

Making the Grade:

A Preliminary Review of Post-Secondary Education in the Calgary Region

October 2004

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Executive Summary

Globalization and growth of the knowledge-based economy are increasing workforce skill requirements and labour force needs. Across all industries, there are varying degrees to which global changes are affecting the needs and requirements for well-educated, skilled and adaptable workers. A key challenge in Canada and across the world is to determine how to address these changing and shifting skill needs now, and in the future.

From an economic perspective, the lack of a knowledgeable and skilled labour talent pool affects the ability of local economies to compete within the marketplace. At the forefront of the ability to be competitive is the need to invest in people – also known as “human capital”. Human capital is based on the minds of individuals: knowledge, competencies, experience, and know-how. It is the engine that drives the economy and is the foundation of economic development.

The purpose of this review is to identify issues affecting workforce development. More specifically, the review focuses on post-secondary education as a prerequisite for economic development. The report also identifies areas that Calgary Economic Development and stakeholders can focus efforts to support increased access to the adult learning system in order to meet increasing skilled labour demands. The report is intended to:

- Summarize the post-secondary education system in Alberta;
- Review the post-secondary sector in the Calgary Region;
- Identify capacity and demand issues affecting the post-secondary education sector; and
- Outline priorities to support increased access to post-secondary education.

Within the Calgary Region, high levels of in-migration have contributed to an unprecedented population increase. At the same time, an increase in post-secondary educational opportunities has not kept pace with this growth. As the fastest growing metropolitan area in Canada over the past five years, Calgary boasts the most educated population in Canada, with 69% having attended a post-secondary education institutionⁱ. However, Alberta has the lowest rate in Canada for high school students to move onto post-secondary education at 43%, indicating a heavy reliance on in-migration for our pool of skilled and educated workersⁱⁱ.

Higher learning is essential for youth to enter the workforce with skills that meet job knowledge requirements now, and in the future. Retention and expansion of existing companies, as well as new business and industry investment and attraction requires a talent pool of skilled labour. A low supply of skilled labour that does not meet labour force needs will seriously dampen economic growth and diversification. Within this context, general trends that are affecting economic development include:

- Increasing student demand for post-secondary education that exceeds the current capacity of post-secondary institutions;

- Labour needs are not currently being met and expected to be increasingly critical in the future; and
- Public investment into post-secondary education has not kept pace with the increasing student demand and industry needs.

Overall, increased access to post-secondary education is required – however this is not to be at the expense of any single institution, but rather overall system growth. Key findings of the review of the post-secondary education situation include:

- Enrolment for full-time students in Alberta universities increased by 13.8% compared to growth in Canada of 6.6% between the periods of 1991/1992 - 1999/2000 respectively;
- Alberta universities saw a 51.7% increase in part-time student enrolment, however, there was an overall 17.8% decrease for part-time university students on a national scale during the same time period of 1991/1992 - 1999/2000;
- Full-time college enrolment in Alberta increased at twice the national rate between the periods of 1991/1992 - 1999/2000;
- Although Alberta has 10% of the Canadian population, the province trains over 20% of the country's apprentices; apprenticeship grew by 63% between 1995 and 2002 – this is still well below the level to meet student demand as seen by increasing numbers of applications;
- Calgary received a larger share of full load equivalent (FLE) growth, as a percent of total growth, from 1994/1995 to 1999/2000, at 46% in comparison to Edmonton that experienced only half this amount (25%);
- University of Calgary absorbed 25.5% of all post-secondary enrolment in Alberta during the period of 1994/1995 - 1999/2000;
- Applicants turned away from Alberta's three largest universities doubled between the period of 1998 to 2002, totaling over 3,300 in 2002;
- Alberta Learning has forecasted that over the next 10 years, 79% of all new jobs will require a post-secondary education – this is well above the current level of the population having a post-secondary credential in the Calgary Region which is approximately 61%;
- Calgary experienced the highest overall population growth rate amongst major cities Canadian between 1999-2003 at 2.4% per year which has resulted in increasing demand for post-secondary education;
- Alberta has the lowest average rate in Canada for students to move onto post-secondary education at 43%;
- Alberta has the third lowest number of post-secondary degrees granted per capita in Canada compared to other provinces; and
- As a percentage of total expenditures, Alberta only invests 5.2% on post-secondary educationⁱⁱⁱ, making Alberta's rank second lowest among provincial jurisdictions in Canada.

Calgary Economic Development is well positioned to take a leadership role to promote additional research and facilitate expanded capacity and access for, post-secondary education in the Calgary Region. While this assessment has addressed many of the shortfalls within our post-secondary system, further research is required to provide a greater understanding of the types of skills that industry is anticipated to require into the next decade and beyond. Within this context, priorities in the short and longer terms include:

1. Promote sustainable growth of the post-secondary education system by working in partnership with stakeholders in the Calgary Region to increase access to higher learning within all institutions.

Additional investment and funding for the post-secondary education sector is a priority. Promotion of increased access and system growth for each post-secondary institution through opportunities to influence provincial policy and program design is required. Inherent to success is the need to take a partnership approach through information sharing and collaborative approaches to address post-secondary system issues. This includes working with post-secondary institutions, industry, stakeholders and government departments and agencies.

2. Profile the capacity and capabilities of the post-secondary education sector in the Calgary Region.

The post-secondary education sector is an important contributor toward the local economy – as well as a major factor for business retention, expansion and new industry attraction. In order to promote sustainable business growth, the capacity and capabilities of the post-secondary sector should be documented through maintenance of a comprehensive education profile for the Calgary Region. In support of this objective, a greater understanding of the socio-economic impacts of the post-secondary sector is required. In turn, this will support and promote the Calgary advantage to attract and retain business investment.

3. Conduct a labour force readiness study of the Calgary Region to identify specific current and future industry needs to promote economic development.

Skilled labour shortages are increasingly becoming an issue at local, regional and national levels. In order to ensure that the Calgary Region is prepared to meet growing and changing labour force skill requirements, a comprehensive study of these needs is a priority for Calgary Economic Development. Through research on current and future labour force shortfalls and gaps, a greater understanding of priorities for the post-secondary education sector to allow young adults to fully participate in the expanding knowledge economy is required.

While the current review of the post-secondary scene points to many of the shortfalls within Alberta's post-secondary system, with specific emphasis on the Calgary Region, this is only a starting point. Further access to post-secondary education is paramount to addressing industry and labour needs.

Additionally, sector research is required to provide a greater understanding of the types of skills that industry requires now and in the future. Through pro-activity, the Calgary Region can be positioned for business growth and diversification into the next decade and beyond.

Introduction

Background

Globalization and growth of the knowledge-based economy are increasing workforce skill requirements and labour force needs. Across all industries, there are varying degrees to which global changes are affecting the needs and requirements for well-educated, skilled and adaptable workers. A key challenge in Canada and across the world is to determine how to address these changing and shifting skill needs now, and in the future.

From an economic perspective, the lack of a knowledgeable and skilled talent pool affects the ability of local economies to compete within the global marketplace. At the forefront of the ability to be competitive is the need to invest in people – also known as “human capital”. Human capital is based on the minds of individuals: knowledge, competencies, experience, and know-how. It is the engine that drives the economy and is integral for economic development.

Within this context, education is one of the fundamental building blocks for human capital development in support of a talent pool that is capable of addressing changing labour market and industry needs. As the gap between the supply of a knowledgeable, skilled and adaptable workforce grows, businesses and industry are increasingly concerned with labour shortages.

In Canada, post-secondary education is a provincial responsibility and thus is primarily supported through provincial government grants¹ for a large portion of the operating and programming budgets. Thus adult education – or more specifically post-secondary education - is addressed differently across the country. Well known in the adult learning sector is that greater access to post-secondary education is required in order to support increased capacity and capabilities within the post-secondary sector to train new and existing workers.

Within the Calgary Region, high levels of in-migration have contributed to an unprecedented population increase. At the same time, an increase in post-secondary educational opportunities has not kept pace with this growth. As the fastest growing metropolitan area in Canada over the past five years, Calgary boasts the most educated population in Canada, with 69% having attended a post-secondary education institution^{iv}. However, Alberta has the lowest rate in Canada for high school students to move onto post-secondary education at 43%, indicating a heavy reliance on in-migration for our pool of skilled and educated workers^v.

¹ This review excludes territorial post-secondary education.

Purpose

The purpose of this review is to identify issues affecting workforce development. More specifically, the review focuses on post-secondary education as a prerequisite for economic development. The report also identifies areas that Calgary Economic Development and stakeholders can focus efforts to support increased access to the adult learning system in order to meet increasing skilled labour demands. The report is intended to:

- Summarize the post-secondary education system in Alberta;
- Review the post-secondary sector in the Calgary Region;
- Identify capacity and demand issues affecting the post-secondary education sector; and
- Outline priorities to support increased access to post-secondary education.

Scope

Post-secondary education, within this assessment, focuses on publicly funded institutions that provide formal training beyond high school (grade 12) taken to obtain a degree, diploma, or certification that is directly related to obtaining academic or trade related skills training. This includes professional development and academic up-grades.

While there is an increasing growth trend in private institutions in Calgary and across Canada, private institutions are excluded from the current review of the Calgary Region; the current report focuses on publicly funded post-secondary institutions governed under the *Post Secondary Learning Act* in the Calgary Region², namely:

- Alberta College of Art & Design (ACAD)
- Athabasca University (AU)
- Bow Valley College (BVC)
- Mount Royal College (MRC)
- Olds College (OC)
- Southern Alberta Institute of Technology (SAIT)
- University of Calgary (U of C)

Paramount to this review is to examine the areas Calgary Economic Development can take a leadership role to support increased access to post-secondary education within Alberta and more specifically, within the Calgary Region. It is understood that system growth in the Calgary Region is not to be at the expense of other areas or schools of the province, but rather in addition to growth to all areas of the post-secondary system in support of higher learning, which will ultimately support labour force needs for economic development.

² The 'Calgary Region' refers to Census Division 6.

Post Secondary Education in Alberta

Adult learning is a key driver of economic development at local, regional, national and international levels. As an individual attains higher levels of academic achievement through formal and informal avenues, they are better able to contribute individually and collectively toward society. While the benefits of lifelong learning extend beyond the realm of this review, it is acknowledged that as individuals gain more education, socio-economic benefits accrue.

Additionally, while post-secondary institutions are most often viewed solely as centres for higher learning, these institutions are also valuable contributors to the local economy through community development initiatives, research and innovation, and as major employers. Again, through each of these roles, post-secondary educational institutions are an important driver for economic development, yet outside the scope of this review.

Post-secondary Legislative Framework

Most publicly funded institutions are legislated under the *Post-Secondary Learning Act* (Bill 43). The Act, recently passed in 2003, combined and updated four separate Acts that previously governed Alberta's public post-secondary institutions. The legislative and associated policy framework allows all post secondary institutions to provide degrees regardless of the type of institution and as such, increases the ability for the institutions to respond to changing adult learning demands. Additionally, the Act also provides for:

- The establishment of the *Campus Alberta Quality Council (CAQC)* to facilitate the development and expansion of degree-granting opportunities for all post-secondary institutions;
- Greater flexibility for post-secondary institutions to conduct their business so they are better able to respond to the needs of students; and
- Guidance for tuition fees.

The new framework for post-secondary education supports individual institutions to be more responsive to adult learning demands by reducing barriers and restrictions on the types of program offerings. It also provides for greater transferability among institutions in Alberta regardless of the “type” of institution and as such, greatly improves access and mobility.

Transferability between Alberta-based post-secondary institutions and institutions outside of the province remains an issue. For the most part, Alberta degrees are only recognized outside the province if they are issued by a university. In other cases, transferability, particularly for an ‘applied’ degree from institutions other than a university is assessed on an individual basis, resulting in a lack of a national standard.

To some extent, the Association of Universities and Colleges of Canada (AUCC), has taken on the role of developing accreditation standards, however the recent shifts in post-secondary education delivery system has resulted in a need to revisit these standards and trends. At the same time, transferability outside of the province remains a key issue. This is further discussed later in this report.

Spectrum of Institutions

Besides the traditionally publicly funded post-secondary institutions, which are the largest contributor towards adult learning, there are also nine private colleges accredited to grant specific degrees at the “university” level. The *Private Colleges Accreditation Board* sets conditions to be met by private colleges that offer programs leading to bachelor degrees. The Board reviews program proposals and makes recommendations to the Minister of Learning. Institutions are authorized to grant degrees through approval of an Order in Council.

Privately funded post-secondary institutions are outside the scope of this review, but are still an important part of the education scene. There are some discrepancies among privately funded institutions as there are a handful of private institutions located within the Edmonton Region, which receive government grants. At the same time, within the Calgary Region there are three private (not-for-profit) institutions that do not receive the same public grants. These institutions include the following:

- Alliance University College
- Nazarene University College
- St. Mary's University College

The one private institution in the Calgary Region that is a “for-profit” institution, and is the only one of its kind in Canada is listed below:

- DeVry Institute of Technology

Additionally, there are over 140 private training institutions in Alberta that offer programs licensed under the *Private Vocational Schools Act*. These institutions offer vocational training that is designed to provide graduates occupation specific skills. Further, secondary schools also provide skills training that contribute toward workforce development. Again, the focus of this review is on the publicly funded institutions in the Calgary Region - private and secondary schools are outside the scope of the current review. That being said, private schools are listed below.

- Academy of Learning
- Career College
- Columbia College
- Henderson College of Business
- Learning International
- YWCA Calgary Business College
- CDI College

Public Post-secondary Institutions

Calgary offers the same spectrum of institutions and program opportunities as other comparable cities in Canada – one exception is, arguably, that there is only one publicly funded university. All metropolitan areas Canada with a population over 1 million have at least two universities, except Calgary. Highlights of the range of publicly funded post-secondary institutions for adult learning in the Calgary Region include:

- Alberta College of Art & Design is only one of four fully accredited visual arts colleges in Canada – and the only one located in the Prairie Provinces^{vi}.
- Athabasca University, located at the Calgary Learning Centre, offers over 300 courses, including professional certifications, diplomas, degrees, and graduate diplomas/degrees through distance education^{vii}.
- Bow Valley College delivered learning services in 28 locations and is an integral for the provision of career certificates, along with adult upgrading and English as a Second Language (ESL) courses in 2003/2004^{viii}.
- Mount Royal College has more than 1,600 instructors and staff; Mount Royal College is among Calgary's top 20 employers^{ix}.
- Olds College is expanding into Calgary through a new building on the Stampede Grounds that will include 60,000 square feet of classroom and youth program space^x.
- Southern Alberta Institute of Technology has attracted an international reputation for customized industry training. In 2001/2002, SAIT offered 2,447 different courses and programs and delivered education and training to approximately 66,000 individuals^{xi}.
- University of Calgary is the 4th largest employer in Calgary with over 4,200 employees^{xii}.

Cumulatively, post-secondary institutions are significant contributors toward the Calgary economy. This sector is a major employer and buyer of goods and services, which in turn supports the regional economy. Student expenditures on housing, supplies and day-to-day living are also major contributors. A comprehensive economic impact assessment of the cumulative impact of the post-secondary sector's direct and indirect economic benefits to the Calgary Region has not been conducted.

Programs Offered

Each post-secondary institution offers a wide range of programs for adult learning. Within the range of programs offered, the line between what is currently offered and what may be offered in the future is likely to change due to the new legislative framework and the establishment of the CAQC. Essentially this body and review process established allows for any institution to provide degrees, diplomas, certificates and other credentials that have traditionally not been offered due to the "type" of institutions. As such, it greatly improves the ability for individual institutions to partner and/or provide programs to meet demand that was otherwise restricted to traditional parameters for post-secondary institutions.

However, transferability at a national scale remains an issue. Despite the new provincial legislative framework adopted, there are still outstanding issues for transferability that will need to be negotiated within and outside Alberta, particularly in the areas of graduate studies. While this is already occurring, it is being done on a piecemeal approach depending on the type of program and institution that the program is being offered from.

Within the general parameters of current program offerings, 'preparatory and basic' includes high school upgrade and English training. Professional development programs generally focus on the acquisition of skills for persons already within the workforce, and in some institutions are specifically designing programs in partnership with industry. Certificates are one-year programs that are less intensive than diplomas (two-year), however both provide specific emphasis on practical knowledge and skills required to enter the workforce immediately after graduation.

The "applied degree" was introduced a few years ago as a new credential that was designed to respond to career preparation needs of adult learners in the changing economy. The "applied degree" has been offered by colleges and technical institutes in Alberta and are significantly different in structure and intent from most university degrees.

These programs focus on study in career or technical fields, and combine six semesters of formal instruction with two semesters of formally credited work experience. The academic and work experience components focus on attainment of clearly identified competencies, are employment focused, and are not intended to duplicate existing [traditional] degrees^{xiii}.

Traditional degrees in Alberta are currently only granted by universities. While the new framework allows more flexibility in degree granting for other institutions (it is understood that only universities will continue to offer post-graduate work), it is questionable as to how transferable degrees obtained from a college or technical institute will be particularly outside the province – there is a need to re-visit the post-secondary education sector on a national perspective to ensure adult learners are not limited in their options for higher and future learning both in Alberta and across Canada.

Program offerings vary amongst provinces. Some provinces, such as Ontario and Alberta have chosen to provide applied degrees, while others such as British Columbia have taken a hybrid approach by creating university-colleges. Currently, the Province of British Columbia is dismantling this hybrid approach and returning to a more traditional approach to post-secondary education.

The Post-Secondary Education Scene

Enrolment Trends

Enrolment in post-secondary institutions across Canada has been rising steadily over the past decade as indicated by Statistics Canada. Demographics for enrolment have also changed significantly, and more females are pursuing post-secondary education than ever before. Additionally, there is a growing trend toward adults returning to post-secondary education to gain new skills as labour force demands change, particularly in Alberta as compared to Canada.

According to Statistics Canada, enrolment for full-time students in Alberta universities increased by 13.8% compared to growth in Canada of 6.6% between the periods of 1991/1992 - 1999/2000. Much of the increase in enrolment is a reflection of the population increase in Alberta. During this same period (1992-2000), the overall population of Alberta increased by approximately 350,000 people or 11.7%.^{xiv}

While Alberta universities saw a 51.7% increase in part-time student enrolment, there was an overall 17.8% decrease for part-time university students on a national scale as indicated during the same time period as indicated in Figure 1 below³. This discrepancy could be interpreted as a reflection of the need for additional skills and training to support the knowledge based economy.

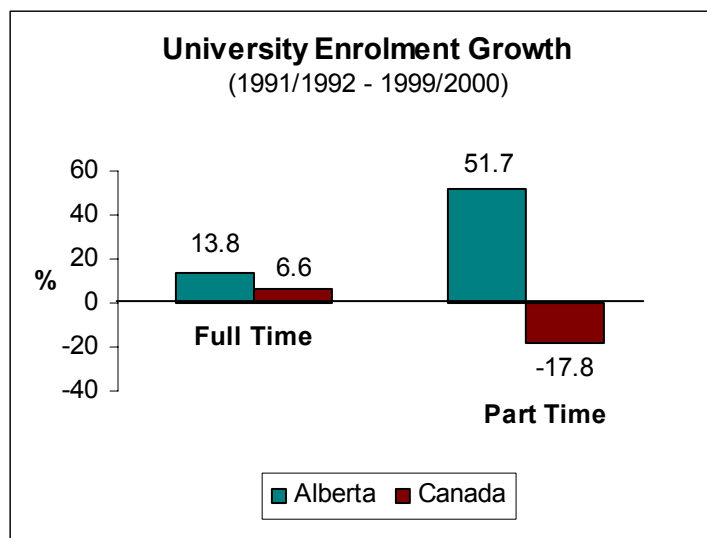


Figure 1: Alberta-Canada University Enrolment Growth^{xv}

Like the university sector, full-time college enrolment in Alberta increased at twice the national rate between the periods of 1991/1992 - 1999/2000. Part-time enrolments in Alberta college programs were consistent with declining national trends however, during the same period, they decreased by only half of that of the nation as a whole as depicted

³ More recent figures for enrolment increases were not available at the time of document preparation.

in Figure 2. Despite the decline in part-time enrolment, Alberta's growth in full-time college enrolment was the largest in Canada during the period between 1994 - 2000.

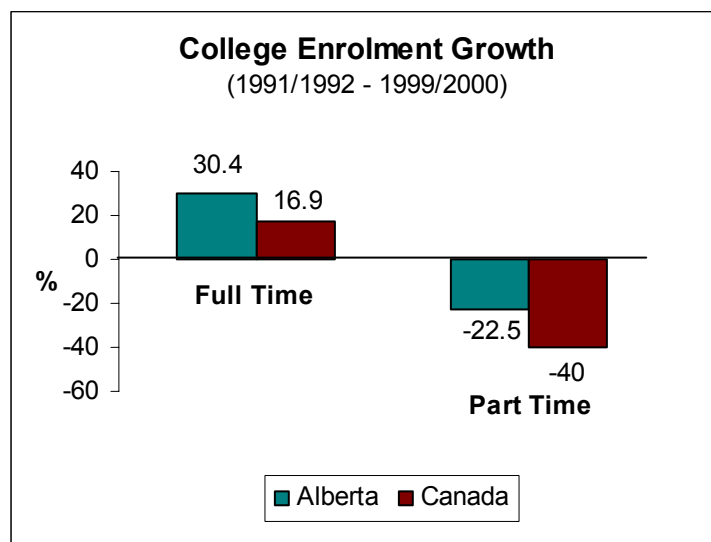


Figure 2: Alberta-Canada College Enrolment Growth^{xvi}

Overall system growth for trades and technical institutes is not tracked by Statistics Canada in the same manner as universities and college. Within the Calgary Region, this would only include SAIT. Thus in comparison to enrolment growth trends in figures 1 and 2, during the same period of 1991/1992 – 1999/2000, SAIT experienced a 24.8% increase in enrolment overall.

Demand shifts for increased post-secondary education is not an unusual phenomenon. Currently, enrolments in health, parks, and recreation and fitness programs have showed the largest gain in recent years. Architecture, engineering and related technology programs have also seen greater demand^{xvii}. However, much of the research to date has examined these sectors from a macro perspective. Specific studies to examine the nature of demand for post-secondary education, particularly as it relates to overall labour needs in the Calgary Region have not been conducted.

Post-Secondary Institutions in the Calgary Region

Within each post-secondary institution, multiple program offerings exist – while the details of program offerings are outside the realm of this report, it has become clear to Calgary Economic Development that there is a need to develop a comprehensive education profile specific to the Calgary Region. This will greatly improve the Region's ability to retain and attract businesses and understand how the education sector can meet the needs of the local community by assessing strengths and gaps.

Table 1 provides a summary of major program streams within each institution in the Calgary Region.

Institution	Preparatory & Basic	Professional Development	Certificates	Trades & Apprenticeship	Diploma	Applied Degree	Undergraduate Degrees	Graduate Degrees
Athabasca								
ACAD								
BVC								
MRC							xxxxxxxx ⁴	
Olds								
SAIT							xxxxxxxx ⁴	
U of C								

Within the Calgary Region, there is a wide range of post-secondary education institutions that are publicly funded, and at a rapidly growing rate, privately funded. The publicly funded institutions range from a traditional 'university' with a strong research focus - the University of Calgary - to more specialized institutions such as the Alberta College of Art and Design. Publicly-funded institutions in the Calgary Region are listed in Table 2 and includes the headcount for students for the 2001/2002 academic year.

PSE Institution	Type of Institution	2001/2002 Full-Time	2001/2002 Part-Time	2001/2002 Headcount ⁵
ACAD	Art School	961	347	1,308
Athabasca	University	NA	NA	NA ⁶
BVC	College	3,174	7,128	10,302
MRC	College	7,427	6,474	12,101
Olds College	College	1,365	578	1,943
SAIT	Technical Institute	13,240	8,146	21,386
U of C	University	23,826	7,143	30,969
Total	7	53,237	114,035	167,272

⁴ Both MRC and SAIT plan to offer degrees.

⁵ Full-time student annual headcount - The annual unduplicated headcount of full-time students is the number of individual students who have been counted as full-time during at least one session of the academic year. A full-time student is an active student in a Summer, Fall, Winter or Spring session who is registered in that session for at least 30% of the full year load for the program. Part-time student annual headcount - The annual headcount of part-time students is an unduplicated headcount of students enrolled in a reporting year who have not been counted as full-time during at least one session of the year. Effectively, part-time enrolment will be equal to the total headcount of individuals served during the year less the full-time headcount.

⁶ Calgary Region enrolment is unavailable, however there are approximately 29,500 FLE students at Athabasca University – 11,800 of which are based in Alberta.

System Growth

The post-secondary system in Alberta has been growing over the past decade. Between the period of 1994 - 2000, Alberta was one of only two provinces in Canada to experience significant increases in full-time university enrolment^{xx}. Alberta's growth in College enrolment during the same period was the highest in Canada.

Since post-secondary education falls within a provincial mandate, comparisons can be made with respect to growth of the post-secondary education sector between the two major cities in Alberta – Edmonton and Calgary. Overall, Calgary received a larger share of full load equivalent (FLE)⁷ growth, as a percent of total growth, from 1994/1995 to 1999/2000, at 46%, in comparison to Edmonton that experienced only half this amount (25%) as described in Table 3.

Institution	Growth as a % of total Alberta system growth
ACAD	1.2
Bow Valley College	-7.1
Mount Royal	10.0
SAIT	16.1
U of C	25.5
Calgary Total	45.7%
Grant MacEwan	15.5
King's University College	12.4
NAIT	15.0
NorQuest College	-18.2
U of A	12.4
Edmonton Total	24.6%

From 1994/1995 - 1999/2000, the University of Calgary absorbed 25.5% of all post-secondary enrolment in Alberta. FLE growth at SAIT was 16.1%. The only post-secondary institution in the Calgary Region to have negative growth was Bow Valley College at -7.1%⁸. Despite the overall larger growth in Calgary, this is still inadequate to meet student and industry demands.

Over the past few years, post-secondary institutions in Calgary have been working under the "Campus Alberta" umbrella to address the Calgary Region's needs for enrolment projections, as well as capital and operating requirements toward 2010.

⁷ FLE is the standard measure universities uses to identify the number of students they have based on credit hours.

⁸ The decline in Bow Valley College's overall FLEs is a result of a cutback to the Alberta Human Resources and Employment Budget for 2003-2004 and overall grant levels.

The projections for future required growth suggests that there is need for significant additional access, capital and operations growth as reflected in Table 4 below.

Institution	2010 Growth Strategy (New FLE Target)	Capital Costs (New \$)	Operating Costs (New \$)
Bow Valley College	1,700	65M	14M
Mount Royal College	3,000	15M	24M
SAIT Polytechnic	8,000	80M	30M
University of Calgary	7,000	400M - 450M	70 – 85M

Demand

Despite the larger FLE growth in Calgary versus Edmonton, demand in both cities continues to grow demonstrated by the increasing numbers of qualified applicants that are turned away annually. The number of applications to attend an institution is often used as a measure of demand for post-secondary education.

Since 1998, the number of qualified university applicants turned away from the three major universities in the province (University of Alberta, University of Calgary and the University of Lethbridge) has been increasing steadily. Overall, applicants turned away by these three institutions doubled during the period of 1998-2002 as depicted in Figure 3. Thus, the increasing numbers of applications for post-secondary education are an indicator of rising demand.

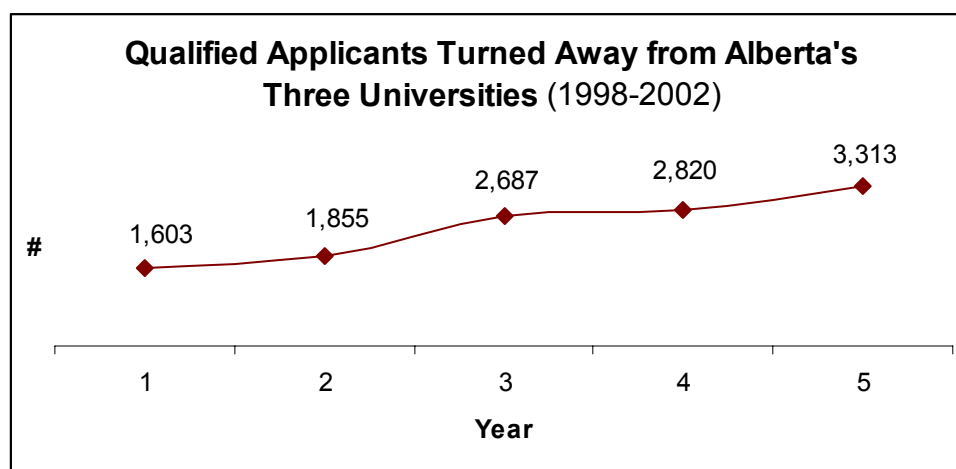


Figure 3: Number of Qualified Applicants Turned Away^{xxiii}

While applications for degree programs increased among the three largest universities, a similar increasing demand is being seen within colleges and technical institutes. Over the past year, Bow Valley College turned away 1,450 qualified applicants from training in career programs, ESL, work experience for immigrants, and academic preparation programs. Similarly, Mount Royal College received 14,768 applications for 4,777 quota places in 2002/2003. SAIT turned away 5,500 applicants in the fall of 2003 alone.

Unless there is substantial system growth over the next decade, qualified applicants turned away from higher learning and education and training will continue to rise.

Alberta Learning forecasted that over the next 10 years, 79% of all new jobs will require a post-secondary education. This is well above the current population, which has a post-secondary credential in the Calgary Region of 61.1%. It is clear that a key issue is the need to have a higher educated population and as well as address the number of turned away qualified applicants through greater access and system growth.

Accessibility

While it is clear that there is a higher student demand than the available number of seats within post-secondary institutions in the Calgary Region, accessibility is also an increasing issue. Within Alberta, rising entrance requirements and competition for university spaces has resulted in higher average grades to enter higher learning – again making post-secondary education inaccessible for many.

As applications to Alberta's post-secondary institutions rise, so do the numbers of qualified applicants turned away from pursuing higher learning. While, entrance requirements vary among specific program areas, rising entrance levels is also a concern. However, average grades for high school students have increased as well, indicating that the GPA access barrier may be somewhat overstated^{xxiv}.

Affordability

Aside from demand and access issues, affordability for post-secondary education is also a growing issue. Tuition fees within the publicly funded institutions in the Calgary Region have been steadily rising. As shown in Table 5, since 1997/1998 to 2001/2002, the tuition fee increase in the Calgary Region has ranged from 24 - 68%, depending on the institution⁹.

Institute	1997/1998	1998/1999	1999/2000	2000/2001	2001/2002	5-Year Increase
ACAD	\$1,823.00	\$2,136.00	\$2,472.00	\$2,808.00	\$3,054.00	68%
Athabasca	\$2,760.00	\$2,760.00	\$3,000.00	\$3,250.00	\$3,410.00	24%
BVC	\$1,722.00	\$1,880.00	\$2,060.00	\$2,210.00	\$2,406.00	40%
MRC	\$1,820.00	\$1,997.00	\$2,147.00	\$2,387.00	\$2,522.00	39%
Olds College	\$1,827.00	\$2,060.00	\$2,293.00	\$2,526.00	\$2,762.00	51%
SAIT	\$1,588.00	\$1,821.00	\$2,041.00	\$2,285.00	\$2,379.00	50%
U of C	\$3,180.00	\$3,440.00	\$3,650.00	\$3,834.00	\$3,975.00	25%

Alberta currently has a provincial tuition fee policy, which stipulates that a student will not be required to pay more than 30% of the total costs associated with their post-secondary education^{xxv}.

⁹ These figures reflect average tuition fee increases – there is a wide variation in fee range increases among program areas.

Provincial grants and/or private grants to institutions are to cover the balance. Depending on the program, tuition fees within the province are well below this upper cap and as such could be expected to continue to rise in future years.

A lack of system enhancements to post-secondary education in Alberta through public investment could result in tuition fee levels that are inaccessible to many without incurring a large student debt load. As such, should pursuing a post-secondary education become unaffordable and thus discourage students from pursuing adult education, a decrease in applications and interest in could result. In turn, this could contribute toward anticipated skilled labour shortages. The key to system enhancements is the need for more post-secondary spaces for potential adult learners.

The Face of Our Workforce

Overall, the Calgary Region has the youngest population among major urban centres at an average 35 years of age^{xxvi}. In addition to population growth through natural increases, in-migration and immigration have also played a significant role in shaping the current workforce of the Calgary Region. The following section provides a brief outlook on the projected growth of Calgary's population as well as the educational profile of the region.

Population Growth in Calgary

Among Canadian Metropolitan Areas (CMAs), Calgary experienced the highest overall population growth rate between 1999-2003 at 2.4%. As depicted in Figure 4, Toronto also experienced a high growth rate during the same period at 2.28%. This population growth has impacted the post-secondary sector as more people in the region equates to rising demand for post-secondary education.

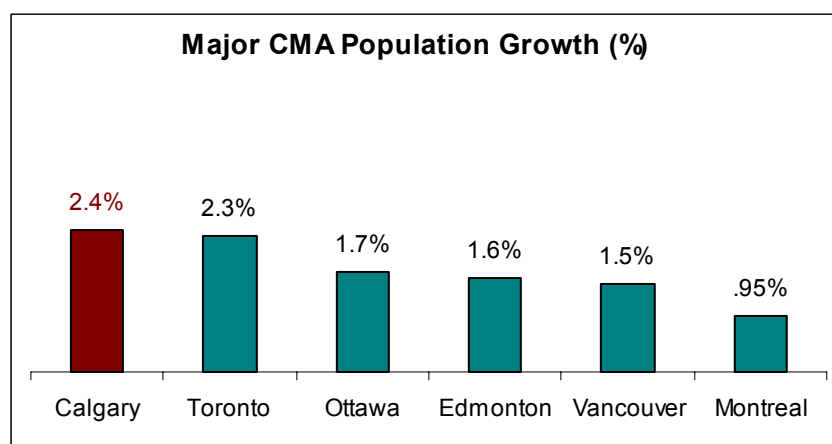


Figure 4: Population Growth - Canadian CMAs (1999 – 2003)^{xxvii}

Provincially, Alberta is one of four provinces that exhibits a positive net migration flow of university students entering the province. This also contributes toward the increasing population. However, it should be noted that many students choose to study in another province – reasons include a desire to move away from home, or to study in a program not offered in their home province.

As displayed in Figure 5, a significant portion of university students to the Province come from student in-migration¹⁰. Recent reports from post-secondary institutions in the Calgary Region have indicated that up to 80% of graduates stay in the region after graduation. This may be a reflection of the opportunities available in Calgary compared to other locations in Canada.

¹⁰ As a cautionary note, the only source for university mobility data is Statistics Canada. While this is the best data available, it is viewed by some as being incomplete due to uneven reporting. Additionally, mobility for college students is not tracked.

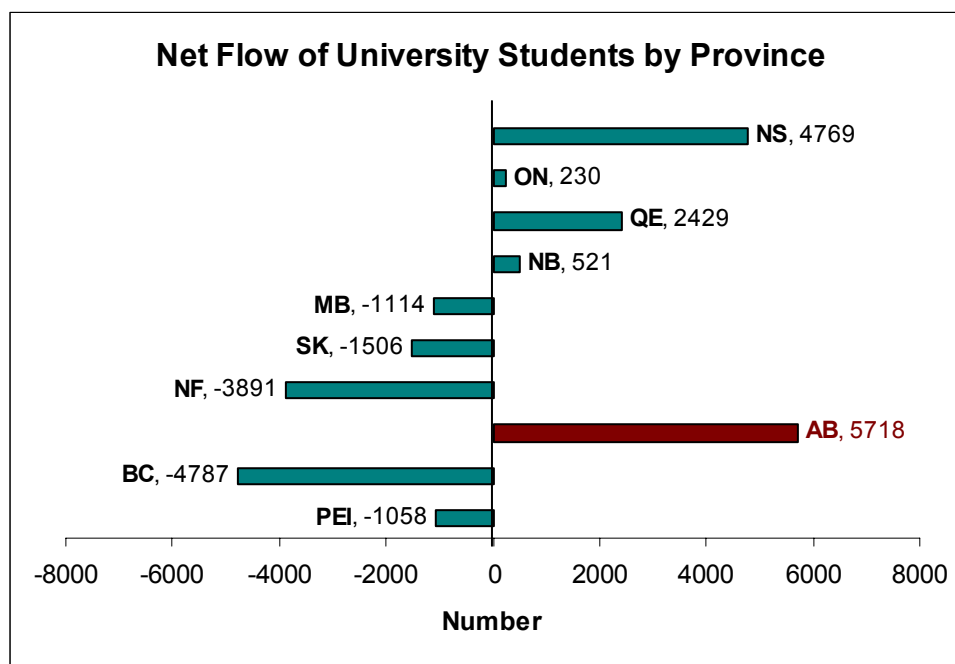


Figure 5: Net Flow of University Students by Province^{xxviii}

Mobility data for students attending colleges and technical institutes is not well documented across Canada. Compared to universities, it is generally accepted that learners attending colleges are more likely to stay within their home province for post-secondary education. Within the technical institutes, there may be higher mobility, however more research is required.

As we look toward the future, it is likely that continued population growth will not continue at the same rates. According to the most recent Economic Outlook for Calgary, our region's Gross Domestic Product is expected to grow by 4.4% in 2004 and 4.2 in 2005^{xxix}. However, this growth is projected to decline to 2.9% in 2009, due to a relatively tight labour market that will constrain further growth. Net migration is expected to decline due to the constraints on the labour market and economic recovery in other parts of Canada.

Population Diversity

Population diversity within Calgary also impacts post-secondary education. Increasingly, immigration will play a greater role in our workforce. Policies regarding the education level of immigrants have relaxed, resulting in growing numbers of immigrants with lower education levels than 20 years ago. As such, there is a need to provide more opportunities for post-secondary education to new citizens. Thus post-secondary education institutions will need to respond to the shifts in new workers, particularly in the area of English as a second language.

In Alberta and across Canada, the education attainment of the aboriginal population is well below that of the non-aboriginal population. One of the barriers is that 42% of the aboriginal population has not completed high school compared to 22% for the non-aboriginal population^{xxx}. At the same time, only 5% of Aborigines have a university level

education. While off-reserve Aboriginal education levels are generally higher than on-reserve levels, there is still much room for improvement^{xxxvi}.

Calgary has the fourth highest urban Aboriginal population in Canada at 21,915 and is expected to increase through in-migration and higher than average birth rates^{xxxvii}. As the aboriginal population rises, it is increasingly important to ensure that cultural, systemic and language barriers are removed to support a representative workforce with a post-secondary education, including Aboriginal persons.

In addition to the growing aboriginal population, immigration also contributes toward the workforce as over 43% of immigrants in Calgary are of working age^{xxxviii}. Calgary is the fifth most common destination for immigrants, behind Vancouver, Toronto, Montreal and Ottawa. However, Calgary is the choice location for 'second' moves within Canada^{xxxix}. Immigration from Asia represents over 60% of all immigrants to the Calgary Region. Again, as our workforce becomes more diversified, it is important to ensure that barriers to post-secondary education are eliminated in order to support participation from immigrants.

Post-Secondary Educated Population Growth

Alberta has one of the most educated populations amongst the 10 provinces according to the 2001 Census. Overall, persons with a post-secondary education accounted for 56% of Alberta's working age population, compared to 47% one decade earlier. The highest area of gain was in the trades, at 21% compared to the national average of 9% in 2001.^{xxxv}

A statistic often used in business attraction to the Calgary Region is that Calgary boasts the most educated metropolitan population at working age (25 – 64 year age) in Canada, with 69% having a post-secondary education. Paramount to understanding this statistic is that this includes individuals that have not (and presumably will not) completed their education to obtain a post-secondary credential. It should be noted that this figure would also include individuals over the age of 25 who are currently attending a post-secondary institution or have returned to an institution for higher learning and have not yet completed their studies.

According to the most recent Statistics Canada data, 61% of the Calgary Region residents have a post-secondary credential. As such, Table 6 provides a summary the population that has completed a post-secondary education program.

Education Type	Calgary (%)	Alberta (%)	Canada (%)
Less than High School	16.7	21.8	20.9
High School	22.1	22.7	22.7
Trades	12.7	15.3	12.1
College	19.4	18.7	16.0
University	29.0	21.4	20.2
All Post-Secondary	61.1	55.5	48.3
Total	100	100	100

Alberta has the lowest rate in Canada for high school students to move onto post-secondary education at 43%^{xxxvii}. High school dropout rates have been decreasing; however, this trend is occurring at a slow rate.

Among comparable metropolitan centres, Calgary still fares quite well with respect to its proportion of the population with a post-secondary education. According to the 2001 Census, the Calgary Region has the third highest proportion of the population in Canada with a completed post-secondary education as reflected in Figure 6 below.

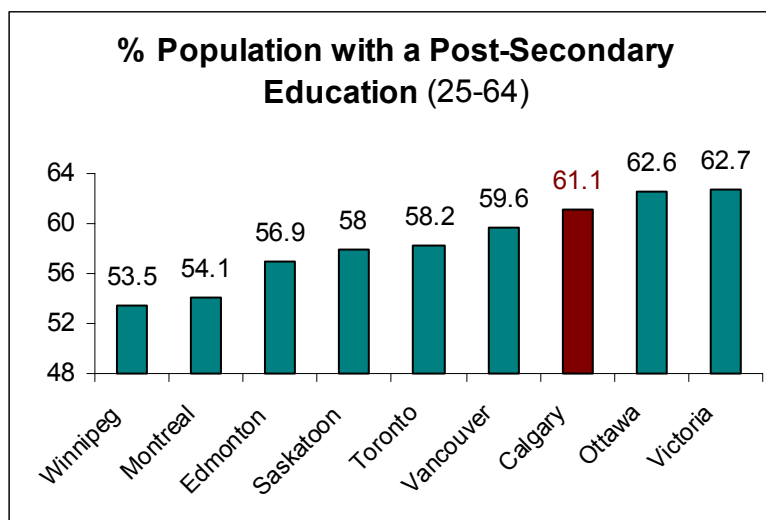


Figure 6: Educational Attainment in the Population by Census Metropolitan Areas^{xxxviii}

As demand for skilled labour increases, it is anticipated that employers will also be increasingly influenced by the availability of trained and skilled workers. Increasingly, businesses considering Calgary as a location for business expansion or future relocation focus on the capacity and capabilities of the post-secondary sector in the Region as a supplier of local skilled labour. As such, there is a need to ensure that the post-secondary sector is prepared to meet increasing skill labour needs.

Calgary's Challenges

The population of the Calgary CMA has experienced tremendous growth as compared to other major cities within Canada. While there has been an increase in enrolment in the Calgary Region overall, the increase has clearly been less than adequate from an overall system perspective. The following section provides a comparative analysis of the growth in Alberta compared to other jurisdictions.

Degrees Granted

Overall Alberta was ranked fourth in Canada in terms of the number of degrees granted at approximately 13,000 in 1998 (figure 7). However, at the same time, Alberta had the third lowest number of post-secondary degrees granted per 100,000 population in Canada as depicted in figures 8^{xxix}. As a cautionary note, the data below is quite dated; however, is still considered to reflect the current situation¹¹.

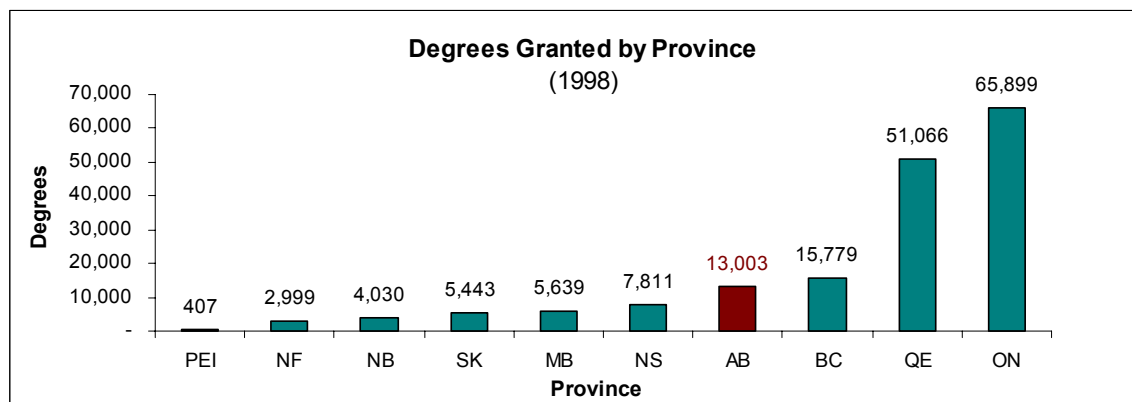


Figure 7: Total Number of Degrees Granted by Province^{xi}

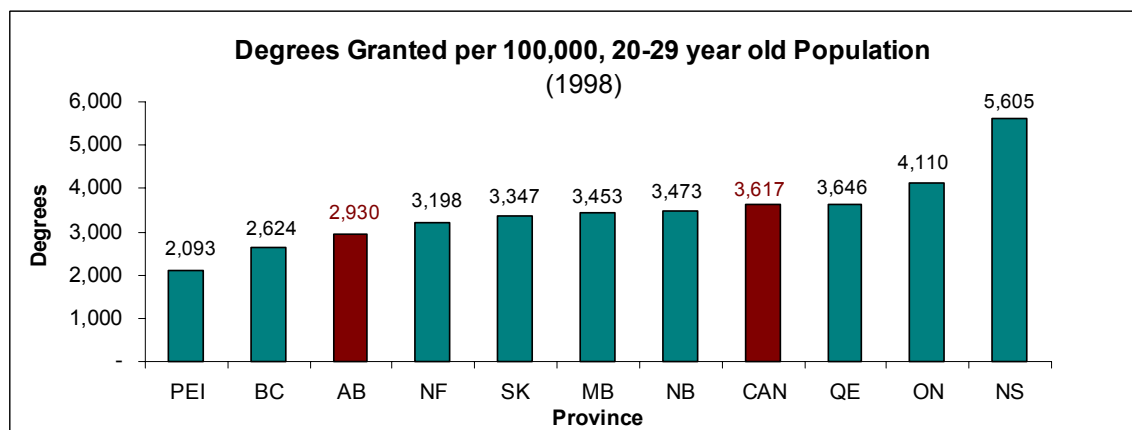


Figure 8: Degrees Granted per 100,000 by Province^{xli}

¹¹ According to Alberta Learning.

Provincial Investment

While there are growing demands for post-secondary education, the majority of the funding for post-secondary education is transferred from the province to individual institutions. As such, growth and expansion opportunities ultimately depend on the provincial government.

A measure of commitment toward post-secondary education is the level of provincial investment in adult learning. Across all provinces, Manitoba provides the greatest share of expenditure dollars at 6.7%, followed closely by Saskatchewan at 6.5%. However compared to these provinces, as a percentage of total expenditures, Alberta invests 5.2% on post-secondary education^{xiii}. As such, Alberta's rank is second lowest among all provincial jurisdictions in Canada (Table 7).

Province	2002/2003
Manitoba	6.7
Saskatchewan	6.5
Quebec	6.0
New Brunswick	6.1
Newfoundland & Labrador	5.6
British Columbia	5.5
Nova Scotia	5.5
Ontario	5.4
Alberta	5.2
Prince Edward Island	4.7

Similarly, per capita expenditure reflects the same lack of investment as indicated by Table 8. Alberta ranks second last in the country for per capita expenditures.

Province	Population (#)	PSE Expenditures (\$000 000)	Expenditures Per Capita (\$)	Rank
NL	520,170	249	479	4
PE	137,941	51	370	8
NS	936,878	352	376	7
NB	750,460	361	481	3
QC	7,503,502	3,754	500	2
ON	12,208,731	3,919	321	10
MB	1,164,135	588	505	1
SK	995,003	470	472	5
AB	3,164,400	1,102	348	9
BC	4,158,649	1,668	401	6

A review of the percentage of total post-secondary budgets received from provincial governments yield different results as indicated in Table 8. Overall, Quebec institutions have the highest dependence on provincial funds for operating its institutions¹², while Manitoba ranks fourth. Alberta ranks sixth, which may arguably, be an indication that there is greater support from the private sector, cost recovery programs or tuition fees.

Province	(%)
Quebec	66.0
Newfoundland & Labrador	64.0
Saskatchewan	58.3
Manitoba	58.0
British Columbia	57.5
Alberta	56.3
Prince Edward Island	52.8
New Brunswick	51.2
Ontario	47.8
Nova Scotia	41.9

Tuition Fees

Rising tuition fees continue to be a concern for accessibility and affordability. Overall, Alberta Ranks fourth highest for tuition fees among Canadian provinces for 2003/2004. By comparison, Alberta was the seventh highest in 1993/1994. As indicated in Table 9, on average, undergraduate tuition fees have increased by 103.1% over the past 10 years. A recent Ipsos-Reid study revealed that approximately 70% of high school students in Alberta felt that the total cost of post-secondary education was a barrier to learning^{xvii}.

Jurisdiction	(\$) 1993/94	(\$) 2003/04	(%) Change
NS	2,701	5,557	105.8
ON	2,076	4,923	137.2
SK	2,341	4,644	98.4
AB	2,209	4,487	103.1
NB	2,385	4,457	86.9
BC	2,240	4,140	84.9
PE	2,509	4,133	64.7
MB	2,272	3,155	38.9
NF	2,000	2,606	30.3
QE	1,550	1,862	20.2
Canada	2,023	4,025	98.9

¹² This may be a reflection of the CEGEP system that is different from other provinces.

Additionally, a study by the Canadian Centre for Policy Alternatives indicates that Alberta, along with Ontario, Quebec and Nova Scotia are expected to continue to have rising tuition rates in upcoming years. In the case of Alberta, this may be reflection of the provincial government's tuition fee policy and will be further discussed in the next section.

Future of Post-Secondary Education

For more than a decade, post-secondary education systems across the country have undergone a period of stress. Provincial fiscal restraint to address large debts accrued in the 1980s resulted in institutions placing more of a financial burden for increasing costs on the student. At the same time, this period of restraint also encouraged many institutions to seek out other avenues for funding, including cost recovery models for continuing education, as well as other sources for funding such as the private sector.

Based on the information gathered in this review, several key trends become apparent. At the forefront is the need for greater access or 'seats' within the post-secondary sector. The following section discusses these trends and provides insight to the future for the post-secondary education scene.

Meeting Student Demand

The current demand for post-secondary education exceeds the supply – and all indications point to a widening of gap between supply and demand. Young people have career options that did not exist a generation ago, yet the extent to which particular skill sets will be beneficial to individuals entering the workforce is unknown. Further research into the gaps is required.

The Association of Universities and Colleges of Canada (AUCC)^{xlviii} has estimated that by 2011, universities in Canada will need to respond to a projected 20-30% increase in demand for university enrolment. This will require significant additional investment toward post-secondary education from both the public and private sectors as the limits to which young adults can afford post-secondary education may reach restrictive levels.

The ability for post-secondary educational institutions to meet the rising demand is limited. Similar to public sector government departments and agencies, the quasi-public sector (that includes post-secondary education institutions) is also expected to experience an alarming retirement rate within the next 10 years. In order to meet student demand and the balloon of retirements expected, estimates indicate that there may be the need to replace as many as 20,000 faculty members as well as hire an additional 20,000 staff^{xlix} across Canada.

In turn, this high rate of staff turnover has major implications for retention of institutional knowledge and, questionably, could reduce the quality of academic institutions due to a lack of having highly experienced instructors and academic researchers. To this end, the quality of post-secondary education could be in serious jeopardy.

Student and industry demand clearly tells us that there is a need for increased investment for access to post-secondary education. Given that most students pay increasingly higher percentages of their total learning costs after high school, strategic decisions need to be made to ensure that public and private investment is targeted at industry sectors that are most likely to experience labour shortfalls.

Labour Force Needs

As a province, Alberta has been a strong contender to attract skilled workers due to robust growth in several sectors, and concurrently, being an attractive location for young educated adults that are mobile. Because of this, Alberta, particularly Calgary, has been successful in drawing educated people at the expense of other provincial jurisdictions – thus much of the ‘Calgary Advantage’ is based on the desirability over other jurisdictions.

Alberta is not producing the number of graduates required to meet industry needs both now and is expected to be more critical in the future. However, Alberta also has relatively low population enrolled in post-secondary education as compared to other provincial jurisdictionsⁱ. This may be a reflection of our dependence on in-migration for our skilled labour pool. Other jurisdictions are making moves to stop this through student loan incentive packages to encourage graduates to stay in their province of origin for a length of time. As the demand for knowledgeable and skilled labour across Canada grows, the Calgary Region should be prepared to be competitive through increased access to post-secondary education.

Currently, there are critical labour shortages in several key industries. According to a recent study by the Canada West Foundation, there are shortages in 65 industries.ⁱⁱ These shortages will likely only increaseⁱⁱⁱ. Well known are the labour shortages in health, trades, transport, equipment operators and primary industries such as oil and gas.

Individual institutions have made great strides to identify where the gaps may be on a program-by-program basis in order to tailor program requirements to meet industry needs. For example, the Southern Alberta Institute of Technology, Mount Royal College, and Bow Valley College have programs that can be tailored to industry professional development needs. From a macro perspective, there is a lack of knowledge of future program requirements for the Calgary Region. Labour force demand within the Region should be explored further to determine the investment necessary to address gaps and take advantages of opportunities.

Post-Secondary Accreditation

Maintaining a competitive advantage locally, provincially and nationally relies on having a knowledgeable and skilled workforce. Over the past decade, post-secondary institutions have been continually adding degree programs in response to both student demands, as well as employer demands. This trend, often referred to as ‘creeping credentialism’, indicates that higher and higher levels of education are required to enter into a job in today’s growing knowledge based economyⁱⁱⁱⁱ.

Despite the low population level that attends post-secondary education, ‘creeping credentialism’ will become an increasing issue as employers demand that their workers have a basic educational level, which is unprecedented in our history^{lv}. In response to student and employer demands, post-secondary institutions have been slowly adding more degree programs in recent years. As such, there is a need to have enrolment increase, not only keep pace with current population growth, but also to address the impact of creeping credentialism.

Recent literature on the post-secondary education scene indicates an urgency to address impending skilled labour force shortfalls^{iv}. While a weak argument can be made to focus on attracting skilled labour from regions outside of Calgary, a more systemic approach is required to ensure that post-secondary institutions are well positioned to adapt to changing labour market demands.

While there is much discussion surrounding the need for increased post-secondary educational opportunities, it is generally understood that as an individual attains a higher level of education they increase their 'mobility'. Thus, it is difficult to make a direct correlation between the location where a person obtains their degree and their movement after graduation. That being said, as previously stated, a significant percent of graduates from the Calgary Region tend to continue to reside in the region after graduation.

Alberta and particularly Calgary, has depended on in-migration to meet increasing skilled labour force demands. This is likely not sustainable as other provincial governments, particularly those that are seeing a net out-migration are providing programs and incentives to keep graduates within their province or origin. For example, Saskatchewan has taken the approach of providing more forgivable loans if a student works within the province after graduation. Thus, Alberta, and more specifically the Calgary Region post-secondary institutions will increasingly need to be able to compete with other regions to retain and attract educated people to the Region.

Public Policy

As a leader in Canada for debt elimination, Alberta is well positioned to address the gaps in post-secondary education. Recent reports indicate that as a result of record oil prices, the province expects a surplus that may be anywhere between \$5 and \$11 billion. While a range of options exist for use of these surplus funds, it is clear that greater investment in post-secondary education is required.

However, it should be noted that it is clear that the benefits of higher learning stem beyond the demand for skilled labour required to fuel economic growth and diversification. Investment into the post-secondary sector is also an investment in human capital. By investing in human capital, there are greater societal benefits such as a higher standard of living, greater earning potential, less likelihood to be dependent upon social programs and so on.

The shape of our systems is somewhat questionable – according to the Canada West Foundation Report, 70% of Westerners placed a high priority on post-secondary education. This indicates that education and skills training are a major concern. Yet many of the issues with post-secondary education are diverse and industry specific – thus, in addition to an examination of the overall post-secondary system, an industry sector approach will be most successful at identifying the gaps.

From an overall systems perspective, post-secondary institutions are not well positioned to address the overall demand. Since the majority funding is provided from the province and they operate as relatively independent bodies, there is a need to look at system issues, student demands and labour force needs from a regional level.

Contribution to the Community

In the most basic term, post-secondary education provides individuals with an avenue to earn a higher wage and thus, improve one's standard of living. However beyond this utility, post-secondary institutions also support the economy through spending, investment into research and innovation and employment.

Well over 10,000 people are directly employed in the post-secondary education sector in Calgary. Increasingly, the range of institutions within a city are viewed as contributing to both an academic synergy^{vi} and a fundamental prerequisite for the mix of socio-economic services available to urban residents.

While the value of post-secondary education goes well beyond that which is quantifiable, it is imperative to recognize that higher learning contributes toward society in many forms. Much of the investment in post-secondary education is an investment in the future. This investment goes beyond the immediate and short term gains of meeting student demand and labour force needs – it supports capacity building and reflects our value for development of human capital.

From the perspective of research and innovation, post-secondary institutions are vital to the Calgary Region's competitiveness in the global economy. Fostering new ideas and creativity is integral to supporting the development of new products and technologies, that foster economic growth and creates jobs. As such, post-secondary education institutions should be considered vital to the knowledge economy.

Over the next decade, higher learning will increasingly be at the forefront of the minds of our young people, employers, and hopefully, public policy makers. To capitalize on this, recognition of the post-secondary education sector's contribution toward community and economic development in the Calgary Region is imperative.

Overall, the post-secondary education sector is an invaluable contributor toward the local economy through direct employment and expenditures, as well as indirect spending on goods and services. More work is required to determine the total socio-economic impact of the post-secondary education sector.

Moving Forward

Higher learning is essential for our young people to be able to enter the workforce with skills that meet job knowledge requirements now and in the future. Concurrent with this, retention and expansion of existing companies, as well as new industry investment and attraction require a talent pool of skilled labour. Additionally, research and innovation is key to industry growth. Low supply of skilled labour that does not meet labour force needs will seriously dampen economic growth and diversification. Across Canada, it is anticipated that all jurisdictions will experience increasing pressure and competition to attract skilled workers. For the Calgary Region, without action, our ability to compete within the global market place will be compromised.

Priorities for Calgary Economic Development

Addressing the impending shortfalls must be strategically planned. There will be gaps in specific sectors; however, information on where the gaps are expected and to the level of demand is required. Further research to examine industry demand will better inform and prepare the Calgary Region in order to fill the gaps. From this base of information, efforts can be directed to those sectors that are facing the greatest risk due to a constrained talent pool.

“Creeping credentialism” is one of the factors that has driven the growing demand for a post-secondary education as a minimal requirement to enter the workforce in several professions and occupations. Increasingly, employers are requiring a post-secondary credential as a minimum requirement from prospective employees. Realistically, some job functions do require completion of post-secondary; however, it is expected that the value of post-secondary education completion will become increasingly important for new entrants to the workforce.

The provincial government has requested input on how to spend surplus provincial dollars. Alberta is in a financial position to invest in enhanced access to post-secondary education and other essential programs – however this needs to be sustainable funding. Comparatively, the Alberta’s investment in higher learning to date has been weak and among the lowest in the country. A continued lack of investment in the post-secondary system will harm Alberta’s competitive advantage.

In addition to providing sustainable funding and access to post-secondary education, higher learning must also be affordable. Increasing tuition fees are increasingly being viewed by potential adult learners as a barrier to pursuing a post-secondary education. Thus, additional investment to the system should take a partnership approach between government and the private sector, with minimal burden being placed on young adults.

Next Steps

Calgary Economic Development is well positioned to take a leadership role to promote research and facilitate expanded capacity for post-secondary education in the Calgary Region. While this assessment has addressed many of the shortfalls within our post-secondary system, further research is required to provide a greater understanding of the types of skills that industry is anticipated to require into the next decade and beyond.

Within this context, priorities in the short and longer terms include:

1. Promote sustainable growth of the post-secondary education system by working in partnership with stakeholders in the Calgary Region to increase access to higher learning within all institutions.

Additional investment and funding for the post-secondary education sector is a priority. Promotion of increased access and system growth for each post-secondary institution through opportunities to influence provincial policy and program design is required. Inherent to success is the need to take a partnership approach through information sharing and collaborative approaches to address post-secondary system issues. This includes working with post-secondary institutions, industry, stakeholders and government departments and agencies.

2. Profile the capacity and capabilities of the post-secondary education sector in the Calgary Region.

The post-secondary education sector is an important contributor toward the local economy – as well as a major factor for business retention, expansion and new industry attraction. In order to promote sustainable business growth, the capacity and capabilities of the post-secondary sector should be documented through maintenance of a comprehensive education profile for the Calgary Region. In support of this objective, a greater understanding of the socio-economic impacts of the post-secondary sector is required. In turn, this will support and promote the Calgary advantage to attract and retain business investment.

3. Conduct a labour force readiness study of the Calgary Region to identify specific current and future industry needs to promote economic development.

Skilled labour shortages are increasingly becoming an issue at local, regional and national levels. In order to ensure that the Calgary Region is prepared to meet growing and changing labour force skill requirements, a comprehensive study of these needs is a priority for Calgary Economic Development. Through research on current and future labour force shortfalls and gaps, a greater understanding of priorities for the post-secondary education sector to allow young adults to fully participate in the expanding knowledge economy is required.

While the current review of the post-secondary scene points to many of the shortfalls within Alberta's post-secondary system, with specific emphasis on the Calgary Region, this is only a starting point. More research is required to assess post-secondary education sector needs as well as a greater understanding of the types of skills that industry requires now and in the future is required. Through pro-activity, the Calgary Region can be positioned for business growth and diversification into the next decade and beyond.

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