



GEARING UP CASE STUDY REPORT

Memorial University & University of British Columbia

 Developing Mining Talent Through Work-Integrated Learning



MINING INDUSTRY
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Volume 2



The Mining Industry Human Resources Council (MiHR) is Canada's knowledge centre for mining labour market information (LMI). MiHR produces LMI for industry stakeholders to enable the sector to address labour market challenges such as recruitment, retention, workforce diversification and training.

MiHR's 2019 Canadian Mining Industry Labour Market 10-year Outlook report highlighted the need to hire approximately 100,000 workers in the next decade. Older workers are leaving, total enrolment across all 10 Canadian mining engineering programs is down 45% since 2015, and STEM occupations are becoming more prevalent with the adoption of new technology. It can also take anywhere from two to five years to train a skilled worker for the mining industry.

Where are companies going to find the next generation of mining talent?

There is no silver bullet to face this challenge. Industry needs to take a collaborative approach to grow the labour pool and to attract top talent – distinguishing themselves as employers of choice.

Industry also needs to make better use of all potential sources of talent. Women only made up 16% of the mining labour force in 2016, while internationally-trained professionals accounted for 13%.

To help shape the next generation of Canada's mining workforce, the Government of Canada provided MiHR with funding support through its Student Work Placement Program to create the Gearing Up program. Gearing Up brings mining employers, service providers, industry associations and post-secondary institutions together to create new work-integrated learning (WIL) opportunities for post-secondary students to be better positioned to secure employment in mining.

Gearing Up changes the way students in mining-related post-secondary educational programs perceive, pursue and acquire the skills needed for in-demand mining careers. It offers wage subsidies to Canadian mining employers that create new WIL opportunities for students enrolled in science, technology, engineering and math (STEM) or business programs. Opportunities can include co-ops, internships, field placements, applied projects, capstone projects and case competitions.



Gearing Up wage subsidies are tiered to promote early attachment to, and diversity in, high-demand mining occupations.

Employers can receive subsidies up to 50 per cent of the wage cost for a placement, and up to 70 per cent for under-represented students: first year students, women, Indigenous students, persons with disabilities, and newcomers to the country. The maximum wage subsidy per placement for these two categories are \$5,000 and \$7,000, respectively.



The following study showcases examples of how Gearing Up was adopted, what WIL placements are like, and the benefits to the companies, post-secondary institutions and students involved.

CASE STUDY 3

MEMORIAL UNIVERSITY

Dr. Stephen Butt is a Process Engineering professor at Memorial University in St. John's, Newfoundland. His department requires its students to complete one co-op work term per year, and thanks to his existing connections with various mining companies, the Gearing Up program was a perfect fit.

“We do lots of applications for funding as a university-based research centre, and MiHR’s was by far the most straight-forward.”

Gearing Up’s wage subsidy application is just one page, and available on MiHR.ca. Companies can apply as many times as they choose to, and support is always available if applicants have any questions.

The application process was much quicker than Dr. Butt expected; Memorial hired a student only two weeks after finding out about the wage subsidy program, and has hired many more since.



Stephen Butt, Process Engineering professor at Memorial University in St. John's, Newfoundland

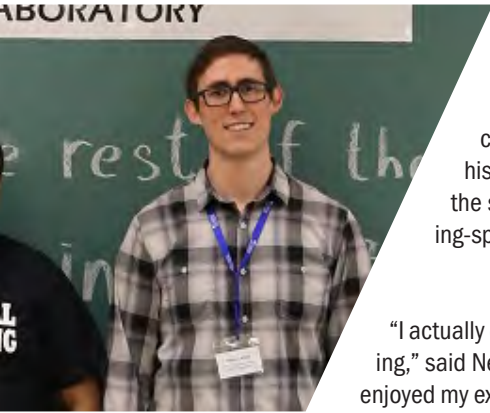
“We hired our first student literally within weeks of finding out about the program, and we applied for three positions throughout 2018 and we filled them all”
– Stephen Butt

He explained that these students worked at Memorial, but for Anaconda Mining. The research they conducted in the school’s labs applied to real-life challenges faced by Anaconda, providing valuable benefits to both the students and the mining company.

