The Saskatchewan Institute of Applied Science and Technology (SIAST) conducted a trend analysis of students from four designated groups—Aboriginal, visible minorities, persons with disabilities, and women in predominantly male occupations. These students were compared to the overall student population on four success measures: access to educational opportunities; success rates in education as measured by completion/graduation rates; success rates in obtaining employment in the chosen field of study; and wage/salary ranges for the employed graduates. The study used data from these sources: annual Education Equity Monitoring Report that documents changes from year to year in terms of applications, enrollments, graduation, and leaver statistics for the four groups and annual Graduate Employment Survey from which the graduates of the four groups are extracted and their employment rates compared with overall graduates. Findings indicated the following: an increase in participation of equity groups in SIAST programs; lower success rates for equity group students; steadily improving completion rates with parity for some groups; and lower employment rates for equity group graduates. More long term data is necessary before definite correlations can be made. (Copies of 29 transparencies used during the presentation are appended.) (YLB)
Do Equity Groups Have a Fair Chance in our Education System?

Presented at:
CIRPA Annual Conference
October 21, 1997
Toronto, Ontario

Presenters:

Gerlinde Sarkar
Director, Research and Development
Saskatchewan Institute of Applied Science and Technology
400 - 119 4th Ave. S.
Saskatoon SK S7K 5X2
Canada
Phone: (306) 933-7716
Fax: (306) 933-5988
email: sarkar@siast.sk.ca

Claire Stallard
Senior Research Officer
Saskatchewan Institute of Applied Science and Technology
400 - 119 4th Ave. S.
Saskatoon SK S7K 5X2
Canada
Phone: (306) 933-6199
Fax: (306) 933-5988
email: stallard@siast.sk.ca
Do Equity Groups have a Fair Chance in our Education Institutions?

An outcome assessment analysis of diversity groups students compared to students overall

Introduction

The Saskatchewan Institute of Applied Science and Technology is a technical institute in the province of Saskatchewan, Canada, with four campuses in the major four cities of the province. In Saskatchewan we have a large and growing population of Aboriginals. These people often face major barriers to enter the mainstream of society. One of these barriers is lack of education. Even when such students enter an educational institution they often face many obstacles to be successful. In addition to this group, we have designated three further groups that have been traditionally underrepresented in the educational institutions and in the workforce: people with disabilities, visible minorities (or racialized Canadians) and women in pre-dominantly male occupations. Since 1990 SIAST has adopted an "Education Equity" Program that is designed to address the inequities that these four designated groups face in participating in education.

A major component of the Education Equity program is to provide access to these groups of students to our educational institution by setting aside seats for qualified applicants. However, the support does not stop at the entry point. Getting entry is of no particular value if these students can't succeed. In order to help these students complete their studies successfully, we have put in place a number of programs and special measures that would eliminate or reduce some of the barriers they face in an educational setting. The goal is to have these students graduate at similar rates and to obtain similar levels of attachment to the labor force than do the regular students. We have studied the progress with regard to this goal over time.

Purpose

The purpose of this study was to conduct a trend analysis of students of the four designated groups (Aboriginal, visible minorities, persons with disabilities and women in non-traditional occupations) of these success measures compared to the overall student population:

- access to educational opportunities
- success rates in education as measured by completion/graduation rates
- success rates in obtaining employment in the chosen field of study
- wage/salary ranges for the employed graduates

Literature Review

No formal literature review was conducted for this particular study; however, before implementing the SIAST Education Equity program and in the context of our regular research functions, we found a significant amount of secondary research, which documented the need for our Education Equity program, the numerous barriers to education and to enter the workforce.

Data Sources

At SIAST we complete an annual Education Equity Monitoring Report since 1990. This report documents the changes from year to year in terms of applications, enrollments, graduation and leaver statistics for the four identified equity groups compared to the SIAST student population overall. The report documents the various special measures that have been put into place during that year to increase the chances of succeeding in the program.

