

# Sponsored Degrees: Transforming Talent Development for Canada's Tech Companies

## AT A GLANCE

**PARTNERS:** York University, Carleton University, Bow Valley College, Shopify

**REGIONS:** Ontario, Alberta

**INDUSTRIES:** Technology sector

**WIL TYPES:** Intensive work experience as part of a sponsored degree/diploma program

**TYPE OF LEARNING:** Curricular

**THEMES:** Computer science, technology sector, productivity, recruitment, retention, EDI/DEI, STEM

**SUMMARY:** This case study explores the rise of sponsored degree and diploma programs in Canada's tech sector by examining York University's BAsC in Digital Technologies, Bow Valley College's Apprenticeship-Style Technology Diploma Programs, and Shopify's Dev Degree program with Carleton University. We analyze the benefits this work-integrated learning model provides to employers – including improved talent development, higher retention, and increased productivity.

## Context

Canadian technology companies face challenges including declining budgets, fewer resources, and slower adoption of technologies compared to global counterparts.<sup>1</sup> These challenges are further compounded by a skill gap in specialized and emerging technical areas (e.g., cybersecurity and AI), and diversity and equity concerns related to pay and representation.<sup>2</sup> These issues put Canadian tech firms' competitiveness and profitability at risk.

- 1 KPMG (2023). Innovating with Intention: The path to tech transformation. Retrieved from <https://kpmg.com/ca/en/home/insights/2023/09/path-to-tech-transformation.html>
- 2 Deschamps, T. (2024). Gender pay gap in Canada's tech sector almost tripled between 2016 and 2021: study. Retrieved from <https://www.ctvnews.ca/business/gender-pay-gap-in-canada-s-tech-sector-almost-tripled-between-2016-and-2021-study-1.6934510#:~:text=Among%20the%20report's%20key%20findings.earned%20%247%2C200%20more%20than%20women.>



To address these challenges, the Business + Higher Education Roundtable's (BHER's) post-secondary members, including Bow Valley College, York University, and Carleton University, have created a new way to train students that radically prioritizes experiential learning. We call it a **sponsored degree/diploma program**.<sup>\*</sup> This type of program model is not unique to tech, with post-secondaries in the UK offering these sponsored programs across a wide range of healthcare, social services and creative occupations.<sup>3</sup> But the urgent demand for tech workers in Canada, the popularity of tech as a second career choice, and success of the model in addressing diversity and equity concerns in STEM in other jurisdictions makes it an appropriate sector to begin expanding sponsored degree/diploma models in Canada.

Sponsored degree/diploma programs, unlike shorter term internships or co-ops, offer structured, long-term learning with an employer. This leads to strong technical skill development and reduces the financial burden of education for students. At a time when the return on investment in STEM degrees has eroded relative to prior decades, a more financially accessible route into the tech sector is a compelling value proposition for students.<sup>4</sup> For employers, the model increases productivity, enhances technical contributions, and strengthens retention. And for post-secondaries looking to showcase industry relevance, reduce costs, and diversify revenue by attracting non-traditional students like second career seekers and older learners, sponsored tech programs are a model worth exploring.

**\*You may also see terms like “higher apprenticeships,” “degree apprenticeships,” “apprenticeship-style programs,” and others to describe sponsored degree/diploma programs with integrated long-term experiential learning paid for by an employer. While there are slight differences across countries, institutions, and governing bodies depending on which term is used, the main features they all have in common are high employer investment for high return on talent, reduced financial burden on students, and a deep partnership between the employer and the post-secondary. We use the term sponsored program as a catch-all for all of these types of programs.**

3 Alberta's Expanded Apprenticeship initiative, under the Alberta 2030 plan, targets tech alongside energy, agriculture and forestry, tourism and hospitality, culture, aviation, aerospace, financial and financial technology sectors.

