

EDUCATIONAL ACHIEVEMENTS AND LABOUR MARKET OUTCOMES OF STUDENTS IN THE UNIVERSITY OF MANITOBA ACCESS PROGRAM

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Abstract / Résumé

Increasing accessibility to university education for under-served populations has been an important policy issue in Canada for at least thirty years. It has long been recognized that those facing socioeconomic, geographic, gender, or ethnic barriers are less likely to attend universities, and are less likely to succeed even if they attend. Success in higher education has been so strongly correlated with economic and social outcomes that governments in Canada have taken a variety of steps to try to improve accessibility for disadvantaged populations.

Depuis au moins trente ans, l'accessibilité croissante à l'éducation universitaire des populations sous-desservies se montre une importante question de politique gouvernementale au Canada. Il est établi depuis longtemps que les individus subissant des obstacles rattachés à la situation socio-économique, géographique, sexuelle ou ethnique ont moins tendance à fréquenter l'université tout comme ils ont moins de chance d'y réussir leurs études. La réussite des études post-secondaires est si étroitement reliée aux facteurs économiques et sociaux que les gouvernements canadiens ont pris diverses mesures pour tenter d'améliorer l'accessibilité des populations défavorisées.

In Manitoba, particular attention has been given to two groups—Aboriginal people and people living in remote communities, with many of the former also qualifying in the latter category.¹ Over the past twenty-five years, a series of programs has been developed in the province that collectively have had very significant success in providing high quality post-secondary education to populations, primarily Aboriginal, that had previously been excluded from such education. These programs are based on the belief that if academic, social, personal, and financial barriers are addressed, minorities and disadvantaged groups, for whom education has not been a viable option, will enroll and succeed in post-secondary studies at the same levels as non-excluded members of society. The programs follow the tenet of *equality of condition* that states that mere access is not sufficient, but must be accompanied with the kinds of supports that give to students who are motivated, but poorly prepared and under-resourced, a realistic opportunity to succeed (Unruh and Levin, 1990).

These access programs operate in a wide variety of fields of study and with several different program formats (see Alcom and Levin, 1998, for a fuller discussion of the programs). Over the years, though, an overall set of principles has developed that characterize them. These include offering the same degrees and diplomas that all other students receive; conducting extensive recruitment to the program; selecting students who could not succeed without the support of the program, but who have a reasonable chance of success with these supports; ensuring an integrated set of academic, personal, and financial supports for students; and redesigning some curriculum and teaching to ensure that Access students are supported in reaching the same high standards as all other students.

The programs operate on the belief that with appropriate motivation and support, many students who would not normally be admissible to university can achieve high standards and earn recognized qualifications. A formal review of the University of Manitoba Access Program concluded that about 40% of the 2,400 students admitted to the programs over their history had graduated, and that this was an unparalleled achievement for programs that were admitting entirely students who did not meet normal entrance requirements (Hikel, 1994).

Graduates of the University of Manitoba Access Program (UMAP) include a large variety of professionals—engineers, teachers, social workers, and nurses. As of the fall of 1994, 11 of the 51 Aboriginal doctors and three of the five Aboriginal dentists in Canada were UMAP graduates. The program has done a great deal to assist its intended clients in obtaining relevant and high quality post-secondary education, even though people

from the target groups continue to be greatly under-represented in higher education (McClure, Wallace, Sloane-Seale, Lavallee and Levin, 1999).

The program does much more, however, than help individual students; it also makes a vital contribution to the development of Aboriginal communities, which continue to suffer from high rates of poverty and unemployment. Many UMAP graduates have returned to their communities to work. In this regard, they provide role models for young people, provide professionals with a deep understanding of Aboriginal culture and needs, and also generate economic activity in the community. Many UMAP graduates have also continued on to graduate education and many hold key leadership roles in the Aboriginal community in Canada.

Although the UMAP and accessibility to higher education are important background elements in this study, it is important to note that this project is not an evaluation of the UMAP. Our intent is to use interest in the programs as a way of identifying a cohort of disadvantaged Manitoba adults whose long-term economic and educational outcomes would be of interest from a variety of perspectives. In this second paper, however, we distinguish between data drawn from program participants and non-participants.

Related Literature

There is a dearth of longitudinal studies on the linkage between Aboriginal education and training and labor market outcomes. Some studies use Statistics Canada data to analyze the achievement and prospects of Aboriginal students who have completed higher education (Armstrong, Kennedy, and Oberle, 1990; Drost, 1995; Sarkar and Stallard, 1997; Saskatchewan Institute of Applied Science and Technology [SIAST], 1996).

The available literature, however, has little to say on the ways in which these lives unfold over time. Moreover, much of the school-to-work transition literature tends to stop at around age 25, whereas this study looks primarily at adults, many of whom are well above this age. The conceptual literature on second chance (Inbar, 1990) has not led to a significant body of empirical work in Canada.