SIAST also conducts an annual Graduate Employment Survey of our over 4,000 graduates. In a further analysis of this overall data base we extract the graduates of the four equity groups and compare the employment rates of the equity group graduates to the overall graduates. This type of analysis has now been performed for six years and it provides us with a good data for the trend analysis.
**Methodology**

Data is analyzed on a yearly basis in a consistent manner. The proportion of students of the equity groups in the pool of applicants, enrolled students, graduates and leavers are compared. Similar proportions would indicate that equity students face similar challenges and barriers as do the students overall in progressing through their studies. Application to enrollment ratios are compared as are graduation and leaver rates.

Conducting a course analysis for every program allows us to identify programs in which these students experience particular difficulty. The analysis is based on calculating the percentages of credit courses attempted, completed, failed and exited and comparing this by the various groups. Employment rates in training related employment, full and part time employment, wage and salary levels and other related information are tracked and compared through the data bases of the annual Graduate Employment Survey.

**Results**

We have noted an increase in participation of equity groups in the programs offered at SIAST since the Education Equity program has been adopted. Success rates are still lower for equity group students than for the overall student population, however, the completion rates are steadily improving and reaching parity for some groups.

Employment rates for graduates from equity groups are generally lower than for the overall graduates. The gap has narrowed somewhat, but the differential seems to be related to economic upswings. More long term data is necessary before we can make any definite correlation's however.

**Implications**

The results of the study are useful in modifying the special measures that assist students to complete their studies. These measures can then be applied in a very targeted manner to assist special groups or to approach the barriers in specific programs. Although the institution as a whole does not have the ultimate control over who hires our students, we can indirectly affect potential employers by encouraging them to hire graduates from the equity groups by assuring the industry that all graduates, regardless from what special group, have mastered the same competencies and are equally qualified to do the work that is expected of them.
Do Equity Groups Have a Fair Chance in our Education System?

A comparison of Aboriginal, Disabled, Visible Minority and Female students to the overall student body with respect to:

- Access to education
- Graduation rates
- Workforce attachment rates

Access
SIAST established an Education Equity Program

Outcomes
Annual Monitoring Report prepared for the Saskatchewan Human Rights Commission

but...

... where do we go from there?

Attachment to Workforce
Measured by the annual SIAST Graduate Employment Statistics Report
SLIDE 3

SIAST Education Equity Program

Objective
+ To ensure a SIAST student body which reflects the diverse mix of people in the Saskatchewan population

Program Strives to Improve Accessibility to
+ Students of Aboriginal Ancestry
+ Students with Disabilities
+ Students from Visible Minorities
+ Female students

SLIDE 4

SIAST Education Equity Program

+ Voluntary (developed under the special programs section of the Saskatchewan Human Rights Code)
+ Approved by the Board and the Saskatchewan Human Rights Commission, May 1990
+ Goal is to achieve a representative student body in SIAST Certificate/Diploma programs with respect to the four designated groups
+ Defines strategies to address systemic discrimination and identifies special measures to increase the participation and success of designated group students in Certificate and Diploma programs
SLIDE 5

Representation of Employment Equity Designated Groups in Saskatchewan, 1991

Workforce population for Aboriginal, Visible Minority and Females is comprised of persons aged 15 and over who worked sometime in 1990 or 1991. The workforce population for Disabled persons is comprised of persons aged 15 to 65 who worked sometime between 1986 and 1991.

