

# **Access to Post-secondary Education: Does Class Still Matter?**

By Andrea Rounce

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**About the author:**

*Andrea Rounce* is a PhD candidate in Political Science at Carlton University in Ottawa and a Research Associate for the Saskatchewan Office of the Canadian Centre for Policy Alternatives.



**Canadian Centre for Policy Alternatives—Saskatchewan**

2717 Wentz Avenue, Saskatoon, SK, Canada, S7K 4B6

Phone: (306) 978-5308, Fax: (306) 922-9162, email: [ccpasask@sasktel.net](mailto:ccpasask@sasktel.net)

[http:// www.policyalternatives.ca/sk](http://www.policyalternatives.ca/sk)

# Table of Contents

Introduction .....	1
Defining Access .....	1
Assessing Socio-Economic Status .....	3
Providing Context: The Current Post-Secondary Environment .....	4
Making The Decision To Attend A Post-Secondary Institution .....	8
Parental Expectations .....	8
Knowledge of Costs and Funding Options .....	9
Academic Achievement and Preparation .....	10
Part-time Work .....	11
Barriers To Post-Secondary Participation .....	12
Low Levels of Parental Education .....	12
Low Levels of Family Income .....	13
Family Status .....	14
Costs: Tuition Fees as a Deterrent.....	14
Costs: Accumulating Debt.....	16
Costs: Distance to Post-Secondary Institution.....	17
Barriers to Professional Programmes .....	18
Completing Post-Secondary Education .....	20
Financial Barriers .....	20
Adjustment Barriers .....	21
Conclusions .....	22
References .....	24
List of Tables	
Table 1:Weighted Average Domestic Undergraduate Tuition Fees for Canada and Saskatchewan, 1990-2001 .....	4
Table 2: Post-Secondary Participation Rates: School Leavers Survey, 1991 and Youth in Transition Survey, 1999: Saskatchewan .....	6

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## INTRODUCTION

A majority of Canadians believe that their children will attend a post-secondary educational institution when they finish high school. Further education after high school education is increasingly seen as a vitally important part of a person's life, both for participation and success in the knowledge economy. Human Resources Development Canada has estimated that by 2004 more than 70% of new jobs created will require a college or university education, with nearly half of these new jobs requiring at minimum a Bachelor's degree (Doherty-Delorme & Shaker, 2003).

According to recent reports, Canada has the greatest proportion of citizens with post-secondary education of all of the OECD countries (Allen & Vaillancourt, 2004). Recognizing the importance of an increasingly educated population, the Canadian Government pledged in 2002 to ensure that "...one hundred percent of high school graduates have the opportunity to participate in some form of post-secondary education..." (Corak, Lipps, & Zhao, 2003, p. 2). However, questions remain about how accessible post-secondary education really is in Canada. Although participation in post-secondary education has remained strong in the face of rising up-front costs to individual students, it is not clear that particular groups of people are being represented in all aspects of post-secondary education.

### Defining Access

Access to post-secondary education has received more attention in the past few years, with the Canadian Government, in particular, undertaking a number of studies of who does and does not attend post-secondary institutions. It is important to acknowledge that much of the research around post-secondary education attendance equates attendance with "access" to a post-secondary institution. The term access, narrowly defined, is used to refer to participation in any type of post-secondary education. Most of the earlier Canadian research has been focused on the narrow definition of access, examining university undergraduate degree programmes and college diploma programmes together to gain a picture of who attended post-secondary institutions and who did not. Others, such as Doherty-Delorme and Shaker (2002), have used a broader definition of accessibility, understanding it as "... (including affordability and opportunity) ... the freedom to obtain and make use of a post-secondary education" (p. 1).

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More recent research has begun to acknowledge and explore gradations in access, including differentiating between college and university attendance, university undergraduate, professional, and graduate degrees, institutional choices, and affordability (especially Statistics Canada research reports written by Butlin, 1999; Zhao & de Broucker, 2002; Corak et al, 2003; and Finnie & Laporte, 2003, among others). There are gaps in the access literature, however. Focus is often on university attendance, at least in part because there are often fewer universities in a geographic area than colleges and because university graduates earn more than other post-secondary graduates. Researchers may look at university education as a first choice for many potential students (Frenette, 2002).

**Others, such as Doherty-Delorme and Shaker (2002), have used a broader definition of accessibility, understanding it as “...(including affordability and opportunity) ... the freedom to obtain and make use of a post-secondary education” (p. 1).**

It is also important to note that much of the research dealing with access to post-secondary education focuses on access for young people who plan to study full-time. However, as Allen and Vaillancourt (2004) and many others note, the majority of individuals who complete post-secondary education have been out of high school for some time before starting their programmes or had some other post-secondary education before enrolling in their programmes.

Little is understood about how different background factors (such as socio-economic status) affect what kinds of institutions within which people choose to study, what disciplines they choose, where they locate themselves, and whether or not they are able to access

additional education such as professional programmes. The Canadian research literature has traditionally focused on the importance of parents' educational attainment, family income, gender, home province, and language in understanding equity in post-secondary access (Butlin, 1999). While these are all important factors in understanding access to post-secondary education, this review of the literature will focus primarily on the socio-economic status (or class) of individuals and their families in the attempt to provide a broader understanding of how class relates to post-secondary participation.

Looker and Lowe (2001) discuss the importance of parental socio-economic status (SES) for influencing children's post-secondary participation. Parental status can be understood to encompass both social and cultural capital: social capital refers to resources available because of parents' connection to other individuals or groups, while cultural capital includes non-economic assets that come from higher levels of education and exposure to middle and upper class values and attitudes.

Much of the Canadian research into access to post-secondary education explores (either explicitly or implicitly) the relationship between parental status (social and cultural capital) and children's participation in the post-secondary system. Most of this research

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concludes that the higher the parental status/capital, the higher the children's educational plans will be. Higher status parents will have children who are more likely to attend a post-secondary institution than are lower status children. Additionally, higher status children are more likely both to attend a university rather than a college and to pursue graduate or professional study (Looker & Lowe, 2001).

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## **Assessing Socio-Economic Status**

In the attempt to understand how post-secondary education and socio-economic status are related, researchers have developed a series of measures that can be used to act as proxies for SES. Most commonly used proxies are family or household income, parental education, and parental occupation. These are either used on their own or in combinations to assess SES.

There are a number of issues that relate to the measurement of family income when looking at the results of research with young people. Most importantly, young people are often not able to provide an accurate estimation of family income. In addition, increasing numbers of individuals do not live in traditional two-parent families, and it can be challenging to determine whose incomes should be considered part of the household or family income. Statistics Canada chose not to include family income in their recent Youth in Transition Survey, assessing youths' educational choices, because of these reasons.