Higher education is often the best means of social mobility available to Aboriginal people. Graduating from university is associated with more stable patterns of employment and higher earnings (SAIST, 1996; Smith, 1997; Statistics Canada, 1993; Yau *et al.*, 1993). Aboriginal people, however, continue to be under-represented at all levels of the education and employment systems (Statistics Canada, 1993). The literature review that follows examines Aboriginal peoples' education and labor market outcomes.

Labor Force Participation

Labor force activity is an indicator of economic well being. For both Aboriginal and Canadian populations, increased levels of education tend to be followed by increased levels of participation in the labor force, increased employment, and less unemployment. With education, economic well being among Aboriginal people increases, and differences in labor force activity between Aboriginal people and other Canadians decrease (Armstrong *et al.*, 1990; Drost, 1995; Sarkar and Stallard, 1997).

With respect to persons holding a university degree, labor force participation among Aboriginal and non-Aboriginal people is similar, the employment rate is within 6%, and the unemployment rate is within 7%. Armstrong *et al.* (1990) state that the relative gains, nevertheless, associated with a university education are greater for Aboriginal than non-Aboriginal peoples. Controlling for education, differences in labor force activity between the two groups may be due to work experience, labor market opportunity, and quality of employment opportunities.

Controlling for work experience enhances the advantage of Aboriginals over non-Aboriginals with respect to employment and unemployment rates. For degree holders of a specific age (15 to 24 years) labor force participation among Aboriginal students is higher than non-Aboriginal, and their unemployment rates are lower. When work experience is not controlled, Aboriginal labor force participation is slightly lower than non-Aboriginal.

Labor market opportunity is the availability of work. The opportunity to participate in the labor force is less in remote regions and on Reserves. Armstrong *et al.*, (1990) indicate that when labor market opportunity is not controlled, the participation rates are about the same for Aboriginal and non-Aboriginal degree holders (87%). The employment rates for on-Reserve Aboriginal degree holders and comparable non-Aboriginal degree holders in comparable communities are 78% versus 82% respectively. The results are similar for all Aboriginal and non-Aboriginal degree holders (77% versus 82% respectively). The unemployment rate for on-Reserve Aboriginal degree holders is 12% compared to 5% for non-Aboriginal degree holders in comparison communities. The results indicate an increased gap for Aboriginal and non-Aboriginal degree holders.

SIAST (1995) provides information on graduates of Aboriginal ancestry who completed certificate and diploma programs, and determines whether their success rate of finding employment is similar to the employment rates of overall graduates from such programs. At the time of the SIAST survey, the majority of Aboriginal respondents were employed in training-related occupations (i.e., jobs that require all or some of the skills gained in the training program). The study confirms that vocational graduates have a

lower unemployment rate than graduates of general programs and, of the total number of weeks in the labor force since high school graduation, vocational graduates enjoyed the highest number of weeks of employment.

The study suggests that labor force activity is also influenced by the general economic condition of the province and has an impact on the success rate of finding employment (Sarkar, 1995; SIAST, 1995). Of the 1991 Aboriginal graduates who replied to the SIAST survey, 74% found employment compared to 78% of the graduates overall, a difference of 3%. However, in 1992 (in Saskatchewan) when the recession worsened and the labor market was down, only 65% of the 1992 Aboriginal graduates compared to 74% of the SIAST graduates found employment, a difference of 9% (Sarkar, 1995; SIAST, 1995; Statistics Canada, 1993 and 1998).

Types of Jobs

Aboriginal people are under-represented in managerial, teaching, and health-related occupations, and they are over-represented in service, trades, processing, and operative (transportation equipment operating) occupations. The industrial composition of the two labor forces is similar as well. Between 21% and 23% of Aboriginal and non-Aboriginal workers respectively, are employed in manufacturing and construction, with slightly fewer Aboriginal workers in manufacturing and more in construction. In the service sector, Aboriginal workers are over-represented in consumer services and the public-sector, and under-represented in business services. The gaps narrow only slightly as educational achievement increases (Drost, 1995; Statistics Canada, 1993 and 1998).

Wages

The Statistics Canada *1991 Aboriginal Peoples Survey* indicates that incomes among Aboriginal people are disproportionately low. Sixty-one percent of Aboriginal people in Saskatchewan have incomes below \$10,000, twice as many as the general population. Thirteen percent have incomes in the \$20,000 to \$40,000 range (considered middle class) compared to 26% of the general Saskatchewan population (Sarkar, 1995).

Graduates of academic programs in full-time jobs have an earning advantage over graduates of general programs (Campbell, 1986; SIAST, 1995). These findings suggest that attaining a certificate or training narrows the wage gap between Aboriginal graduates and graduates overall. The Aboriginal graduates who were employed received comparable wages.

SIAST (1996) and Statistics Canada (1993) indicate that the average employment earnings of Aboriginal women are lower than that of other women in Canada and their male counterparts. Campbell (1986) suggests that differences in the extent of post-secondary education, other things

being equal, contribute to substantial differences in hourly and monthly earnings. Those with four or more years of post-secondary education have an earning advantage of at least 20% over those who do not continue their education after high school graduation. With education and other factors related to productivity controlled, however, significant gender differences in wages remain (Sarkar, 1995).

When ability, level of education, labor-market experience, and other relevant variables are controlled, women consistently earn less than men. This disparity is, in part, the result of differences in the socialization process of men and women that occurs in the family and in the education system, and points women to stereotypical fields of study such as business programs which, in turn, lead to lower paying work or unemployment (Gerardi, 1996; Sarkar, 1995; Statistics Canada, 1998).

Unemployment

Unemployment is related to educational achievement, age, gender, marital status, ethnic origin, and geographic location. Unemployment rates for both Canadian and Aboriginal populations steadily fall as the level of education increases. Unemployment is one of the most serious problems Aboriginal people face in the labor market. A number of studies, using data from the 1991 census, show that the overall unemployment rate of Aboriginal people in major cities (15%) is close to twice that of non-Aboriginal people (8%) (Armstrong *et al.*, 1990; Drost, 1995; SIAST, 1996; Statistics Canada, 1993).

Drost (1995) indicates that the relationship between unemployment and age is U-shaped for Aboriginal and non-Aboriginal people. The incidence of unemployment declines until prime age is attained (as young people leave the school system, they slowly move into more stable employment in the adult labor market and, as a result, the frequency of unemployment declines). Between ages 45-50, unemployment starts to rise, peaking before retirement age. This rise represents the increase in unemployment duration with age: the older a worker is, the longer it will take to be re-employed after a job separation.

The population of Aboriginal people tends to be much younger than Canada's total population. Thirty-six percent are under the age of 15, compared to 21% for the total population. Only 7% of the Aboriginal population are aged 55 years and over, compared to 20% of all Canadians. The differences in the age distribution between the two populations are very substantial in all provinces, but they are particularly large in the Prairie provinces and in British Columbia (Drost, 1995; Statistic Canada, 1993). Consequently, there will be a much larger cohort of Aboriginal youth

entering the labor force over the next decade. This may create major problems in the provinces and cities of Western Canada. If the job opportunities for Aboriginal people do not greatly increase, the demographic bulge may lead to a deterioration of the relative wage and employment rates of Aboriginal workers in western cities.

Gender is another important factor in unemployment. Women are normally expected to have a higher risk of unemployment than men, because of their interrupted labor force participation. Also, because women are more likely than men to hold low-wage jobs, increases in the minimum wage may have a greater negative impact on their employment levels.

Marital status is another factor in unemployment. Being married, divorced, or separated increases the chances of employment as compared to being single. Marital status only, however, is not strongly related to labor market activity; rather, having children in the home has a significant impact on the likelihood of unemployment. Since many single mothers have full responsibility for childrearing, their ability to acquire and keep a job is greatly reduced. The restrictions on labor market attachment seem to be greater for Aboriginal single mothers than for their non-Aboriginal counterparts.

Ethnic origin is also linked to unemployment. In metropolitan areas with a high concentration of Aboriginal people with a single-ethnic origin, the unemployment rates of Aboriginal people surpass non-Aboriginal. Among single-origin Aboriginal people, urban dwellers are, on average, three times more likely to experience unemployment than are non-Aboriginal, and twice as likely as Aboriginal of mixed ethnic origins. Regina, Saskatoon and Winnipeg have particularly low Aboriginal labor force participation rates. In Winnipeg, 44% of single-origin Aboriginal people of working age are not in the labor force, compared to 25% of Aboriginal people with mixed ancestries, and 19% of non-Aboriginals. Looking at the unemployed working-age population, 38% of Aboriginal people are not employed, compared to 26% of non-Aboriginal.

Geographic location is yet another factor in unemployment. As a result of the dissimilar regional distribution of Aboriginal and non-Aboriginal populations, the ratio of Aboriginal people to the total number of Canadians is much higher in the western provinces, particularly in Manitoba and Saskatchewan. This dissimilar regional distribution of the Aboriginal population must be considered when unemployment variances between Aboriginals and non-Aboriginals are compared. The percentage of Aboriginal people in urban centers reporting a single ethnic origin has grown to 42%. Over 60% of Aboriginal people are concentrated in the large metropolises, where they face a much higher risk of unemployment.

The relatively higher concentration of the Aboriginal urban labor force in the western Canadian cities helps to explain the overall unemployment variance between Aboriginal people and non-Aboriginals; it accounts for close to 50% of the identified unemployment gap. Twenty-four percent is due to the higher representation of Aboriginal people in the younger age groups, lower levels of education attainment, and differences in the industrial distribution contribute to 11% and 8% respectively. The unexplained part may include the effects of differences in work habits, aspirations, health, quality of schooling, and other intangibles (e.g., differences in cultural and family background). If young Aboriginal workers are limited to secondary labor market jobs—that is, jobs that have low wages, poor working conditions, and little opportunity for skill acquisition and advancement within companies—unstable employment patterns will continue.

Employment

Among the many worker characteristics, the relatively low level of general education and occupational skills of Aboriginal people have been considered major obstacles to stable Aboriginal employment. Of all the educational achievement factors having less than a grade 9 education has the greatest influence on employment. Failure to complete elementary or junior high school has dismal consequences for the job opportunities of Aboriginal people. Non-completion increases the likelihood of unemployment for Aboriginal people by 12% (versus 4% for non-Aboriginals) compared to the achievement of a high school certificate or diploma (Canada, 1991; Drost, 1995; Statistics Canada, 1993).

The labor market outcomes of educational policy clearly indicate that the largest gains for enhancing the employment opportunities of Aboriginal people can be attained by increasing their elementary and junior high school completion rates. The likelihood of employment is increased for Aboriginal people with a trade certificate. However, having a diploma or certificate from a community college, junior college, or technical institute increases the chances of unemployment when compared with those whose highest educational attainment was a high school diploma.

It is not clear why urban Aboriginal college graduates do not gain employment relative to those who hold a trade certificate, although it may be due to overcrowding in those jobs for which college graduates are hired. College graduates are also the largest group of all Aboriginal students who hold a secondary or post-secondary certificate, diploma, or degree. Having a university degree increases the likelihood of employment, more so for Aboriginal graduates than for non-Aboriginal. Even an incomplete university education enhances their employment opportunities. Education and train-

ing, therefore, appear to narrow the employment gap (SIAST, 1995; Statistics Canada, 1993).

Lavin and Hyllegard's (1996) second-chance study examined the long term outcomes of the open access policy at City University of New York in 1970. The policy provided access to the City University system to anyone who completed a high school diploma in New York City. The study examined a substantial number of participants over twenty years and concluded that the policy was of great benefit to a large number of students who would otherwise have been excluded from higher education. Even though a large number of participants who would previously have not qualified for admission did not complete their studies at CUNY, another large number did so, and their employment and income results were substantially better than would otherwise have been expected.

At the same time, the study indicates that initial disadvantage continues to affect many people's lives on an ongoing basis, despite their attainment of additional education. Students from minority backgrounds, with lower income, or with less educated parents were more likely to be in non-academic programs in high school and more likely to require remedial help in university. As a result, it often took these students longer to graduate, and they earned on average lower GPAs, which influenced access to graduate study. Disadvantaged students were also more likely to have to work part-time while in college, further reducing their academic performance. The labor market itself also sometimes exacerbates disadvantage. Minorities in the United States are more likely to be employed in the public sector, which has been in a period of retraction and, in many occupations, pays less on average. These disadvantages are increased for women because of their childbearing/rearing responsibilities and pay discrimination.

Similar patterns are expected among disadvantaged adults in Manitoba, many of whom come from Aboriginal backgrounds. While additional education can improve life outcomes, the impacts of early and continued disadvantage cannot be overcome entirely by any one element of the social structure. When trying to explain discrepancies in education, jobs, and salaries (i.e., labor market outcomes) social scientists often use a number of theories, including socialization or human capital, certification, and labor market segmentation. Socialization theory states that as a result of education, human capital is increased as students gain knowledge, skills, and abilities they would not otherwise have. The theory suggests that university graduates are paid more money than high school graduates because they have the knowledge, skills, and abilities employers value. Similarly, graduates of certain fields may get jobs more easily and make more money than graduates of other fields (Grayson, 1997).

In contrast, certification theory suggests that university graduates do not necessarily have more knowledge, skills, and abilities than non-graduates and that a university education, therefore, bestows on graduates a positive status that employers value (independent of knowledge, skills, or abilities achieved). The theory suggests that the mere possession of the degree without any demonstration of skills, knowledge, or abilities allows university graduates to find it easier to get jobs and earn more than students with only high school diplomas (Grayson, 1997).

Labor market segmentation theory suggests that there is not one labor market in which everyone competes fairly on the basis of knowledge, skills and abilities. There are several restrictive markets defined by gender, class (annual parental family income), and ethno-racial origin. As a result, independent of knowledge, skills, and abilities, groups such as women and non-Whites including Aboriginal people, may have difficulty finding jobs, and if they do, these may be low paying (Grayson, 1997).

Finally, there is some evidence to suggest that luck plays a considerable role in shaping people's lives. Jencks (1972) demonstrated that variances in outcomes were very large ingroups that had similar educational achievement, similar family background, or similar measured ability. Some of this variance must be attributable to the unexpected—positively, in terms of a chance opportunity, or negatively through an illness or other misfortune. As Tepperman (1988) puts it, life may be less a process of getting what you want than of learning to want what you get.

As we have seen, the literature suggests important links between Aboriginal education and training and labor market outcomes. Aboriginal peoples' recent educational gains are especially impressive given their difficult economic, geographic, and social conditions. The challenge that many educational institutions face is to work with the Aboriginal communities to build upon positive trends and ensure that Aboriginal people receive not only the quality and level of education they need, but also the equality of employment opportunities they deserve (O'Brien, 1992; Poonwassie, 1993; Sarkar and Stallard, 1997).

Existing studies suggest that education and training remove some of the documented inequities in employment and income levels between the Aboriginal population and the population overall. Obtaining a certificate, diploma, or degree has an equalizing effect on the opportunities to participate in the labor market. Nevertheless, with respect to research on Aboriginal people in higher education, the dearth of national and longitudinal studies examining their experiences is a major gap in the literature. The educational needs, difficulties, and economic indicators such as employment and income figures remain largely hidden for Aboriginal people.

A number of compelling questions in the literature suggested further inquiry and were investigated in the current study.

The Study

The objectives of this study were to investigate the differences, including gender differences, in education and training, and employment experiences between persons accepted and persons non-accepted in the Access (UMAP) and Special Pre-Medical Studies (SPSS) Program at the University of Manitoba. The study also collected information that may help educational programs and government agencies understand how to act more effectively in developing prospects for training and employment outcomes. Finally, the study aimed to develop a better understanding of the events, factors, and difficulties that have an impact on the educational and economic outcomes of these students.

Population and Sample

In the study, the population of disadvantaged adult students from the University of Manitoba was defined as former applicants to the University's Access/SPSS Program. Given that the purpose of the Access/SPSS Program is to help students disadvantaged by socioeconomic or geographic barriers achieve higher education goals, the application criteria serve to attract students who are disadvantaged. Participants for the study were drawn from applicants from the years 1983, 1987, and 1991. The total random sample of 471 was drawn from Program participants and non-participants in those years.

Method

Survey methodology is used to collect data for the study. Since reliable addresses are more difficult to obtain than telephone numbers, and since this is a population less likely to respond accurately and completely in writing than by telephone, a telephone survey was designed. A possible limitation of the telephone interview method is that, although the telephone survey no doubt increases response rates, it may have produced more socially desirable responses than a mail survey (deLeeuw, 1992).

Participants were identified from the Access Program files, and their contact and demographic information recorded. Given that the design included the use of contact information from application files dating back as far as 1983, contact information first had to be updated before participants could be reached. Correct addresses and telephone numbers were obtained from the Manitoba Telephone System and, more frequently, by contacting northern and rural Manitoba communities (McClure *et al.*, 1999).

The telephone survey instrument contained structured items designed to gather demographic data and information related to education and training, and work experience. A number of items were drawn from an existing survey instrument, the Statistics Canada Graduates Study (1997). It was necessary to modify a number of items to take into account the particular circumstances of Aboriginal students, students from northern Manitoba, and those who had come from disadvantaged circumstances.

The survey instrument comprised of four parts: education and training experience, work experience, skills acquisition and use, and demographic information. The instrument was pre-tested with a sample of five persons comparable to the sample, and a number of questions were modified as a result of the feedback received.

In order to facilitate the cooperation of participants, a pre-notification letter explaining the purpose of the study was mailed to persons in the sample. Current Access Program students who had been hired and trained as telephone interviewers subsequently conducted the one-hour telephone interviews. Data were collected over a 16-month period and were coded during the interviews. Each interview concluded with an enquiry as to whether or not the participant would be willing to participate in a follow-up face-to-face interview.

The follow-up face-to-face interviews are planned for 2000. These interviews will provide in-depth information regarding the relationship between education and training, skills, and work experience of this population. The interviews will be audiotaped and later transcribed. Before the data will be analyzed, the interview transcripts will be mailed to participants for further input on accuracy and completeness.

Data Analysis

The analysis was guided by a number of questions that are derived from the first paper and the literature review. Are there differences in educational, employment, and income outcomes among accepted and non-accepted? Are there gender differences in educational achievement and economic outcomes among these respondents?

There are difficulties inherent in obtaining data from files over 15 years old drawn from a mobile, hard-to-reach population that includes individuals who are engaged in hunting, fishing, trapping, and mining on a part-time or full-time basis. We, therefore, put extra time and resources in the initial data collection stage trying to contact members of the sample but have had enormous difficulty trying to contact and reach a sufficient number of respondents.

During the interim from first reporting on these data and this second report we tried once again to contact members of the sample. At the time of writing this second report, however, the data set is comprised of responses from 103 participants, an increase of 14 respondents, representing a new response rate of only 22% (an increase of 4%). This response rate does not allow for meaningful statistical analysis, generalizations, or reporting (Babbie, 1995). We have again extended the data collection phase and will continue to locate additional respondents but are not very hopeful that we will be able to report more fully on this population. At this point, we have prepared preliminary observations that we believe are worthy of presentation and discussion.

Findings

The data are reported at the aggregate level. However, for purposes of analysis for this second paper the data are not analyzed by specific years of entry into the Program (i.e., 1983, 1987, and 1991). Unless stated otherwise, the analysis also looked at those who were accepted and not accepted to the program, and gender differences. In the interest of clarity the following labels will be used: "accepted" will refer to survey respondents from the group of students who were accepted into the Access Program the year in which they applied. "Non-accepted" will refer to survey respondents from the group of students who were not accepted into the Access Program the year in which they applied. The data are discussed in the four sections corresponding to the purpose of the study: demographics, education and training, work experience, and skill acquisition and use.

Demographics and Gender Differences

Demographic and gender differences provide a profile of the disadvantaged accepted and non-accepted applicants in the study. Data include information on family status, language and cultural identity, and parents' education levels. The gender differences are analyzed using the complete sample; that is, there is no differentiation by year of application or accepted versus non-accepted.

Family Status

Of the total number of respondents (N=103), 58% were women and 42% were men. Of these, 40% of the women and 32% of the men were accepted into the Access Program at the University of Manitoba. Almost two-thirds (63%) of the male applicants reported that they had partners (married or common-law) at the time of application to Access. In contrast,

only half of the female applicants reported having a partner. Compared to male applicants, almost three times (33% versus 13%) more females had dependent children.

Of those applicants accepted to the Access Program, over half had dependents.

Cultural Identity

The majority of applicants (both accepted—86% and non-accepted—75%) reported that they spoke English as their first language. A higher percentage (accepted—94% and non-accepted—86%) considered themselves First Nations, Métis, Aboriginal, or Inuit.

Employment

At the time of the survey, most respondents (80%) were employed. Of the First Nations, Aboriginal, Métis, and Inuit respondents, over 90% were satisfied with their current employment, and over 80% held only one job since application to the Access Program.

Education Level of Parents

Applicants to the Access program who had at least one parent complete high school had a greater likelihood of acceptance (13% versus 5%).

Education and Training Experience

The survey data on the education and training experiences of respondents since the time of application to the Access Program were analyzed according to type of program, completion rates and satisfaction, motivation for taking program, students' status and finance, and continuing education experiences.

Types of Programs

Of those persons accepted to the Access Program, 82% completed a university degree (versus 43% of non-accepted). In contrast, 46% of those non-accepted completed some sort of diploma or certificate program (versus 13% of accepted).

With respect to gender differences, more women had enrolled in college/diploma/certificate (20% versus 10%), and university degrees (66% versus 53%). More men, however, had taken trade/vocational (10% versus 0%), and other diploma/certificate (17% versus 11%).

With respect to enrollment in certificates, diplomas, and degrees since application to the Access Program, more accepted applicants (91%) had enrolled in these educational activities than non-accepted applicants (78%).

A majority of both groups reported that they would select the same field of study if they had to make their choice again.

Motivation for Taking Program

Both accepted and non-accepted applicants stated that the two main reasons they enrolled in their first education and training program were to obtain work/career, and to return to help their community. Twice as many accepted applicants (21% versus 10%) reported that gaining a prerequisite for further education was their next most important reason.

Students' Status and Finance

Almost three times as many non-accepted applicants had to study part-time and work full-time due to lack of money, no full-time program available, or family responsibilities. The major source of funding for all respondents' first program was public funds (i.e., Band funding, Access Program financial support, scholarships, awards, bursaries, and student loans) rather than employment earnings. Considerably more non-accepted applicants, however, had to fund their education through employment earnings (15% versus 3%)—a finding that underscores the dependence of disadvantaged students on Access and other public funding.

Continuing Education Experience

The majority of respondents stated that the main motivation for their enrollment in continuing education programs beyond their formal education was career/job-related.

Work Experience

The study gathered data on respondents' employment history and gender, including employment and level of education, type of employment, satisfaction with employment and income, and unemployment.

Employment and Level of Education

The majority of non-accepted applicants were employed in jobs that did not require any post-secondary qualifications. In contrast, accepted applicants (68%) were employed in jobs that required at least an undergraduate degree. The majority of both groups felt qualified for their jobs.

Type of Employment

At the time of the survey the majority of respondents were currently employed full-time, and held at least one job. The majority were paid employees with a small minority being self-employed. Respondents who worked less than 30 hours per week did so because of child care respon-

sibilities (20% accepted and 0% non-accepted); company's reduction in hours (0% and 20%); and personal preference (20% and 40%). With regard to respondents' current main job, accepted (65%) and non-accepted (78%) applicants reported that this was a permanent job. Of note is the lack of accepted applicants in the transportation, primary industry, and manufacturing sector compared to 21% of non-accepted applicants. Also, a smaller proportion of accepted applicants found themselves in sales or service positions (5% versus 14%). Applicants who were accepted into the Access Program appeared to be more successful in obtaining positions in medicine/health and teaching.

With respect to gender differences the majority of men (87%) and women (75%) reported that they were currently employed and held at least one job (82% male versus 84% female). The majority of men (84%) and women (88%) were paid employees versus self-employed. More women were employed in the social sciences (23% versus 19%), teaching (16% versus 8%), managerial (12% versus 5%), and clerical fields (10% versus 0%). More men were employed in medicine/health (22% versus 19%) careers.

Employment Satisfaction

On the whole, the majority (89%) of respondents reported that they were satisfied with their current jobs. The majority of men (73%) and women (74%) reported that they felt qualified for their current jobs.

Income Satisfaction

Although there appeared to be a lower degree of satisfaction with income than employment, respondents reported feeling satisfied with their income (66%).

Unemployment

Although periods of unemployment were experienced by both accepted and non-accepted groups, those who were accepted were considerably less likely to be unemployed for periods of longer than 13 months (21% accepted vs. 51% non-accepted).

Skill Acquisition and Use

Respondents were asked about the skills that were important in their current employment and the extent to which aspects of their experience (education, work, and volunteer activity or life experience) assisted in the development of those skills.

Developing Skills

With respect to the six skills investigated, communication skills appeared to be important for both accepted and non-accepted applicants. It is interesting to note, however, that communication skills were the clear priority for the accepted group (64% versus 49%). Technical skills were less important to the accepted group (22% versus 9%), and the ability to work with others was more important to the accepted group (17% versus 7%).

Volunteer Activity

Most respondents engaged in unpaid volunteer work (accepted—87% and non-accepted—81%) and reported that this work had a positive impact on their education and employment experiences.

Discussion

It is unfortunate that there is so little research regarding the educational and employment histories of Aboriginal people. This may reflect the prejudice against and lower status of this disadvantaged group. Although we cannot draw conclusions from this second WRNET study, a number of observations can be made regarding the fit between our data and the picture presented in the literature.

The typical respondent in this study was a woman aged 25 years or under, living alone with dependent children. She speaks English as her first language and identifies herself as a member of an Indigenous Canadian people (Aboriginal, Métis, First Nations, or Inuit), and as a member of a visible minority. She is currently employed at one permanent job, earns a salary of \$25,000 - \$39,999 per year, and depends heavily upon her communication skills in her work.

If this woman was accepted to the University of Manitoba Access Program, she is more likely than a non-accepted applicant to have had at least one parent complete a high school credential, and more likely to have finished the undergraduate degree program in which she enrolled. She is unlike her non-accepted counterpart in that her degree was a necessary qualification for her current job. She has also done more than her non-accepted counterpart to continue to upgrade her skills and qualifications through continuing education programs. She is satisfied with her current job but less so with her income.

Although this woman has had periods of unemployment in her work life, she (unlike her non-accepted counterpart) has never been out of work for longer than 12 months. The funding she received in the Access Program allowed her to complete her studies as a full-time student without incurring

the debt and depletion of employment earnings experienced by her non-accepted counterpart.

Demographics

The findings in this study support aspects of labor market segmentation theory (Grayson, 1997). Although these students have improved their employability through participation in education and training, unemployment patterns show that a proportion of both groups appears to be underemployed. This may suggest that there is not one labor market in which everyone competes fairly on the basis of knowledge, skills, and abilities but several restrictive markets defined by gender, class, and ethnic origin.

Education and Training Experience

Accepted applicants had higher completion rates for certificates, diplomas, and degree programs than non-accepted applicants (91% vs. 78%), and both accepted and non-accepted applicants had high levels of attachment to the labor force (79% accepted and 80% non-accepted were currently employed at the time of the survey). This finding is consistent with the literature with respect to the observation that education can shrink the gap and inequities in employment and income for Aboriginal peoples. These findings (although limited) suggest that of the relationship between education and work force experience for the Aboriginal population, higher education may still be one of the best means of social mobility (Sarker, 1997; SIAST, 1996; Smith, 1997; Statistics Canada, 1993; and Yau *et al.*, 1993).

Educational disparities for the accepted applicants may have been reduced because the Access Program moved students beyond disadvantaged family circumstances by building in factors that contribute to their academic achievement (Barton, 1997) such as financial, personal, and academic supports. Accepted applicants also may have completed more degrees and advanced education because of these supports and, therefore, are in professional occupations that tend to pay more than other fields. The fact that applicants, on the whole, (even those who were not accepted into the Access Program) have high completion rates and stable employment may also relate to attitudes or experiences not investigated in this study. For example, that both accepted and non-accepted applicants had high completion rates for educational programs suggests that both groups may have placed a high value upon education as a means to stable employment.

Respondents' major motivation for taking formal educational programs was related to work purposes, that is, getting employment and keeping up-to-date on job skills. This result is consistent with the literature (Gerardi,

1996; McClure *et al.*, 1999; SIAST, 1995). For these disadvantaged students, however, returning to help their community also appeared to be as important for pursuing their programs (Poonwassie, 1993). In addition, in this study, accepted applicants took their educational programs as pre-requisites for further education, and non-accepted applicants engaged in formal programs for self-improvement.

Work Experience

For these disadvantaged learners the findings suggest (Statistics Canada, 1993) that education and training programs may be one very successful avenue to improved SES. These learners are beginning to be represented at some levels of the education and employment systems, and discrepancies in education, jobs, and income (that is, labor market outcomes) are being reduced. Although this finding may be unrepresentative of the population, it may also support aspects of socialization theory in that human capital is increased as learners gain more knowledge, skills, and abilities they would not otherwise have. They, therefore, may gain employment and more income than high school graduates because they have the knowledge, skills, and abilities which employers may value. Further data analysis is required to identify the factors, besides education, that influence employers' recruitment and hiring practices.

Many of these disadvantaged learners were employed at the time of the survey in occupations requiring education and training. They were in jobs that required all or some of the skills gained in their educational programs, and a smaller proportion of the group was unemployed for periods over 12 months. This suggests that having a university degree or post-secondary certificate or diploma reduces the likelihood of unemployment and enhances the employment opportunities for this group of disadvantaged learners. Education and training, therefore, appear to be narrowing the unemployment gap. Given the long term gains in income achieved by university graduates over those with college certificates and diplomas, the Access Program may have assisted disadvantaged students in dramatically improving their SES.

Skill Acquisition and Use

The findings of this study are consistent with the self-assessed, generic skills identified in the literature that are valued by employers and that contribute to the employment of applicants. When asked about aspects of their experience that developed their skills, these disadvantaged learners

identified life experience or volunteer activity, on-the-job training, and education and training (McClure *et al.*, 1999).

The findings also provide some support for aspects of socialization and certification theory. In addition to content knowledge, employers value and stress generic skills such as analytic, communication, organizational, comparative, job procurement, basic numeracy, and basic computer skills. There is a positive relationship between full-time employment and these generic skills (Grayson, 1997).

Implications For Research, Policy, and Practice

Academic, personal, and financial supports provided by the University of Manitoba Access Program appear to be linked to improved employment opportunities, geographic mobility, and improved socioeconomic status. The current data point to formal education as an important vehicle for obtaining employment skills. These data also suggest that there may be at least a partial mismatch between the formal curricula of formal education, and skills people require and use at work. Further study is needed to explore the fit between the formal curricula and generic skills that are required and used in the workforce.

Low socioeconomic status is one of the strongest determinants of talent loss, particularly among Aboriginal people (Hanson, 1994; Plank and Jordan, 1997). In the current study, disadvantaged learners achieved a large range of outcomes—a finding that suggests many disadvantaged learners have unrealized potential and talent loss would be enormous. Increased access to post-secondary education appears to be a very important factor in improving life chances, occupational status, and economic status of these high-potential disadvantaged students. More research is required to identify how educational institutions and government agencies can be more effective in providing appropriate supports for disadvantaged learners.

Finally, structure, agency, and life histories play important roles in the socioeconomic outcomes of the disadvantaged. While additional support and education have a positive impact upon improving life outcomes, the impact of early and continued disadvantaged cannot be overcome entirely by any one element of the social structure. The influences of agency and life histories upon the life chances and outcomes of disadvantaged people are important elements that also require further investigation.

Conclusion

The criteria for acceptance into the University of Manitoba Access Program are lack of resources and motivation to succeed. By definition, the sample in this study was comprised of disadvantaged learners. On a number of measures (e.g., levels of education achieved, employment history, and employment skills), the learners accepted into the Access Program achieved considerably greater gains. These results support previous findings regarding the efficacy of the Access Program in compensating for disadvantage.

Generalizations, however, at this point, would be premature. There is a need to further investigate the ways in which this sample (of both accepted and non-accepted applicants) may differ from the larger population of disadvantaged learners. Continued data collection will allow statistical analysis, control of variables, generalizations, and recommendations.

Note

1. Kim Cooke was the Research Assistant on this project. An earlier version of this paper was published on the Western Research Network on Education and Training Website: <http://www.educ.ubc.ca/wrnet/callforpapers.htm>.

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