

# University Participation

Measures of Student Progress and Outcomes

February 2009



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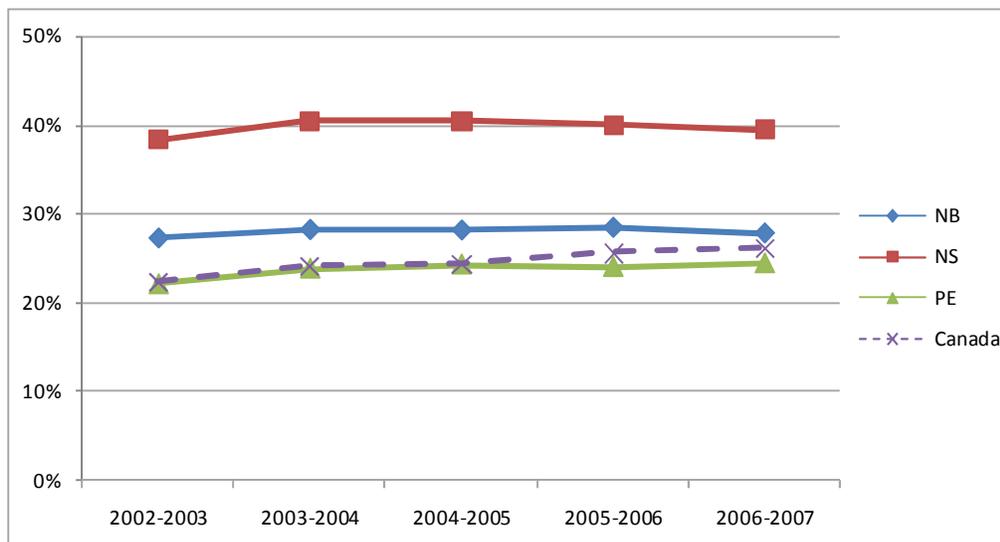
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## University Participation

### Overall Participation

#### Definition

Number of students enrolled<sup>1</sup> full-time in a province divided by the provincial population aged 18-24.



Source: *Maritime Data*: MPHEC PSIS database; Statistics Canada Census. *Canada*: Statistics Canada PSIS from 2002-2003 to 2005-2006; Association of Universities and Colleges of Canada (AUCC) preliminary numbers 2006-2007; Statistics Canada Census.

#### What this Measure tells us

This definition measures general student activity as a proportion of the typical university student-aged population in the province. It has been published historically by the Maritime Provinces Higher Education Commission (MPHEC)<sup>2</sup> to enable comparison with Statistics Canada's historical definition. This definition includes all full-time students enrolled regardless of age or geographic origin; because substantial proportions of students come from outside the region to study, the definition is not an accurate measure of the extent to which a province's universities are serving its typical student-aged population, and should therefore be used with caution.