SLIDE 6

Saskatchewan Working Age Demographics
(SIAST Education Equity Long Term Goals)

- Persons of Aboriginal Ancestry - 12.2%
- People with Disabilities - 9.7%
- Visible Minority People
  - Saskatoon - 4.7%
  - Regina - 5.1%
  - Saskatchewan - 2.6%
- Females - 50%
SLIDE 7

Direct Student Access Fund

Activities
- Learning Strategy Development
- Subject Specific Tutoring - Individual and Group
- Invigilators
- Readers
- Scribes
- Photocopy Cards
- Orthopedic Chairs
- Adaptive Computer Technology
- Application Fees
- Sign Language Interpreters
- Oral Facilitators

Learning Assistance Centre

Transition Program for LD Adults

SLIDE 8

Enrolment Trend - Female

Goal 50.0%

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>50.0%</td>
</tr>
<tr>
<td>1993</td>
<td>48.1%</td>
</tr>
<tr>
<td>1994</td>
<td>47.0%</td>
</tr>
<tr>
<td>1995</td>
<td>48.2%</td>
</tr>
<tr>
<td>1996</td>
<td>48.6%</td>
</tr>
<tr>
<td>1997</td>
<td>49.4%</td>
</tr>
</tbody>
</table>
SLIDE 9

Enrolment Trend - Aboriginal

Goal 12.2%

SLIDE 10

Enrolment Trend - Disabled

Goal 9.7%
SLIDE 11

Enrolment Trend - Visible Minority

Goal Regina 5.1% Saskatoon 4.7% Saskatchewan 2.6%

SLIDE 12

Graduate Trend - Female

BEST COPY AVAILABLE
SLIDE 15

Graduate Trend - Visible Minority

Not Recorded


0% 1% 2% 3%

SLIDE 16

Employment Trend - Female

77.7% 76.7% 78.2% 82.7% 81.4%

100% 80% 60% 40% 20% 0%


Total Employment 73.9% 75.8% 78.3% 82.4% 83.7%
SLIDE 17

Employment Trend - Aboriginal

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>73.9%</td>
</tr>
<tr>
<td>1993</td>
<td>75.8%</td>
</tr>
<tr>
<td>1994</td>
<td>78.3%</td>
</tr>
<tr>
<td>1995</td>
<td>82.4%</td>
</tr>
<tr>
<td>1996</td>
<td>83.7%</td>
</tr>
</tbody>
</table>

SLIDE 18

Employment Trend - Disabled

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>73.9%</td>
</tr>
<tr>
<td>1993</td>
<td>75.8%</td>
</tr>
<tr>
<td>1994</td>
<td>78.3%</td>
</tr>
<tr>
<td>1995</td>
<td>82.4%</td>
</tr>
<tr>
<td>1996</td>
<td>83.7%</td>
</tr>
</tbody>
</table>
SLIDE 19

Employment Trend - Visible Minority

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>73.9%</td>
</tr>
<tr>
<td>1993</td>
<td>75.8%</td>
</tr>
<tr>
<td>1994</td>
<td>78.3%</td>
</tr>
<tr>
<td>1995</td>
<td>82.4%</td>
</tr>
<tr>
<td>1996</td>
<td>83.7%</td>
</tr>
</tbody>
</table>

SLIDE 20

Divisions

- Business (12.6%)
- Aboriginal (26.8%)
- Disabled (9.1%)
- Visible Minority (14.7%)
- Female (4.7%)

Total (n=1634)
Aboriginal (n=138)
Disabled (n=44)
Visible Minority (n=58)
Female (n=872)

Do Equity Groups Have a Fair Chance in our Education System?
CIRPA Annual Conference, Toronto ON, 10/97
Do Equity Groups Have a Fair Chance in our Education System?
CIRPA Annual Conference, Toronto ON, 10/97

SLIDE 23

Enrolled in Any Education

Enrolled □ Not Enrolled

<table>
<thead>
<tr>
<th></th>
<th>Total (n=1622)</th>
<th>Aboriginal (n=135)</th>
<th>Disabled (n=44)</th>
<th>Visible Minority (n=67)</th>
<th>Female (n=884)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled</td>
<td>82.5%</td>
<td>81.9%</td>
<td>84.1%</td>
<td>80.6%</td>
<td>81.1%</td>
</tr>
<tr>
<td>Not Enrolled</td>
<td>17.5%</td>
<td>18.1%</td>
<td>15.9%</td>
<td>19.4%</td>
<td>18.9%</td>
</tr>
</tbody>
</table>

