The typical number of pilots employed by respondents was one to three, followed by ten or more, then four to six and seven to nine. (**Figure 2**)

Figure 2: Number of Pilots Employed



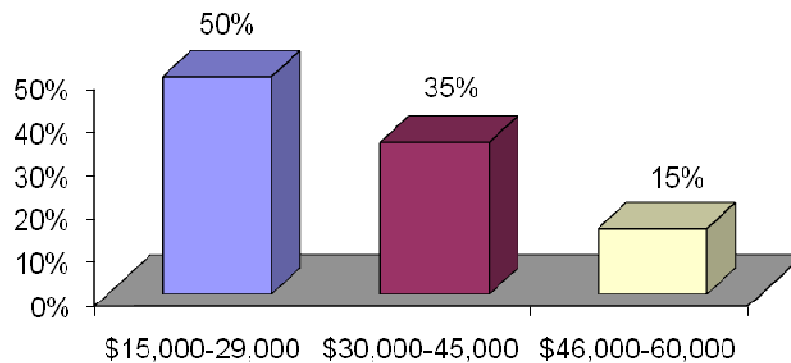
- The number of year-round/full-time pilots vs. seasonal/part-time pilots employed by respondents varied. Ten percent of respondents employed no pilots year-round, while 23% of respondents employed no seasonal pilots. (**Table 2**)

Table 2: Number of Year-Round vs. Seasonal Pilots Employed

# of Pilots	% of Respondents Employing this # of Year-Round/Full-Time Pilots	% of Respondents Employing this # of Seasonal/Part-Time Pilots
0	10%	23%
1-3	54%	51%
4-6	12%	13%
7-9	4%	4%
10+	20%	9%

- The typical wage range respondents reported for new pilots was \$15,000 to \$29,000, followed by \$30,000 to \$45,000, and \$46,000 to \$60,000. (Figure 3)

Figure 3: Average Wage Range for New Pilot with the Operation



- Current supply and demand for new pilots in the capture area was seen as adequate by the majority of respondents (64%). Those who felt it was inadequate (36%), stated the geography and lifestyle in their region was often the reason for low applicant numbers, while others stated pilots applying for bush jobs in the north need 1000+ hours of flight time before insurance would cover them and high-time pilots just aren't applying.
- The typical recruiting strategies used by respondents in the capture area were personal networks, referrals from an existing employee, specialized advertising (aviation website/list serve, magazine, etc.), general advertising (newspaper, magazine, website, etc.), and relationships with an existing flight school/college programs. Some respondents also stated they hired successful candidates through cold calls, emails, and hits to company websites.
- The majority of respondents (64%) indicated they did not use incentives or bonuses in their recruiting process. Those who indicated they did use incentives or bonuses (36%) offered incentives in the form of housing/accommodations, moving costs, higher wages than competitors, flight time in new aircraft, an end-of-season bonus, the use of aircraft and company vehicles for limited personal use, room and board, and training in loading and confined spaces. One operator stated he/she used a gradual incentive package, offering specialized training the first year, a pay incentive the second year, an aircraft-type incentive the third year, and endorsements the fourth year.

Discussion of Company Operations

Based on the feedback from the survey, respondents from the capture area primarily operate in the Canadian northwest and Alaska, with a few branching out to the rest of Canada. Typically, these operators are small, employing a handful of pilots from year to year, both full-time and seasonally. Yet, there are a number of larger operators in the area, many of which employ pilots year round. The average wage range for a new pilot would seem to be under \$29,000, but could range to \$60,000 annually, depending on the amount of work and flying time a pilot could be expected to obtain in a given year.

At the present time, the supply of new pilots into the region is seen as adequate, but some operators admit their geographic location is a limiting factor in hiring and feel there are not enough pilots applying from rural areas. Other operators state they need more high-time pilots applying for bush jobs, as insurance company standards are a limiting factor during their hiring process.

Most Northern Air Operators rely on their own personal networks within the Northern Pilot Network or referrals from an existing employee when recruiting new pilots to their operations. Some northern operators offer incentives or bonuses for new pilots to join their operations, while the majority does not.

C. Five-Year Planning

One of the objectives of the Northern Air Operator Survey was to gauge how operators viewed the current economic downturn and how it might affect the aviation industry in northwest Canada. To that end, respondents were asked to disclose how many pilots they might be hiring over the next one to two years, as well as the next three to five years.