“Like other co-op students, they were assigned short and long-term goals on activities, so I would meet with them every week in a seminar session to review their progress,” he said. “They were quite happy to be employed on a work term and to be active participants in a relatively large project with very high level goals.”

But the benefits did not stop there, as Dr. Butt explained these WIL opportunities were easily just as valuable for Memorial.

“Our primary project has been with Anaconda mining, but as that grew, I would say 15 or so different companies are interested in following up on what we’re doing with Anaconda in terms of technology.”



Left: **Neeson Mello**, Process Engineering graduate at Memorial University

Dr. Butt has recommended Gearing Up to several colleagues, and is looking to apply for more subsidies when funding resumes, especially for his graduate students. He also stated the program has raised awareness of mining not just for the students, but for the school itself, and that his department is looking to add additional mining-specific courses.

“I actually did a mining course in my last semester, but that work term was really my introduction to mining,” said Neeson Mello, a Process Engineering graduate, of his WIL experience funded by Gearing Up. “I enjoyed my experience; it was really challenging and a good opportunity.”

Mello was the first student Dr. Butt hired through Gearing Up, and said the entire internship was very well orchestrated.

“He was really well organized and devout, and divided up the teams very well, based on each student’s needs,” he said of Dr. Butt’s guidance during his placement. “Working in a co-op with a real company while working with the school, it was very professional and very much like an actual workplace.”

During his undergraduate degree, Mello said he completed five co-ops in total, but that his work with Anaconda was the most organized.

“It was more structured than some of my other work terms, which I thought was a good thing, because it made the deliverables much clearer, and the monitoring and everything was just much more organized.”

He said the program did a great job preparing himself and his teammates for the workforce. As a recent graduate, he is now looking for work and is keeping an eye on any mining opportunities that might relate to his field, particularly those to do with metallurgy.

“Overall, it was a really good time, and I am definitely thankful that Gearing Up exists, and was able to provide funding for my work term.”
- Neeson Mello

While he did not work directly with Mello, Allan Cramm, the Vice President of Innovation at Anaconda Mining, said that the work done by students at Memorial University was very useful to his company.

“In the project which [Dr. Butt] is involved in, we’ve actually started up a registered subsidiary company and we’re hoping it will be our start-up to apply the technology that we have developed through this research,” he said. “We’re absolutely hoping to hire the students who we hired as interns.”

Cramm said the students’ research was impressive, but not a surprise.

Right: **Allan Cramm**, Vice President of Innovation at Anaconda Mining



“The opportunity comes from providing students with not just a theoretical challenge, but with real challenges. When students are involved in projects that have real applications, they perform much better.”
- Allan Cramm

He proclaimed work-integrated learning is “definitely the way to go”, and a big step in the right direction for the future of the both the mining industry and post-secondary institutions alike.

“I think we really do have to change the way we deliver training,” he said. “The way things are changing, we need more links to real, applicable research. Work-integrated learning will definitely have a very positive effect on the mining industry.”

“I always mention Gearing Up to colleagues whenever I can,” Dr. Butt said. “It has been so beneficial for us that we cannot wait to hire more students, and hopefully foster research connections with even more mining companies.”



CASE STUDY 4

UNIVERSITY OF BRITISH COLUMBIA

Jamie Rogers is the manager of talent acquisition at Newmont Goldcorp's office in Vancouver, BC. As a member of the Gearing Up Steering Committee, Rogers has promoted the program's use to companies and mining schools across Canada. He also helped champion the program at Newmont Goldcorp, and is currently managing a few interns funded by Gearing Up.