Some have continued to use parental income to assess socio-economic status or class, in spite of potential measurement errors (Corak et al, 2003; Christofides, Cirello, & Hoy, 2001). Others have chosen to use a number of different variables, either alone or in combination, such as parental education, parental occupation, family type, and number of siblings (Bouchard & Zhao, 2000; Knighton & Mirza, 2002). Parental education and occupation are considered safe questions to ask young people, as they should be able to answer them accurately without too much difficulty.

This review will begin with a brief description of the current post-secondary environment in order to provide some context for the debates found in the literature. The body of the review will address three elements of access to post-secondary education: 1) planning to attend a post-secondary institution; 2) socio-economic status and attending a post-secondary institution, including accessing professional degree programmes; and 3) socio-economic status and completing a post-secondary education.

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## PROVIDING CONTEXT: THE CURRENT POST-SECONDARY ENVIRONMENT

The 1990s were a volatile time for publicly-funded post-secondary education in Canada. Both the federal and provincial governments cut funding to the post-secondary sector, shifting an increasing amount of the costs for supporting educational institutions to individual students.

As a result of this decrease in public funding, tuition fees for both universities and colleges in most provinces increased dramatically throughout the decade. University students were the hardest hit, with fees increasing by as much as 125% between 1990 and 2000. An average undergraduate student starting a degree at a Saskatchewan university in 1990 would have paid \$1,545 for a full course load, while that same undergraduate would be paying fees of \$3,676 for the same courses in 2000.

**Table 1: Weighted Average Domestic Undergraduate Tuition Fees For Canada and Saskatchewan, 1990-2001**

	<b>Canada</b>	<b>Saskatchewan</b>
<b>1990-1991</b>	<b>1,464</b>	<b>1,545</b>
<b>1991-1992</b>	<b>1,706</b>	<b>1,859</b>
<b>1992-1993</b>	<b>1,872</b>	<b>2,129</b>
<b>1993-1994</b>	<b>2,023</b>	<b>2,341</b>
<b>1994-1995</b>	<b>2,214</b>	<b>2,543</b>
<b>1995-1996</b>	<b>2,371</b>	<b>2,677</b>
<b>1996-1997</b>	<b>2,601</b>	<b>2,727</b>
<b>1997-1998</b>	<b>2,864</b>	<b>3,074</b>
<b>1998-1999</b>	<b>3,061</b>	<b>3,263</b>
<b>1999-2000</b>	<b>3,292</b>	<b>3,384</b>
<b>2000-2001</b>	<b>3,405</b>	<b>3,676</b>

*Source: Council of Ministers of Education, Canada and Statistics Canada, 2000.*

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In some provinces, beginning with Ontario, particular post-secondary programmes such as medicine, dentistry, law, and graduate studies were deregulated, meaning that a university could choose to set tuition fees without any boundaries. Average fees for some programmes, such as medicine, increased from \$6,057 to \$9,406 between 2000 and 2003. The post-secondary system continues to become increasingly differentiated, with other provinces (like Saskatchewan) following this trend by increasing fees for programmes such as dentistry by as much as 55% in 2003-04 to reach \$32,000 for year one of a four-year programme in 2004-05.<sup>1</sup>

**An average undergraduate student starting a degree at a Saskatchewan university in 1990 would have paid \$1,545 for a full course load, while that same undergraduate would be paying fees of \$3,676 for the same courses in 2000.**

In spite of the continuously increasing tuition fees of the past 15 years (in most provinces), participation in post-secondary education has not decreased. Rather, demand for access to post-secondary institutions has increased overall. Not surprisingly, people from higher income families continued to be more highly represented in post-secondary institutions throughout the 1990s, and that trend continues into the new millennium. Most recent studies demonstrate that post-secondary participation among individuals from low-income families has remained at an even state or even increased

**Most recent studies demonstrate that post-secondary participation among individuals from low-income families has remained at an even state or even increased slightly throughout recent years, and that middle-income families may be becoming less likely to attend post-secondary institutions (Corak et al, 2003; Christofides et al, 2001).**

slightly throughout recent years, and that middle-income families may be becoming less likely to attend post-secondary institutions (Corak et al, 2003; Christofides et al, 2001).

Other trends in access to post-secondary education remain observable, particularly among the genders and among Aboriginal peoples. More young women than men currently attend Canadian universities, and more are likely to graduate with an undergraduate degree. However, men are more likely to continue on with their studies and do graduate work. Young men are also more likely than women to choose to attend college rather than university.

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<sup>1</sup> Total estimated tuition fees for a four-year programme in Dentistry at the University of Saskatchewan: \$155,000.



Aboriginal peoples still have lower rates of participation in post-secondary education than do other groups (Clift, Hawkey, & Vaughan, 1998; Cloutier, 1984; Sarker & Stallard, 1997; University of Alberta, 2000; Looker & Lowe, 2001). However, according to the Council of Ministers of Education, Canada and Statistics Canada (2003), participation rates among Aboriginal peoples are increasing.

**Table 2: Post-Secondary Participation Rates:  
School Leavers Survey, 1991 and Youth In Transition Survey, 1999: Saskatchewan**

	Participation Rates (%)				Change (%)	
	Males		Females		Males	Females
	SLS (1991)	YITS (1999)	SLS (1991)	YITS (1999)		
<b>Any Post-Secondary</b>						
<b>Saskatchewan</b>	<b>42.3</b>	<b>54.9</b>	<b>50.7</b>	<b>67.1</b>	<b>12.6</b>	<b>16.4</b>
	[3.4]	[3.3]	[3.1]	[2.5]		
<b>University</b>	<b>27.6</b>	<b>34.7</b>	<b>36.8</b>	<b>45.8</b>	<b>7.1</b>	<b>9.1</b>
<b>Saskatchewan</b>	[3.1]	[3.5]	[2.9]	[2.9]		

Finnie & Laporte (2003), using data from Statistics Canada's 1991 School Leavers Survey and 1999 Youth in Transition Survey.

Note: Standard error is reported in square brackets [].

Barriers to education, identified by both potential students and those already in post-secondary study, are for the most part income-related (Christofides et al, 2001; Junor & Usher, 2002). Individuals who are accepted into a post-secondary institution must deal with the costs of education. Students, especially those from lower income families, have responded to these changes in a number of ways:

- borrowing more money to sustain their education,
- working more during summer months or during studies,
- pursuing studies part-time or taking breaks from study,
- living at home longer (where possible),
- going to college instead of university, and
- entering the labour market directly from high school and not attending a post-secondary institution (Corak et al, 2003).<sup>2</sup>

<sup>2</sup> See also Linda Quirke's qualitative exploration of lower income students' coping mechanisms for the costs of university education and their psychological reactions to taking on debt at the University of Guelph in Missing Pieces II: An Alternative Guide to Canadian Post-Secondary Education.

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These coping mechanisms all impact on whether or not individuals, especially those from lower SES families, will 1) be able to think about attending a post-secondary institution; 2) be able to participate in post-secondary education; and 3) be able to complete their education.

One of the most discussed outcomes of the increasing costs of post-secondary education is the increasing debt that lower SES students take on.