4 RBC Proof Point: Financial returns after a post-secondary education have diminished. <https://thoughtleadership.rbc.com/proof-point-financial-returns-after-a-post-secondary-education-have-diminished/>

## OVERVIEW OF SPONSORED DEGREE/DIPLOMA PROGRAMMING

Sponsored degree/diploma programming, brought to mainstream attention by the UK government's policies in 2015,<sup>5</sup> is based on the premise of learning by doing. These programs allow students to simultaneously split their time between university study and the workplace, and allow employers to co-design the program to ensure that training is relevant to the industry. This intensive engagement, as opposed to traditional co-ops that alternate between study and work terms, allows for the continuous application of technical skills resulting in stronger skills development for students and uninterrupted productivity for employers (Table 1)



**Table 1 | Comparison of a Sponsored Degree/Diploma and a Typical Computer Science Co-op**

FEATURE	SPONSORED DEGREE/DIPLOMA	TYPICAL COMPUTER SCIENCE CO-OP PROGRAMS
<b>Work Experience Structure</b>	Work and study are often simultaneous	Alternates between study terms and work terms (usually four to eight months long)
<b>Mentorship</b>	Structured long-term mentorship throughout the entire program	Limited short-term mentorship during work terms
<b>Duration</b>	Long-term work experience throughout the degree or diploma program	Shorter work terms, lasting a portion of the program
<b>Industry Partners</b>	Ongoing relationships with specific industry partners	Often different companies each work term
<b>Portfolio Development</b>	Gradual long-term development of a portfolio throughout the program	Periodic development of portfolio pieces in separate, shorter work terms
<b>Skills Development</b>	Focus on mastering specific technical skills over long-term work placements	More generalized work experience with potentially less time to develop specific technical skills, depending on company and term
<b>Financial Benefits</b>	Consistent paid work integrated with learning, reducing financial strain	Paid during work terms only, unpaid during study terms

<sup>5</sup> Department for Business, Innovation & Skills (2015). Government rolls-out flagship degree apprenticeships. Retrieved from: <https://www.gov.uk/government/news/government-rolls-out-flagship-degree-apprenticeships>

## **SPONSORED DEGREES/DIPLOMAS IN CANADA**

Recognizing the tangible benefits of this program model for both employers and students, three post-secondary institutions (PSIs) in Canada have recently begun delivering sponsored programming. Below is a summary of each program, with a comparative overview of the three programs in Table 2.

### **York University's BAsC in Digital Technologies**

York University's Bachelor of Applied Science (BAsC) in Digital Technologies, launched in September 2023 at the Lassonde School of Engineering, is Canada's first fully work-integrated degree initiative. This four-year program combines academic study with practical, paid work experience to address the skills gap in the information and communication technologies sector. Students spend 80% of the program gaining direct, applied experience with an employer, and 20% engaged in academic learning.

### **Bow Valley College's Apprenticeship-Style Technology Diploma Program**

Bow Valley College offers an apprenticeship-style technology diploma program designed to meet the demands of Calgary's growing tech industry. Launched in 2023, this 16-month program utilizes a dual training system, with students spending four months in full-time study followed by 12 months of blended classroom instruction and on-the-job training under industry mentors three days a week.

### **Shopify Dev Degree Program at Carleton University**

The Shopify Dev Degree program is a four-year degree that combines 50% hands-on work experience at Shopify with 50% academic coursework in computer science at partner universities, including Carleton University. Carleton offers a Dev Degree stream under their Bachelor of Computer Science program, which allows students to gain over 3,800 hours of paid work experience at Shopify while in school. The program covers full tuition and provides a competitive salary for students.



Table 2 | Comparison of Sponsored Tech Programs at York, Bow Valley, and Carleton

<b>PROGRAM FEATURE</b>	<b>YORK UNIVERSITY (BACHELOR OF APPLIED SCIENCE IN DIGITAL TECHNOLOGIES)</b>	<b>BOW VALLEY COLLEGE (APPRENTICESHIP-STYLE TECHNOLOGY DIPLOMA PROGRAM)</b>	<b>CARLETON UNIVERSITY (DEV DEGREE STREAM UNDER THE BACHELOR OF COMPUTER SCIENCE)</b>
<b>Program Type</b>	Undergraduate Degree	Diploma	Undergraduate Degree
<b>Curriculum Focus</b>	Digital Technologies (BASc) with specializations in: Software Development Cybersecurity Data Science	Software Development or Digital Design, including UX/UI <sup>6</sup>	Computer Science (BCS)
<b>Program Duration</b>	4 Years	6 Months	4 Years
<b>Industry Partners</b>	Several (e.g., Shopify, Alstom, IBM)	Several local employers in the tech sector	Partnership with Shopify
<b>Work Experience</b>	20% Coursework 80% Industry Work Experience	25% Coursework 75% Industry Work Experience	50% Coursework 50% Work Experience with Shopify
<b>Financial Benefits</b>	Paid work experience Tuition coverage in select work placements	Paid work experience	Paid work experience 100% tuition coverage
<b>Key Differentiators</b>	High proportion of work experience to coursework, high levels of work-study integration	Classroom and industry experience in either digital design or software development, in a shorter amount of time than a degree program	Higher level of work-study integration than a typical co-op program, early career integration with start with employer (Shopify) that expects to hire upon graduation

6 UX/UI stands for "User Experience" and "User Interface", both aspects of User Design

## VALUE OF THE MODEL

The complete embedding of work experience into the program provides stronger productivity, retention, and equity/diversity benefits than traditional models like co-ops or internships. The three main value propositions of the model are:

1. Improve recruitment and retention
2. Increase productivity due to uninterrupted tenure
3. Foster a more diverse network of employees

### 1 | SPONSORED DEGREE/DIPLOMA PROGRAMS HELP IMPROVE RECRUITMENT AND RETENTION BY UTILIZING PSI ONBOARDING SUPPORTS AND ENGAGING WITH STUDENTS OVER AN EXTENDED PERIOD.

According to the Society for Human Resource Management (SHRM),<sup>7</sup> the average hard cost to hire a non-management staff member is approximately **\$6,319 CAD**,<sup>8</sup> with some companies projecting it to be **three to four times** the position salary after considering impacts on existing staff time and productivity.

Sponsored programs mitigate some of the initial upfront costs of recruitment and retention by having employers and PSIs work in partnership in selecting applicable candidates for the program and organization at a consistent time each year. The model also helps to mitigate the cost of competition, i.e. when a candidate chooses to accept work with a different employer, as the university acceptance process is more controlled.

Unlike shorter co-ops, students in sponsored degree/diploma programming engage with employers for a minimum of a year. Shopify Dev Degree and York Digital Technologies students work with their employers for four years. This prolonged engagement allows students to build a strong understanding of organizational dynamics and company culture, making them more likely to stay with the organization upon graduation. This tenure helps employers to reduce their reliance on traditional

recruitment methods, while supporting students integrating more smoothly into full time employment post-graduation.

Shopify's Dev Degree program boasts an impressive **90% conversion rate** to full-time positions after graduation, demonstrating the strength of relationships built during the program.

Manchester Metropolitan University's undergraduate sponsored degree program, which serves as a model for York University's initiative, reports an **average retention of seven years** at an employer for graduates post-program.



**There are really concrete benefits around retention. We're investing in these folks who are part of the program - they become what we've called the high impact, high context developers. They have so much context on the programs and projects that are going on in the company because they've been with the company for four years. They're also incredibly loyal - they want to work for the company when they're done. - Dev Degree Program Lead**

7 Navarra, K. (2022). The real costs of recruitment. Retrieved from: <https://www.shrm.org/topics-tools/news/talent-acquisition/real-costs-recruitment>

2 | SPONSORED DEGREES/DIPLOMAS ALLOW STUDENTS TO PROVIDE INCREASED PRODUCTIVITY FOR EMPLOYERS.



**These students can add value to your organization virtually straight away...And you don't have to keep doing this every four months or every eight months. What's there to lose? – Jane Goodyer, Dean of the Lassonde School of Engineering**

In traditional four-to-eight-month computer science co-ops, employers are faced with balancing the requirements of onboarding and determining what meaningful work a student can complete, while also planning for transition and hand off after their short tenure.

Sponsored degree/diploma programming removes this balancing act, allowing employers to plan for at least one full year, allowing sufficient time for onboarding, skill development, and space for students to make significant contributions to the organization. For example, Shopify's Dev Degree and York's Digital Technologies students provided employers with innovative solutions, such as enhancing threat assessment procedures, and automating internal processes to be less resource intensive.



**Our student has done outstanding work so far, building a script that will be used as an integral part of our threat modeling process. The result is that we can better understand the way that cyber threats impact our organization. Students in this program can relate what they're learning in the classroom to real-life business scenarios and connect the two. - Alistair Lamb, Sr. Security Analyst at Dayforce (York Digital Technologies Employer)**

In addition to honing complex technical skills, students also develop strong business acumen, versatility, and a commitment to professional growth, with opportunities to earn valuable certifications along the way. We see testimonials from Shopify representatives that highlight how, over the years, students learn to consider key business factors such as risk, economic impact, and scalability, further strengthening their ability to contribute to the organization.

While exact return on investment for these programs is still emerging in Canada, a 2021 report from the St. Martin's Group found that students in sponsored programming in the UK provided a net benefit of approximately **\$4,192 CAD** after the onboarding and continuous mentorship provided by the organization. Therefore, it is not surprising that employers seek to retain their students longer term, with **all employers having extended student contracts for the second year** in the York program and **over 90% of graduates** from Shopify's Dev Degree having been hired internally as developers, with many **achieving Senior Developer status rapidly**.

3 | SPONSORED DEGREE/DIPLOMA PROGRAMS PROMOTE DIVERSITY IN TECH BY ADDRESSING FINANCIAL AND EDUCATIONAL ENTRY BARRIERS FACED BY STUDENTS FROM UNDERREPRESENTED GROUPS.

According to the Dais, the technology sector in Canada faces inequities in pay and demographic composition, including a lower representation of women (22.1% of workforce) and youth under the age of 25 (7% of workforce) due to systemic barriers.<sup>9</sup> To address this, sponsored programs look to remove the financial barrier to entering the sector by allowing students to earn while they learn,<sup>10</sup> with some programs also offering free tuition as illustrated in Table 2.

The sponsored program model has been successful in engaging a higher proportion of lower income students and students who are the first in their family to attend post-secondary than traditional degree or diploma programs, including in traditional skilled trades

8 The St. Martin's Group (2021). The real costs and benefits of apprenticeships. Retrieved from: <https://stmartinsgroup.org/wp-content/uploads/2021/09/The-St-Martins-Group-The-Real-Costs-and-Benefits-of-Apprenticeships.pdf>

programs where other equity challenges persist.<sup>11</sup> The expansion of sponsored degree/diploma programs in the UK's tech sector has successfully engaged non-traditional students, with 61% being the first generation in their family to attend university.<sup>12</sup>

With the reduced financial barrier and commitment to diversity, employers can access a broader and more diverse range of candidates. For example, Bow Valley encourages both high school graduates and those looking to change careers to apply to their program, while Carleton has removed prior programming experience requirements to encourage all who are passionate about software development to apply.

While the effectiveness of this commitment to diversity is still being studied in Canada, York and Shopify's Dev Degree both reported that **almost 50% of their cohorts were women.**



**It's also a way for us to put our thumb on the scale a little bit with respect to diversity in the industry. We look for and value non-traditional candidates. People coming from underrepresented groups, or a second career... We can create that opportunity for them to be in an environment that really does celebrate that diversity and the uniqueness of their perspective.**  
**- Distinguished Engineer at Shopify**



9 Lockhart, A. & Vu, V. (2024). Canada's got tech talent: Diversity of Canada's tech workers. Retrieved from: <https://dais.ca/wp-content/uploads/2024/06/Canadas-Got-Tech-Talent-Chapter-02.pdf>

10 Students are paid during their work experience.



# Key Takeaways

## FOR EMPLOYERS

- Sponsoring a degree/diploma program with a PSI is a high return-on-investment for tech sector employers, as these types of programs reduce the costs of traditional recruitment and facilitate long-term gains in productivity and retention. Compared to shorter duration placements, you can expect to spend more on student wages, though wage subsidies can be used to offset those costs, alongside the ultimate savings.<sup>13</sup> The benefits of uninterrupted productivity are especially notable compared to co-op programs, since you can avoid the traditionally short cycles of student onboarding and gain greater productivity benefits from the higher skill level of students developed over a much longer term placement. If you are looking for enhanced opportunities for students to contribute more and are comfortable investing relatively more now for longer term productivity and retention gains, these sponsored programs are worth exploring.
- Engagement with diverse students allows employers to leverage unique perspectives and help foster greater innovation. If you are looking to align your WIL program with your organization's larger diversity, equity, and inclusion objectives, there's potential to engage a more diverse talent pool, including women and second career seekers, through these sponsored degree/diploma programs.
- The long-term mentorship component of sponsored programs gives employers opportunities to strengthen existing staff's leadership skills to support further career advancement. If you have a corporate mentoring program, consider expanding it to integrate students from sponsored degrees/diplomas.
- Leverage insights from employers who have participated in a sponsored tech degree/diploma to reduce the HR and operational barriers to implementing this new model at your organization to reduce the HR and operational barriers to implementing this new model at your organization.



11 Chatoor, Ken. The Journey of Ontario Apprentices: From High School to the Workforce. HEQCO. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/[https://heqco.ca/wp-content/uploads/2020/11/Formatted\\_Journey-of-Ontario-Apprentices-FINAL.pdf](https://heqco.ca/wp-content/uploads/2020/11/Formatted_Journey-of-Ontario-Apprentices-FINAL.pdf)

## FOR EDUCATORS

- Committing to a sponsored degree/diploma program can strategically differentiate your institution. Sponsored programs have boosted student outcomes including work readiness and employment, providing PSIs with a competitive edge, and improved reputation. In addition, there are relatively few sponsored tech programs in Canada when compared to computer science co-op programs. The unique opportunity to “earn while you learn” and meaningfully contribute to a leading firm during the degree can be used to strategically communicate the relevancy of your tech offerings to prospective students, families, and guidance counsellors. This value proposition can also be used to attract non-traditional, second career seekers.
- Engage large, national or multinational firms. Large corporations tend to have more capacity to hire and mentor a significant volume of students, as evidenced by trends in the UK and early evidence from Canada’s sponsored tech programs. Focusing your outreach to large firms will result in greater operational efficiency.<sup>14</sup>
- Learn best practices from the implementation of sponsored degree/diploma programs in the UK. For example, UK analysts suggest scaling up sponsored programs in areas with the greatest interest and volume potential for your institution.<sup>15</sup> By focusing on technology-related occupations with strong projected job growth, with strong student interest, and aligned with institutional strengths, you can position new sponsored programs for success.
- Educators can follow the lead of Carleton, York, and Bow Valley and leverage their best practices and lessons learned, saving time and resources when establishing a sponsored degree/diploma program.



## CONTINUE THE CONVERSATION

Interested in learning how your business or post-secondary institution can set up an innovative sponsored tech degree/diploma program? Connect with us at [wilpartnerships@bher.ca](mailto:wilpartnerships@bher.ca)

Check out more resources at <https://bher.ca/resources?initiative=work-integrated-learning>

12 Manchester Metropolitan University. Force for Impact: The transformational impact of Manchester Metropolitan University’s Degree Apprenticeships for apprentices, employers and the wider economy. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/<https://www.mmu.ac.uk/sites/default/files/2024-09/Force%20for%20Impact%202024.pdf>

13 For more detail on the impact of training duration on the ROI from WIL, see BHER’s “ROI: Beyond the Numbers Guide.” <https://bher.ca/assets-documents/resource/BHER-How-to-Calculate-Your-ROI-A-Step-by-Step-Guide.pdf>