Results of Questions Regarding Five-Year Planning

- The majority of respondents (69%) anticipate hiring pilots in the next one to two years. The majority of those who anticipate hiring (73%) would hire one to three pilots, followed by four to six pilots (18%). A few respondents (9%) anticipate hiring ten or more pilots in the next one to two years.
- The majority of respondents (67%) anticipate hiring pilots in the next three to five years, roughly the same number as those who would hire in the next one to two years. The majority of those hiring in the next three to five years (58%) anticipate hiring one to three pilots, followed by four to six pilots (16%). A good number of the respondents (19%) anticipate hiring ten or more pilots in three to five years, and a few others (7%) anticipate hiring seven to nine pilots during that time.

Discussion of Five-Year Planning

Based on the feedback from the survey, respondents still anticipate hiring pilots over the next five years, indicating a need for commercial pilots in the capture area regardless of the economic downturn. Noteworthy is the fact nearly 19% of respondents anticipate hiring ten or more pilots in the next three to five years, while only 9% anticipate hiring ten or more pilots in the next one to two years. This may indicate optimism for long-term improvement of the economic situation and seems to support concern for an impending commercial pilot shortage.

D. Difficulties in Hiring and Retention

As stated previously, the current supply and demand of pilots in the capture area is seen by some operators to be influenced by geography and lifestyle in their region. To obtain a clearer picture and help determine if this perception is that of many or only a few, respondents were asked questions regarding their hiring practices and the retention of their current employees.

Results of Questions Regarding Difficulties in Hiring and Retention

- Over 60% of respondents stated the geography of their region (too dangerous, too remote) was an important barrier in recruiting new pilots to their operation.
- Over half of the respondents felt the harsh winter climate of their region was NOT an important barrier in recruiting new pilots to their operation.
- Seventy percent of respondents felt low wages were NOT a barrier in recruiting new pilots to their operation.
- Over 60% of respondents felt a lack of opportunity to advance was NOT a barrier in recruiting new pilots to their operation.
- Over half of the respondents stated they had found it necessary to change their company hiring criteria in order to find qualified pilots to work for their operation. Those who had changed their hiring criteria indicated they had hired more low-time pilots and trained them in-house, hired from overseas, increased pay for the position advertised, or changed the type of aircraft to accommodate the skill level for which they could recruit.
- Over 75% of respondents stated a pilot's satisfaction with the wages he/she earned was an important factor in retaining adequately qualified personnel.
- The majority of respondents stated competition from other operators who offer a higher wage once a pilot logs enough hours was an important factor in retaining adequately qualified personnel.
- Seventy-five percent of respondents stated opportunities with larger operators who offer more variety in clientele and work location played an important role in retaining adequately qualified personnel.
- The majority of respondents stated quality of life issues (housing amenities, social contacts, etc.) played an important role in retaining adequately qualified personnel.
- Other factors respondents felt played an important part in retaining adequately qualified personnel included: scheduling and crew rotation opportunities from larger companies, offers for work locales where pilots have the ability to maintain social and family life, dangerous mountain conditions, the quality of aircraft, crew vehicles and hangars an operation has to offer, stable work environment, offers to fly new aircraft, and lack of amenities in the bush.

Discussion of Difficulties in Hiring and Retention

Based on the feedback from the survey, respondents from the capture area do feel the geography of their region (being too remote or too dangerous) plays an important role in recruiting new pilots to their operations. They do not feel the harsh winter climate of their region plays an important role in their recruiting processes, however. Respondents do not think low wages or the lack of opportunity to advance are hurdles to them when trying to recruit new pilots to their operations either, implying operators feel they offer a decent wage and plenty of advancement opportunities.

Over half of respondents say they have had to change their hiring criteria in order to find qualified pilots to work for their operation. Changing their hiring criteria has meant operators have hired more low-time pilots and trained them in-house, hired from overseas, increased pay for the positions they advertise, and/or changed out their aircraft to accommodate the skill level for which they can recruit.

Retention of adequately qualified personnel plays a huge role in the success of any business. The importance of a pilot's satisfaction with the wages he/she earns is recognized by over 75% of respondents as playing an important role in retaining adequately qualified pilots in their operations. Also playing an important role in pilot retention in the north are the competition from high wage offers, opportunities with larger operations who offer more variety in clientele and work location, and quality of life issues (housing, amenities, social contacts, etc.).