SLIDE 24

Age Distribution

<table>
<thead>
<tr>
<th></th>
<th>Total (n=1622)</th>
<th>Aboriginal (n=135)</th>
<th>Disabled (n=44)</th>
<th>Visible Minority (n=67)</th>
<th>Female (n=884)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55+</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>35 - 54</td>
<td>15.3%</td>
<td>15.3%</td>
<td>15.3%</td>
<td>15.3%</td>
<td>15.3%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
<td>23.1%</td>
</tr>
<tr>
<td>20 - 24</td>
<td>49.5%</td>
<td>49.5%</td>
<td>49.5%</td>
<td>49.5%</td>
<td>49.5%</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>22.9%</td>
<td>22.9%</td>
<td>22.9%</td>
<td>22.9%</td>
<td>22.9%</td>
</tr>
</tbody>
</table>

BEST COPY AVAILABLE
SLIDE 27

Full Time Training Related Monthly Salary

- Minimum • Average • Maximum

$7,000 $6,300 $4,350
$6,000
$5,000
$4,350
$4,000
$3,000
$3,000
$2,400 $2,000
$1,751 $1,790 $1,574
$1,498 $1,574 $1,790
$1,000 $800 $800 $803
$800 $803 $803

Total (n=768)
Aboriginal (n=58)
Disabled (n=12)
Visible Minority (n=32)
Female (n=58)

SLIDE 28

Top Reasons Unsuccessful in Finding Employment
(Unemployed respondents only)

Total (n=191)
- Employment is seasonal (27.7%)
- Not enough experience (18.8%)

Aboriginal (n=22)
- Employment is seasonal (40.9%)
- No jobs in desired location (18.6%)

Disabled (n=14)
- Require further training (36%)
- Employment is seasonal (21%)

Visible Minority (n=7)
- Employment is seasonal (28.6%)
- Require further training / No jobs in desired location / Not enough experience / No jobs available at all / Other reasons (14.3% each)

Female (n=108)
- Employment is seasonal (30%)
- Employment is seasonal (30%)
- No jobs available at all (17%)
Top Reasons Not Looking for Work
(Not in the Labor Force respondents only)

<table>
<thead>
<tr>
<th>Total (n=139)</th>
<th>Returned to school (52.5%)</th>
<th>Other reasons (20.1%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal (n=18)</td>
<td>Returned to school (50.0%)</td>
<td>Family responsibilities / Other reasons (16.7% each)</td>
</tr>
<tr>
<td>Disabled (n=4)</td>
<td>Returned to school / Family responsibilities / Health/Disability / Given up looking (25.0% each)</td>
<td></td>
</tr>
<tr>
<td>Visible Minority (n=5)</td>
<td>Returned to school / Other reasons (40.0% each)</td>
<td></td>
</tr>
<tr>
<td>Female (n=87)</td>
<td>Returned to school (46.0%)</td>
<td>Other reasons (19.5%)</td>
</tr>
</tbody>
</table>
Sign Here: "I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Signature: [Signature]
Printed Name: Gerlinde Sarkar
Address: 400 - 119 4th Ave. S.
         Saskatoon SK S7K 5X2
Position: Director, Research and Development
Organization: Saskatchewan Institute of Applied Science and Technology
Telephone No: 306-933-7716
Date: November 17, 1997

Signature: [Signature]
Printed Name: Claire Stallard
Address: 400 - 119 4th Ave. S.
         Saskatoon SK S7K 5X2
Position: Senior Research Officer
Organization: Saskatchewan Institute of Applied Science and Technology
Telephone No: 306-933-6199
Date: November 17, 1997

III. Document Availability Information (from Non-ERIC Source):

Complete if permission to reproduce is not granted to ERIC, or if you want ERIC to cite availability of this document from another source.

Publisher/Distributor:

Address:

Price per copy:  Quantity price: