Alberta Access Planning Framework

A Context for Access and Demand

June 2008

Alberta
Advanced Education
and Technology

Executive Summary

The development of the Alberta Access Planning Framework is a foundational part of the *Roles and Mandates Policy Framework*. The **purpose** of the Alberta Access Planning Framework is to provide the context to support planning within the province's post-secondary system in order to broaden access and ensure that Alberta's post-secondary providers can respond to the needs of learners, the economy, and society. The report provides a broad context of the key demographic and economic drivers that impact post-secondary participation. The Alberta Access Planning Framework will inform system direction and development.

This document's primary focus is on the provincial-level factors; however, it will be supported by the development of Regional Profiles (providing regional-level context) and Institutional Access Plans (providing institutional-level context).

The Alberta Access Planning Framework is divided into six sections:

Section 1

Population Profile

- Section 1 outlines Alberta's current and projected population growth, both for the total and school age populations. The impact of migration – both interprovincial and international – along with the demographic characteristics of the working age population, are considered.

Section 2

High School Profile

- Section 2 provides an overview of Alberta's high school population, including high school transitions into post-secondary (regionally and provincially), and overall completion rates.

Section 3

Post-Secondary Profile

- Section 3 provides a context for Alberta's post-secondary system using regional and international comparisons. Educational attainment, literacy, enrolments (by credential, program band, and gender), and international student presence are considered.

Section 4

System Capacity

- Section 4 provides current and forecasted system capacity, including an overall enrolment forecast.

Section 5

Labour Force Profile

- Section 5 provides a context for considering future labour market demand in the context of access planning.

Section 6

Moving Forward: Data and Information Needs

- Section 6 outlines key data areas in need of increased attention and dialogue among system stakeholders.

Key Challenges: Alberta Today

- Reflecting a constant participation rate, there is an expected total enrolment pressure of approximately 23,000 FLEs to 2017-18. There are significant regional variations in current and projected population growth across the province.
- Although Alberta has the most significant population growth in Canada, Alberta's 18 to 34 year old post-secondary participation rate continues to lag behind other provinces – a position that has remained relatively constant over the last decade. At varying degrees throughout the province, a significant number of Albertans are neither completing high school nor transitioning from high school into post-secondary study. Albertans tend to delay entrance into post-secondary study.
- Given the current domestic production of graduates, current levels of participation, and current population demographics, Alberta is unlikely to meet its labour market shortages. Individuals from groups that are under-represented in our post-secondary system are key segments of our population whose potential has yet to be realized.
- Growth in graduate-level studies will depend on learners from outside Alberta – the province's current mix of graduate (Masters and PhD) students largely come from outside Alberta, with international students alone comprising almost one-quarter of Alberta's PhD students.
- There are strong links between graduate students, research, and innovation; international students represent a skilled and available population already in the province and familiar with Alberta society.
- To meet the demand for skilled workers, it is necessary to ensure the system can respond and align to high demand programs, and that resources are aligned with demand.

Key Opportunities: Moving Forward

Untapped Resources

- There is a lack of understanding around the degree and particular nature of under-represented groups' post-secondary participation. There is a need for more robust data collection and collaboration among system stakeholders in order to provide methodologically consistent and comparable information on under-represented groups.

Enrolment Forecasting

- Alberta Advanced Education and Technology is working to broaden its enrolment forecasting systems and enhance information on the sensitivity of enrolment changes to economic and other factors. The department anticipates dialogue with other government areas on collaborative efforts to broaden knowledge on enrolment forecasting systems.

Transitions

- Given Alberta's dynamic labour market, it is necessary to expand learner pathways, including transitions to and from the labour market and/or opportunities to work and learn at the same time. There is a need to address current knowledge gaps by increasing data and information around delayed transitions into post-secondary studies.

International Education

- Highly skilled, sought-after graduates are increasingly mobile – in both learning and work. Alberta's innovation capacity will depend to a great extent on our ability to attract and retain graduate students. Clear, outcomes-focused strategies in the area of international education – including mechanisms to address retention – are required, along with greater insight into international student choice factors.

Leveraging Knowledge

- Collaboration among system partners on initiatives such as sharing administrative services, learner services, curriculum, or delivery opportunities, could be enhanced through the use of technology. The Alberta Post-secondary Application System (APAS), eCampusAlberta, and the Campus Alberta Digital Library are examples of collaborative initiatives that lend to overall system capacity by leveraging existing knowledge.

Table of Contents

Figures, Tables and Maps

Figures

Tables

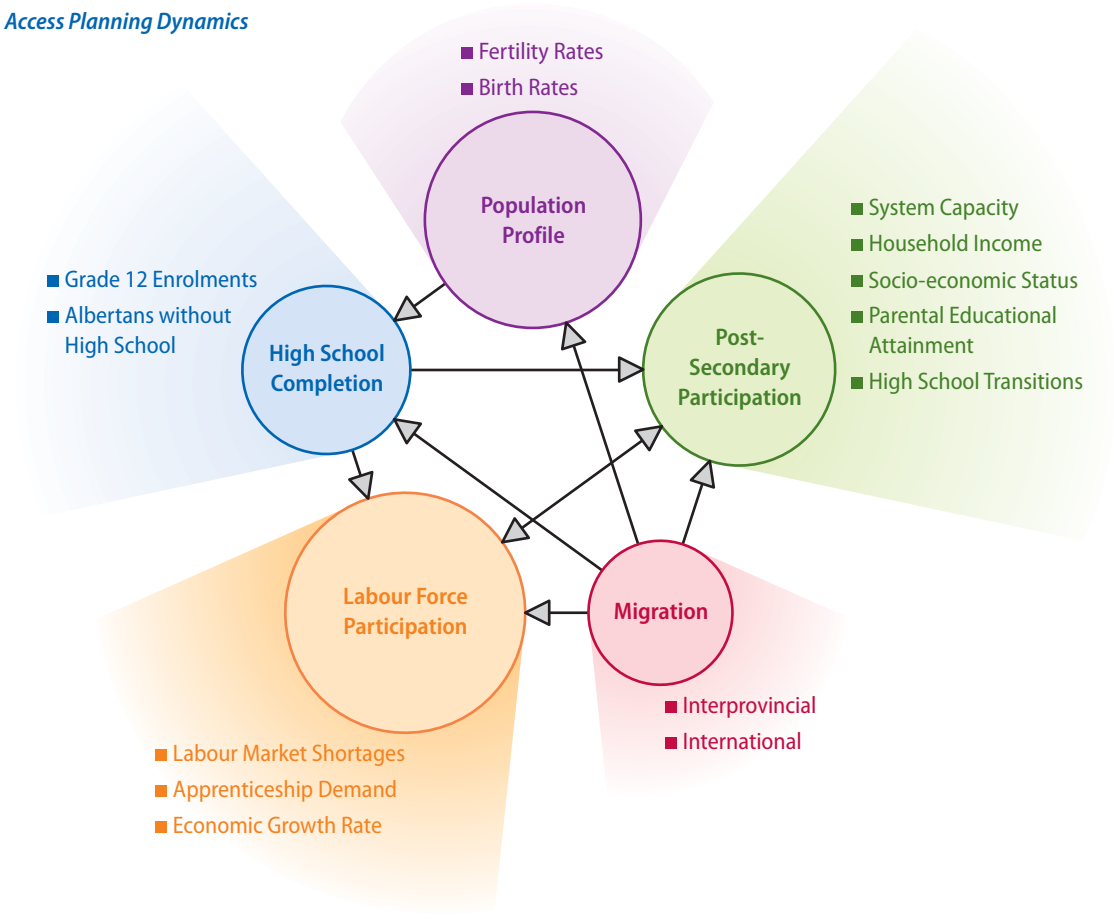
Maps

Introduction

The Alberta Access Planning Framework provides a context to support access planning. To understand this context, one must consider the key factors that influence participation within Alberta's post-secondary system, the relationships between them, and their relative magnitude.

Figure 1

Access Planning Dynamics



As Figure 1 indicates, high school enrolment is driven to a significant degree by domestic population growth, birth rates, fertility rates, and net migration. Post-secondary enrolments are dependent on high school to post-secondary transition rates. These transition rates are a product of many different factors, including the opportunities presented by the labour market and perceptions regarding the return on investment from post-secondary education. Given the past decade's sustained economic growth, transitions from the labour force into the post-secondary system may become a more significant factor, particularly with sudden economic change.

Migration is an increasingly significant factor in Alberta society. International and interprovincial in-migrants to Alberta tend to be more educated than the domestic population, and bring different access and program pressures than domestic population growth. For some immigrants, there is a need for greater emphasis on bridging programs, language development, and prior learning assessment and recognition; in the case of interprovincial migrants, there may be a need for opportunities that combine work and study (laddering) as economic conditions change.

We know that many individuals from outside the province also apply to Alberta post-secondary institutions, and that there are Albertans applying to and attending institutions outside Alberta. Applicants from other provinces and countries present a significant challenge in terms of identifying system pressures, as it is difficult to determine the extent to which they are ready, willing, and able to relocate to Alberta.

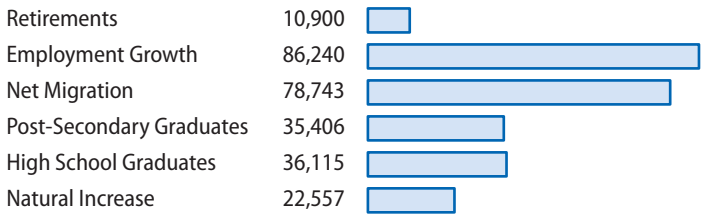
Ultimately, a system that is effective in maximizing access and responsiveness to societal needs is a system that produces a highly skilled, adaptable, and innovative workforce. The overall skill level of our workforce is a product of many factors. It is influenced by the rates of successful completion and transition into and from the post-secondary system over the longer term. Increasingly, it is influenced by those migrating to Alberta from other provinces, as well as by individuals from other countries already in possession of post-secondary credentials.

While the intent of this document is to contextualize the factors that will shape and influence Alberta's post-secondary system over the next ten years, it is also important to recognize that circumstances change. It will be important to consider how future economic and societal shifts could potentially alter the demand for post-secondary education, as well as the program needs at Alberta's institutions.

While it is important to understand the various factors that influence access and participation, it is also important to conceptualize the relative magnitude of these factors.

Figure 2

Alberta Demography, 2006: Stocks & Flows



As Figure 2 demonstrates, Alberta is experiencing substantial employment growth. Similar to most western societies, Alberta's natural population growth is fairly marginal; this domestic population growth rate will not keep pace with employment growth over the longer term. While Alberta's overall population has increased, the overall high school population has remained relatively constant over the past five years. Alberta's post-secondary system produced 35,406 graduates in 2006.[1] Post-secondary graduates only supply approximately one-third of all new labour market growth (including opportunities arising from retirement); immigrants and interprovincial migrants are supplying almost two-thirds of all new labour market growth.

Even though the average age of retirement is increasing[2], retirements will continue to grow relative to the natural population increase and new labour market entrants over the longer term. Alberta will become increasingly reliant on net migration as a basis to support employment growth.

[1] Alberta Advanced Education and Technology, Learner and Enrolment Reporting System. Unduplicated (unique) parchment graduates. http://www.advancededucation.gov.ab.ca/college/psinfo/1_System_wide_graduates_by_credential.pdf

[2] Alberta Employment and Immigration (2006). *Annual Alberta Labour Market Review*. http://employment.alberta.ca/documents/LMI/LMI-LFS_2006_lmreview.pdf.

Section 1

Population Profile

The numbers of students entering the post-secondary system is affected by the province's population and demographic composition. While natural population growth (birth rate minus deaths) greatly determines the size of the school-age population, interprovincial and international migration increasingly affect population demographics and, in turn, participation, access, and total enrolments.

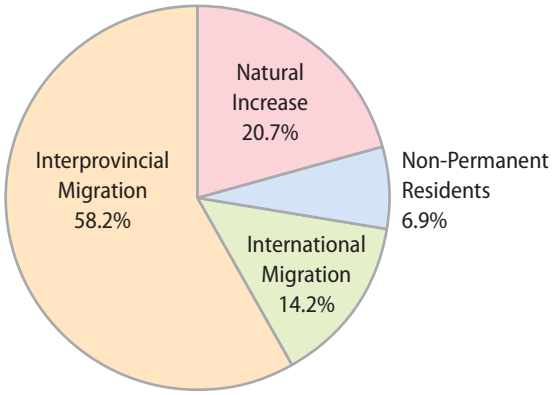
Key Findings

- Although Alberta has strong population growth overall, growth is projected to be uneven across the province.
- Immigration and interprovincial in-migration are important sources of population and labour force growth for Alberta.
- The majority of immigrants to Alberta is of working age and highly educated.
- As Alberta's population becomes increasingly diverse and attracts a greater proportion of Canada's immigrants, the need for English as a Second Language (ESL) training and other foundational learning opportunities will increase.

Population Growth

Figure 3

Population Growth, Alberta, 2006



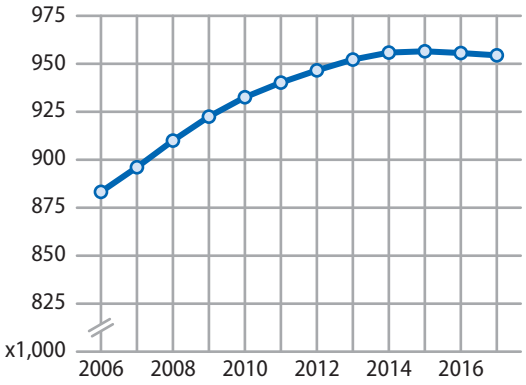
Source: Alberta Employment and Immigration

- In 2006, net interprovincial migration represented 58.2% of Alberta's average growth; natural growth accounted for 20.7% and international migration for 14.2% of Alberta's population growth. Non-permanent residents (temporary workers, etc.) comprise the remaining 6.9%.[3]
- From July 1st 2005 to June 30th 2006, there were 42,875 births in Alberta, compared to 39,450 from 2002 to 2003.[4]
- Alberta's population was estimated to be 3,486,767 as of October 1st, 2007[5], an increase of 2.3% from the year before.
- Alberta's population growth rate in 2007 was 2.3%.[6] This represents a substantial increase compared to most other provinces.

[3] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006.* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf
[4] Statistics Canada, CANSIM 051-0004 and Catalogue no. 91-213-X. http://www40.statcan.ca/l01/cst01/demo04a.htm
[5] Alberta Population Report, Third Quarter 2007. http://www.finance.alberta.ca/aboutalberta/population_reports/2007_3rdquarter.pdf
[6] Alberta Population Report, Third Quarter 2007. http://www.finance.alberta.ca/aboutalberta/population_reports/2007_3rdquarter.pdf

Figure 4

Population Projection, 18 to 34 Years, Alberta



Source: Statistics Canada, Population Projections

- Alberta's 18 to 34 year old population is projected to steadily increase to 2014 and then stabilize, gradually declining until 2017.

Table 1

Forecasted Population Growth, 18-34 Years, 2007 to 2017

Geographic Service Region	2007 Population	2017 Population	% Change
Alberta	896,091	954,418	6.5%
Central Region	71,087	81,313	14.4%
Peace Region	39,014	43,629	11.8%
Parkland Region	20,033	22,079	10.2%
Lakes Region	6,456	7,039	9.0%
Northeast Overlap	13,290	14,403	8.4%
Calgary Region	328,948	354,321	7.7%
Cypress Region	27,908	29,462	5.6%
Edmonton Region	317,012	330,960	4.4%
Athabasca Region	10,513	10,675	1.5%
Wood Buffalo Region	18,123	17,799	-1.8%
Lethbridge Region	43,707	42,738	-2.2%

Source: Statistics Canada, Population Projections

- There are significant regional variations in population growth – both current and projected.
- Population growth in geographic service regions will be strongest in the Central Region, Peace Region, and Parkland Region.
- Two regions – Wood Buffalo Region and Lethbridge Region – are projected to have decreases in the 18-34 year old population from 2007 to 2017.

Aboriginal Population

Table 2

- Between 1996 and 2006, Canada's Aboriginal population increased 45%, nearly six times faster than the 8% rate of increase for the Canadian non-Aboriginal population.[7]

Aboriginal Identity Population, Alberta, 1996 to 2006

	2001		2006		% Change	% Change
	Population	Share	Population	Share	2001-2006	1996-2006
Total Population	2,941,150	100.0%	3,256,355	100.0%	10.7%	21.8%
Aboriginal Identity Population	156,225	5.3%	188,365	5.8%	20.3%	48.4%
Non- Aboriginal Identity Population	2,784,925	94.7%	3,067,990	94.2%	10.2%	20.6%

Source: Statistics Canada, Labour Force Survey

- In Alberta, the increase was even greater, at 48.4% compared to 20.6% for the non-Aboriginal population.
- These high rates of increase – at both the national and provincial levels – are partially attributable to the increasing tendency of individuals to self-identify as Aboriginal.

Table 3

Population Reporting Aboriginal Identity, 2006

	Population	Distribution	Share of Population
Canada	1,172,790	100.0%	3.7%
Ontario	242,495	20.7%	2.0%
British Columbia	196,075	16.7%	4.8%
Alberta	188,365	16.1%	5.7%
Manitoba	175,395	15.0%	15.3%
Saskatchewan	141,890	12.1%	14.7%
Quebec	108,430	9.2%	1.4%
Nunavut	24,920	2.1%	84.5%
Nova Scotia	24,175	2.1%	2.6%
Newfoundland & Labrador	23,450	2.0%	4.6%
Northwest Territories	20,635	1.8%	49.8%
New Brunswick	17,655	1.5%	2.4%
Yukon	7,580	0.6%	25.0%
Prince Edward Island	1,730	0.1%	1.3%

Source: Statistics Canada, Census 2006

- In 2006, Alberta had 16% of Canada's reported Aboriginal Identity population, comprising 6% of Alberta's total population.
- Alberta ranked third highest of all provinces and territories in 2006 for the reported proportion of the Canadian Aboriginal Identity population.
- Alberta ranked sixth highest of all provinces and territories for the proportion of its reported Aboriginal Identity population out of its total population.

- In Alberta in 2006, there were 95,700 Aboriginal people aged 15 years and older living off-reserve; two thirds of these individuals were between the ages of 25 and 64 years and over half lived in either Edmonton or Calgary.[8]

[7] Statistics Canada (2008). Aboriginal Peoples in Canada in 2006: Inuit, Métis, and First Nations, Census 2006. http://www12.statcan.ca/english/census06/analysis/aboriginal/surpass.cfm#02

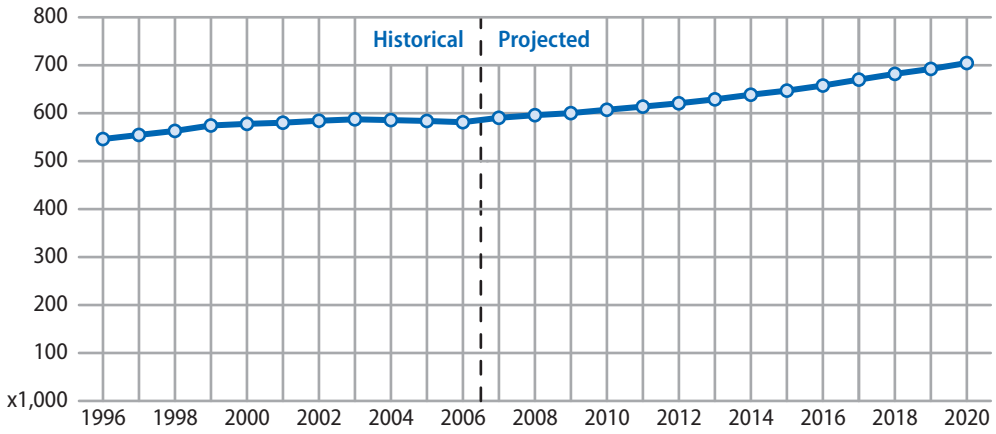
[8] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006.* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf

School-Age Population

- From 1996 to 2006, an average of 88% of Alberta's school-age population (those aged 4-18 years) attended Kindergarten to Grade 12 in the province.
- According to the 2006 Census, 31.1% of Alberta's Aboriginal population is under 15 years of age,[9] compared to 18.7% of the total Alberta population.[10]
- From 2007 to 2020, the school-age population in Alberta is projected to increase by 19.3%.

Figure 5

Historical and Projected School Age Population, 4-18 Years, Alberta



Source: Alberta Education

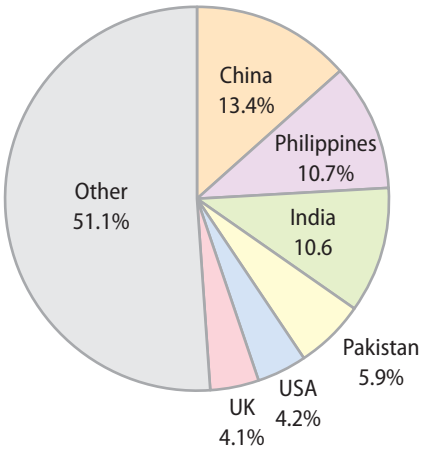
[9] Statistics Canada (2006). Census. http://www40.statcan.ca/l01/cst01/demo40c.htm
[10] Statistics Canada, CANSIM, table (for fee) 051-0001. http://www40.statcan.ca/l01/cst01/demo31a.htm

Migration and Mobility

- Alberta's population growth is a factor of strong immigration and interprovincial in-migration, with a positive flow of migrants projected for Alberta throughout 2001 to 2010.[11]
- In 2006, Alberta's net migration was 78,743.[12]
- Most people immigrating to Alberta are of working age, between the 15-29 year old cohort.[13]
- Of the total workforce, 3.4% (563,000 individuals) moved to a different province or territory between 2001 and 2006. Alberta and the territories had the highest mobility rates in Canada: Alberta's labour force had the highest share of individuals (8.6%) having lived in another province or territory five years earlier. An estimated 160,500 people in Alberta's labour force had moved to the province from elsewhere in Canada from 2001 to 2006.[14]
- Of the provinces, Alberta was the prime beneficiary of interprovincial migration among highly educated adults, with the biggest inflow of post-secondary graduates (nearly 28,000) between 2001 and 2006. British Columbia gained the second largest number of post-secondary graduates, at nearly 15,800.[15]
- Nearly 7,500 of Alberta's interprovincial in-migrants with a post-secondary credential came from Saskatchewan and 7,200 from Ontario. Four out of every ten (38%) of these post-secondary graduates had a university degree.[16]
- Of all the provinces, Saskatchewan had the largest net outflow of post-secondary graduates, at 10,000 between 2001 and 2006. Over one half (5,400) of these individuals were university graduates, of which nearly 3,700 migrated to Alberta.[17]

Figure 6

2001-2006 Alberta Immigrants by Birthplace



Source: Statistics Canada, Census 2006

- The majority of immigrants to Alberta from 2001 to 2006 were born in China (13.4%), Philippines (10.7%), India (10.6%), Pakistan (5.9%), USA (4.2%), and the UK (4.1%).
- In 2006, 57.2% of Alberta's immigrants moved to Calgary and 30.7% to Edmonton; no other town or city in the province received more than 2.0% of Alberta's immigrants.[18]

[11] Conference Board of Canada, Provincial Outlook Long Term Economic Forecast: Winter 2007 http://www.conferenceboard.ca/documents.asp?rnext=1927
[12] Alberta Population Report, Fourth Quarter 2006 http://www.finance.gov.ab.ca/aboutalberta/population_reports/2006_4thquarter.pdf
[13] Conference Board of Canada, Provincial Outlook Long Term Economic Forecast: Winter 2007 http://www.conferenceboard.ca/documents.asp?rnext=1927
[14] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Pages 6 and 24 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[15] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 24 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[16] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 24 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[17] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 25 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[18] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 200* . http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf

Mortality and Retirements

- Canada's labour force is aging: the median (where half are above and half are below) age of the labour force surpassed the 40-year mark for the first time in 2006, reaching 41.2 years.[19]
- Workers aged 55 and older comprised 15.3% of the Canadian labour force in 2006, an increase from 11.7% five years earlier. Workers aged 55 to 64 years increased their employment rate by 43.0% from 2001 to 2006 and their labour force participation rate by 3.7%. These increases may be partially due to the tendency for older workers to participate in the labour force.[20]
- In 2006, Alberta had the lowest proportion of older workers (aged 45 and older) in Canada, at 43.4% of the working population.[21]

Conclusion

Alberta has experienced significant population growth – growth that is projected to continue into the near future, albeit at varying degrees throughout the province. The majority of this growth is due to migration. Alberta has the highest mobility rate of all provinces.

Certain segments of the population are increasing at faster rates than others: the majority of Alberta's in-migrants are of working age, Alberta's Aboriginal population is increasing at an even higher rate than the general population, and the school age population is projected to increase over the next decade. While the workforce is aging, Alberta has the lowest proportion of older workers in Canada.

[19] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 25 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[20] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 25 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[21] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf

Section 2

High School Profile

A high school education helps lay the foundation for a successful transition into further education, and is a critical gateway to many post-secondary programs. A high school education brings tremendous societal impacts: it gives people the foundational skills they can build on to enhance their educational, career, and other life opportunities. A population with significant numbers of individuals who have at least a high school diploma is one component of a vibrant and educated society. Increasing the proportion of the population with a high school diploma will also assist in addressing current and future labour market shortages, enabling people to contribute to building and sustaining the success of Alberta's knowledge economy.

Key Findings

- High school completions and transitions are uneven across the province.
- A significant number of Albertans are neither completing high school nor transitioning from high school into post-secondary study.
- The unemployment rate for high school graduates is significantly lower than for those who do not graduate from high school.
- Increasing the accessibility of foundational skills and basic upgrading increases the opportunities available for individuals to earn their high school diploma and further their education and training at the post-secondary level.
- Opportunities exist for Comprehensive Community Institutions and other system partners to collaborate and increase high school completion rates across the province.

High School Enrolments

- In Alberta, from 2001-02 to 2006-07, there was an average annual increase of 1.1% in high school enrolment (Grades 10 to 12), and 1.5% in Grade 12 enrolment.[22]

Table 4

Historical High School Enrolment, Alberta

	School Year				
School Year	2002-03	2003-04	2004-05	2005-06	2006-07
Grade 10	48,222	48,540	49,662	50,113	50,301
Grade 11	47,321	46,785	47,314	47,502	49,088
Grade 12	57,561	57,224	57,022	58,051	59,427
Grades 10-12	153,104	152,549	153,998	155,666	158,816
Change in High School Enrolment	2.0%	-0.4%	0.9%	1.1%	2.0%
Change in Grade 12 Enrolment	4.1%	-0.6%	-0.4%	1.8%	2.4%

Note: Starting with school year 2001/2002, Student Population is a count of students for whom a school authority has received funding, plus a count of students (not funded) but with a registration in effect September 30 of the school year.

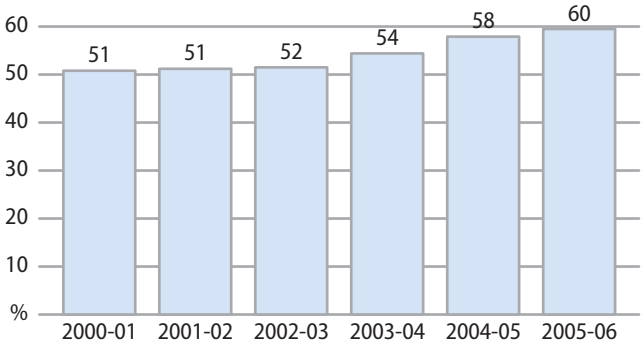
Source: Alberta Education

[22] Alberta Education. http://education.alberta.ca/department/stats/students/bygrade/grade10to12.aspx

High School Transitions

Figure 7

High School to Post-Secondary Transition Rate (6 Year), Alberta



Source: Alberta Education

- Over 40% of high school students in Alberta either delay entry or do not transition into post-secondary education within six years of entering Grade 10. This is a critical concern when 62.7% of future jobs are expected to require post-secondary education,[23] particularly if these individuals do not subsequently enter the post-secondary system.

- Significant numbers of working-aged Albertans (120,000) do not have the equivalent of a high school diploma. This increases individuals' vulnerability to labour market changes and greatly decreases opportunities to access post-secondary education.
- The presence of a disability can hamper post-secondary participation. Nationally, close to 50% of young adults with a long-term limiting condition had not gone beyond high school by the ages of 22 to 24 as of December 2003.[24] In order to address barriers to access and participation, legislation requires institutions to accommodate students with disabilities.
- High school to post-secondary transition rates are currently not available for Aboriginal Albertans.

Table 5

*High School to Post-Secondary Transition Rate (6 Year), 2005-06 **

Geographic Service Region	Transition Rate
Northeast Overlap	63.8%
Cypress Region	63.3%
Lakes Region	62.9%
Parkland Region	61.6%
Calgary Region	60.7%
Edmonton Region	60.4%
Wood Buffalo Region	60.3%
Lethbridge Region	56.6%
Central Region	55.8%
Athabasca Region	54.0%
Peace Region	52.8%

Note: Alberta's six year transition rate differs slightly from the department's business plan version because mapping by geographical service region excludes charter schools, private schools, etc.
* Within 6 years of entering Grade 10.

Source: Alberta Education

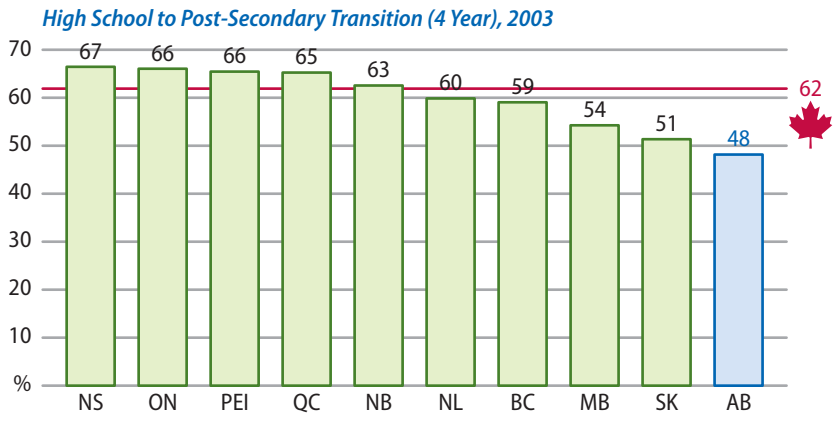
Map 1

Geographic Service Regions, Alberta

- In Alberta, high school transition rates vary by region.
- In 2005-06, high school transition rates ranged from a high of 63.8% in the Northeast Overlap to a low of 52.8% in Peace Region.

[23] *Canadian Occupational Projection System (COPS) Outlook, 2006-16 Industry Employment Outlook.*
[24] Statistics Canada (2008). *Taking Time off between High School and Postsecondary Education: Determinants and Early Labour Market Outcomes.* http://www.statcan.ca/english/freepub/81-004-XIE/2007005/article/10501-en.htm

Figure 8



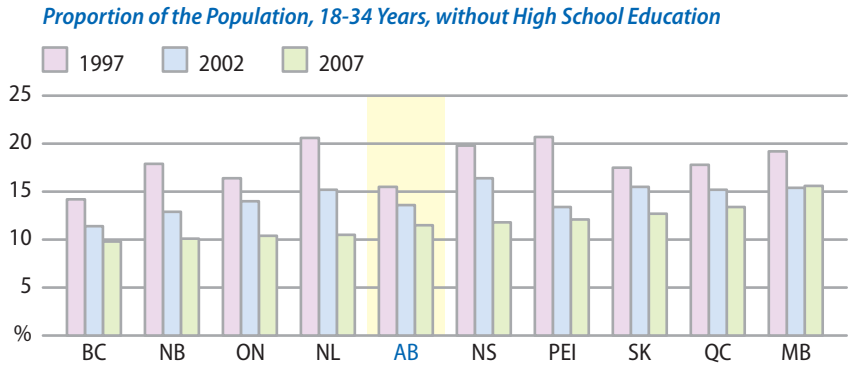
Source: Statistics Canada, Youth in Transition Survey (YITS) (Cohort A), 2003

- In 2003, Alberta had the lowest high school to post-secondary 4-year transition rate of all provinces, at 48.2%. The Canadian average was 61.9%.[25]

Albertans without High School

- In 2006, the unemployment rate for Canadians who did not finish high school was 12.3% compared to a 5.3% average for those who graduated.[26]

Figure 9



Source: Statistics Canada, Labour Force Survey

- In 2007, 11.5% of Albertans aged 18-34 years did not have a high school diploma.
- While Albertans without a high school diploma are more likely to be working than individuals without a high school diploma in other provinces,[27] lacking a high school diploma increases individuals' vulnerability to labour market shifts and further skill development.
- There are significant societal benefits to an educated population, including improved health, lower crime rates, and lower poverty rates.[28] Individuals and societies with higher levels of education are more adaptable and less vulnerable to economic shocks.
- The proportion of the population without a high school diploma is not distributed equally throughout the province. Rural areas tend to have higher proportions of individuals without a high school diploma than urban areas.[29]

[25] Statistics Canada Youth in Transition Survey, 2003 (Cohort A). Zeman, Klarka (2007). *A First Look at Provincial Differences in Educational Pathways from High School to College and University*. http://www.statcan.ca/english/freepub/81-004-XIE/2007002/provdiff.htm#c

[26] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 22. http://www.csls.ca/reports/csls2007-04.pdf

[27] http://www.statcan.ca/english/freepub/81-004-XIE/2005004/drop.htm

[28] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 26. http://www.csls.ca/reports/csls2007-04.pdf

[29] http://www.statcan.ca/english/freepub/81-004-XIE/2005004/drop.htm

Table 6

High School Completion Rates, Alberta

	2001-02	2002-03	2003-04	2004-05	2005-06
3 Year Rate	65.6%	67.8%	69.3%	70.4%	70.4%
4 Year Rate	71.8%	72.3%	73.4%	75.1%	76.2%
5 Year Rate	75.1%	75.2%	75.5%	77.4%	78.6%

Note: An adjustment for attrition is applied using Statistics Canada estimates. The rates for each year in the table above represent different Grade 10 cohorts. For example, for 2001-02 rates, the three-year rate is based on the 1999-00 Grade 10 cohort, the four-year rate is based on the 1998-99 Grade 10 cohort and the five-year rate is based on the 1997-98 Grade 10 cohort. The four and five year rates for the 1999-00 Grade 10 cohort are reported in subsequent years, 2002-03 and 2003-04 respectively.

Source: Alberta Education

- Approximately 80% of 14 to 18 year old students who dropped out of high school during this period did not return.
- Approximately one-fifth of 14 to 18 year old students who dropped out of high school each year from 2000-01 to 2004-05 returned to high school the following school year.

Table 7

Annual High School Dropout and Returning Rates, Students, 14-18 Years, Alberta

	2001-02	2002-03	2003-04	2004-05	2005-06
Dropout Rate	6.3%	5.5%	5.3%	4.9%	4.7%
Returning Rate	20.9%	20.8%	23.0%	21.4%	21.2%

Note: An attrition adjustment is applied to dropout rates using Statistics Canada estimates. The returning rate for any year in the table above is based on the students who dropped out in the previous year. For example, the returning rate in 2002-03 based on the students in the 2001-02 dropout rate.

Source: Alberta Education

Conclusion

High school enrolment has demonstrated a slight increase over the past few years. Transitions to post-secondary studies have steadily increased, although there is significant regional differentiation in transition rates and in the proportion of individuals without a high school diploma. A number of regions have transition rates below the provincial average. Alberta's strong labour market is a key factor in Alberta having the lowest 4-year transition rate among the provinces. The challenge will be enabling skill development for these individuals, including a return to formal education.

Section 3

Post-Secondary Profile

A population with high levels of post-secondary attainment contributes many of the same social benefits as one with high levels of high school completion. Post-secondary education produces graduates with the technical and theoretical insight necessary to make innovative contributions to knowledge. Alberta's post-secondary profile is affected by the composition of students by origin, credential, field of study, and by the number of foundational and high school learners transitioning into the system.