Left: **Jamie Rogers**, Manager of Talent Acquisition, Newmont Vancouver

"Businesses get a lot of value out of work-integrated learning, as do students," Rogers said. "We have a pretty lean program that allows students to have a lot of on-the-job training experience, and they're put into roles that have quite a lot of responsibility, so this assists the teams with being able to build them up to be true contributors."

Gearing Up's application form is available on [MiHR.ca](https://www.mihrcanada.ca), and is just one page. There is no limit to the number of applications a company can submit, and support is always available should any questions arise.

"It provides us with a good insight into future potential and pipelining of new grads that could assist either our office or one of our sites throughout the portfolio of mines that we have," he said.

"I think a lot of our interns leave with a stronger understanding of how to apply the things they're learning in school, and maybe learn more experience-based skills they'd only get in the workplace."
- Jamie Rogers

Companies can receive a wage subsidy of up to \$7,000 per student hired on WIL opportunities such as co-ops, internships, field placements, applied projects, capstone projects or case competitions.

Samyta Rai is one of two Gearing Up interns working for Jamie, fulfilling her co-op requirements at the University of British Columbia's (UBC) Sauder School of Business. Rai is currently studying to earn her Bachelor of Commerce, specializing in Accounting and Human Resources, and participating in a yearlong work term, as a recruitment intern at Newmont Goldcorp has been a perfect fit.

"It's not the stereotypical internship that students think of when working for a large company," Rai said. "I'm working on actual projects that provide meaning to the company; it has been a great experience."

She said her day-to-day work changes often, making it a challenging but exciting opportunity. Though an intern herself, she said one of her responsibilities is to ensure other interns in the office have a good placement.

"My main duties are managing internship hiring, as well as the internship program as a whole here at the Vancouver office, as well as leading the full recruitment cycle for fulltime roles for the various departments," Rai said.

Rai worked fulltime at Newmont Goldcorp over the summer, but as she enters her fifth and final year at UBC Sauder, she is going back to working there part-time as the Talent Acquisition Coordinator-Contractor. She said her internship experience has greatly helped her contextualize her studies.

"It gave me a lot more exposure to a lot more about human resources, and being able to collaborate and work on different projects outside my role too," she said. "I'm fortunate enough that at the Vancouver office, I'm able to see the type of work different departments do and also interact with all the interns to hear about the projects they are involved in. The people here are subject matter experts, so you can learn a lot from them."



Samyta Rai, fifth-year University of British Columbia student studying Commerce

While working in the office means she does not get to interact much with the mines themselves, she said she appreciates the chance to support them directly through facilitating job postings to ensure their staffing pipelines are healthy.

"I really value the work they've done for communities, and even working with Indigenous people. Doing their due diligence to make sure that they're restoring the land to how it used to be, if not better, is a key thing.

- Samyta Rai

She also said she could see herself working in mining, as the industry is huge in Vancouver, and she has heard good things about mining careers from peers. In addition, she says she appreciates the efforts the company puts towards reclaiming mines once they close.

Rogers said that Newmont Goldcorp holds their interns in high regard, and strives to hire them post-graduation.

“I think every manager here has that as something they would love to do,” he said. “So we try our very best to hire those who’ve had internships or co-op placements with us.”

Rogers envisions the Gearing Up program helping the mining industry over the long-term. That’s why he joined the Gearing Up Steering Committee and will continue to help with and promote the program – describing Gearing Up as a strong tool that could benefit from incorporating modern mining technology.

“I think it’s a strong program with the ability for many people to take part in; I think it’s more us continuing to try to mold together strong mining experience with technology experience,” Rogers said. “The usage of a variety of different technologies within the industry, and the progressive nature of that, that’s just something that we will continue to need to be aware of.”

**“Gearing Up is helping the industry.
I’ll continue to be a part of the program,
as its positive impacts will be felt long-term.”**
- Jamie Rogers

Below: Jamie and Samyta at MIHR’s 2018 Gearing Up Consortium Meeting







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