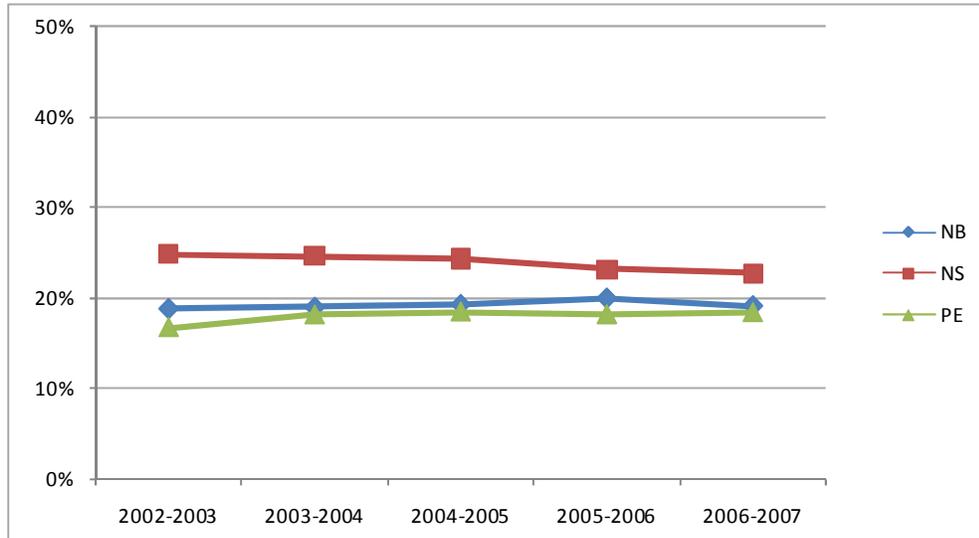
#### Recent Trend

The Overall Participation Rate for Nova Scotia has hovered at or near 40% for the past four years after increasing five percentage points between 2000-01 and 2003-04. The rate for Nova Scotia exceeds the national rate by 13 percentage points, in keeping with its historical trend. It should be noted, however, that this definition does not distinguish the geographic origin of students, and reflects the higher number of out-of-province students studying in Nova Scotia's 11 universities. New Brunswick's participation rate, now resting at 28%, is lower than Nova Scotia's but has nevertheless historically tracked above the national average. In recent years, however, the gap between the New Brunswick rate and the national average has been narrowing. Prince Edward Island's participation rate has been the same as the national average until recently; it now stands at 25%, or one point below the national rate.

## Home Province Participation

### Definition

Number of students enrolled full-time in their home province divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This definition provides one measure of the extent to which a province's typical university-aged population is served by the universities in that province. The numerator includes all full-time students from the province. This is to enable comparisons with the National Participation of Maritimers, where age group is not universally available for the source used for the Canadian statistics.

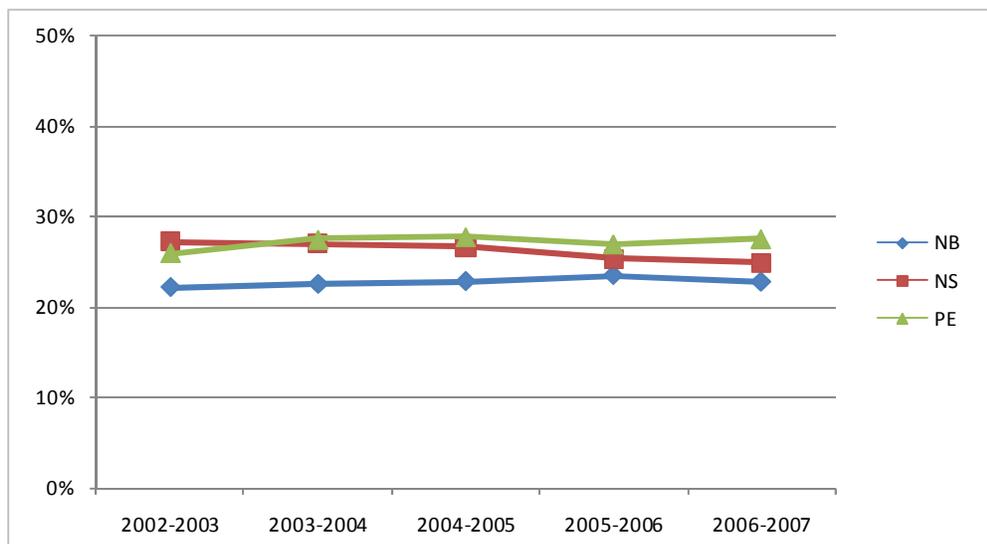
### Recent Trend

Over the five year interval shown, the Nova Scotia Home Province full-time Participation Rate declined two percentage points, from 25% to 23%, while both New Brunswick's and Prince Edward Island's rates remained relatively stable, varying  $\pm 1$  point at most. In 2006-07, New Brunswick's rate stood at 19% and Prince Edward Island's at 18%.

## Maritime Participation of Residents

### Definition

Number of *provincial residents enrolled full-time in any Maritime university* divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This definition provides the regional picture of the accessibility of university education to a provincial population and the extent of its intra-regional mobility, as it encompasses the enrolment of provincial residents in all Maritime universities. Certain sub-populations may be more likely to seek education outside their province, such as for programs unavailable in their province, or French-language instruction. The numerator in this definition includes all full-time students. This is to enable comparisons with the National Participation of Maritimers, where age group is not universally available for the source used for the Canadian statistics.