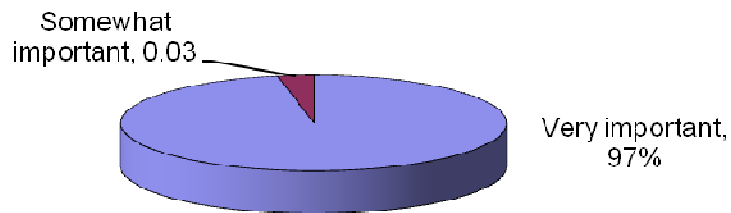
E. Pilot Qualities

To get an idea of what Northern Air Operators are looking for in applicants seeking employment with their companies, respondents were asked about basic qualities of those applying for work, and how important of a role each played in their hiring decisions. Operators were also asked about factors affecting the career advancement of a pilot and how important of a role certain issues played in a pilot advancing his/her career and being a successful contributor in the aviation industry.

Results of Questions Regarding Pilot Qualities

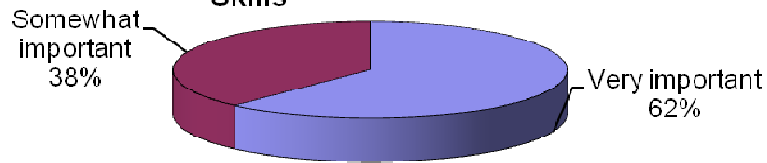
- The applicant's overall general attitude was nearly unanimous among respondents as playing a very important role during the hiring process. **(Figure 4)**

Figure 4: Importance of Overall General Attitude



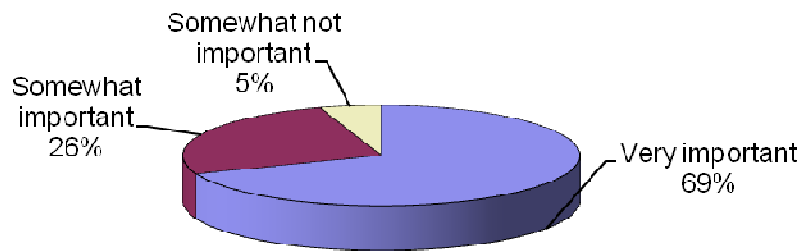
- The applicant's interpersonal and communication skills were also viewed as somewhat to very important to all respondents. **(Figure 5)**

Figure 5: Importance of Interpersonal and Communication Skills



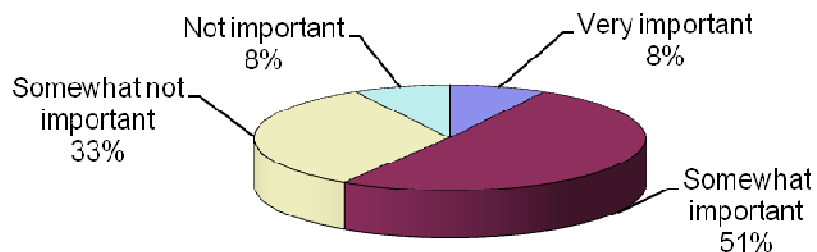
- The applicant's potential compatibility with the company's culture played an important role during the hiring process for all but five percent of respondents. (Figure 6)

Figure 6: Importance of Compatibility with Company Culture



- The applicant's educational background was seen as important to 59% of respondents, while 41% said it was not important when considering a candidate for employment. (Figure 7)

Figure 7: Importance of Educational Background

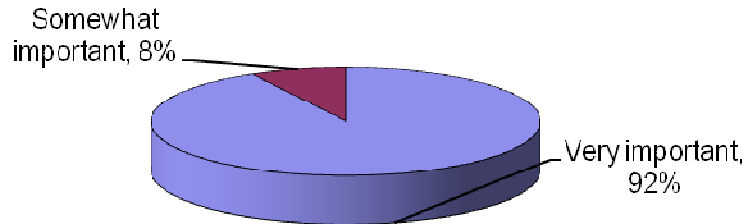


- The applicant's number of hours logged was important to 90% of all respondents, while only 10% said it was not important.
- Two-thirds of northern operators felt the applicant's familiarity with the operator's geographic area was important when considering a candidate for employment.
- The applicant's familiarity with the lifestyle in the operator's region was also important to nearly 70% of northern operators.
- The applicant's familiarity with the latest technology was important to over half of the survey respondents.
- Other factors respondents felt play an important part when hiring a new pilot for their operation included the applicant's willingness to put in extra effort, a work ethic and drive to work on other things on a day when there is no flying, an eagerness and readiness to

learn, an ability to get along with a variety of customers, a sense of professionalism – especially in stressful situations, a willingness to take direction and openness to learning, and a good attitude along with good judgment and decision-making skills.

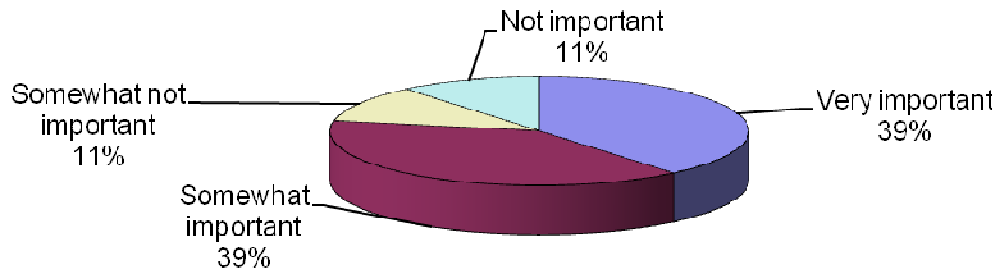
- When asked about factors affecting the career advancement for pilots, an employee’s personal initiative was seen by all respondents as playing an important role in his/her career advancement. (Figure 8)

Figure 8: Importance of Personal Initiative Affecting Advancement



- The ability of an employee to hold a position with a “living wage” was viewed by just over half of respondents as playing an important role in affecting a pilot’s career advancement.
- The opportunity of an employee to log more hours was seen by 78% of respondents as playing an important role in affecting his/her career advancement. (Figure 9)

Figure 9: Importance of Logging More Hours



- The opportunity of an employee to have access to an upgrade facility was seen by just over half of respondents as playing an important role in affecting his/her career advancement.
- Other factors respondents felt played an important role in affecting career advancement for new pilots included the lifestyle and seasonality of the work, competition among pilots during lay-off periods, the safety management of the company for which they are working, general economic decline, family commitments, lack of grooming opportunities for junior pilots, and the lack of movement in senior positions that can prevent advancement for new hires.

Discussion of Pilot Qualities

Based on the feedback from the survey, respondents from the capture area unanimously feel an applicant’s overall general attitude plays an important role during the hiring process.

Likewise, the applicant's interpersonal and communication skills are important, as is his/her potential compatibility with the prospective company's culture. The applicant's educational background and familiarity with the latest technology was important to nearly 60% of respondents, but these did not seem to be as important as the applicant's overall attitude, his/her ability to communicate effectively, the number of hours he/she had logged, or his/her familiarity with the operator's geographic area and regional lifestyle. Other factors respondents feel play an important role when hiring a new pilot include a drive to work on other things on a day when there is no flying and a willingness to take direction and adapt to the situation at hand. One operator stated he/she would rather hire a lower time pilot who is willing to adapt vs. a higher time pilot set in his/her ways and not willing to adapt.

When asked about factors affecting the career advancement for pilots, an employee's personal initiative is unanimously seen as important by respondents. Also viewed as important is the opportunity for a pilot to log more hours, followed by the ability of an employee to hold a position with a "living wage" salary and his/her access to an upgrade facility. Other factors respondents feel play an important role in affecting career advancement are the lifestyle and seasonality of the work, competition during lay-off's, company safety management plans, and family commitments. One respondent noted age and weight can be a problem that affects career advancement, as an operator might have limited flexibility around a 40+ year old pilot who weighs 300+ lbs and operates helicopters that can only take a 500 lb load.

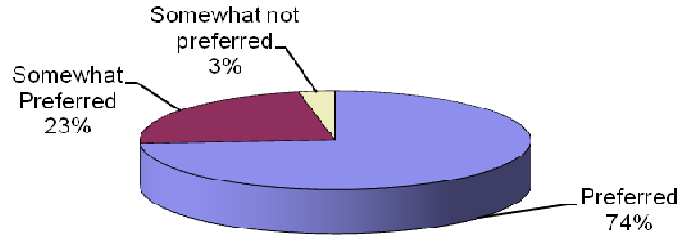
F. Training Preferences

To get an idea of the training Northern Air Operators are looking for in applicants seeking employment with their companies, respondents were asked about specific types of training they preferred, and whether or not they had seen any training skills become deficient in applicants during recent years. Respondents were also asked to share their thoughts on two-year aviation diploma programs vs. traditional flight school training.