According to a recent report on Statistics Canada's 2002 National Graduates Survey (Class of 2000), approximately 40% of students graduate from undergraduate bachelor's and college diploma programmes with education-related debt (Allen & Vaillancourt, 2004). The proportion of students carrying debt was unchanged from the previous survey, conducted in 1995. What had changed, however, was the amount of debt the graduates of 2000 were carrying. Graduates of 2000 had, on average, 30% more debt than the Class of 1995, and 76% more debt than the Class of 1990 (in 2000 constant dollars).

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Thus, over the course of the last 15 years, the post-secondary education environment can be characterized in large part by its volatility:

- governments decreased funding to the public institutions;
- upfront costs to individual students rose;
- participation among full-time students—especially in universities—increased;
- participation among women increased;
- participation among Aboriginal peoples increased;
- participation among lower income families (low SES individuals) increased, decreased, and then increased back to its early 1980s level;
- participation among middle income families (middle SES individuals) remained steady, and may currently be on the decline; and
- participation among high income families (high SES individuals) continued to remain strong.

Given the context, it becomes important to try to understand how these trends have impacted equity in post-secondary education. By reviewing the literature on access to post-secondary education, it is hoped that it will be possible to understand some of the factors influencing decisions to attend, attendance, and completion of post-secondary education.

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# MAKING THE DECISION TO ATTEND A POST-SECONDARY INSTITUTION

Researchers point to a number of factors, related to socio-economic status or family background, that impact an individual's decision to attend a post-secondary institution. Parental expectations of attendance, attitudes of family and friends, knowledge of costs and funding options, gender, and academic achievement are all related to whether or not individuals are able to choose to further their education after high school. For this review, parental expectations, knowledge of costs and funding options, and academic achievement will be highlighted.

## Parental Expectations

The majority of Canadian parents expect their children to attend a post-secondary institution. According to Statistics Canada's 1999 Survey of Approaches to Educational Planning, 87% of Canadian families expected that their children would receive some kind of post-secondary education. These expectations differed across income categories, however: 80% of parents in lower income households (less than \$30,000 per year) hoped that their children would attend a post-secondary institution, while 95% of parents in higher income households (\$80,000 or more) expected that their children would go on to university or college (Statistics Canada, 2001).

Family income has an important impact on expectations. As incomes rise, so too do parental expectations that children will receive post-secondary education. Not surprisingly, a family's ability to save for their children's education is also related to income. The higher the family income, the more likely that the family will be saving for future education. According to researchers using the 1999 Survey of Approaches to Educational Planning, less than one-fifth of families with incomes of less than \$30,000 were saving for the post-secondary education of their children, while about two-thirds of those with incomes of more than \$80,000 were doing so (Corak et al, 2003; Junor & Usher, 2002).<sup>3</sup>

Parents with higher levels of education are more likely both to expect their children to attend post-secondary education and to be saving for that education (Corak et al, 2003). This is not surprising, as higher levels of education are positively correlated with both higher expectations and higher family income. Parents with post-secondary

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<sup>3</sup> Saskatchewan families are slightly less likely than the national average to expect their children to attend a post-secondary institution: approximately 80% of them expect their children to participate in post-secondary education. However, Saskatchewan families are more likely overall to be saving for this education (51%).

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education are more likely to have higher family incomes and to have high expectations for their children's future education.

Parental expectations for the type of institution their children will attend are also related to income. Research in the United States and Australia has found that individuals from lower income families have been less likely to aim for admittance into highly selective and more prestigious universities than individuals from higher income families (James, 2002; Harvard University Gazette, 2004; Bowen, 2004). In addition, lower to middle income high school students are more likely to plan to attend a college than a university (James, 2002). They are less likely to see a university education as relevant than are those from higher income families.

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## **Knowledge of Costs and Funding Options**

Perceptions of the costs associated with attaining a post-secondary education can be an important determinant of access to post-secondary education. In a recent study conducted by the Manitoba Government (2000), the top-ranked barrier to future post-secondary plans was "not having enough money". While students listed other barriers such as lack of information, grades, personal contacts, not being accepted, family obligations, and discrimination as concerns, more students were concerned about financial barriers than all of the others. Other research has demonstrated that the perceived costs associated with post-secondary education have had an impact on high school students from lower socio-economic status families (Looker & Dwyer, 1998; Lowe, Krahn, & Bowlby, 1997; Newfoundland, 1998).

These observations about the relationship between family income and planning to attend a post-secondary institution also hold in other countries. A recent study of Australian high school students found that 90% of students wanted to participate in post-secondary education: approximately 66% in university and 25% for vocational

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education and training. However, when they were asked what they thought they would actually be doing after they finished school, the proportion expecting to go to university fell. Higher and middle income students still believed that they would attend university, but approximately 16% of lower income students believed that they would not be able to go.

**Perceptions of the costs associated with attaining a post-secondary education can be an important determinant of access to post-secondary education.**

Additionally, lower income students were more likely than other students to believe that the cost of university would keep them from attending, and that their families could not afford the costs of supporting them at university (James, 2002).

James' 2002 study of Australian high school students also investigated the interaction of gender and family income on participation, concluding that females from lower income families were more likely than males to believe that costs could make university impossible for them. They were also more likely to be concerned that their families could not afford the costs of supporting them while at university than the male students.

## **Academic Achievement and Preparation**

As one would expect, research demonstrates that there is a strong link between academic achievement, especially in the earlier years of secondary school, and making the decision to attend a post-secondary institution. Researchers note that this relationship is likely more complex than it actually seems on the surface, however. Corak et al (2003) note that academic achievement relates to family background, in that higher income families are more likely to be able to ensure that their children have the skills needed to fulfill academic requirements.

Related to academic achievement is preparation for participation in post-secondary education. Researchers have noted that academic counselling is vitally important in supporting decisions to attend a post-secondary institution, especially for students from lower SES groups (MacKinnon & Looker, 1999 in Canada; McDonough & Antonio, 1996 in the United States).

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Poor preparation for post-secondary admittance is often referred to as a reason why lower income children may not plan to attend a post-secondary institution. Research in the United States has demonstrated that the odds of both taking the SAT's (required for admittance into college or university) and of doing well on them are much better for those from higher income families than for those from lower income families: higher income students were six times more likely to both take the tests and do well on them (Hoxby, 2003). Hoxby (2003) has concluded that lower income families have greater difficulty investing resources to develop necessary abilities and outlooks in their children so that they could attend a post-secondary institution.

## **Part-time Work**

Canadian researchers generally agree that some part-time work during high school has a positive impact on young people's expectations for participation in post-secondary education. However, excessive work hours—usually considered to be 20 hours per week or more—negatively affect plans for attending post-secondary education.