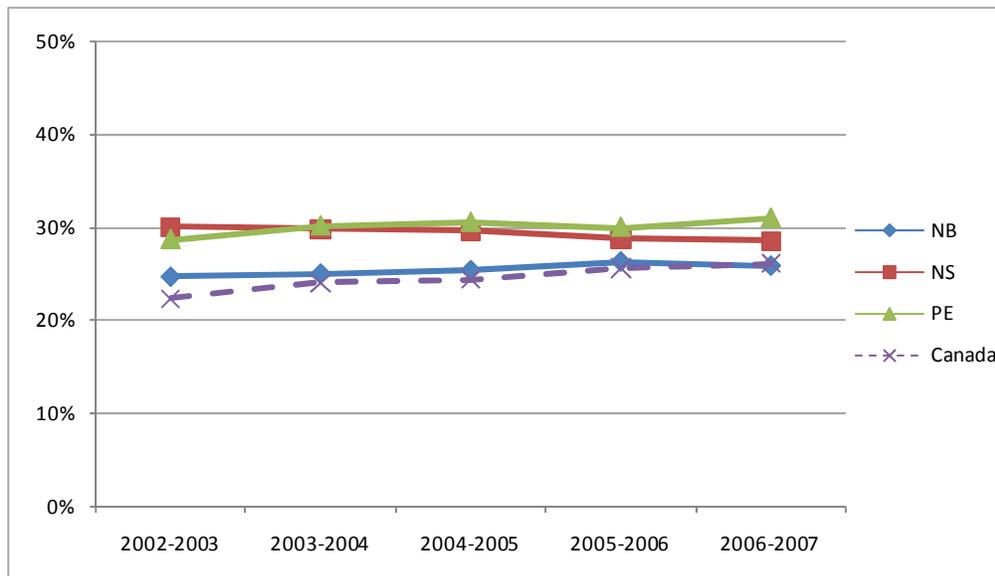
### Recent Trend

Widening the scope from home province to the regional level, we find that the most pronounced difference for residents of Prince Edward Island is between the Home Province Participation Rate and the Maritime Participation of Residents. In 2006-07, the Home Province Participation Rate was 18% whereas the participation of those from Prince Edward Island in universities anywhere in the Maritime region was 28%, a 10 percentage point difference. For New Brunswick there was a four point difference, and for Nova Scotia a two point difference between the two definitions. In 2006-07, the Maritime Participation of New Brunswick residents was 23% and for Nova Scotia residents, 25%. The Maritime provincial governments have a regional transfer arrangement that encourages the mobility of students between provinces to attend programs unavailable in their home province; this movement across borders is most pronounced for students from Prince Edward Island who have access to the programs of one primarily undergraduate university within their province.

## National Participation of Maritimers

### Definition

Number of *provincial residents enrolled full-time in a Canadian university*<sup>3</sup> divided by the provincial population aged 18-24.



Source: MPHEC PSIS database, Statistics Canada Census and special collection of data directly from 42 universities across Canada<sup>3</sup> · Canada: Statistics Canada PSIS from 2002-2003 to 2005-2006; AUCC preliminary numbers 2006-2007.

### What this Measure tells us

This definition provides the most student-centered measure of participation as it encompasses enrolments of provincial residents in all Canadian universities. This measure, which illustrates the tendency of a province's typical university-aged residents to engage in university education, is the best measure to describe the desirability of/access to a university education by the population in question as it eliminates any limits imposed by the choices available in the home province or region. The numerator in this definition includes all full-time students, not just the 18-24 cohort as this age group is not universally available for the sources used<sup>3</sup> for the Canadian statistics.