Key Findings

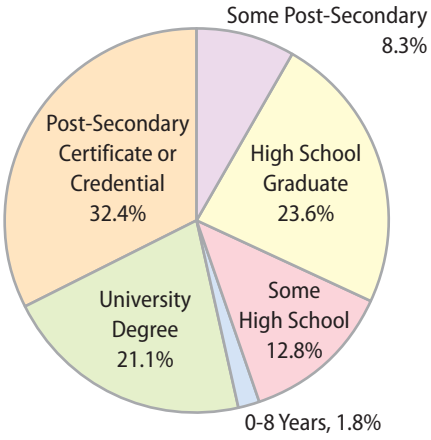
- Over half of all employed Albertans aged 15 years and older had a post-secondary credential in 2006.
- Mobility increases with educational attainment. Alberta is increasingly attracting immigrants with high levels of educational attainment.
- Individuals from lower-income families are less likely to pursue post-secondary studies.
- Slightly more Albertan women than men possess a university degree. Over twice as many urban Albertans possess a university degree compared to rural Albertans, who have higher levels of trade certificates.
- Foundational learning is integral to increasing system access and facilitating the transition into further post-secondary study.
- Aboriginal Albertans have educational attainment levels below that of the general population, with First Nations living off-reserve having higher levels than those living on-reserve.
- Alberta's graduate (Masters and PhD) students largely come from outside the province, with international students alone comprising almost one-quarter of Alberta's PhD students. Growth in graduate-level studies is likely to come from outside Alberta.
- There are strong links between graduate students, research, and innovation. It is important to expand opportunities for greater retention of international students within the province. International students represent a skilled and available population already in the province and familiar with Alberta society.

Educational Attainment

- Educational attainment is related to parental education, household income, and future earnings and mobility.
- High levels of education and training are becoming increasingly important drivers of innovation, productivity and competitiveness. The strongest employment growth from 2006-11 will be in occupations requiring a post-secondary credential (62.7% of jobs).[30]
- Household income and parental educational attainment levels are generally strongly correlated with post-secondary enrolment.[31] According to the 2003 *Youth in Transition Survey*, 50% of Canadian youth whose parents had less than high school did not go beyond high school.[32]
- Average employment income generally increases with the level of educational attainment.[33] The Canadian economy continues to place a premium on workers with higher levels of education. Canadians who had not completed high school had an unemployment rate of 12.3%, compared to 4.0% for those who completed a university degree.[34] For Albertans who had not completed high school, their unemployment rate was 7.0%, compared to 2.4% for those with a university degree.[35]
- Mobility increases with the level of educational attainment. Adults aged 25 to 64 years with a university degree accounted for 33% of people who moved to another province or territory between 2001 and 2006.[36]
- A total of 53.5% of all employed Albertans aged 15 years and older had a post-secondary certificate or credential in 2006.

Figure 10

Educational Attainment of Employed Albertans, 15+ Years, 2006

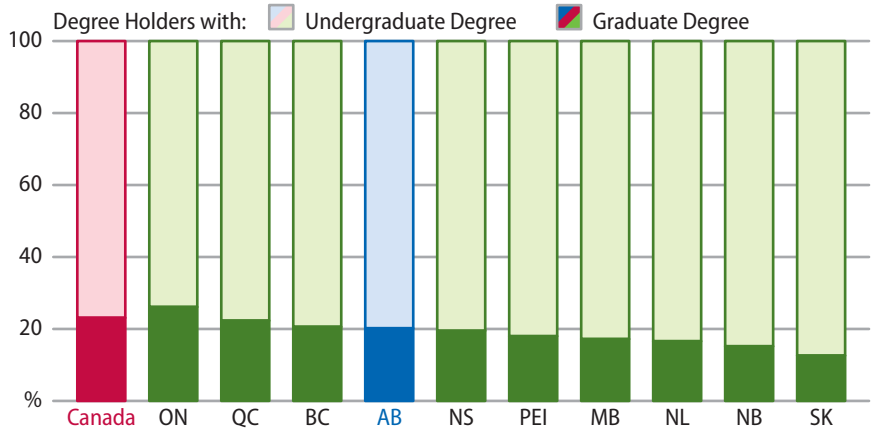


Source: Statistics Canada, Labour Force Survey

[30] *Canadian Occupational Projection System (COPS) Outlook, 2006-16 Industry Employment Outlook*
[31] Butlin 1999, DeBroucker and Lavallee 1998, Lavalee Pereboom and Grignon 2002, Knighton and Mirza, 2002
[32] Statistics Canada (2008). *Taking Time off between High School and Postsecondary Education: Determinants and Early Labour Market Outcomes* http://www.statcan.ca/english/freepub/81-004-XIE/2007005/article/10501-en.htm
[33] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 26 http://www.csls.ca/reports/csls2007-04.pdf
[34] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 22 http://www.csls.ca/reports/csls2007-04.pdf
[35] Statistics Canada (2007). *Labour Force Survey*.
[36] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 6 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf

Figure 11

Undergraduate and Graduate Degrees out of Total Degrees, 18-34 Years, 2007

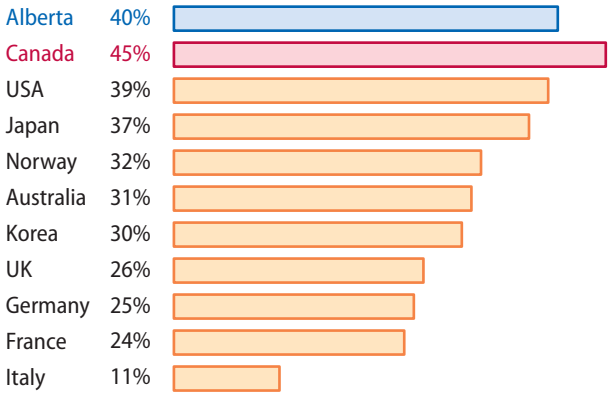


Source: Statistics Canada, Labour Force Survey

- Of all provinces in 2007, Ontario had the highest proportion of 18 to 34 year old university degree holders with a graduate degree, at 26.1%.
- In Alberta in 2007, 20.2% of 18 to 34 year old university degree holders had a graduate degree. The Canadian average was 23.1%.
- In 2006, Canada ranked sixth among all Organisation for Economic Co-operation and Development (OECD) countries in the proportion of adults aged 25 to 64 with a university degree. When university and college were combined, no other country had a higher proportion than Canada.[37]

Figure 12

Percentage of Population with Tertiary Education, 25-64 Years, 2004



Source: PCEIP 2007

- In a 2004 international comparison, Alberta demonstrates a strong showing in the proportion of the population aged 25 to 64 years with tertiary education at 40%.[38] Nationally, Canada demonstrates an even stronger showing with an overall average of 45%.

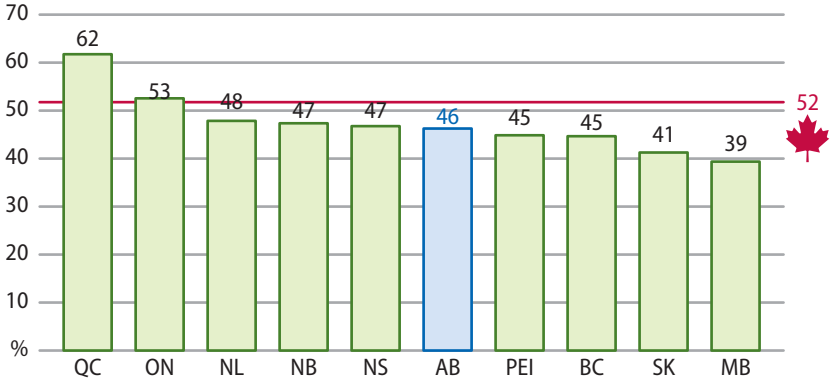
[37] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 6 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf.

[38] *Pan-Canadian Educational Indicators* (2007). Table D6.1. The Pan-Canadian Education Indicators Program (PCEIP) uses OECD data to analyze cross-country comparisons of educational attainment. OECD reports enrolment and participation rates using the International Standard Classification of Education (ISCED). See OECD (2007). *Education at a Glance*. Page 38 http://www.oecd.org/dataoecd/4/55/39313286.pdf. The Labour Force Survey does not make the OECD's delineation between two levels of education ('non-tertiary' and 'tertiary-type B' education), both of which the OECD includes in their definition of 'tertiary education'; as such, Labour Force data for Canada and Alberta slightly overstate the participation rate in comparison to the other countries.

- According to Labour Force Survey data, 46% of Alberta's 18 to 34 year old population had a post-secondary education in 2007.
- Among the provinces, Quebec had the highest proportion of its 18 to 34 year old population with a post-secondary credential (62%), while Manitoba had the lowest (39%). The Canadian average was 52%.

Figure 13

Percentage of Population, 18 to 34 Years, with Post-Secondary Education, 2007



Source: Statistics Canada, Labour Force Survey

Aboriginal Identity Population

- One in three (34%) Aboriginal persons in Canada had not completed high school and 21% had a high school diploma as their highest educational qualification in 2006.[39]
- An estimated 44% of the Canadian Aboriginal population were post-secondary graduates in 2006. Of these graduates, an estimated 14% had trade credentials, 19% had a college diploma, and 8% had a university degree.[40]
- Nationally, differences in educational attainment were evident for First Nations aged 25 to 64 years living on- and off-reserve, with those living off-reserve having overall higher levels of educational attainment. Individuals living off-reserve were over twice as likely to have a university degree, at 9% compared to 4% for the on-reserve population. Half of the on-reserve population had less than a high school education, compared to 30% for those living off-reserve.[41]
- Slightly under half (47.3%) of the 2001 employment income gap ($3247 per person) between Aboriginal and non-Aboriginal Canadians in 2001 can be attributed to differences in educational attainment.[42]
- In 2001, Aboriginal Canadians with a high school diploma or higher had significantly better labour market outcomes, both in absolute terms and relative to non-Aboriginal Canadians.[43]
- Representing a growing proportion of Alberta's population, Aboriginal Albertans have lower educational attainment levels compared to the non-Aboriginal population.
- In 2007, 29.7% of Aboriginal Albertans had high school as their highest level of educational attainment; 10.5% had a trade certificate, 12.4% a college diploma, and 7.4% a university certificate or degree. A total of 30.3% of Aboriginal Albertans had completed some form of post-secondary education.[44]
- A university degree was the educational category in which Aboriginal Canadians were most underrepresented compared to other Canadians in 2001.[45]
- A total of 7,563 Aboriginal Albertans aged 18-34 years participated in post-secondary education in the province in 2005-06.[46] This represents an over 20% increase from 6,286 Aboriginal Albertans in 2004-05. This may be partially attributable to the increasing tendency of Aboriginal peoples (particularly Métis) to self-identify.[47]

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[39] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 19 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf.

[40] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 19 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf.

[41] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 23 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf.

[42] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 6 http://www.csls.ca/reports/csls2007-04.pdf

[43] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 6 http://www.csls.ca/reports/csls2007-04.pdf

[44] Statistics Canada (2007). *Labour Force Survey.*

[45] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 7 http://www.csls.ca/reports/csls2007-04.pdf

[46] Students can self-report as being one of the following: "Status Indian/First Nations", "Non-Status Indian/First Nations", "Métis", or "Inuit". The number of learners who had identified themselves as any of the above were added together to produce a total headcount of learners who self-reported as Aboriginal. Only the learners who reported that they were residents of Alberta are considered in this calculation. The reported total is the aggregate of all self-identified Aboriginal Albertans who are participating in publicly funded post-secondary programs at an Alberta institution.

[47] Guimond, Eric and Norbert Robitaille (2008). *Aboriginal Populations in Canadian Cities: What's Behind the Spectacular Growth?* Research presented at the *Strength in Numbers* Conference. Edmonton, March 13, 2008

Immigrants

- There has been a noticeable trend toward increasing skill levels among Canadian immigrants since 1990.[48] The majority of recent immigrants to Canada (2001 to 2006) have a post-secondary credential.[49]
- Over half (51%) of Canada's recent immigrants aged 25 to 64 years (those immigrating between 2001 and 2006) had a university degree. This was more than twice the proportion of degree holders among the Canadian-born population (20%).[50]
- Approximately 16% of these recent immigrants with either a PhD or a Masters degree earned their degree at a Canadian university; 14% earned their degree at an American university (but only 36% of these immigrants were born in the USA).[51]
- A total of 11% of recent immigrants to Canada aged 25 to 64 years had a college diploma and 5% had a trades certificate. These proportions were considerably less than the 22% of the Canadian-born population with a college diploma and 14% with a trade certificate.[52]
- In 2006, 66.7% of immigrants to Alberta had completed some form of post-secondary education.[53]

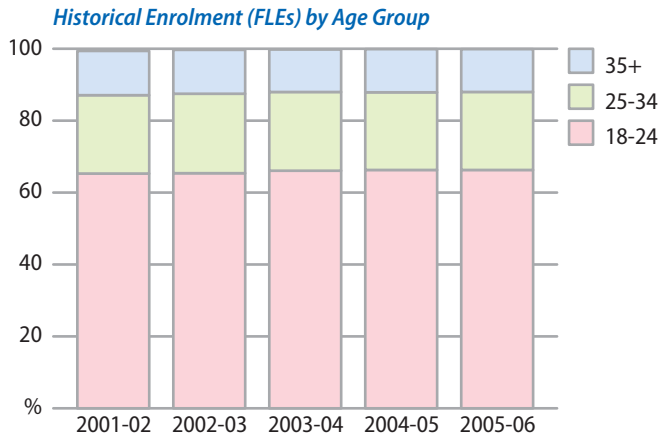
Urban vs. Rural

- Urban areas are defined as those areas with a population of at least 1,000 and no fewer than 400 persons per square kilometer. They include both census metropolitan areas and urban non-census metropolitan areas.[54]
- Over one-quarter (26%) of Canadians aged 25 to 64 living in an urban area in 2006 had a university degree, compared to 11% for rural areas. Rural areas, on the other hand, had a higher proportion of individuals with a trade certificate (17% compared to 11% of urban residents). These differences were consistent for all age groups.[55]
- Urban and rural communities had a similar proportion of the 25 to 64 year old population with a college diploma, at approximately 20% for both urban and rural areas across Canada.[56]

[48] Citizenship and Immigration Canada (2006). *The Monitor*. Issue 2 http://www.cic.gc.ca/english/resources/statistics/monitor/issue13/05-overview.asp
[49] Citizenship and Immigration Canada (2006). *Facts and Figures* http://www.cic.gc.ca/English/pdf/pub/facts2006.pdf
[50] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 6 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[51] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 17 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[52] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 17 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[53] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf
[54] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 35 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[55] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 25 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[56] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 25 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf

Enrolment by Age Group

Figure 14



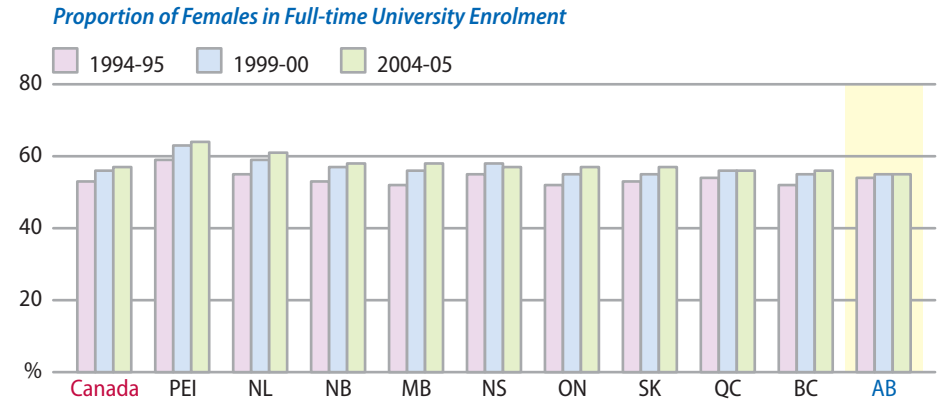
Note: The 18-24 age group contains a small percentage (~ 2% per year) of 1-17 year olds.
A small percentage of enrolments of unknown age (< 1% per year) are excluded.

Source: Advanced Education and Technology; Learner and Enrolment Reporting System (LERS)

- The student age distribution of enrolments over the 2001-02 to 2005-06 period has remained relatively stable.
- The majority of enrolments (approximately 66%) over the 2001-02 to 2005-06 period were aged 18-24 years, followed by the 25-34 year age group (approximately 22%).
- A significant proportion of enrolments in the 2001-02 to 2005-06 period were 35 years and older (approximately 12%).

Enrolment by Gender

Figure 15



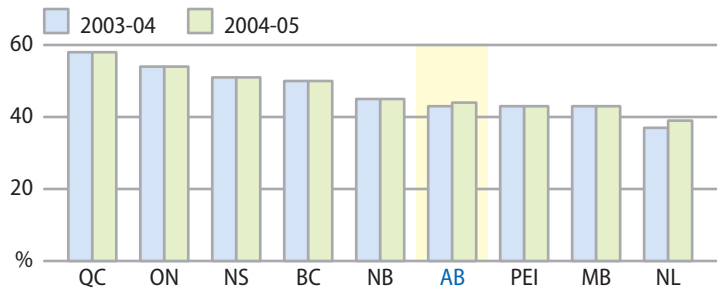
Source: Report of the Pan-Canadian Education Indicators Program (PCEIP) 2007

- In the university sector in 2004-05, female full-time enrolment was greater than male enrolment in every province. Prince Edward Island had the highest rate of female full-time university enrolment in 2004-05, at 64%. Newfoundland and Labrador followed at 61%, with Manitoba and New Brunswick tied for third place at 58%.[57]
- In Alberta in 2004-05, the proportion of female enrolment in universities was 55%, the lowest of all provinces. The Canadian average was 57%.[58]

[57] *Report of the Pan-Canadian Education Indicators Program* (2007). Page 273 http://www.statcan.ca/english/freepub/81-582-XIE/81-582-XIE2007001.pdf
[58] *Report of the Pan-Canadian Education Indicators Program* (2007). Page 274 http://www.statcan.ca/english/freepub/81-582-XIE/81-582-XIE2007001.pdf

Figure 16

Proportion of Females in Full-time Public College and Institute Enrolment



Note: Data for Saskatchewan, and therefore Canada, are unavailable.

Source: Report of the Pan-Canadian Education Indicators Program (PCEIP) 2007

- Female full-time enrolment in colleges and technical institutes was equal to that of males in British Columbia in 2004-05; in Quebec, Ontario, and Nova Scotia female enrolment was greater.[59]
- In the colleges and technical institutes sector, the proportion of female enrolment in Alberta was 44%, slightly less than the average of 47% (of available provinces, excluding Saskatchewan).[60]
- In 2006, 22.6% of Albertan women aged 15 years and over had a university degree compared to 19.9% of men. Albertan women had higher rates of education attainment than men in the high school graduate, some post-secondary, and university degree categories; men had a higher rate of educational attainment in the post-secondary certificate or diploma category.[61]

Part-Time Enrolment

Table 8

Historical Full-time and Part-time Enrolment (Unduplicated Student Headcount), Alberta

	2001-02	2002-03	2003-04	2004-05	2005-06	% Change 2001-02 to 2005-06
Full-time	144,738	153,910	155,358	155,860	159,197	2.4%
Part-time	85,671	91,334	95,638	93,794	97,356	3.3%
Total	230,409	245,244	250,996	249,654	256,553	2.8%

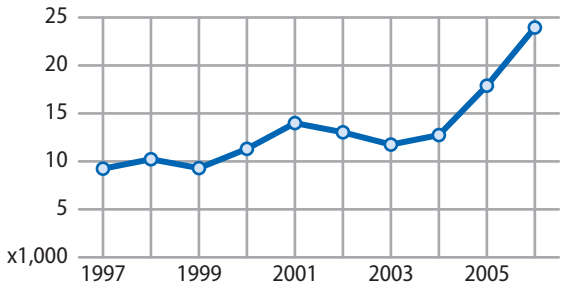
Source: Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

- While post-secondary enrolment has demonstrated an overall increase, there has been a slight increase in part-time enrolment (3.3%) over full-time enrolment (2.4%) from 2001-02 to 2005-06.

Apprenticeship Registrations

Figure 17

New Apprentices Registered, Alberta



Source: Advanced Education and Technology

- The number of people attracted to, and participating in, formal apprenticeship programs in Alberta continues to grow.
- In 2006, employers registered 23,954 new apprentices with Advanced Education and Technology.
- Between 2001 and 2005, the average number of new apprentices registered was 13,887.

[59] *Report of the Pan-Canadian Education Indicators Program* (2007). Page 272 http://www.statcan.ca/english/freepub/81-582-XIE/81-582-XIE2007001.pdf

[60] *Report of the Pan-Canadian Education Indicators Program* (2007). Page 272 http://www.statcan.ca/english/freepub/81-582-XIE/81-582-XIE2007001.pdf

[61] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf

Post-Secondary Participation and Income

Table 9

Post-Secondary Education Participation Rate at Age 19 by Income Quartile, 2003

Geographic Service Region	All Youth		
	Lowest Family-Income Quartile	Highest Family-Income Quartile	Difference
Canada	50.1%	72.6%	22.5%
Saskatchewan	43.0%	60.4%	17.4%
British Columbia	47.4%	67.1%	19.7%
Ontario	55.4%	77.2%	21.8%
Alberta	37.0%	60.0%	23.0%
Quebec	51.6%	77.9%	26.3%
Prince Edward Island	54.6%	82.1%	27.5%
Nova Scotia	51.3%	79.9%	28.6%
New Brunswick	46.3%	76.2%	29.9%
Manitoba	37.0%	67.9%	30.9%
Newfoundland & Labrador	35.7%	81.0%	45.3%

Source: Statistics Canada, Youth in Transition Survey (YITS) (Cohort A), 2003

- Household income is one factor affecting an individual's decision to pursue post-secondary education. Higher household incomes are associated with higher participation in post-secondary education, particularly at the university level.[62]
- The post-secondary participation rate for 19 year old Albertans in the highest family income quartile was 23% higher than for those in the lowest income quartile.[63]

Learners with Disabilities

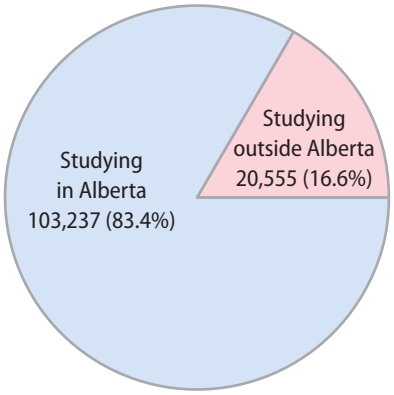
- While there is currently no formalized requirement for institutions to report the number of students enrolled in post-secondary institutions who are disabled or who seek support services and accommodations (unless student financial assistance is sought), data on the number of funded exam accommodations for disabled students has been collected since 2005.
- The total estimated number of exams to be accommodated in 2007-08 for students with disabilities across the system is 39,320. This is up from the estimated 25,307 exams that needed to be accommodated in 2005-06.
- The number of students with disabilities seeking support services at the post-secondary level is increasing. Alberta post-secondary institutions estimate that close to 8,200 students will seek support services in 2007-08, up from 4,100 in 2002.[64]

[62] Canada Millenium Scholarship Foundation (2007). *The Price of Knowledge 2006-07* http://www.millenniumscholarships.ca/images/Publications/POK07-ch3_e_final.pdf
[63] Statistics Canada (2003). *Youth in Transition Survey (YITS)* (Cohort A)
[64] Alberta Advanced Education and Technology, Post-Secondary Programs Branch

Albertans Studying Outside the Province

Figure 18

Geographical Distribution of Alberta Student Enrolment (excluding Visa Students), 2005-06



Source: Advanced Education and Technology, Learner and Enrolment Reporting System

- There is currently no direct data collection on Albertans studying outside the province.
- Data on Albertans studying outside the province are derived from the number of full-time Alberta students on financial assistance at Alberta's publicly-funded institutions. It was assumed that the same proportions of students inside and outside of the province receive financial assistance.
- Using extrapolation, an estimated 20,555 Albertans studied outside the province in 2005-06, representing approximately 16.6% of the total post-secondary cohort. Of this total number of students that study outside Alberta, approximately 82% study elsewhere in Canada while 18% study internationally.

- From 2000-01 to 2005-06, the proportion of Albertans on financial assistance studying in Alberta has gradually declined (-4.6%), with increasing proportions attending post-secondary elsewhere in Canada (+4.3%). The proportion of Albertans on financial assistance studying outside Canada has remained fairly stable over the period.[65]

Graduates (Program Completers)

- Nationally, one out of every five post-secondary graduates aged 25-64 years had studied in Business, Management, Marketing and Related Support Services according to the 2006 Census. This was the most popular field of study for both men and women.[66]
- Following Business, Management, Marketing and Related Support Services, the top fields of study for men and women differed widely at the national level. For men, Mechanic and Repair Technologies/Technicians field was the most popular choice followed by Engineering; for women, the Health Professions and Related Clinical Services field was the second most popular, followed by Education.[67]
- In 2006, about 22% of Alberta's adult population had a university degree, 22% had a college diploma, and 12% had a trades certificate; these proportions were virtually on par with national averages.[68]
- Among Albertans with a university degree, 13% studied engineering – the highest proportion of engineers in Canada. Just over one fifth (21%) of adults with a trade certificate were qualified in the Construction Trades, the highest proportion of all provinces and territories.[69]

[65] Based on data provided by Alberta Student Finance.
[66] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 15 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[67] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 15 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[68] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 30 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[69] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 30 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf

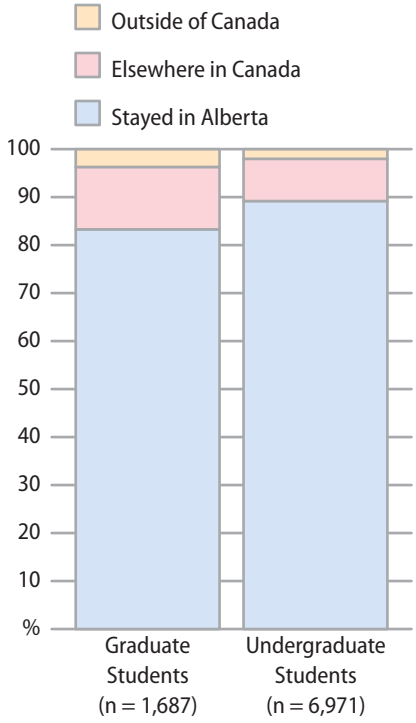
Immigrants

- For recent immigrants to Canada (those immigrating between 2001 and 2006) aged 25-64 years with a university degree, the most popular field of study was Engineering. A total of 25% of immigrants graduated in Engineering, compared to 6% of the Canadian-born degree holders in this age group. Engineering was followed by Business, Management, Marketing and Related Services (19%) as popular fields of study choices for immigrants.[70]
- Around 6% of recent immigrants with a university degree aged 25-64 years studied Computer and Information Sciences and Support Services. This is three times the rate of the Canadian-born population.[71]

Residence after Graduation

Figure 19

Student Residence after Graduation, Alberta Graduating Class of 2003-04



Note: Of graduates surveyed, 23 graduate and 70 undergraduate students indicated that they either did not know or refused to identify their location when applying for post-secondary education.

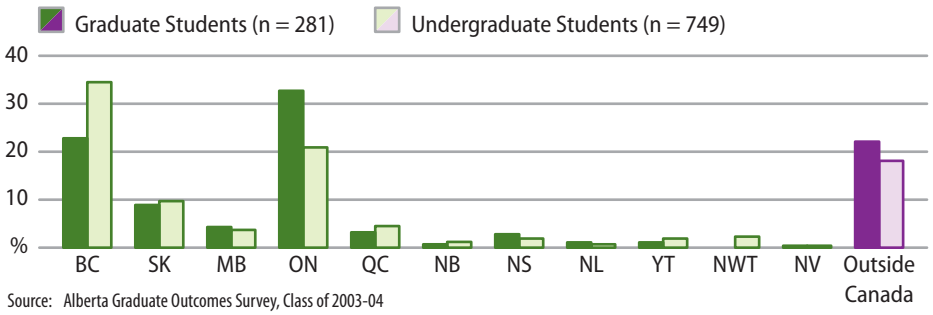
Source: Alberta Graduate Outcomes Survey, Class of 2003-04

- Results from the Alberta Graduate Survey, Class of 2003-04, show that approximately 1,600 students (9.5%) who responded to relocation questions relocated outside of Alberta following graduation.
- The overwhelming majority of the 2003-04 undergraduate and graduate (Masters and PhD) degree program completers (responding to the Alberta Graduate Survey, Class of 2003-04) remained in Alberta following graduation, at over 80% for both credentials.[72]
- A larger proportion of graduate degree (Masters and PhD) program completers (responding to the Alberta Graduate Survey, Class of 2003-04) indicated leaving Alberta upon graduation (16.7%) compared to undergraduate degree program completers (10.8%).
- British Columbia and Ontario were the top Canadian destinations – British Columbia for undergraduate degree completers and Ontario for graduate degree completers.
- International destinations ranked third for both undergraduate and graduate degree completers.

[70] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 17 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[71] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 17 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf
[72] These figures understate the proportion of graduates leaving Alberta upon graduation, as the Alberta Graduate Outcomes Survey, Class of 2003-04 did not survey students with contact information outside North America.

Figure 20

Students' Relocation Destinations after Graduation, Alberta Graduating Class of 2003-04



Source: Alberta Graduate Outcomes Survey, Class of 2003-04

- The majority of Albertan students (94.0%) surveyed in the Alberta Graduate Outcomes Survey, Class of 2003-04 remained in the province following graduation. The same is true for interprovincial students (77.4%) and international students (87.9%).
- A total of 21.0% of interprovincial and 7.2% of international students relocated elsewhere in Canada. A total of 4.8% of international students relocated to international destinations following graduation.
- The majority of Masters/PhD students remained in Alberta following graduation. A total of 87.5% of Masters/PhD graduates who originated in Alberta remained in Alberta after graduation.
- Of those who came to Alberta from other provinces to study in Masters/PhD programs, 77.9% stayed in the province after graduation. A total of 84.9% of international students that graduated from Masters/PhD programs stayed in Alberta following graduation.[73]

International Students

Table 10

FLEs by Sector and Visa Status, Alberta, 2005-06

Sector	Total FLEs	Domestic FLEs	Visa FLEs	% of Visa FLEs
Comprehensive Academic and Research Institutions	62,428.5	57,829.8	4,598.6	69.7%
Baccalaureate and Applied Studies Institutions	18,154.8	17,697.3	457.5	6.9%
Polytechnical Institutions	22,337.5	21,564.7	772.8	11.7%
Comprehensive Community Institutions	25,953.3	25,361.8	591.5	9.0%
Independent Academic Institutions	3,305.2	3,179.8	125.4	1.9%
Specialized Arts and Culture Institutions	943.0	887.4	55.6	0.8%
All Institutions	133,122.3	126,520.8	6,601.5	100.0%

Note: Sector Totals excludes Athabasca University and the Banff Centre.

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

- Across all sectors, international (visa) student FLEs represented a small proportion of total FLEs (5%) in 2005-06. [74]
- Over two-thirds of visa FLEs (69.7%) are enrolled in the Comprehensive Academic and Research Institutions sector. This is followed by Polytechnical institutions (11.7%) and Comprehensive Community Institutions (9.0%).
- Universities are the overwhelming choice for international students in Canada. Numbers of study permits issued for other post-secondary programs (diplomas, certificates, etc.) are also increasing.[75]

[73] Alberta Graduate Outcomes Survey data

[74] Methodological differences in reporting prevent international comparisons of international student enrolment at a provincial or national level (e.g. Canadian data are missing in OECD cross-country comparisons).

[75] Citizenship and Immigration Canada (2007). *Facts and Figures* http://www.cic.gc.ca/English/pdf/pub/facts2006.pdf

Table 11

International Students

	1997	2006	% Change
Canada	75,804	156,955	107%
New Brunswick	918	2,911	217%
Prince Edward Island	134	382	185%
Nova Scotia	1,937	4,967	156%
Ontario	24,060	58,308	142%
Manitoba	2,061	4,815	134%
Newfoundland & Labrador	496	1,111	124%
British Columbia	23,011	44,799	95%
Quebec	13,950	24,582	76%
Alberta	7,090	11,748	66%
Saskatchewan	2,039	3,254	60%
Other Territories	44	51	16%
Yukon	32	32	0%
Unknown	32	0	N/A

Source: Citizenship and Immigration Canada, 2007

- Alberta ranked 4th in Canada as a destination for international students in 2006, with 11,748 study permits issued to individuals to study in the province.[76]
- Alberta is second only to British Columbia in the proportion of study permits issued for individuals to study in the trades.

Graduate Studies

Table 12

Masters and PhD Graduates (Program Completers) by Program Band, Alberta, 2005-06

	Number	Distribution
Physical, Natural & Applied Sciences	1,070	29.2%
Business / Management	911	24.9%
Health Sciences	718	19.6%
Languages, Social Sciences, Arts, Humantities	471	12.9%
Education	430	11.7%
Recreation	42	1.1%
Trades & Technology	15	0.4%
Legal & Security	8	0.2%
Total	3,665	100.0%

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

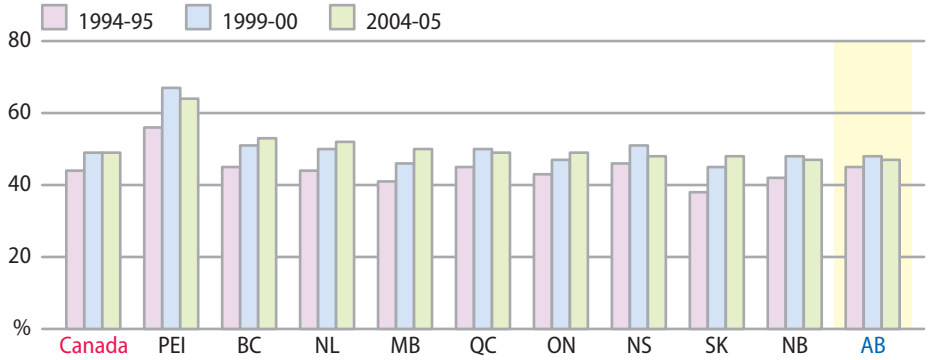
- In possession of higher level skills and knowledge, graduate (Masters and PhD) students are integral to the success of Alberta's knowledge-based economy and the province's position as a global leader in research and innovation.
- In 2005-06, the majority of Masters Degree and PhD graduates (program completers) in Alberta graduated from the physical, natural, and applied sciences, at 29.2%.[77] This was followed closely by business/management and health sciences at 24.9% and 19.6%.

[76] Citizenship and Immigration Canada (2007). *Facts and Figures* http://www.cic.gc.ca/English/pdf/pub/facts2006.pdf

[77] See Appendix C for a breakdown of program bands by CIP 2000 codes.

Figure 21

Proportion of Females in Full-time Graduate Program Enrolment

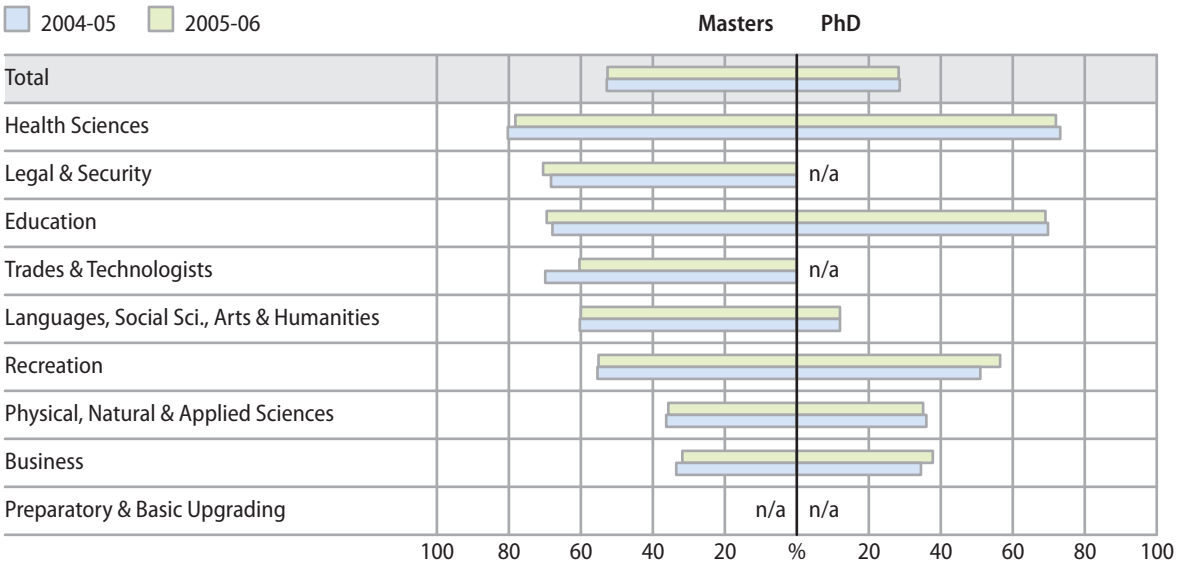


Source: Report of the Pan-Canadian Education Indicators Program (PCEIP) 2007

- The number of females enrolled full-time in graduate programs increased in every province over the 1994-95 to 2004-05 period.
- Prince Edward Island leads the provinces in full-time female enrolment in graduate studies, at 64% in 2004-05.
- Alberta is tied with New Brunswick for the lowest proportion of full-time female enrolment in graduate studies in 2004-05, at 47%. The Canadian average in 2004-05 was 49%.

Figure 22

Proportion of Females in Masters and PhD Program Enrolment, Alberta

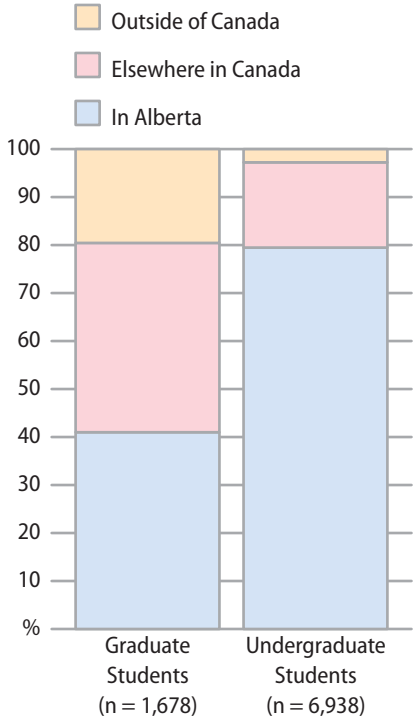


Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

- The majority of females enrolled in Masters Programs in Alberta in 2005-06 were in the health sciences (78.2%). Business had the lowest proportion of female enrolment at the Masters level, at 31.8%.
- Female enrolment in PhD programs in Alberta was also led by the health sciences in 2005-06, with 73.2% female enrolment.
- PhD programs in the languages, Social Sciences, Arts & Humanities demonstrated the lowest female enrolment in 2005-06, at 12.0%.

Figure 23

Student Residence when Applying for Post-Secondary Education, Alberta Graduating Class of 2003-04



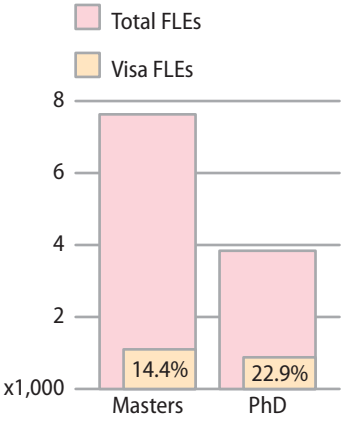
Note: Of graduates surveyed, 32 graduate and 103 undergraduate students indicated that they either did not know or refused to identify their location when applying for post-secondary education.

Source: Alberta Graduate Outcomes Survey, Class of 2003-04

- Overall, 26% of Canadian post-secondary graduates in Canada aged 25-64 years had earned their highest certificate, diploma, or degree outside the province or territory in which they resided in 2006.[78]
- The majority of students surveyed in the Alberta Graduate Outcomes Survey (Class of 2003-04) completing a graduate studies program came from outside of Alberta (59.0%).
- Comparatively, undergraduate students largely come from Alberta. Only 20.6% of students in the 2003-04 graduating class in undergraduate studies came from outside the province.[79]

Figure 24

Proportion of Visa FLEs in Masters and PhD Programs, Alberta, 2005-06



Source: Advanced Education and Technology, Learner and Enrolment Reporting System

- In 2005-06, a total of 9,307 students were enrolled in Masters Degree programs in Alberta. A total of 13.8% of these students were visa students.
- In the same year, a total of 1,286 students were enrolled in PhD programs in Alberta, of which almost one quarter (23.9%) were visa students.

[78] Statistics Canada (2008). *Educational Portrait of Canada* – 2006 Census. Page 25 http://www12.statcan.ca/english/census06/analysis/education/pdf/97-560-XIE2006001.pdf

[79] An analysis of post-secondary applications by region was undertaken to determine regional application trends (see Appendix B). The general pattern suggests that students largely apply to institutions in the regions where they live.

Albertans in Foundation Learning

- Using a direct measure of skills rather than formal educational attainment demonstrates a clear relationship between investments in human capital, long-term economic growth, and labour productivity; skilled workers not only benefit themselves, but wider society.
- Raising a country's literacy levels results in a substantial return on investment for society, including an impact on Gross Domestic Product (GDP).[80]
- Participation in community literacy programs enables immigrants to increase their skills in order to transition effectively into the workplace or further training, and provides a gateway for interacting with Albertan society early in their residency.
- The Volunteer Tutor Adult Literacy program assisted 2,023 adults with improving their basic literacy and numeracy skills in 2006. Many of these individuals are also under-represented in the Alberta's post-secondary education system.[81] A total of 7.4% of Volunteer Tutor Adult Literacy program participants in 2006 were Aboriginal Albertans; the program also assisted 161 adults with developmental disabilities and 35 adults with physical disabilities.[82]
- Of the nearly 11,000 Albertans who participated in part-time courses funded through the Community Adult Learning Program, 55% were in ESL/FSL programs, while 45% were in adult basic literacy programs.[83]
- In addition to ESL courses, 1,110 learners with English as a Second Language received tutoring from a volunteer tutor.
- The majority (77.3%) of individuals accessing Volunteer Tutor Adult Literacy Services (VTALs) are new Albertans.

Table 13

Languages Spoken (Percentage of Total Population)

	Alberta			Canada		
	1996	2001	2006	1996	2001	2006
Mother Tongue is English only	80.9%	80.9%	79.1%	59.2%	58.5%	57.2%
Mother Tongue is French only	2.0%	2.0%	1.9%	23.3%	22.6%	21.8%
Mother Tongue is a non-official language only	15.9%	16.0%	17.9%	16.1%	17.6%	19.7%
Speak English and/or French most often at home	92.6%	92.5%	90.9%	91.0%	90.3%	88.9%
Speak a non-official language most often at home	7.4%	7.5%	9.1%	9.0%	9.7%	11.1%

Source: Statistics Canada (2007), 2006 Census on Immigration, Citizenship, Language, Mobility and Migration

- From 1996-2006, the percentage of Alberta's immigrants whose first language is neither English nor French increased from 15.9% to 17.9%.

[80] Foundational Learning and Diversity Sub-Committee: Report to the *A Learning Alberta* Steering Committee (2006), Page 1 http://www.advancededucation.gov.ab.ca/alearningalberta/Strengthening_Learning_Foundations.pdf

[81] For the purposes of this Alberta Access Planning Framework, "Under-Represented Groups" are Aboriginal, disabled, low-income, and rural Albertans.

[82] *Community Adult Learning Program Annual Report*, 2006, released September 2007

[83] *Community Adult Learning Program Annual Report*, 2006, released September 2007

Conclusion

While demonstrating a strong international showing in the 25-64 year old age group, Alberta's proportion of 18-34 year olds with post-secondary education is lower than the Canadian average. Immigrants tend to have a higher level of education than the rest of the population, while for Aboriginal Albertans educational attainment levels tend to be lower.

There are regional and gender variations in enrolment, along with variations in regional capture depending on socioeconomic status. Part-time post-secondary enrolment has increased at a slightly faster rate than full-time enrolment, demonstrating a need for more flexible learning opportunities considerate of learner needs and the range of available economic options.

Out-of-province and international students comprise the majority of graduate (Masters and PhD) students in the province – applicant data conveys that future growth at this level will continue to depend heavily on external enrolment. While data demonstrates that a significant proportion of students remain in Alberta upon graduation, it is unknown how many international students leave North America after they graduate. The majority of international students, while comprising a small proportion of total post-secondary enrolments, are concentrated in the Comprehensive Academic and Research sector.

The following section examines Alberta's system capacity – the current and projected numbers of FLEs available in Alberta's post-secondary system.

Section 4

System Capacity

This section provides an overview of Alberta's post-secondary system capacity – the number of FLEs the post-secondary system is capable of accommodating. Taking into consideration historical enrolment, regional capture and participation rates, and projected enrolment (based upon constant participation rates), this section outlines learner supply and provides an aggregate picture of expected future enrolment by province, region, and program band. In addition to considering overall expected enrolment growth, this section also considers existing physical capacity, current and approved capital expansion, and identifies additional capital expansion needs at the regional and program band level.

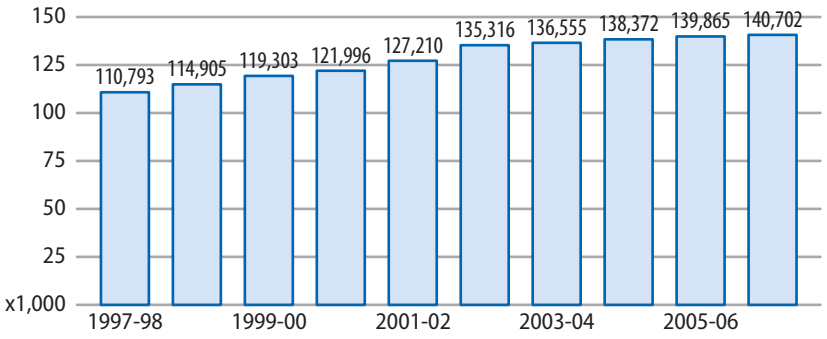
Key Findings

- Although Alberta has the most significant population growth in the country, Alberta's 18 to 34 year old post-secondary participation rate lags behind other provinces – a position that has not changed over the last decade.
- While some regions have shown enrolment decreases, overall, Alberta's advanced education system has demonstrated a gradual and steady increase in enrolment over the last nine years.
- Assuming constant participation rates, Alberta can expect enrolment increases of approximately 23,000 FLEs over the next decade. Enrolment increases are projected for all geographic service regions.
- Despite projected enrolment increases, the number of graduates from Alberta's post-secondary system will be insufficient to meet demand.
- Alberta's post-secondary system capacity will need to increase in order to meet the number of skilled workers needed. Given Albertans' low participation rates, however, post-secondary expansion will need to be in targeted areas where there is a known supply of students.
- The majority of regions show FLE growth below existing capacity and approved expansion.
- Further dialogue between post-secondary institutions and the department is necessary in order to address demand and capacity imbalances and ensure the most effective use of available resources.

Historical Post-Secondary Enrolment

Figure 25

Historical FLE Enrolment, Alberta



Source: Advanced Education and Technology, Learner and Enrolment Reporting System

- Alberta's advanced education system has demonstrated a gradual and steady increase in enrolment over the past decade.

Table 14

Map 1

Historical Enrolment Pattern (FLEs), All Age Groups, 20002-03 to 2006-07

Geographic Service Region	Average Annual % Increase
Edmonton Region	1.3%
Calgary Region	0.9%
Lakes Region	0.3%
Lethbridge Region	0.3%
Central Region	-0.9%
Wood Buffalo Region	-1.1%
Cypress Region	-1.3%
Parkland Region	-2.1%
Peace Region	-7.6%
Athabasca Region	-9.5%
Northeast Overlap	n/a
Alberta	1.0%

Note: Alberta figures includes Athabasca University, while the figures for individual regions do not. Since there is no post-secondary institution with its home campus in the Northeast Overlap region, all enrolments in the Northeast Overlap are counted in the region of the home institution.

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

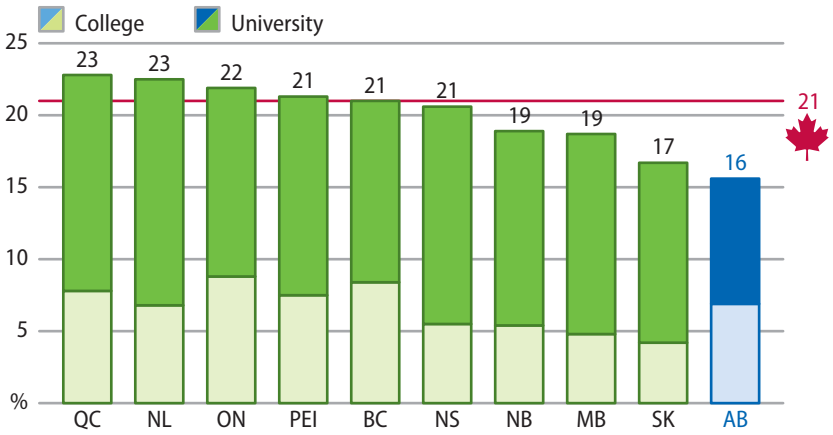
Geographic Service Regions, Alberta

- The student age distribution of enrolments over the 2001-02 to 2005-06 period has remained relatively stable.
- The largest increases in enrolment from 2002-03 to 2006-07 were in the Edmonton Region (1.3%), followed by the Calgary and Lakes Regions (0.9%), and the Lethbridge Region (0.3%).
- All other regions, demonstrated negative average annual enrolment changes from 2002-03 to 2006-07

Post-Secondary Education Participation Rates

Figure 26

College and University Participation Rate, 18-34 Years, 2007



Source: Statistics Canada, Labour Force Survey

- Although Alberta has the most significant population growth in the country, Alberta's 18-34 year old post-secondary participation rate continues to lag behind other provinces – a position that has not changed over the last decade.

Table 15

Post-Secondary Education Regional Capture Rate, 18-34 Years

Geographic Service Region	2001-02	2005-06
Lethbridge Region	31.0%	32.6%
Edmonton Region	23.5%	24.8%
Calgary Region	21.0%	21.0%
Parkland Region	23.0%	20.8%
Cypress Region	11.8%	13.8%
Central Region	11.7%	11.7%
Wood Buffalo Region	12.8%	10.4%
Lakes Region	8.1%	9.4%
Athabasca Region	10.0%	8.6%
Peace Region	12.3%	8.5%
Northeast Overlap	—	—
Alberta	22.6%	23.6%

Note: The figure for Alberta includes Athabasca University, while the figures for individual regions do not.

Students attending two of any of the campuses listed are counted at each campus location.

Since there is no post-secondary institution with its home campus in the Northeast Overlap region, all enrolments in the Northeast Overlap are counted in the region of the home institution.

Source: Statistics Canada, Population Projections; Advanced Education and Technology, Learner and Enrolment Reporting System

Map 1

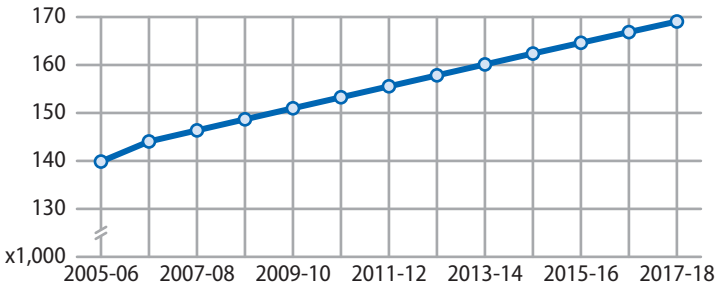
Geographic Service Regions, Alberta

- Alberta's post-secondary participation rate (18-34 year olds) has remained relatively stable from 2001-02 to 2005-06, increasing by 1% over the period.
- Regionally, there is greater variation in the regional capture rate.
- In 2005-06, the highest regional capture rate (18-34 year olds) was in Lethbridge Region, at 32.6%. This was followed by Edmonton Region at 24.8%. Calgary Region ranked third, with a rate of 23.0%.
- Four regions – Peace, Wood Buffalo, Parkland, and Athabasca – demonstrate negative changes in regional capture from 2001-2006.

Projected Enrolment

Figure 27

Historical and Projected Enrolment (FLEs)



Source: Advanced Education and Technology, Demand and Capacity Analysis

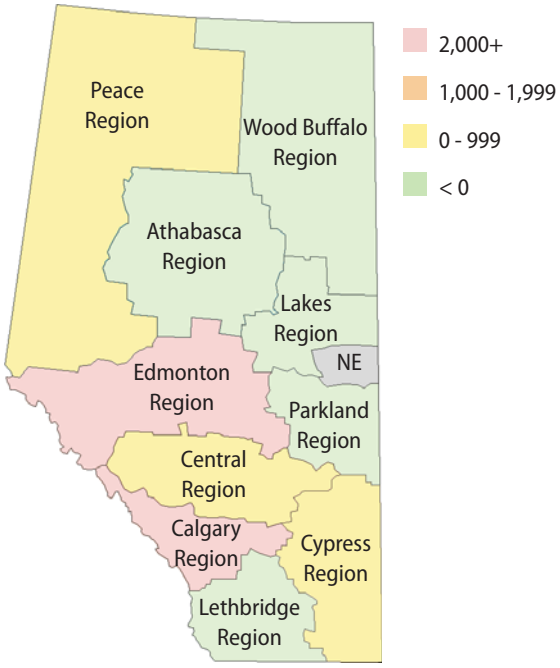
- Assuming constant participation rates, Alberta can expect enrolment increases of approximately 23,000 FLEs over the next decade.

Capacity, Growth and Approved Expansion

- System capacity refers to the number of FLEs Alberta's post-secondary system can reasonably accommodate.
- In 2016, Alberta Employment and Immigration expects a shortage of approximately 71,000 workers requiring post-secondary education. With a constant participation rate, approximately 51,000 graduates are expected in 2017-18.
- In-migration will help to alleviate some of these growth pressures; however, Alberta Advanced Education and Technology recognizes that more skilled and educated individuals are needed.
- Advanced Education and Technology is formulating a long-term capital plan that will enable the Ministry to respond to learner and economic demand over the next 10 years. It also includes shorter-term capital priorities required to meet the demand forecast of the next five years.

Map 2

FLE Growth Above Capacity and Approved Expansion



Source: Advanced Education and Technology, Demand and Capacity Analysis

- Through provincial capital investment and Enrolment Planning Envelope (EPE) funding, the post-secondary education system will be able to increase capacity in fields of study with high demand.
- With a constant regional capture rate, significant shortages in capacity are predicted for Calgary Region and Edmonton Region by 2017-18.
- Calgary Region, Edmonton Region, and Central Region are projected to have the largest enrolment increases in the next 10 years.

Table 16

Estimated FLE Increase and Approved Expansion

Geographic Service Region	FLEs				
	Estimated 2007-08 FLEs *	Capacity	Estimated FLE Increase to 2017	Approved Expansion	Growth above Existing Capacity & Approved Expansion
Cypress Region	2,486	2,400	300	250	50
Lethbridge Region	10,510	10,800	550	570	—
Calgary Region	51,209	49,000	9,100	4,350	6,950
Central Region	5,497	5,500	1,200	790	600
Edmonton Region	61,758	61,000	9,000	6,000	3,950
Parkland Region	1,895	1,900	280	325	—
Lakes Region	982	1,100	100	160	—
Northeast Overlap	—	—	—	—	—
Wood Buffalo Region	1,415	1,400	200	585	—
Athabasca Region	710	1,200	250	—	—
Peace Region	2,155	2,500	510	50	115
Athabasca University	7,360	7,000	1,400	1,500	—
Total	145,977	143,800	22,890	14,580	11,665

* Estimate based on Fall 2007 enrolments. Students attending more than one of the campuses listed are counted at each campus location (i.e. those enrolled in collaborative or designated programs).

Source: Advanced Education and Technology, Demand and Capacity Analysis

- Capacity pressures will vary across service regions. While capacity shortages are forecasted for some regions over the 2007-08 to 2017-18 period, this will not be the case in all regions, where existing capacity will be sufficient to accommodate expected enrolment increases.
- The department is responding to enrolment growth pressures in the post-secondary system by increasing physical capacity. A list of projects under construction or recently completed as of November 2007 is provided in Appendix D. Most of these projects will be completed in 2008-09.
- If all funding requirements are met, approved physical capacity projects will result in space for an additional 15,000 FLEs. The department has committed $2.4 billion towards increased physical capacity.

Table 17

Increased Capacity vs. Forecasted Enrolment Growth by Program Band, 2007-08 to 2017-18

	Current Capacity *	Existing & Approved Expansion	FLE Requirement by Program, 2017	Shortage (Surplus) of Additional Capacity to 2017
Trades & Technology	15,200	1,150	6,718	5,620
Health Sciences	20,600	3,770	4,889	1,120
Business / Management	20,400	1,125	2,171	1,045
Physical, Natural & Applied Sciences	26,000	3,540	4,292	755
Languages, Social Sciences, Arts & Humanities	37,800	1,555	2,298	750
Education	7,800	305	684	380
Recreation	2,800	230	245	15
Legal & Security	3,100	120	60	(60)
Preparatory & Basic Upgrading	10,100	2,785	1,533	(1,010)
Capacity Adjustment **	—	—	—	3,050
Total	143,800	14,580	22,890	11,665

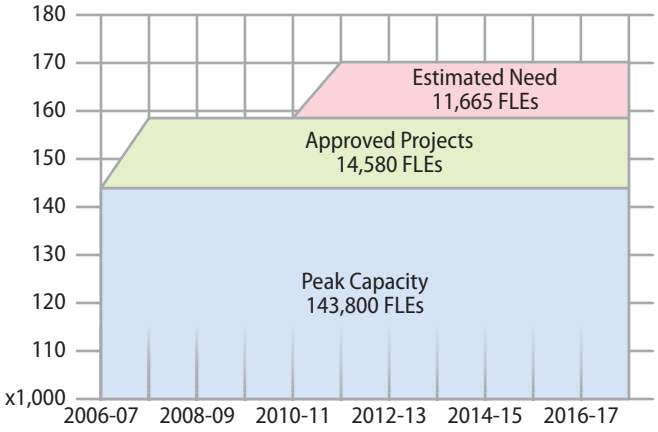
* Estimate based on Fall 2007 enrolments. Excludes FLEs in collaborative or designated programs.

** Adjustment for overcapacity in some regions where investment will be needed to meet current demand.

Source: Advanced Education and Technology, Demand and Capacity Analysis

Figure 28

Estimated Future Capacity by Enrolment (Constant Participation Rate)



Note: Peak Capacity refers to the highest enrolment level reached since 1998-99.

Source: Advanced Education and Technology, Demand and Capacity Analysis

- Based on 2005-06 approved projects, Trades & Technologists will see the largest capacity shortage (5,620 FLEs), followed by Health Sciences (1,120 FLEs).
- It is estimated that there will be a need for 11,500 additional FLEs in Alberta's post-secondary system from 2010 to 2017.

Conclusion

Enrolment is forecasted to increase by approximately 23,000 FLEs over the next ten years. This is based upon a continuation of existing participation rates, which, in Alberta, have remained fairly constant over the past decade.

Overall, approved capital projects are expected to accommodate space for an additional 15,000 FLEs. Given the variable enrolment growth across regions, capacity pressures will also vary; while capacity pressures are forecasted for some regions over the 2007-08 to 2017-18 period, in other regions existing capacity will be sufficient to accommodate expected enrolment increases.

Section 5

Labour Force Profile

The following section provides an overview of key attributes of Alberta's labour market, as well as key factors impacting Alberta's labour market and composition.

Key Findings

- Without interprovincial and international immigration, Alberta is not able to meet its labour market demands. It is necessary to ensure that there are clear outcomes identified for international education, including retention and better alignment with labour market needs.
- Individuals from under-represented groups remain a key, underutilized potential labour resource.
- With significant job growth expected, Alberta Employment and Immigration projects that the province will continue to face shortages across the full range of occupations and industry sectors, with critical shortages felt in key areas – trades and technology, health, business/management, and sciences.
- Applicant demand is also indicative of labour market shortages. In program areas where applicant demand exceeds available capacity, there is also a projected labour market shortage.
- Alberta will not meet its projected labour market shortages based upon the domestic supply of graduates alone.

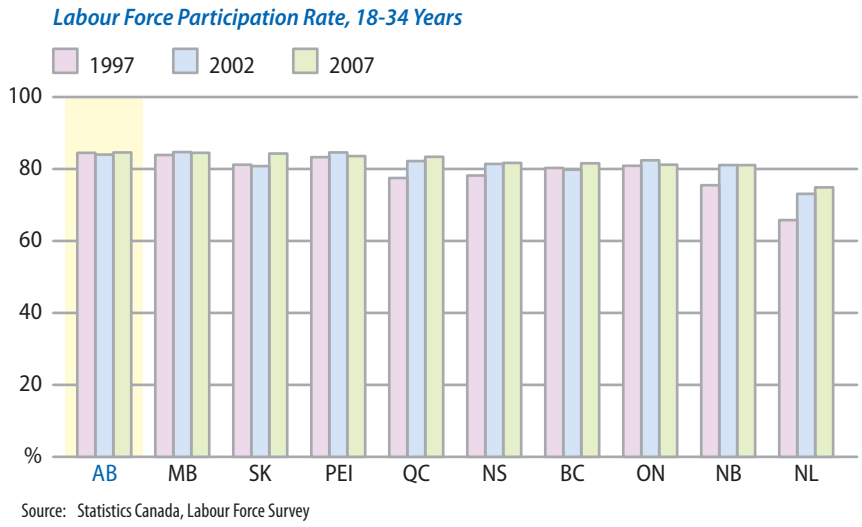
Labour Market Trends

- From 2001 to 2006, total employment in Canada increased at an annual average rate of 1.7%, the fastest rate increase among the Group of Seven (G7) nations.[84]
- In 2006, Alberta led Canada in having the highest labour force participation rate, highest employment rate, and the lowest unemployment rate in the country.[85] Alberta's unemployment rate was 4.3%; Calgary and Medicine Hat's unemployment rates were even lower, both at 4.0%.[86]
- Alberta added 251,000 workers between 2001 and 2006, largely spurred by growth in the construction industry and in professional, scientific, and technical services. In professional, scientific, and technical services Alberta saw an increase of 27,000 workers, at an average annual increase of 4.3%. Employment in mining and oil and gas extraction industries increased by 47,400 alone – an annual pace of 9.7% and over three times the rate of annual employment growth in Canada.[87]
- While Alberta had the highest proportion of youth (18.6%) within its working age population among the provinces in 2006, Alberta's aging workforce is a factor in increasing labour market demand. For example, over half of those employed in Management occupations were older workers (aged 45+).[88]
- In 2006, Alberta's unemployment rate was the lowest of all provinces for women (3.6%) and youth aged 15-24 years (6.8%).[89]

[84] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 6 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[85] Alberta Employment and Immigration (2007). *Annual Alberta Regional Labour Market Review* http://employment.alberta.ca/documents/LMI/LMI-LFS_2006_aalmr.pdf
[86] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 23 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[87] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 16 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[88] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf
[89] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf

Labour Force Participation Rates

Figure 29



Source: Statistics Canada, Labour Force Survey

- In 2006, Alberta's labour market participation rate was the highest among women across all provinces at 67.0%. This was 12.6% lower than the male labour market participation rate.[90]
- In 2007, Albertans aged 18-34 years had the highest labour force participation rate of all provinces, at 84.6%.
- Projections demonstrate the significant impact that increases in the labour force participation of under-represented groups may have in meeting Alberta's economic demand. The impact of educational attainment on labour force participation is evident when looking at Aboriginal and new Canadians.
- For example, if Aboriginal Albertans reach the 2001 employment rate of non-Aboriginal Albertans by 2017, a 12.2% contribution to the province's employment growth would result. This is almost double the contribution than if 2001 levels are maintained.[91]
- Aboriginal people remain more than twice as likely as non-Aboriginal people to be unemployed. In 2006, the employment rate for Aboriginal people of core working age (25-54 years) was 65.8%, up from 61.2% in 2001. This is compared to 81.6% for non-Aboriginal people in 2006, up from 80.3% in 2001.[92]
- From 2001 to 2006, there were greater increases in employment for First Nations living off-reserve than for those living on-reserve, widening the gap between the two. In 2006, 51.9% of First Nations living on-reserve were employed, compared to 66.3% of those living off-reserve.[93]
- The employment rate of core working age (25-54 years) recent immigrants was 67.0% in 2006, a gain of 3.6% from 2001 and faster than the gain among their (generally less educated) Canadian-born counterparts.[94]

[90] Alberta Employment and Immigration (2007). *Alberta's Labour Force Profiles – 2006* http://employment.alberta.ca/documents/LMI/LMI-LFP_labour_profiles.pdf
[91] Centre for the Study of Living Standards (2007). *The Potential Contribution of Aboriginal Canadians to Labour Force, Employment, Productivity and Output Growth in Canada, 2001-2017*. Page 72 http://www.csls.ca/reports/csls2007-04.pdf
[92] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 26 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[93] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 26 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf
[94] Statistics Canada (2008). *Canada's Changing Labour Force, 2006 Census*. Page 29 http://www12.statcan.ca/english/census06/analysis/labour/pdf/97-559-XIE2006001.pdf

Labour Market Shortages

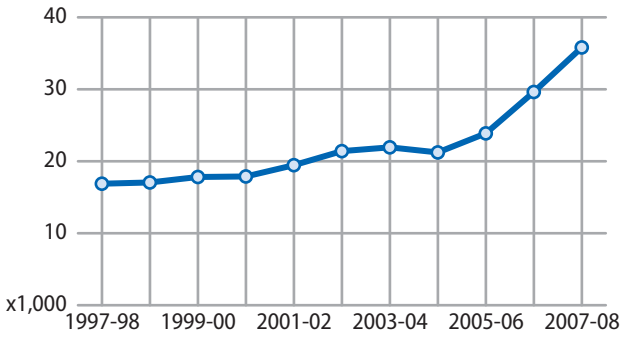
- With significant job growth expected, Alberta will continue to face shortages across the full range of occupations and industry sectors, with critical shortages felt in key areas – trades and technology, health, business/management, and sciences.
- With a constant participation rate, from 2007 to 2017 there is a projected shortage of approximately 21,000 graduates in the trades and technology sector.
- This is followed by health sciences with a projected labour market shortage of approximately 16,250 from 2007 to 2017.
- Physical, Natural, and Applied Sciences also face significant projected labour market shortages from 2007 to 2017 (almost 14,000) along with Business (approximately 11,500).
- Alberta's advanced education system must be prepared to generate greater numbers of highly skilled people in these key areas.
- Alberta will continue to rely on interprovincial and international in-migration to help mitigate labour market shortages. Immigrants are more likely to be of working age than the Canadian population, and will likely be the main source of future labour force growth.

Apprenticeship Demand

- Apprenticeship demand is expected to follow labour market demands in the trades.
- Alberta Employment and Immigration's forecast indicates a shortage of 14,221 tradespeople in 2016. By 2017-18, Alberta's post-secondary education system is expected to produce 9,796 graduates in apprenticeship trades, meeting almost 70% of the province's need.[95]

Figure 30

Technical Training Seats Offered by School Year



Source: Advanced Education and Technology

- Apprenticeship technical training is offered at 10 public post-secondary institutions. The program is standard across the province.
- The number of apprenticeship technical training seats offered in 2007-08 was 35,821.
- Not all apprentices attend technical training in any given year. Apprentices do not normally attend technical training until they have at least eight to 10 months of on-the-job training with their employer. Apprenticeship is 80% on the job and 20% technical training and starts with an employer hiring and registering an apprentice. Further:
  - Some apprentices are graduates of accredited post-secondary technical programs or have completed an apprenticeship program in another trade and have received credit for their technical training.
  - Some have successfully completed all of the technical training and are just completing the required on-the-job training before being eligible to be certified.
  - Some prefer to obtain the study material (ILMs – individual learning modules), learn at their own pace, and challenge the industry exam.
  - Some are in the Registered Apprenticeship Program (RAP) attending high school and are not able to attend technical training.
- Based on feedback garnered from industry, major announced construction projects and the rate at which apprentices are currently being registered, Alberta Apprenticeship and Industry Training (AIT) projects that the number of apprenticeship technical training seats required will continue to increase over the next couple of years and then stabilize.
- Post-secondary institutions have demonstrated some short-term elasticity in their ability to train apprentices.

[95] Alberta Employment and Immigration.

Turn-Aways

Table 18

Turn-Aways by Region, Alberta, Fall 2007 *

Region	Albertans
Calgary	2,816
Edmonton	746
Central	152
Northeast	56
South	35
Northwest	25
All Regions	3,615

Note: The All Regions figure is a system-wide total.

Adding the various regions together does not reflect the system total since applicants can be qualified and not offered admission in multiple regions.

* Geographic service region is not yet available as a filtering option.

Source: Advanced Education and Technology, Application Submission Initiative

- Turn-aways are applicants who qualified for a program but were not offered admission, and were not attending a program anywhere in the Alberta post-secondary system (see Appendix B for Applicants to Post-Secondary Institutions (excluding trades) by Service Region).
- While turn-aways are a characteristic of the post-secondary system, they are included in the labour force profile in order to clearly define the relationship between post-secondary applicants unable to undertake particular fields of study and the economic implications that result.
- In Fall 2007, post-secondary institutions in the Calgary region had the largest number of qualified Albertan applicants who were not offered admission, at 2,816 students.
- Over 3,600 Albertan applicants were turned away from Alberta post-secondary programs in Fall 2007.

Table 19

Turn-Aways by Program Band, Alberta Applicants, Fall 2007

Program Band	Albertans
Health Sciences	1,205
Trades and Technology	623
Business / Management	541
Languages, Social Sciences, Arts and Humanities	531
Physical, Natural and Applied Sciences	523
Other	346
Legal and Security	274
Education	183
Recreation	35
Total	3,615

Source: Advanced Education and Technology, Application Submission Initiative

- Around 1,200 qualified Alberta applicants were not offered admission for the Health Sciences and over 600 were not offered admission in the Trades and Technology field of study.

Table 20

Top Ten Fields of Study for Albertan Turn-Aways, Fall 2007

CIP Code / Description	Albertan Turn-Aways	All Turn-Aways
Nursing	438	597
Accounting and Related Services	298	356
Allied Health Diagnostic, Intervention and Treatment Professions *	251	411
Mining & Petroleum Technologies/Technicians	173	245
Law (First Professional Degree)	145	435
Teacher Education & Professional Development, Specific Levels & Methods **	127	168
Allied Health & Medical Assisting Services ***	127	161
Legal Support Services	122	135
Medicine (M.D.)	120	523
Journalism	98	126

* Includes Athletic Training/Trainer, Diagnostic Medical Sonography/Sonographer and Ultrasound Technician, Emergency Medical Technology/Technician (EMT Paramedic), Medical Radiologic Technology/Science -Radiation Therapist, Nuclear Medical Technology/Technologist, Radiologic Technology/Science - Radiographer, and Surgical Technology/Technologist

** Includes Adult Continuing, Early Childhood, Elementary, Junior High/Intermediate/Middle School, and Secondary Education and Teaching

*** Includes Clinical Medical Laboratory Assistant, Emergency Care Attendant (EMT Ambulance), Occupational Therapist Assistant, Pharmacy Technician Assistant, Physical Therapy Assistant, Respiratory Therapy Technician/Assistant, and Veterinary/Animal Health Technology/Technician and Veterinary Assistant

Source: Advanced Education and Technology, Applicant Submission Initiative

- The highest numbers of total qualified turn-aways in Fall 2007 were in the nursing (597), medicine (M.D) (523), law (first professional degree) (435) programs.
- The highest numbers of qualified Albertan turn-aways in Fall 2007 were in the nursing (438), accounting and related services (298), and allied health diagnostic, intervention, and treatment professions (251).
- Nursing had the highest number of turn-aways for Albertan applicants (438) whereas medicine (M.D) had the highest number of turn-aways for non-Albertan applicants (403).
- Turn-aways comprised a small number of Masters and PhD program applicants in Fall 20067. Almost five times as many individuals applied for Masters programs compared to PhD programs.
- Less than 1% of Masters degree applicants and less than 2% of PhD applicants were turn-aways in Fall 2007.

Conclusion

Alberta has the highest labour force participation rate in Canada. A strong labour market will continue to place downward pressure on post-secondary attendance levels, emphasizing the need for targeted funding in the advanced education system.

Labour force shortages are projected for the province across a range of occupations and industry sectors, particularly in the trades and technology, health sciences, physical, natural, and applied sciences, and business sectors. The majority of turn-aways occur in these sectors where demand is highest.

Section 6

Moving Forward: Data and Information Needs

The Alberta Access Planning Framework has outlined the general factors influencing the province's advanced education system that require consideration. Population demographics, foundational learning, and high school transition rates of Alberta learners shape the composition of the post-secondary system. Post-secondary enrolments, participation and regional capture rates, and graduate outcomes impact the health and success of Alberta's economy.

There is a need for continued information and data development to support access planning. Work needs to be done ensuring consistency in methodology and reporting across government departments and in developing forecasting models that would allow more detailed and reliable data for effective system planning. These improvements, necessary to ensure effective and coordinated planning for Alberta's advanced learning system, will require a concerted and collaborative effort on the part of all system stakeholders and partners.

The Alberta Access Planning Framework has identified areas requiring increased attention going forward. While this initial version has brought together numerous data sources to paint a general picture of the province's access profile, it has also shown existing areas in which it will be important to develop better diagnostic information.

These areas include:

- The context of non-credit enrolment in Alberta's post-secondary institutions.
- Enhanced knowledge of enrolments, regional capture, and participation rates within Alberta's private post-secondary institutions.
- Retention rates of international students in Alberta after graduation.
- Data pertaining to undersubscribed programs in Alberta's post-secondary institutions.
- The extent to which individuals are transitioning back from the labour market into post-secondary education relative to those transitioning directly from high school.
- A greater understanding of student mobility, particularly the degree to which Alberta students are choosing to study outside of Alberta.
- Factors that account for disparities in post-secondary participation rates between rural and urban learners.
- Transition rates from high school to post-secondary for Aboriginal learners.
- Scenario planning to isolate how factors such as population permanency and economic downturn might impact post-secondary participation and programs.

During the compilation of this initial Alberta Access Planning Framework, it became evident that certain areas lack data or require more robust methodologies. Future areas for information development include:

- Under-Represented Groups
- System Capacity
- Learner Transitions
- International Students & Study Abroad

Under-Represented Groups

One of the key policy directions for Alberta Advanced Education and Technology is increasing the participation of individuals who face significant barriers due to physical, economic, geographic, or other factors. Collaboration and coalition-building among system partners and stakeholders will play a vital role in expanding access to under-represented groups.

Effective planning for access expansion will also require collaboration with regards to data. Significant challenges exist regarding the availability and reporting of data relating to under-represented groups:

- Data on under-represented groups often rely on individuals to self-identify (e.g., Aboriginal, learners with disabilities). For a variety of reasons, some individuals are unwilling or hesitant to self-identify; resulting data, therefore, may offer only a general picture of a group's post-secondary participation.
- Data collection on under-represented groups often requires extensive consultation with system stakeholders and partners. Under-represented groups are not homogenous and may have varying and specific data needs, prefer different definitions and methodologies, and have varying access to resources.
- There are methodological differences at all reporting levels – international, national, provincial, post-secondary institution, and school board. Data are collected at different times, using different indicators and measures, and may not be comparable across jurisdictions.

The department is working on improving the collection and availability of data relating to under-represented groups (see Appendix H).

Enrolment Forecasting

Alberta Advanced Education and Technology is working to broaden its enrolment forecasting systems and enhance information on the sensitivity of enrolment changes to economic and other factors. The department anticipates dialogue with other government areas on collaborative efforts to broaden knowledge on enrolment forecasting systems.

System Capacity

A greater understanding of system capacity issues needs to be developed in order to more effectively align resources with demand. Alberta Advanced Education and Technology expects to dialogue with system stakeholders and partners to ensure that system capacity is used to its full potential and to address areas in need of increased support.

Learner Transitions

There is a need for greater understanding around delayed transitions into post-secondary studies from high school, including learners at privately-funded institutions (e.g., Aboriginal colleges) – data is not currently available on these individuals and their learner pathways.

International Students and Study Abroad

There is a lack of knowledge about how international students hear about opportunities to study in the province, and about the factors influencing their decision to do so. There is a need for institutions to better articulate the role of international students and develop targeted approaches to attracting international students in key program areas. Similarly, unless they apply for student financial assistance, there is no record of Alberta students who choose to study abroad; even less is known about factors influencing their decision to do so, and there is no data available to suggest the return rate for these individuals.

Appendix A

Methodology

The Alberta Access Planning Framework uses a number of data sources from both within and outside government. Methodologies used in the Alberta Access Planning Framework will be assessed on an ongoing basis to ensure accuracy and reliability.

Data Availability

Data sources referenced in the AAPF are released at various points throughout the year; data provided in the AAPF are the most current available at the time of writing and are valid as of the AAPF's release. Enrolment data for 2006-07 was finalized close to the AAPF's release, and has been incorporated wherever possible.

Geographic Service Regions

Map 1

Geographic Service Regions, Alberta

- Data will be provided by geographic service region to enable more effective, informed, and collaborative planning.
- Alberta is divided into eleven service regions that generally follow census division and county boundaries (see Map 1). Linking service regions to census divisions provides post-secondary institutions with readily available census data on population and demographics relevant to their geographic location.
- Service regions are also based on the communities that colleges have historically served.
- Because Athabasca University primarily offers distance learning to communities both throughout and outside Alberta, it is not included in any one particular service region or in breakdowns of regional-level data (enrolments, population growth, etc.). Athabasca University, however, is included in all provincial-level data. Totals of regional level data, therefore, understate provincial-level totals.
- The department intends to dialogue with system stakeholders about Service Region boundaries. For example, there are a number of institutions currently serving the Peace Region – these boundaries may need redefining in order to more accurately reflect current service provision.
- Service region boundaries for Alberta's Comprehensive Community Institutions (CCIs) are meant to approximate general service regions and act as guidelines to be considered for planning purposes.

Population Projections

- Population projections are based on Statistics Canada and Alberta Education data.
- Population projections by geographic service region are based on Statistics Canada data, using a medium growth scenario and the following assumptions:
  - medium fertility;
  - medium life expectancy;
  - medium immigration; and
  - interprovincial migration towards the western and central provinces.
- The Banff Centre is excluded from all provincial and regional-level data.
- Alberta FLE projections are based on population projections as well as a series of ratio-based headcount and FLE data.

Post-Secondary Participation and Regional Capture Rates

- At the time of writing, 2005-06 was the most recent fiscal year for FLE and FLE-graduate (program completer) data. Data for 2006-07 was finalized close to the AAPF's release and has been incorporated wherever possible.
- Regional capture rates are intended to provide context surrounding population growth assumptions and act as indicators for the number of people that may attend post-secondary study in a given service region.
- Each region's regional capture rate is based on regional-specific 18-34 year old population data.
- Regional capture rates should not be confused with the post-secondary participation rate , which is based on the student headcount relative to the total population (all ages).
- Individuals from one service region may be participating in post-secondary education in another region; as such, they may not be captured in the regional capture rate figures.

Program Band Demand

- Program demand data indicates 2016 demand levels for each program band based on Alberta Employment and Immigration's (EI) Demand and Supply Outlook (2006 to 2016)[96].
- Alberta Employment and Immigration uses the National Occupational Classification (NOC) system, which categorizes job titles into occupational group descriptions – each with a corresponding code. The NOC codes system is used by Statistics Canada as the foundation for labour market statistics and career information.
- NOC codes are mapped to fields of study categories drawn from the Classification of Instructional Program (CIP 2000) system of categorization. Program bands are aggregate groups of CIP 2000 fields of study (see Appendix C).
- Since Preparatory and Basic Upgrading is not associated with any particular job title or occupational group under the NOC system, Alberta Employment and Immigration does not provide a forecast. In order to include a demand forecast for Preparatory and Basic Upgrading, the current proportion of enrolment in each program band was applied to Alberta Employment and Immigration's forecasted demand total.
- Analysis demonstrates that a significant proportion of graduates from Business/Management fields of study do not enter management positions, and that a significant proportion of these management positions are filled by graduates from languages, social sciences, arts, and humanities (liberal arts) fields of study.[97] Forecasted FLE requirements have been adjusted to take this into consideration.

Labour Market and Graduate Shortages

- Three-digit National Occupational Classification (NOC) codes were divided into two groups: those requiring and not requiring post-secondary study. Those requiring post-secondary study were matched to program bands.
- Only occupations requiring post-secondary education and expected to experience a shortfall in 2016 were used.
- Six of the three-digit NOC codes requiring post-secondary education could fall into two program bands – these were labeled and the shortfall was split evenly between both program bands.
- In calculating the total shortfall by field of study, it was assumed that the program band proportion in 2016 would apply in 2017-18. For example, if 16.4% of the total shortfall in 2016 will require a business education, 16.4% of the total FLE enrolment increase from 2007-08 to 2017-18.
- The Alberta Health and Wellness demand forecast was also applied to forecast shortages.

[96] Available on-line at http://employment.alberta.ca/documents/LMI/LMI-LMF_occ_demand_supply.pdf

[97] Horn, Laura and Lisa Zahn (2001), http://nces.ed.gov/programs/quarterly/vol_3/3_1/q5_2.asp#H3. Gehlhaus, Diana (2007) http://www.bls.gov/opub/ooq/2007/winter/art01.pdf

Appendix B

Applicant System Chart

Number of Applicants (Excluding Trades) to Post-Secondary Institutions by Geographical Service Region, 2006-07

All Post-Secondary Institutions

Geographical Service Region of Place of Residence	Cypress Region	Lethbridge Region	Calgary Region	Central Region	Edmonton Region	Parkland Region	Lakes Region	Wood Buffalo Region	Athabasca Region	Peace Region	PSI Unassigned	Total Applicants
Cypress Region	1,271 (55.4%)	341 (3.7%)	588 (1.2%)	114 (1.9%)	454 (0.8%)	21 (1.2%)	4 (0.2%)	1 (0.1%)	1 (0.1%)	3 (0.2%)	478 (0.9%)	2,857 * (1.7%)
Lethbridge Region	73 (3.2%)	3,373 (36.6%)	779 (1.6%)	95 (1.6%)	557 (1.0%)	29 (1.6%)	13 (0.8%)	1 (0.1%)	5 (0.4%)	9 (0.5%)	688 (1.3%)	5,193 * (3.1%)
Calgary Region	113 (4.9%)	2,252 (24.4%)	30,190 (63.1%)	699 (11.8%)	3,739 (6.7%)	67 (3.8%)	20 (1.2%)	11 (1.2%)	6 (0.5%)	17 (1.0%)	8,000 (15.0%)	40,840 * (24.2%)
Central Region	25 (1.1%)	275 (3.0%)	1,312 (2.7%)	2,852 (48.1%)	1,539 (2.8%)	64 (3.6%)	18 (1.1%)	6 (0.7%)	3 (0.2%)	11 (0.7%)	1,168 (2.2%)	6,391 * (3.8%)
Edmonton Region	63 (2.7%)	550 (6.0%)	1,499 (3.1%)	680 (11.5%)	30,493 (54.8%)	205 (11.6%)	76 (4.6%)	58 (6.3%)	43 (3.6%)	104 (6.2%)	6,357 (11.9%)	38,025 * (22.5%)
Parkland Region	16 (0.7%)	80 (0.9%)	115 (0.2%)	110 (1.9%)	906 (1.6%)	341 (19.2%)	61 (3.7%)	3 (0.3%)	0 (0.0%)	11 (0.7%)	311 (0.6%)	1,720 * (1.0%)
Lakes Region	3 (0.1%)	17 (0.2%)	38 (0.1%)	31 (0.5%)	408 (0.7%)	23 (1.3%)	522 (31.3%)	7 (0.8%)	24 (2.0%)	10 (0.6%)	298 (0.6%)	1,265 * (0.7%)
Northeast Overlap	7 (0.3%)	31 (0.3%)	92 (0.2%)	47 (0.8%)	480 (0.9%)	80 (4.5%)	597 (35.8%)	4 (0.4%)	1 (0.1%)	2 (0.1%)	270 (0.5%)	1,466 * (0.9%)
Wood Buffalo Region	5 (0.2%)	66 (0.7%)	147 (0.3%)	24 (0.4%)	459 (0.8%)	35 (2.0%)	79 (4.7%)	733 (80.2%)	0 (0.0%)	9 (0.5%)	363 (0.7%)	1,739 * (1.0%)
Athabasca Region	5 (0.2%)	15 (0.2%)	33 (0.1%)	28 (0.5%)	254 (0.5%)	12 (0.7%)	70 (4.2%)	2 (0.2%)	731 (60.4%)	56 (3.4%)	167 (0.3%)	1,276 * (0.8%)
Peace Region	20 (0.9%)	101 (1.1%)	298 (0.6%)	96 (1.6%)	973 (1.7%)	19 (1.1%)	59 (3.5%)	1 (0.1%)	347 (28.7%)	1,055 (63.2%)	685 (1.3%)	3,213 * (1.9%)
Unknown Service Region	695 (30.3%)	2,115 (22.9%)	12,746 (26.6%)	1,155 (19.5%)	15,343 (27.6%)	878 (49.5%)	148 (8.9%)	87 (9.5%)	50 (4.1%)	383 (22.9%)	34,568 (64.8%)	65,106 * (38.2%)
All Service Areas	2,296 (100.0%)	9,216 (100.0%)	47,837 (100.0%)	5,931 (100.0%)	55,605 (100.0%)	1,774 (100.0%)	1,667 (100.0%)	914 (100.0%)	1,211 (100.0%)	1,670 (100.0%)	53,353 (100.0%)	169,091 Column Total
												181,474 Row Total

Note: * PSIs were matched to service regions, and postal codes were assigned to each service area. Applicants were assigned to service areas based on the postal code where they were living when they applied to institutions. Applicants may have applied to more than one institution.

Rows may add up to more than the total indicated. The number shown indicates the total number of applicants in each service region as students may have applied to more than one institution. For example, there were 1,271 students from service region "A" applying to "PSI A"; some of those students may have applied to other PSIs in other service regions, but they were only counted once in the "Total Number of Applicants by Service Area" total. There are 2,313 duplicate cases in this table of students applying to more than one community college using different postal codes in the applications.

The number of applicants to PSIs in their service region is shaded in grey.

Applicants categorized as "Unknown Service Region" are students with unknown postal codes or students from outside of Alberta.

Table does not include trades applicants.

Source: Advanced Education and Technology, Application Submission Initiative

Appendix C

Higher Level Groupings for CIP 2000

Business / Management	Business, Management, Marketing & Related Support Services
Education	Education
Health Sciences	Psychology
	Health Professions & Related Clinical Sciences
	Dental, Medical & Veterinary Residency Programs
Languages, Social Sciences, Arts & Humanities	Aboriginal & Foreign Languages, Literatures & Linguistics
	English Language & Literatures and Letters
	French Language & Literature and Letters
	Philosophy & Religious Studies
	History
	Social Sciences
	Library Science
	Public Administration and Social Science Profession
	Family and Consumer Science / Human Sciences
	Area, Ethnic, Cultural and Gender Studies
	Communication, Journalism & Related Programs
	Theology & Religious Vocations
	Liberal Arts, General Studies & Humanities
	Visual and Performing Arts
Legal & Security	Security & Protective Services
	Legal Profession & Studies
Recreation	Personal Awareness and Self improvement
	Parks, Recreation, Leisure & Fitness Studies
	Leisure & Recreational Activities
Physical, Natural & Applied Sciences	Biological & Biomedical Sciences
	Agricultural, Agricultural Operations & Related Sciences
	Physical Sciences
	Mathematics and Statistics
	Engineering
	Natural Resources and Conservation
	Multi/Interdisciplinary Studies
	Military Technologies
	Architecture & Related Sciences
	Computer & Information Sciences & Support Services
	Communication Technologies/Technicians & Support Services
Preparatory & Basic Upgrading	Basic Skills
	High School / Secondary Diplomas & Certificate Programs
Trades & Technologists	Construction Trades *
	Mechanic & Repair Technologists/Technicians
	Precision Production
	Transportation & Materials Moving
	Engineering Technologies/Technicians
	Science Technologies/Technicians
	Personal & Culinary Services

* Construction trades include construction, carpentry, electrical and power transmission installers and plumbing.

