

Training for Heavy Equipment Operators

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Introduction

The volume of activity in the oil and gas and forestry industries in Alberta and particularly in the North have created a strong demand for heavy equipment operators (HEOs) to work in the field. Keyano College has expressed a particular interest in the demand for training in this sector. This report examines the number of people working as HEOs currently and predictions for the next five years. In addition it looks at the level, type and source of training that employers require now and in the future.

Methodology

Information for this reports come from a combination of interviews with, and surveys of, a number of experts in the field (see contact list, p.5). Those interviewed tend to be involved in industry organizations or the International Union of Operating Engineers, though some other employers were interviewed as well following the survey format. The survey was faxed out to 23 randomly chosen employers located in northern Alberta, of whom only six responded.

Those employers contacted by interview and by survey account for approximately ten percent of the HEOs working in Alberta. Many employers of HEOs work throughout the province, making for a province-wide training market. Accordingly, figures quoted in this report are for Alberta as a whole.

Current Workforce

According to the National Occupational Classification (NOC) heavy equipment operators:

...operate heavy equipment used in the construction and maintenance of roads, bridges, airports, gas and oil pipelines, tunnels, buildings and other structures; in surface mining and quarrying activities; and in material handling work. They are employed by construction companies, heavy equipment contractors, public works departments and pipeline, logging, cargo-handling and other companies.(NOC Occupational Descriptions, 1992)

This reports also includes those operating heavy equipment in the forest industry.

- HEOs operate such equipment as (among others): backhoes, bulldozers, graders, loaders, feller-bunchers and skidders.
- The size of the workforce in this field is difficult to measure due to the seasonal and project-based nature of the work. One operator may be hired for two or three different jobs within a year, in which case statistical data might count him (this is a male-dominated field) as two or three operators. According to estimates from the International Union of Operating Engineers, Local 955, there are approximately 10 - 11 000 heavy equipment operators working in Alberta. Roughly one-half of those are union members.

- The average age of HEOs is reported to be anywhere from 30 to 45. Those interviewed tended to have older employees than did survey respondents. Many reported that it is becoming difficult to interest young people in this line of work.
- The rate of turnover in the industry is low to moderate. While operators are hired and let go frequently as projects start and finish, most operators will do most of their work for one or two contractors.
- Most, though not all, of the employers contacted for this study have some difficulty finding qualified HEOs in Alberta. Demand is not steady; one major project can have a significant impact on the labour market. One employer pointed out that “cat” operators are easy to find but that crane operators and those with lifting tickets are in short supply. Another reported that finishing and clean-up operators are hard to find.
- Many respondents reported that there is a pressing needs for heavy equipment mechanics.

Training

Formal training in this field is available from Keyano College, NAIT, AVC - Lesser Slave Lake (for logging equipment) and through apprenticeship programs. Even so, the vast majority of heavy equipment operators in Alberta learn their craft on the job.

- Employers estimate that ten percent or fewer have any formal training.
- Employers generally favour experience over formal training when looking for new HEOs.
- Most employers are more interested in a worker’s attitude and real aptitude for the job than in any college training.
- Many of those interviewed related previous disappointments with HEOs who had taken a college course more for a “meal ticket” than as a serious step toward a career.
- Most of the training of equipment operators is done by more experienced personnel, but one respondent mentioned that some private training firms will send instructors to the job site to train new operators while leaving older HEOs available for the work at hand. This approach has the benefits of on-the-job training, supervised by the employer, with minimal disruption to ongoing work.

Future Employment and Training Demands

Most employers surveyed or interviewed expect to need more HEOs in the next five years.

- Those specializing in road building are less likely to predict significant growth due to public sector cutbacks, although major oil and forestry construction will prevent any decline.
- Those serving the resource sectors foresee stronger growth largely due to increased oilsands activity. Much of this growth does depend on the price of oil, however.
- None of the employers predicted a reduction in workforce demand.
- In terms of training, employers do foresee some need for HEOs to have greater skill with computers and other automated systems. The increased use of technology will encourage some employers to look for workers with at least a grade twelve education or its equivalent.
- As was found in the “Environmental Training For Heavy Machinery Operators” report, contractors will likely fall increasingly into one of two camps over the next few years. On one hand, smaller and more general contractors will continue to depend upon on-the-job training for their operators. On the other, more specialized contractors will be more likely to make use of outside (college, apprenticeship or private) training to ensure that their personnel have the specific skills that they require.

Partnerships with Industry

While most of those interviewed expressed skepticism about the value of college-based training for heavy equipment operators, survey respondents were generally in favour of some form of partnership with post-secondary institutions “aimed at helping (the institutions) to provide their students with real, on-the-job experience”. Even the skeptics were open to new proposals from colleges, as long as they were based on real industry needs.

Implications for Training

Given the widespread industry preference for on-the-job training, the strongest opportunity in this area may be for institutions to look at ways in which they can augment the in-house training provided by employers. This may include providing instructors to work with new operators on-site, or providing short courses in computer and automation technology that the employers may not have the expertise or facilities to provide. Training provided successfully in this vein may convince employers of the value of college training; thus opening doors to further industry-institution partnerships and to employment for graduates of pre-employment programs.

Since many employers will likely insist on high school completion as a prerequisite in the future, colleges may have an opportunity to provide adult development training geared toward HEOs during slow periods in the highly seasonal construction, energy and logging industries.

Apprenticeship training for heavy equipment mechanics and specialist HEOs such as crane operators appears to be needed.

Contacts and Survey Respondents (* indicates survey respondent)

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Sources

Human Resources Development Canada, National Occupational Classification; Occupational Descriptions, 1992.

Northern Development Branch. "Together Toward Tomorrow; Conference Summary", March, 1997.

Northern Labour Market Information Clearinghouse reports: "Environmental Training for Heavy Machinery Operators" January, 1997 and "Training Opportunities Generated by Petroleum Industry Activity in Northern Alberta", June, 1996.