What is not clear from the research is why students may be working more than 20 hours per week. There are a number of possibilities, some of which may be related to socio-economic status. The need to save money for post-secondary education or to contribute to supporting one's family are two such possibilities that may be related to the relationship between socio-economic status and plans for post-secondary attendance (Looker & Lowe, 2001). According to results from Statistics Canada's 2001 Survey of Approaches to Educational Planning, 70% of families expected their children to work during high school to help put themselves through university or college.

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# BARRIERS TO POST-SECONDARY PARTICIPATION

Researchers using a wide range of Canadian data have concluded that there are a variety of barriers to actually accessing and participating in post-secondary education. However, the most commonly noted reasons for potential students not continuing on with post-secondary education are financial ones, related to their SES (Junor & Usher, 2002).

Usher (1998) classifies financial barriers to post-secondary education as direct and indirect. Direct barriers are purely financial, and prevent people who are qualified and motivated from attending a post-secondary institution. Indirect barriers are conditions, often income-related, that discourage people from lower income backgrounds from deciding to pursue post-secondary education. These barriers can be understood as "...barriers of motivation and inadequate career planning which especially affect people from lower-income backgrounds" (p. 2).

The SES-related barriers most commonly addressed in the literature are 1) low levels of parental education; 2) low family income; 3) family status; 4) tuition fees as a deterrent; 5) debt as a deterrent; and 6) distance to nearest post-secondary institution.

## Low Levels of Parental Education

According to Finnie and Laporte's 2003 analysis using Statistics Canada's School Leavers Survey (conducted in 1991) and the Youth in Transition Survey (conducted in 2000), the level of parental education has had an important impact on children's post-secondary education participation rates. Finnie and Laporte concluded that family background, as measured by parental education levels, became a more important determinant of post-secondary access in the 1990s. Individuals with more highly educated parents were much more likely to attend a post-secondary institution in 2000 than in 1991, regardless of family income. However, participation levels increased very slightly, and in some cases decreased (particularly for males), for those individuals from lower parental education families. Research conducted by Butlin (1999) using Statistics Canada's 1995 School Leavers Follow-up Survey also emphasizes the importance of parental education in understanding who participated in post-secondary education and who did not (see also Guppy & Davies, 1998; de Broucker & Underwood, 1998; de Broucker & Lavallee, 1998; Knighton & Mirza, 2002 for similar conclusions).

Many researchers also distinguish between the father's and mother's incomes in two-parent families. Finnie and Laporte (2003) reported changes in the influence of parental

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education levels in two-parent families between 1991 and 2000. By 2000, a father's level of education had a greater impact on post-secondary participation than a mother's level of education. Noting that family income is more strongly related to a father's level of education than a mother's level of education, the researchers made the connection between a father's education and increased access to financial resources for children's participation in post-secondary education.

## **Low Levels of Family Income**

Although researchers have found that family income is an important factor in determining who is likely to attend a post-secondary institution, they do not always agree on the extent to which income matters, relative to other measures of socio-economic status.

Using data from Statistics Canada's Surveys of Consumer Finance 1975-1993, Christofides et al (2001) found that income levels are an important predictor of participation in post-secondary education. Lower income groups have experienced increases in post-secondary participation over time, but higher income families continue to be more likely to have their children enter post-secondary education. The researchers concluded that "...imperfect capital markets may continue to play a role in determining the decision to attend postsecondary education" (p. 200).

Researchers have also investigated the impact family income may have on individuals' choice of type of post-secondary education. Many have hypothesized that as university becomes more expensive, more individuals from lower income families will choose lower cost post-secondary options such as colleges or vocational/technical education (Knighton & Mirza, 2002). A recent University of Alberta (2000) study demonstrated that young people from lower income families have less access to the university system. Further, as tuition costs have increased, access decreased for these lower income individuals.

Evidence from other jurisdictions supports the Canadian conclusions. In the United States, Bowen (2004) notes that the National College Board reported that family income is still a strong determinant of an individual entering college (or university). Slightly over half (54%) of high school graduates from the lowest income quartile attend, while 82% of those from the highest income quartile attend (See also Choy, 1999 and Schapiro, O'Malley, & Litten, 1990. Lynch & O'Riordan, 1998 have drawn similar conclusions in the Irish case).

Research done in the United States has also indicated that family income has an impact on the type of programme chosen. Income affects access to information technology (IT), for example, therefore also impacting on access to both information about these types of IT programmes and to the programmes themselves (Gladieux & Swail, 1999).



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## Family Status

Earlier research from the United States concluded that children of single-parent families are less likely to aspire to attend, and to eventually attend, a post-secondary institution (Horn, 1997; Horn & Chen, 1998; Kennedy & Bateman, 1999; Lillard & Gerner, 1999). However, others have noted that it is difficult to assess whether this pattern is related to the family structure itself, or to the fact that many single parent households have a lower income than two parent households.

More recent research by Finnie and Laporte (2003) found that children from two-parent families are still more likely to participate in some form of post-secondary education than those from other types of family. However, during the 1990s, children from single parent families (mostly single mother families) became more likely to go on to post-secondary education than before, especially if the mother had a university education. Individuals from university educated lone-mother families were as likely to go to university as individuals from university educated two-parent families. The researchers argued that the level of parental education is becoming a more important determinant of children's post-secondary attendance than the type of family unit the children come from.

**Lower income groups have experienced increases in post-secondary participation over time, but higher income families continue to be more likely to have their children enter post-secondary education.**

Research shows that young people with dependent children have been less likely to attend a post-secondary institution than those without children (Butlin, 1999). More specifically, people with dependent children were much less likely to attend university than those without children. Butlin found that there was no reduction in the likelihood that individuals with dependent children would attend college or trade/vocational education programmes. Overall, though, young people with dependent children had lower levels of educational attainment (Butlin, 1999; Looker, 1997).

## Costs: Tuition Fees as a Deterrent

Many researchers have pointed to participation rates, measured across income categories, to argue that increases in tuition fees have not deterred participation in post-secondary education in any appreciable way (Junor & Usher, 2002). Usher (1998) claims that *small* tuition increases have a virtually undetectable impact on participation. However, the same researchers have also noted that for many families, the primary barrier to access is "...simply scraping together the required capital for each year of study" (Usher, 1998, p. 3).

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In research carried out by Christofides et al (2001), it was found that tuition fees did not deter participation. However, others have pointed out that this study used data collected during a time period in which tuition fees varied little. Notwithstanding this concern, the impact of tuition fees on participation among lower socio-economic status individuals has been dismissed by a variety of researchers, including Corak et al (2003) and Butlin (1999). Finnie and Laporte (2003) found that post-secondary participation rates increased across almost all provinces between 1991 and 2000 in spite of tuition fee increases in almost all provinces and programmes. Participation increases do not correlate with these tuition fee increases, however. In a province like Quebec where there was a small increase in tuition, there was a small increase in participation. In a province such as Nova Scotia, which had some of the highest tuition increases, participation increased substantially. However, these researchers, among others, have noted that it is important to recognize that Quebec has a unique post-secondary system, with a very high participation rate. Thus, it is reasonable to expect that low tuition fee increases in an already low-tuition system would not trigger any great influx of post-secondary participants (Butlin, 1999; Looker & Lowe, 2001; Junor & Usher, 2002, among others).

**Finnie and Laporte (2003) have noted that in spite of their conclusion that tuition fees do not—on their own—deter participation in post-secondary education, tuition fees are among several factors affecting participation in post-secondary education and provide part of the explanation for why individuals from higher income families are more likely to participate than those from lower income families.**

Other researchers, especially economists, conclude that tuition fees should not be expected to deter enrolment because individuals know that a post-secondary education is a good financial investment (Stager, 1989, 1996). Much of this discussion around fees for post-secondary education refers to personal costs as an investment in an individual's future. Christofides et al (2001) noted that "...private returns to postsecondary education are substantial, [thus] social mobility will be enhanced if participation rates in postsecondary education are increasing more rapidly for children from lower income families" (p. 179).

Finnie and Laporte (2003) have noted that in spite of their conclusion that tuition fees do not—on their own—deter participation in post-secondary education, tuition fees are among several factors affecting participation in post-secondary education and provide part of the explanation for why individuals from higher income families are more likely to participate than those from lower income families. They have argued that increases in fees and their effect on "price sensitive" individuals, like those from low income families, need to be examined within the context of the demand for education and the retrenchment of the post-secondary system.

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Some researchers have focused on the importance of understanding the impact of rising tuition fees on price sensitive individuals. In particular, Heller (1997) found that students from lower income families were more affected by increases in tuition fees and the associated costs of attending a post-secondary institution. A recent report by the University of Victoria (2004) concluded that rapidly increasing tuition fees did not alter the extent to which income predicts participation at the university. However, the research also showed that 72.5% of students were likely (very or somewhat) to ask for or borrow more money to cope with higher tuition fees, and that 40.1% of students were likely (very or somewhat) to take fewer courses to cope with the fees. In addition, 19.6% of currently enrolled students reported that they would likely (very or somewhat) have to stop their studies if tuition increased further.

When examining the impact of tuition fee increases on particular groups of individuals, it is necessary to remember that tuition fees have not risen equally across provinces and across programmes in Canada. Research in the United States shows a similar pattern, in that between 1970 and 1996 tuition rose significantly at the most expensive colleges, only to be followed by large increases in tuition at the public institutions that traditionally provided educational opportunities for economically disadvantaged students (Bowen, 2004). These differential fees are likely to impact individuals, especially those who are price sensitive, differently.

## **Costs: Accumulating Debt**

Due to institutional changes in the 1990s, approximately half of the students who attend post-secondary institutions take on debt to support their education. According to Statistics Canada's 2001 Survey of Approaches to Educational Planning, 50% of families expected their children to take on debt ("acquire additional financial resources") to help put themselves through university or college. What is not well explored in the research is how individuals, especially those from lower income families, react to having to take on this debt during the education process.

Research compiled by Junor and Usher (2002), using data from a survey of Ontario university students, showed that individuals applying to attend university also expected to take on debt, understanding both that 1) the lower one's family income, the more debt one would likely accumulate, and 2) the greater one's debt, the longer one would have to take to repay it. Students from lower income families (earning less than \$25,000 per year) were more likely to be knowledgeable about government student loan programmes. However, this survey did not look at people who would not be attending a post-secondary institution, and thus there is no information on how either knowledge of financial assistance programmes or lack of knowledge impacts those who do not apply for post-secondary education. Contradictory research in both Canada and the United States

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has concluded that individuals with the highest need for financial aid have the least information about the assistance available (Clift et al, 1998; Hossler & Maple, 1993).

As well as impacting whether individuals choose to or not to attend a post-secondary institution, not having access to funding (particularly non-repayable funding) can also impact whether a person delays attending a post-secondary institution. Tomkowicz and Bushnik (2003) found that not receiving a scholarship or a grant often delayed post-secondary education enrolment.

Evidence has shown that rising costs and required borrowing may be especially difficult for students from racial minorities, as they are unlikely to have the same access to financial resources as non-minority students (Grayson, 1995). The changing balance between forms of student financial assistance may impact some individuals more than others, as well. It is unclear how the changing balance of grants/bursaries and loans in the provincial government student loan systems throughout the 1990s impacted individuals of different backgrounds in terms of their decisions to attend a post-secondary institution. For student borrowers, especially among individuals of low socio-economic status background, debt levels rose steadily as grant programmes were eliminated (Looker & Lowe, 2001).

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## **Costs: Distance to Post-Secondary Institution**

Costs of moving to, or commuting to, an area with a post-secondary institution are often highlighted when researching the deterring effect of the costs of education. Using results from Statistics Canada's Survey of Labour and Income Dynamics, Frenette (2002) found that post-secondary participation rates, especially those for university attendance, were strongly influenced by the distance an individual lives from a post-secondary institution.

Frenette concluded that students who grow up near a university were more likely to attend, as they could save on costs by living at home. This was particularly important for low-income families, who were less likely to have the capacity to support their children in their move to a new area. These results are highly applicable for understanding the Saskatchewan situation. Approximately 19% of the Canadian population lives more than 80 km (considered beyond commuting distance for most) from a university, and thus, are less likely to attend. However, 52% of Saskatchewan residents live more than 80 km away from a university—a fact likely to have an impact on individuals' post-secondary participation.

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Frenette also noted that lower income people living farther away from a university were more likely to have to borrow larger amounts of money than both low income individuals living closer to a university and those higher income people living farther from a university. If students are not willing to take on additional debt, then lower income individuals living away from a university would be less likely to access that university.

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Andres and Looker (2001) also found that urban youth in British Columbia, Alberta, and Nova Scotia were more likely to attend a post-secondary institution than rural youth (see also Andres & Krahn, 1999). Research undertaken by Butlin (1999) and Christofides et al (2001) also confirmed a connection between a family's urban and rural location and participation in post-secondary education, concluding that urban families were more likely to have their children attend a post-secondary institution. Similar results have been demonstrated in Australia by James (2002) and Stevenson, Evans, Maclachlan, Karmel, and Blakers (2000).

## **Barriers to Professional Programmes**

Research on access to post-secondary education has traditionally focused on first-entry undergraduate and diploma programmes. However, more recently researchers have begun to examine the impact of dramatic increases in tuition fees on applicants and students in professional programmes, such as law, dentistry, and medicine. These are second-entry programmes, meaning that the vast majority of students applying for and accepted into the programmes already have an undergraduate degree, and potentially student debt. Many have anticipated that the increasing costs associated with these programmes would most impact those from lower income families.

Kwong, Dhall, Streiner, Baddour, Waddell, and Johnson (2002) reported that in Ontario, there was an increase in family income between students who entered medical school in 1997 and 2000: the number of students with a family income of less than \$40,000 declined from 22.6% to 15%. The researchers also noted that students reported that financial considerations had a major influence on their speciality choice and practice location.

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Dhalla, Kwong, Streiner, Baddour, Waddell, and Johnson (2002) examined background characteristics of medical students outside Quebec, finding that almost half— 43.5%— came from neighbourhoods with median incomes in the top quintile. In addition, the researchers found that students from lower income families were seven times less likely to enter medical school than were students from the highest income families. Researchers speculate that these results will also apply to students in other professional programmes, such as dentistry and law.

According to Allen and Vaillancourt (2004), 80% of the Medicine graduates of 2000 who did not pursue further education had student loans. These graduates had the highest average debt for graduates at any level of education, \$38,200. The researchers attributed this to the fact that tuition fees for Medicine programmes were, in 1999-2000, significantly higher than fees for undergraduate programmes. The Medicine graduates appeared to be paying their debts down faster than graduates of other programmes, due in part to their higher starting incomes. With the rapid increase in tuition fees across the country since 2000, researchers will want to assess how increasing costs impact the SES breakdown of applicants and students in professional programmes.<sup>4</sup>

Many have raised concerns about the impact of these cost increases on individual graduates and on the wider society. Brown and Raborn (2003) have questioned whether enough students are entering Canadian dentistry programmes in order to meet the demand for new dentists, pointing to increased costs of dental education as a possible deterrent for potential dental students. In New Zealand, increased tuition fees and debt for dentistry students led many graduating dentists to go overseas to earn higher salaries. New government funding was introduced in 2001 to lower dentistry tuition fees in the hopes that dentistry graduates would stay in the country (Conlon & Frache, 2002). Concerns about access to professional programmes is also being raised in the United States, as the costs of accessing medical, dental, and law schools continue to increase (Cooper, 2003).

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<sup>4</sup> The University of Saskatchewan recently increased tuition fees for students in the Dentistry programme. Under the new fee schedule, tuition fees for Saskatchewan residents are a minimum of \$32,000 per year. Students are advised to anticipate expenses for the four-year degree to total at least \$155,000 ([www.usask.ca/dentistry/sk\\_student/fees.shtml](http://www.usask.ca/dentistry/sk_student/fees.shtml)).

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# COMPLETING POST-SECONDARY EDUCATION

**R**esearch on completion of post-secondary education points to two main factors related to SES: financial barriers and adjustment barriers.

## Financial Barriers

First, financial barriers are not eliminated once a student enters a post-secondary institution. Rather, finances continue to be identified as a barrier by about one-third of all post-secondary students (Junor & Usher, 2002). Students cope with financial barriers while completing their education in a number of ways, including taking on part-time or full-time work, borrowing additional funds, taking a break from studies, or changing from full-time to part-time status (University of Victoria, 2004; Corak et al, 2003; Looker & Lowe; 2001).

**Students cope with financial barriers while completing their education in a number of ways, including taking on part-time or full-time work, borrowing additional funds, taking a break from studies, or changing from full-time to part-time status (University of Victoria, 2004; Corak et al, 2003; Looker & Lowe; 2001).**

Researchers, particularly in the United States, have concluded that rising tuition fees can affect some students more than others. Researchers found that African-American students were more responsive than other students to tuition discounts (Kaltenbaugh, St. John, & Starkey, 1999; Fenske, Porter, & Dubrock, 1999). Other research has found that minority students' access to post-secondary education was positively influenced by grants and bursaries, while access was negatively impacted by repayable funding like loans (Baker & Vélez, 1996). Canadian research has found that Aboriginal students at university also face issues around lack of funding (Archibald, Bowman, Pepper, Union, Mirenhouse, & Short, 1995). Many researchers point to the differing impact of different kinds of student financial assistance, whether government-sponsored, post-secondary institution-sponsored, or privately sponsored, on continuing post-secondary participation.

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According to Statistics Canada's 2001 Survey of Approaches to Educational Planning, 86% of families expected their children to work while attending a post-secondary institution to help put themselves through either university or college. Even more Saskatchewan families than the national average (90% versus 86%) expected their children to work during post-secondary study.

However, summer work for students became challenging to find in the 1990s (Looker & Lowe, 2001). Doherty-Delorme and Shaker (2003) have examined the relationship between college and university tuition fees and average student summer employment income, finding that as of 2001-02, a Saskatchewan university student would earn (on average) \$3,900 over the summer. Tuition fees at an average of \$3,831 would account for a total of 98.2% of summer earnings, leaving virtually nothing for other educational costs. College students were slightly better off, but still would be left with little funds after paying their fees: fees of \$2,442 accounted for 62.6% of average summer earnings.

## **Adjustment Barriers**

Researchers in the United States have found that there is little difference in completion rates between university students at private institutions from lower and higher income families. However, they have found that students from lower income families are less likely to complete an undergraduate degree at a public university, arguing that these students are likely to need more help adjusting to the cultural, social, and academic challenges in college than are students from higher income groups who presumably have prior experience with and/or knowledge of these challenges (Bowen, 2004).



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## CONCLUSIONS

Some believe that we are at a point where we must make difficult decisions about what we as a society want to see for the future of our post-secondary education system:

...there are two possible directions for the future of the education system: one in which the concerns of the market place are traded off against those of citizenship and inclusion, and another in which trade-offs are somehow not made and both goals are pursued simultaneously. Access to post-secondary education is one area that offers the clearest reflection of these two options: do we want higher education to promote excellence in a way that focuses resources on the few; do we want it to be universal and offer everyone the opportunity to participate; or can we have both excellence and inclusion? (Corak et al, 2003, p. 1).

Inequalities in access persist: students from the highest SES quartile are more than twice as likely to go to university as their counterparts in the lowest SES quartile (Council of Ministers of Education, Canada and Statistics Canada, 2000). In spite of ongoing discussion about how to address this issue, individuals with low family or household income and whose parents have low levels of educational attainment (considered to be measures of low socio-economic status) continue to be underrepresented in Canada's post-secondary system, especially in the universities (Butlin, 1999; Looker & Lowe, 2001; Junor & Usher, 2002; Corak et al, 2003; and others).

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The Council of Ministers of Education, Canada (CMEC) and Statistics Canada note that stagnant family incomes, rising economic inequality, and declining grants-based student funding are linked to the post-secondary education gap between lower, middle, and higher socio-economic status individuals. Tax cuts, concurrent with cuts to funding for post-secondary institutions throughout the 1990s, have ensured that higher SES families have proportionally more money to spend on post-secondary education for their children. Meanwhile, lower SES families continue to have less money to put toward their children's increasingly expensive post-secondary education.

The gap between rich and poor can be closed

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by ensuring that there is financial support available for individuals from lower income backgrounds who want to attend a post-secondary institution (Council of Ministers of Education, Canada & Statistics Canada, 2000). As a society, the choice we have made to perpetuate unequal access to post-secondary education means that we cannot be as successful as we have the potential to be. We are not always educating our best minds—rather, we are educating those who can afford to attend a post-secondary institution and either excluding those who cannot or forcing them into debt if they want to attend.

In spite of the importance of socio-economic status on its own (measured as family income and/or parental education), there are additional factors at work affecting access to post-secondary education that are not clearly researched and understood. Research needs to focus on the links between SES and race/ethnicity, Aboriginal status, gender, disabilities, and family structure in order to unpack the complex reasons why individuals may not aspire to, participate in, and complete post-secondary study. As a society, we must work to understand why all citizens do not have access to post-secondary education and to the tools for both individual social mobility and for building a stronger society. ●

**The gap between rich and poor can be closed by ensuring that there is financial support available for individuals from lower income backgrounds who want to attend a post-secondary institution (Council of Ministers of Education, Canada & Statistics Canada, 2000).**

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## REFERENCES

Allen, M., & Vaillancourt, C. (2004). *Class of 2000: Profile of postsecondary graduates and student debt*. (Catalogue No. 81-595-MIE – No. 016). Ottawa, ON: Culture, Tourism and the Centre for Education Statistics Division, Statistics Canada.

Andres, L., & Krahn, H. (1999). Youth Pathways in Articulated Post-Secondary Systems: Enrolment and Completion Patterns of Urban Young Women and Men. *The Canadian Journal of Higher Education*, 29 (1), 47-82.

Andres, L., & Looker, D.E. (2001). Rurality and Capital: Educational Expectations and Attainment of Rural and Urban Youth. *The Canadian Journal of Higher Education*, 31 (2), 1-2.

Archibald, J.K., Bowman, S., Pepper, F.C., Union, C., Mirenhouse, G., & Short, R. (1995). Honouring What They Say: Post-Secondary Experiences of First Nations Graduates. *Canadian Journal of Native Education*, 21 (1).

Baker, T.L., & Vélez, W. (1996). Access To and Opportunity in Postsecondary Education in the United States: A Review. *Sociology of Education* (Extra Issue), 82-101.

Bouchard, B., & Zhao, J. (2000). University Education: Recent Trends in Participation, Accessibility, and Returns. *Education Quarterly Review*, 6 (4).

Bowen, W.G. (2004). *Lecture II: The Question for Equity: "Class" (Socio-Economic Status) In American Higher Education*. The Thomas Jefferson Foundation Distinguished Lecture Series, University of Virginia. April 7, 2004.

Brown, T., & Raborn, W. (2003). Is There an Adequate Supply of New Dentists in Canada? *Journal of the Canadian Dental Association*, 67 (7), 373-374.

Butlin, G. (1999). Determinants of Post-Secondary Participation. *Education Quarterly Review*, 5 (3), 9-35.

Choy, S.P. (1999). College Access and Affordability. *Education Statistics Quarterly*, 1 (2), 74-90.

Christofides, L.N., Cirello, J., & Hoy, M. (2001). Family Income and Postsecondary Education in Canada. *The Canadian Journal of Higher Education*, XXXI (1), 177-208.

Clift, R.F., Hawkey, C., & Vaughan, A.M. (1998). *A Background Analysis of the Relationship Between Tuition Fees, Financial Aid, and Student Choice*. Paper presented at the meeting of the Canadian Society for the Study of Higher Education, Memorial University, Newfoundland, 1997. Revised and posted at [www.cufa.bc.ca/clift/A\\_Background\\_Analysis.html#1](http://www.cufa.bc.ca/clift/A_Background_Analysis.html#1).

Cloutier, R. (1984). *Access of Women and Minorities to Higher Education: Changes in Taste and Colour without Chemical Changes: Part 1*. Paper presented at the Joint Conference of the American Educational Research Association and the Association for the Study of Higher Education, San Francisco, California.

Conlon, M., & Frache, P. (2002). Increasing the burden: Student financial assistance in Canada. In Denise Doherty-Delorme & Erica Shaker (Eds.), *Missing Pieces III: An Alternative Guide to Canadian Post-Secondary Education* (pp. 76-84). Ottawa, ON: Canadian Centre for Policy Alternatives.

---

Cooper, R.A. (2003). Impact of Trends in Primary, Secondary, and Postsecondary Education on Applications to Medical School. II: Considerations of Race, Ethnicity, and Income. *Academic Medicine*, 78 (9), 864-876.

Corak, M., Lipps, G., & Zhao, J. (2003). *Family Income and Participation in Post-Secondary Education*. (Analytical Studies Branch Research Paper Series No. 210. Family and Labour Studies Division, Statistics Canada). Ottawa, ON: Ministry of Industry.

Council of Ministers of Education, Canada, & Statistics Canada. (2003). *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program*. Toronto and Ottawa: Canadian Education Statistics Council.

Council of Ministers of Education, Canada, & Statistics Canada. (2000). *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program*. Toronto and Ottawa: Canadian Education Statistics Council.

de Broucker, P., & Lavalley, L. (1998). Getting ahead in life: Does your parents' education count? *Education Quarterly Review*, 5 (1), 22-28.

de Broucker, P., & Underwood, K. (1998). Intergenerational Educational Mobility: An International Comparison with a Focus on Postsecondary Education. *Education Quarterly Review*, 5 (2).

Dhalla, I.A., Kwong, J.C., Streiner, D.L., Baddour, R.E., Waddell, A.E., & Johnson, I.L. (2002). *Characteristics of first-year students in Canadian medical schools*. *CMAJ*, 166 (8), 1029-1035.

Doherty-Delorme, D., & Shaker, E. (2002). *Missing Pieces III: An Alternative Guide to Canadian Post-Secondary Education*. Ottawa, ON: Canadian Centre for Policy Alternatives.

Doherty-Delorme, D., & Shaker, E. (2003). *Missing Pieces IV: An Alternative Guide to Canadian Post-Secondary Education*. Ottawa, ON: Canadian Centre for Policy Alternatives.

Fenske, R.H., Porter, J.D., & Dubrock, C.P. (1999). *Analyzing Student Aid Packaging to Improve Low-Income and Minority Student Access, Retention, and Degree Completion*. Paper presented at the Annual Forum of the Association for Institutional Research, Seattle, Washington.

Finnie, R., & Laporte, C. (2003). *Family Background and Access to Post-Secondary Education: What Happened in the 1990's*. (Queen's School of Policy Studies Working Paper 34). Kingston, ON: Queen's School of Policy Studies.

Frenette, M. (2002). *Too far to go on? Distance to school and university participation*. (Analytical Studies Research Paper Series No. 191). Ottawa, ON: Statistics Canada.

Gladieux, L.E., & Swail, W.S. (1999). *The Virtual University and Educational Opportunity: Issues of Equity and Access for the Next Generation*. Washington, DC: The College Board.

Grayson, P. (1995). Does Race Matter? Outcomes of the First Year Experience in a Canadian University. *The Canadian Journal of Higher Education*, 25 (2), 79-109.

Guppy, N., & Davies, S. (1998). *Education in Canada: Recent Trends and Future Challenges*. (No. 3). Ottawa, ON: Statistics Canada.

Harvard University Gazette. (2004). *Overcoming economic barriers*. Online edition: [www.news.harvard.edu/gazette/2004/03.04/01-finaid.html](http://www.news.harvard.edu/gazette/2004/03.04/01-finaid.html). Accessed 26/04/2004.

Heller, D. (1997). Student Price Response in Higher Education. *Journal of Higher Education*, 68 (6), 624-659.

- 
- Horn, L.J. (1997). *Confronting the Odds: Students At Risk and the Pipeline to Higher Education*. Washington, DC: National Centre for Education Statistics.
- Horn, L.J., & Chen, X. (1998). *Toward Resiliency: At-Risk Students Who Make it to College*. Washington, DC: National Institute on Postsecondary Education, Libraries, and Lifelong Learning.
- Hossler, D., & Maple, S. (1993). Being Undecided about Postsecondary Education. *Review of Higher Education*, 16 (3), 285-307.
- Hoxby, C.M. (2003). *The Economics of School Choice*. Washington, DC: National Bureau of Economic Research.
- James, R. (2002). *Socioeconomic Background and Higher Education Participation: An analysis of school students' aspirations and expectations*. Canberra: Commonwealth of Australia.
- Junor, S., & Usher, A. (2002). *The Price of Knowledge: Access and Student Finance in Canada*. Montreal, QU: Millennium Scholarship Foundation.
- Kaltenbaugh, L.S., St. John, E.P., & Starkey, J.B. (1999). What Difference Does Tuition Make? An Analysis of Ethnic Differences in Persistence. *Journal of Student Financial Aid*, 29 (2), 21-31.
- Kennedy, E., & Bateman, M. (1999). Expanding the Application Pool: Exploring the College Decision-Making of Students from Single-Parent Families. *College and University*, 75 (1), 2-10.
- Knighton, T., & Mirza, S. (2002). Postsecondary Participation: The Effects of Parents' Education and Household Income. *Education Quarterly Review*, 8 (3), 25-32.
- Kwong, J.C., Dhalla, I.A., Streiner, D., Baddour, R.E., Waddell, A.E., & Johnson, I.L. (2002). Effects of rising tuition fees on medical school class completion and financial outlook. *CMAJ*, 166 (8), 1023-1028.
- Lillard, D., & Gerner, J. (1999). Getting to the Ivy League: How Family Composition Affects College Choice. *Journal of Higher Education*, 70 (6), 706-30.
- Looker, E.D. (1997). Employment of Rural Youth: The Challenges and Constraints. In R. Bollman and J. Bryden (Eds.), *Rural Employment: An International Perspective* (pp. 85-98). CAB International.
- Looker, E.D., & Dwyer, P. (1998). Education and Negotiated Reality: Complexities Facing Rural Youth in the 1990s. *Journal of Youth Studies*, 1 (1), 5-22.
- Looker, E.D., & Lowe, G.S. (2001). *Post-Secondary Access and Student Financial Aid in Canada: Current Knowledge and Research Gaps*. A Background Paper for a Canadian Policy Research Networks Workshop on Post-Secondary Access and Student Financial Aid, 1 February 2001, Ottawa. Montreal, QU: Canadian Millennium Scholarship Foundation.
- Lowe, G.S., Krahn, H., & Bowlby, J. (1997). *1996 Alberta High School Graduate Survey: Report of Research Findings*. Edmonton: Communications Branch, Alberta Advanced Education and Career Development.
- Lynch, K., & O'Riordan, C. (1998). Inequality in Higher Education: A Study of Class Barriers. *British Journal of Sociology of Education*, 19 (4), 445-478.
- MacKinnon, D., & Looker, E.D. (1999). *Under the Influence: The Role of Significant Others in Youths' Occupational and Educational Choices*. Paper presented to the Fourth National Conference on Rural Education, Saskatoon, Saskatchewan.

---

Manitoba Government. (2000). *Student Transitions: Intentions of Manitoba Senior 4 Students. Phase 1 of A Longitudinal School-Work Transitions Study*. Winnipeg, MB: Author.

McDonough, P.M., & Antonio, A.L. (1996). *Ethnic and Racial Differences in Selectivity of College Choice*. Paper presented at the Annual Meeting of the American Educational Research Association, New York, New York.

Newfoundland. (1998). *On the Road to Success: The Report of the Follow-Up of 1995 and 1996 High School Graduates*. St. John's, NF: Department of Education: Division of Corporate Planning and Research.

Quirke, L. (2001). Access in jeopardy? Social class, finances and university attendance. In Denise Doherty-Delorme & Erica Shaker (Eds.), *Missing Pieces II: An Alternative Guide to Canadian Post-Secondary Education* (pp. 63-70). Ottawa, ON: Canadian Centre for Policy Alternatives.

Sarkar, G., & Stallard, C. (1997). *Do Equity Groups Have a Fair Chance in Our Education System?* Paper presented at the Annual Meeting of the Canadian Institutional Research and Planning Association, Toronto, ON.

Schapiro, M.O., O'Malley, M.P., & Litten, L.H. (1990). *Tracing the Economic Backgrounds of COFHE Students: Has There Been a "Middle-Income Melt"?* Cambridge, MA: Consortium on Financing Higher Education.

Stager, D. (1989). *Focus on Fees: Alternative policies for university tuition fees*. Toronto, ON: Council of Ontario Universities.

Stager, D. (1996). Returns to investment in Ontario university education, 1960-1990, and implications for tuition fee policy. *The Canadian Journal of Higher Education*, 26 (2), 1-22.

Statistics Canada. (2001). Survey of Approaches to Educational Planning. *The Daily*. (Tuesday, April 10). Ottawa, ON: Author.

Stevenson, S., Evans, C., Maclachlan, M., Karmel, T., & Blakers, R. (2000). *Access—Effect of campus proximity and socio-economic status on university participation rates in regions*. (Occasional Paper Series 00/D). Canberra, AU: Department of Education, Training and Youth Affairs.

Tomkowicz, J., & Bushnik, T. (2003). *Who goes to post-secondary education and when: pathways chosen by 20 year-olds*. (Education, skills and learning Research Papers, Catalogue no. 81-595-MIE20030006). Ottawa, ON: Minister of Industry.

University of Alberta. (2000). *Degrees of Opportunity: Examining Access to Post-Secondary Education in Alberta. Final Report of the Senate Task Force on Access to Post-Secondary Education*. Edmonton, AB: Author.

University of Victoria. (2004). *Study on Affordability and Accessibility: Report to the Provost and Vice-President Academic*. Victoria, BC: Author.

Usher, A. (1998). *Income-Related Barriers to Post-Secondary Education*. Toronto, ON: Council of Ministers of Education, Canada.

Zhao, J., & de Broucker, P. (2002). Participation in postsecondary education and family income. *The Daily*. January 9. Ottawa, ON: Statistics Canada.