Appendix D

Capital Projects

Projects under Construction or Recently Completed as of November 2007

Banff Centre	Donald Cameron Hall Replacement (Phase Two)
Bonnyville	Learning Centre
Bow Valley College	Expansion (Phases One & Two)
Grant MacEwan College	Health Care Learning Centre
Keyano College	Syncrude Sport and Wellness Centre
Lakeland College	Lloydminster Campus
NAIT	Centre for Apprenticeship Technologies
Olds College	Community Campus Learning Centre
	Canadian Equine Centres of Innovation
Portage College	Cold Lake Campus
Red Deer College	Trades Expansion
	Trades Labs Expansion
University of Alberta	Health Research Innovation Facility
	Augustana Faculty
	Edmonton Clinic
	Centennial Centre for Interdisciplinary Science (Phase Two)
University of Calgary	Health Research Innovation Centre
	Faculty of Veterinary Medicine
	Taylor Family Digital Library
	Child Development Centre
University of Lethbridge	Water and Environmental Science

Capital Projects Recently Approved

Athabasca University	Main Campus Expansion
Keyano College	Trades Upgrade / Expansion
Lakeland College	Trades Mezzanine
Lethbridge College	Trades Renewal and Upgrade
Medicine Hat College	Trades Labs Addition
	Power Engineering Upgrade
	F-Wing Expansion
University of Alberta	Utilities System Expansion
University of Calgary	Institute for Sustainable Energy, Environment and Economy
University of Lethbridge	Markin Building for Health Sciences and Management Studies

Appendix E

Enrolments (FLEs) for All Age Groups by Institution

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Comprehensive Academic & Research Institutions	**61,038.6**	**64,682.9**	**66,429.2**	**68,058.9**	**69,170.9**	**70,514.3**
University of Alberta	27,932.8	29,426.6	30,070.6	31,326.4	32,264.2	32,337.6
University of Calgary	22,587.2	23,912.6	24,121.5	23,446.3	23,190.4	24,044.4
University of Lethbridge	5,945.2	6,190.0	6,477.7	6,823.4	6,973.9	6,948.7
Athabasca University	4,573.5	5,153.8	5,759.4	6,462.9	6,742.5	7,183.7
Baccalaureate & Applied Studies Institutions	**16,013.2**	**18,265.2**	**18,159.9**	**18,404.0**	**18,154.8**	**17,835.9**
Grant MacEwan College	8,740.0	10,585.7	10,408.6	10,534.3	10,346.6	10,338.9
Mount Royal College	7,273.2	7,679.5	7,751.4	7,869.7	7,808.2	7,497.1
Polytechnical Institutions	**20,370.8**	**20,866.2**	**20,876.8**	**21,602.7**	**22,337.5**	**23,861.2**
Northern Alberta Institute of Technology	10,680.7	10,879.9	10,475.9	11,336.8	11,621.3	12,273.7
Southern Alberta Institute of Technology	9,690.1	9,986.3	10,400.8	10,265.9	10,716.2	11,587.5
Comprehensive Community Institutions	**26,145.0**	**27,645.6**	**26,856**	**26,075.6**	**25,953.0**	**24,501.9**
Bow Valley College	3,501.0	3,966.9	3,661.9	3,913.4	3,941.2	3,456.8
Fairview College	899.4	1,079.8	1,042.1	n/a	n/a	n/a
Grande Prairie Regional College	1,520.9	1,567.5	1,509.1	1,386.5	1,347.2	1,262.4
Keyano College	1,267.8	1,278.3	1,306.1	1,322.0	1,282.8	1,223.4
Lakeland College	1,773.5	1,946.5	1,990.6	2,057.8	1,938.1	1,778.2
Lethbridge College	4,255.1	4,363.9	4,130.7	4,103.8	3,954.4	3,726.3
Medicine Hat College	2,320.5	2,496.9	2,400.4	2,456.1	2,415.1	2,365.7
NorQuest College	3,788.7	3,945.5	3,849.3	4,055.7	4,196.5	4,022.8
Northern Lakes College	1,008.8	1,007.6	875.1	759.0	863.5	777.9
Olds College	1,211.0	1,230.7	1,253.9	1,304.4	1,304.9	1,309.0
Portage College	1,054.0	977.0	1,068.6	1,050.0	1,069.5	979.5
Red Deer College	3,544.4	3,785.0	3,767.8	3,666.9	3,639.9	3,600.1
Independent Academic Institutions	**2,776.2**	**2,955.6**	**3,287.2**	**3,292.8**	**3,305.2**	**3,025.3**
Ambrose University College	n/a	n/a	n/a	222.2	189.1	124.3
Augustana Faculty of the U of A	823.1	881.4	885.6	n/a	n/a	n/a
Canadian Nazarene University College	n/a	n/a	n/a	168.1	178.3	192.3
Canadian University College	362.0	390.6	380.2	371.2	353.8	314.3
Concordia University College of Alberta	1,115.8	1,148.3	1,456.7	1,521.8	1,526.0	1,431.3
St. Mary's University College	n/a	n/a	n/a	268.0	325.2	348.1
Taylor University College and Seminary	n/a	n/a	n/a	194.7	213.9	142.4
The King's University College	475.4	535.4	564.6	546.8	518.9	472.8
Specialized Arts and Culture Institutions	**866.2**	**900.2**	**946.0**	**938.1**	**943.0**	**962.8**
Alberta College of Art and Design	866.2	900.2	946.0	938.1	943.0	962.8
Total	**127,210.0**	**135,315.7**	**136,554.7**	**138,372.1**	**139,864.7**	**140,701.5**

Note: Data for Augustana is included in the University of Alberta from 2004-05 onward.

Table does not include 2000-01 and 2001-02 data for Alberta College - Edmonton, which is included in Grant MacEwan from 2002-03 onward.

Data for Fairview College is included in NAIT. from 2004-05 onward.

In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College. Canadian Nazarene's enrolment will be reported separately until 2007-08.

Table does not include data from The Banff Centre.

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

Appendix F

Visa Student Enrolments (FLEs) for All Age Groups by Institution

	2005-06			2006-07		
	Total Enrolment	Visa Enrolment	% Visa Enrolment	Total Enrolment	Visa Enrolment	% Visa Enrolment
Comprehensive Academic & Research Institutions	**69,171.0**	**4,683.2**	**6.8%**	**70,514.3**	**4,517.3**	**6.4%**
University of Alberta	32,264.2	2,315.3	7.2%	32,337.6	2,459.3	7.6%
University of Calgary	23,190.4	1,696.7	7.3%	24,044.4	1,441.0	6.0%
University of Lethbridge	6,973.9	586.7	8.4%	6,948.7	570.2	8.2%
Athabasca University	6,742.5	84.6	1.3%	7,183.7	46.8	0.7%
Baccalaureate & Applied Studies Institutions	**18,154.8**	**457.5**	**2.5%**	**17,835.9**	**491.5**	**2.8%**
Grant MacEwan College	10,346.6	296.5	2.9%	10,338.9	341.5	3.3%
Mount Royal College	7,808.2	161.0	2.1%	7,497.1	150.1	2.0%
Polytechnical Institutions	**22,337.5**	**772.8**	**3.5%**	**23,861.2**	**983.8**	**4.1%**
Northern Alberta Institute of Technology	11,621.3	439.0	3.8%	12,273.7	631.1	5.1%
Southern Alberta Institute of Technology	10,716.2	333.7	3.1%	11,587.5	352.7	3.0%
Comprehensive Community Institutions	**25,953.3**	**591.5**	**2.3%**	**24,501.9**	**658.1**	**2.7%**
Bow Valley College	3,941.2	164.0	4.2%	3,456.8	159.3	4.6%
Grande Prairie Regional College	1,347.2	40.3	3.0%	1,262.4	40.0	3.2%
Keyano College	1,282.8	15.9	1.2%	1,223.4	13.0	1.1%
Lakeland College	1,938.1	7.8	0.4%	1778.2	2.8	0.2%
Lethbridge College	3,954.4	126.5	3.2%	3,726.3	151.1	4.1%
Medicine Hat College	2,415.1	175.8	7.3%	2,365.7	175.2	7.4%
NorQuest College	4,196.5	0	0.0%	4,022.8	27.2	0.7%
Northern Lakes College	863.5	0	0.0%	777.9	0.0	0.0%
Olds College	1,304.9	36.3	2.8%	1,309.0	43.4	3.3%
Portage College	1,069.5	0	0.0%	979.5	1.3	0.1%
Red Deer College	3,639.9	24.7	0.7%	3,600.1	44.9	1.2%
Independent Academic Institutions	**3,305.2**	**125.4**	**3.8%**	**3,025.3**	**131.4**	**4.3%**
Ambrose University College	189.1	0.0	0.0%	124.3	0.0	0.0%
Canadian Nazarene University College	178.3	0.0	0.0%	192.3	0.0	0.0%
Canadian University College	353.8	58.7	16.6%	314.3	56.4	17.9%
Concordia University College of Alberta	1,526.0	35.0	2.3%	1,431.3	38.5	2.7%
St. Mary's University College	325.2	2.9	0.9%	348.1	5.6	1.6%
Taylor University College and Seminary	213.9	0.0	0.0%	142.4	0.0	0.0%
The King's University College	518.9	28.9	5.6%	472.8	30.9	6.5%
Specialized Arts and Culture Institutions	**943.0**	**55.6**	**5.9%**	**962.8**	**57.5**	**6.0%**
Alberta College of Art and Design	943.0	55.6	5.9%	962.8	57.5	6.0%
Total	**139,864.7**	**6,686.1**	**4.8%**	**140,701.5**	**6,839.6**	**4.9%**

Note: Data for Augustana is included in the University of Alberta from 2004-05 onward.

Data for Fairview College is included in NAIT. from 2004-05 onward.

In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College. Canadian Nazarene's enrolment will be reported separately until 2007-08.

Table does not include data from The Banff Centre.

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

Appendix G

Unduplicated Graduates (Program Completers) of Parchment Programs by Institution

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Comprehensive Academic & Research Institutions	**14,192**	**15,588**	**16,280**	**16,695**	**17,477**	**17,379**
University of Alberta	6,911	7,190	7,304	7,642	8,114	8,338
University of Calgary	5,157	5,782	6,181	6,066	5,868	5,751
University of Lethbridge	1,408	1,572	1,724	1,709	1,685	1,745
Athabasca University	716	1,044	1,071	1,278	1,810	1,545
Baccalaureate & Applied Studies Institutions	**3,173**	**3,887**	**2,153**	**3,231**	**4,144**	**2,783**
Grant MacEwan College	1,719	1,845	262	1,953	2,040	1,787
Mount Royal College	1,454	2,042	1,891	1,278	2,104	996
Polytechnical Institutions	**4,604**	**5,296**	**6,122**	**7,704**	**6,610**	**6,852**
Northern Alberta Institute of Technology	2,837	3,215	3,372	3,723	3,210	3,396
Southern Alberta Institute of Technology	1,767	2,081	2,750	3,981	3,400	3,456
Comprehensive Community Institutions	**5,470**	**5,999**	**8,081**	**6,434**	**6,309**	**6,253**
Bow Valley College	496	636	758	879	806	682
Fairview College	199	239	313	n/a	n/a	n/a
Grande Prairie Regional College	243	265	1,904	256	243	274
Keyano College	378	422	426	433	359	279
Lakeland College	477	532	510	725	793	674
Lethbridge College	975	1,044	1,170	985	887	985
Medicine Hat College	363	322	268	341	365	376
NorQuest College	1,006	1,227	1,260	1,025	1,238	1,185
Northern Lakes College	103	95	148	176	112	163
Olds College	477	503	499	568	556	611
Portage College	195	160	186	375	329	411
Red Deer College	558	554	639	671	621	613
Independent Academic Institutions	**568**	**626**	**534**	**572**	**679**	**685**
Ambrose University College *	n/a	n/a	n/a	4	8	14
Augustana Faculty of the U of A	131	152	142	n/a	n/a	n/a
Canadian Nazarene University College *	n/a	n/a	n/a	22	37	35
Canadian University College	58	68	n/a	72	94	78
Concordia University College of Alberta	267	286	262	311	348	344
St. Mary's University College	n/a	n/a	n/a	3	14	29
Taylor University College and Seminary	n/a	n/a	n/a	29	50	50
The King's University College	112	120	130	131	128	135
Specialized Arts and Culture Institutions	**199**	**195**	**195**	**177**	**196**	**199**
Alberta College of Art and Design	199	195	195	177	196	199
Total	**28,206**	**31,591**	**33,365**	**34,813**	**35,415**	**34,151**

Note: Data for Augustana is included in the University of Alberta from 2004-05 onward.

Table does not include 2000-01 and 2001-02 data for Alberta College - Edmonton, which is included in Grant MacEwan from 2002-03 onward.

Data for Fairview College is included in NAIT. from 2004-05 onward.

In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College. Canadian Nazarene's enrolment will be reported separately until 2007-08.

Table does not include data from The Banff Centre.

Source: Advanced Education and Technology, Learner and Enrolment Reporting System

Appendix H

Under-Represented Groups Access Expansion

The *A Learning Alberta* review identified policy recommendations related to under-represented groups in the advanced education system. To this end, the department has undertaken several initiatives aimed at increasing participation and access. These include:

Aboriginal Peoples

- As part of the Aboriginal Policy Initiative (API), helping guide the planning and evaluation of Aboriginal learner programming under the First Nations, Métis, and Inuit (FNMI) Policy Framework.
- Implementing the First Nations College Access Grant, a $2 million pilot program that provides grants to post-secondary students attending First Nations, Métis and Inuit colleges. The purpose of the grant is to encourage more Albertans of Aboriginal heritage to pursue post-secondary studies.
- Dedicating $2 million in funding for six First Nations colleges from the Access to the Future Fund. The Fund supports innovation and excellence in the advanced education system to enhance access to affordable and high quality learning opportunities. This new funding mechanism was developed in partnership with the colleges based on the principles of trust, openness, respect and quality.
- Through the Aboriginal Communication Strategy, distributing promotional materials to youth detailing career opportunities in the trades, funding two Aboriginal Youth Ambassadors to make presentations to learners about study and career paths, and assisting students to stay in school, graduate from high school, and link subjects to career opportunities through the Youth Apprenticeship Project. A specialized component targeted to Aboriginal youth has been included in *Learning Clicks*, designed to assist Aboriginal students in Grades 9 to 12 plan for post-secondary studies
- Linking employers and apprentices through the Alberta Aboriginal Apprenticeship Project (AAAP), a partnership between Aboriginal organizations, industry, the province, and the federal government. The Project is designed to increase the participation of Aboriginal people in apprenticeship programs that lead to successful completion as certified journeypersons.
- Creating the FNMI Action Plan. As part of the BETW strategy, the Action Plan is designed to increase the participation of Aboriginal peoples in the labour force and post-secondary education. The plan is expected to be released in Spring/Summer 2008.
- Including Aboriginal enrolment data on government-wide data reporting systems. This improves the departmental information base and lays the foundation for a more comprehensive and accessible source of Aboriginal data.
- Alberta is working with CMEC and other system partners towards improving the accessibility, suitability, and availability of Aboriginal data.

Immigrants

- Alberta's *Supporting Immigrants and Immigration to Alberta* policy framework outlines strategies to increase the number of immigrants to Alberta by developing a more coordinated approach to immigration within the province. Specific strategies include supporting communities to become more inclusive spaces (*Welcoming Communities*), increasing the number of immigrants accepted to Canada that choose Alberta (*Attracting Immigrants*), expanding programs and services that integrate immigrants into Alberta life (*Living in Alberta*), and helping immigrants access labour market opportunities (*Working in Alberta*).
- Designed to meet skilled and semi-skilled labour shortages, Alberta's Provincial Nominee Program (PNP) is an employer-driven immigration program designed to expedite the process of applying for permanent residence. Around 2,500 individuals were expected to go through PNP in 2007.[98]
- In May 2007, Alberta signed an agreement with the federal government to increase collaboration and alignment of immigration policies.

People with Disabilities

- As part of the Raising Awareness about Planning for Post-Secondary Studies initiative, creating videos, transition planning guides, and other on-line resources for students with disabilities and their families to plan and prepare for post-secondary education.
- Providing financial support for students with disabilities attending post-secondary institutions through the Canada Study Grant for the Accommodation of Students with Permanent Disabilities and Canada Access Grant for Students with Permanent Disabilities.
- Identifying on-going support for exam accommodations and other disability-related services as a priority for Budget 2008 (the three-year business planning cycle 2008-09 to 2010-11).
- Working with disability service providers to establish a communications plan, ensuring for consistent practices across the provinces as they pertain to providing services and accommodations to apprentices with disabilities taking exams as part of their program of study.
- Working with Alberta Employment and Immigration to streamline processes for administering funding supports to persons with disabilities and anticipating consultations with disability service providers to receive their input.
- Work is progressing to augment baseline data to monitor post-secondary participation rates of persons with disabilities enrolled at Alberta's public post-secondary institutions.

[98] News Release: *Expanded Program will help Increase Immigration Flow*. (May 22, 2007) http://www.alberta.ca/acn/200705/21501B492DDEA-B390-5069-99FBB53DF7DC5885.html

Appendix I

Glossary

Aboriginal Identity	Those persons who report identifying with at least one Aboriginal group (North American Indian, Métis, or Inuit) and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada, and/or those who reported they were members of an Indian band or First Nation.
Access Expansion	Increasing the number of FLE spaces available.
Capacity	A measure of the number of enrolments (FLEs) an institution is capable of accommodating based on its infrastructure, historical enrolment, and peak FLE enrolment.
CIP 2000	The Classification of Instructional Programs is a system of grouping programs of study into higher-level categories for ease of use in data processing and information gathering. There are six overarching program types ("chapters") that are further subdivided into three levels of increasing specificity.
Full Load Equivalent (FLE)	Used to measure enrolments, one FLE represents one student for a standard year of study taking what is considered to be a full course load in a specific program. For example, a student taking half a full course load would be counted as 0.5 FLEs.
Geographic Service Region	Based on census and county division boundaries, one of ten areas of the province generally served by a Comprehensive Community Institution (CIC).
Institutional Access Plan (IAP)	A post-secondary institution's strategic response to the context provided by the Alberta Access Planning Framework that also outlines its individual current and emerging areas of focus.
International Student	A student, in possession of a study visa, legally entitled to attend a post-secondary institution in the province.
Knowledge-Based Economy	An economy characterized by the ability to utilize scientific, technical, and creative knowledge bases and networks for economic and social development.
Program Band	Based on CIP 2000, one of nine groupings of post-secondary fields of study.
Turn-Away	An applicant who qualified for a post-secondary program, but was not offered admission, and subsequently did not attend a post-secondary program anywhere in the Alberta post-secondary system.
Urban Area	An area with a population of at least 1,000 and no fewer than 400 persons per square kilometer. They include both census metropolitan areas and urban non-census metropolitan areas.