Results of Questions Regarding Training Preferences

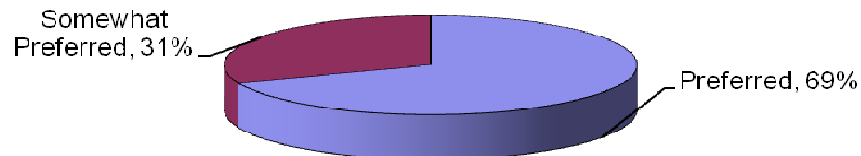
- The great majority of respondents (93%) stated some preference for applicants to have conventional cockpit training, while only a small number did not really prefer it, or it was not applicable to their operations.
- A majority of respondents stated a combination of glass cockpit/moving map display AND conventional cockpit training was preferred or somewhat preferred (69%), but training in ONLY the glass cockpit was not applicable, not preferred, or somewhat not preferred by the majority of survey respondents (60%).
- Over half of respondents stated float training was preferable or somewhat preferable when hiring a new pilot, but another 22% stated float training was not applicable to their operations.
- Just over one-third of respondents stated ski experience was preferable or somewhat preferable when hiring a new pilot, while nearly half stated it was not applicable to their operations.
- Almost one half of respondents stated some preference for coastal experience when hiring a new pilot, while nearly one third said it was not applicable to their operations.
- A vast majority of respondents (97%) stated some preference for northern experience when hiring a new pilot for their operation. **(Figure 10)**

Figure 10: Northern Experience



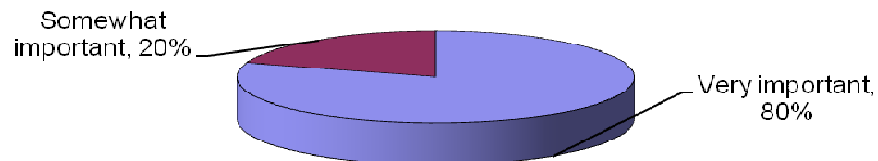
- All respondents showed some preference for new pilots to have survival training. **(Figure 11)**

Figure 11: Survival Training



- Nearly 90% of respondents stated some preference for new pilots to possess aviation physiology/disorientation awareness training, advanced weather training, and mountaineering/advanced geography training.
- Nearly 70% of respondents stated some preference for new pilots to possess psychology of human behavior training, client and marketing training, and business/revenue training.
- Over half of respondents stated some preference for new pilots to possess high altitude training, aviation law training, and Transport Canada audit training.
- All respondents felt new pilots need to be self-motivated and possess a “do-it-all” attitude from cleaning the hangar to piloting the aircraft. **(Figure 12)**

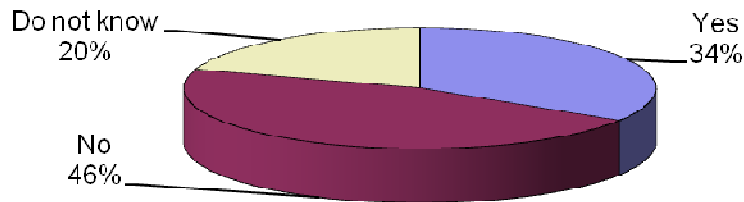
Figure 12: New Pilots Need "Do-It-All" Attitude



- Over ninety percent of respondents feel new pilots in their operations need to think on their own, especially when it comes to making the “go” or “no-go” decision with regard to weather, and they need to possess decision-making abilities with regard to managing people and operational logistics.
- Over half of respondents felt there are areas in which new pilots seem to be lacking or deficient. The areas given for deficiencies included business knowledge, self motivation, logic, maturity, attitude, practical training, the reality of job demands, and common sense.

- Only a third of respondents felt there was an advantage in hiring applicants with a two-year diploma over those with traditional flight school training. Twenty percent did not know how they felt on this issue. (Figure 13)

Figure 13: Advantage of 2-Year Diploma vs. Regular Commercial Pilot's License?



Discussion of Training Preferences

Survey respondents state they like applicants to have conventional cockpit training, or a combination of conventional cockpit training and glass cockpit/moving map display. Training on only a glass cockpit/moving map display is not preferred by nearly one third of respondents, while another one-fourth state that type of training is not applicable to their operations. Some northern operators prefer to see applicants who are float trained, have ski experience, or have coastal experience, depending on the type of business they operate. Nearly all respondents, however, prefer applicants with northern experience of some type, and all respondents state some preference for applicants with survival training. Ninety percent of respondents state some preference for new pilots to possess aviation physiology/disorientation awareness training, advanced weather training, and mountaineering/advanced geography training, while 70% percent state some preference for psychology of human behavior training, client and marketing training, and business and revenue training. Over half of respondents also state some preference for new pilots to possess high altitude training, aviation law training, and Transport Canada audit training.

All respondents feel new pilots need to be self-motivated and possess a “do-it-all” attitude from cleaning the hangar to piloting the aircraft, and ninety percent feel new pilots need to think on their own and possess decision-making abilities. Many northern operators feel new pilots seem to be deficient in their business knowledge, self motivation, logic, maturity, attitude, practical training, and common sense. Yet, only one third of respondent feel there is an advantage in hiring applicants with a two-year diploma over those with traditional flight school training.

G. Potential Program

Another goal of the Northern Air Operator Survey was to try and ascertain what operators are facing when it comes to aviation in northwest Canada. Because the number of flight schools in northwest Canada has dwindled in the last 10 years, respondents were asked about the creation of a two-year commercial pilot diploma program in Vanderhoof, BC and how it might benefit them as northern operators. Respondents were also asked what type of program they would like to see offered in Vanderhoof if the program became a reality.

Results of Questions Regarding Potential Program

- The majority of respondents (58%) stated they would consider hiring graduates from a two-year commercial pilot diploma program in Vanderhoof. Those who said they would

- not consider this stated they needed more experienced/seasoned pilots for their operations. Twenty seven percent of respondents did not know if they would consider hiring graduates from a Vanderhoof program.
- The majority of respondents (54%) stated they saw a potential advantage as a Northern air operator in having a two-year commercial pilot program in Vanderhoof, BC. A third of respondents did not know if it would be advantageous to them or not.
 - A third of respondents preferred Vanderhoof offer a fixed-wing program, under half preferred a fixed-wing and helicopter program, less than ten percent preferred a helicopter program, and just under 20% did not know what type of program they would prefer. Those who stated a preference for a fixed-wing program felt it was less expensive and it might be easier for graduates to find fixed-wing jobs. Those who preferred a helicopter program stated aeroplanes and helicopters were so different it would be difficult and expensive to teach both. Those who stated a preference for the fixed-wing and helicopter program felt it would be best for students to have a good understanding of both and it would widen students' possibilities for employment in the north.

Discussion of Potential Program

A majority of respondents state they would consider hiring graduates from a Vanderhoof program, and nearly the same number see a potential advantage as operators in having a commercial pilot's diploma program located in Vanderhoof. Some of the respondents feel the location of the program will attract northern pilots who will better understand the remote lifestyle of the region and uniqueness of the work here, while others want to take the opportunity to interact with students from the program before hiring them.

When it comes to the type of program to offer, respondents show a preference for a fixed-wing program or a program that offers aspects of both fixed-wing and rotary. This will widen the possibility for students' opportunities within the industry.

H. Survey Conclusions

The objective of the Northern Air Operator Survey was to "take the current temperature" of the aviation industry from the business operator's viewpoint in northwest Canada. The feedback from the survey aids in determining the need for a two-year commercial pilot diploma program in Vanderhoof, BC, and helps shed light on whether or not graduates from such a program will be successful in job placements once their diploma is complete.

Based on the non-random population survey of 120 northern operators, the operators who responded generally feel they pay their employees well in the north, and they recognize the geography and lifestyle of their regions can be a limiting factor when seeking new personnel. In general, most northern operators rely heavily on their own networks and those of their employees for hiring/recruiting, and would like to see more applicants with northern experience, a good work ethic, and an overall positive attitude.

Northern operators seem generally optimistic about the future of the industry and are planning to hire new pilots over the next five years. Not all northern operators are concerned whether an applicant has a diploma with his/her commercial license, but they admit they would like to see more pilots with good communication skills and decision-making abilities with regard to managing people and operational logistics, all of which are key components of a diploma program.

Most northern operators would like to see applicants who have taken a survival course, and some training in aviation physiology/disorientation awareness, advanced weather preparation, and mountaineering/advanced geography instruction. Many northern operators would also like to see applicants who possess training in business/revenue, client and marketing, and the psychology of human behavior.

Northern operators admit to seeing deficiencies in applicants during the last five years in the areas of business knowledge, logic, maturity, attitude, practical training, and the reality of job demands. Some operators think a program in Vanderhoof, BC has the potential to attract northern-minded pilots who possess the attitude and maturity needed to better understand the remote lifestyle of the region, and prefer a program that offers aspects of both fixed-wing and rotary to widen the possibility for students' opportunities within the industry in the north.

The highest response rates for the survey came not just from northern BC, but also from northwest Alberta. This could indicate an interest in the proposed program from that area even though Edmonton boasts similar programs. This could be coincidental and due to a low survey sample size.