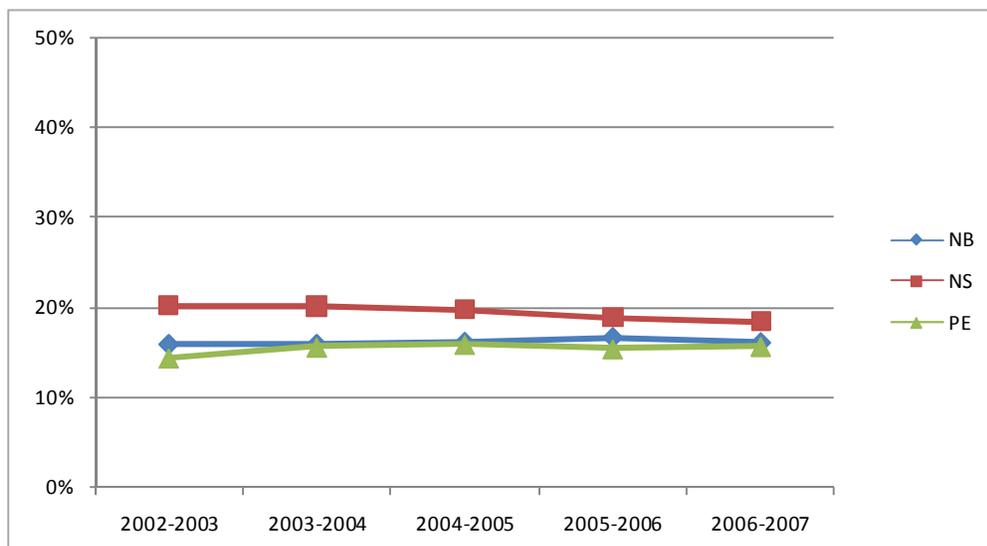
### Recent Trend

Using this definition, it can be seen that students from Prince Edward Island are somewhat more likely (31% in 2006-07) than their Nova Scotian (29% in 2006-07) counterparts to participate in university education in Canada. This finding, when compared with the Overall Participation Rate (where Nova Scotia's rate was greater than Prince Edward Island's by 14 percentage points) illustrates the different conclusions about provincial participation rates that can be drawn, depending on the definition under discussion. In 2006-07 all three Maritime Provinces tracked at or above the national average.

## Home Province 18-24 Participation Rate

### Definition

Number of *students aged 18-24 enrolled full-time in their home province* divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This measure provides insight into the extent a province's universities serve (or are accessible to) its typical university-aged population. This definition includes only full-time students aged 18-24 (as of December 31st) enrolled in their home province in the numerator.

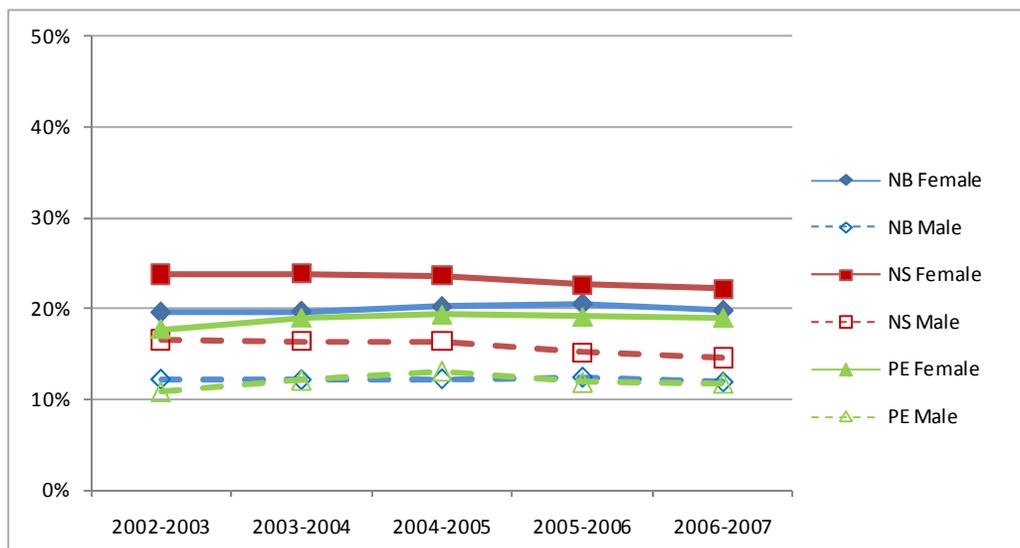
### Recent Trend

This definition is quite similar to the Home Province Participation Rate except that the numerator is limited to the 18-24 year old age group, a direct match for the population making up the denominator. New Brunswick has tracked at or within one point of 16% for the past five years. This trend was the same for Prince Edward Island between 2003-04 and 2006-07; in 2002-03, however, Prince Edward Island was 14% and New Brunswick, 16%. The participation rate for Nova Scotia, by contrast, was 20% between 2002-04 and declined to 18% in 2006-07.

## Home Province 18-24 Participation Rate by gender

### Definition

Number of students aged 18-24 enrolled full-time in their home province divided by the provincial population aged 18-24, by gender.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This chart shows the Home Province 18-24 Participation Rate, with an additional breakdown by gender. There have been considerable increases in female participation in universities since the early 1980s, and this has led to a gender ratio of 3:2 (female to male) in university enrolments in the Maritimes. This same trend has emerged across the country, and the skewed enrolment ratio is currently an important policy issue for both institutions and governments.

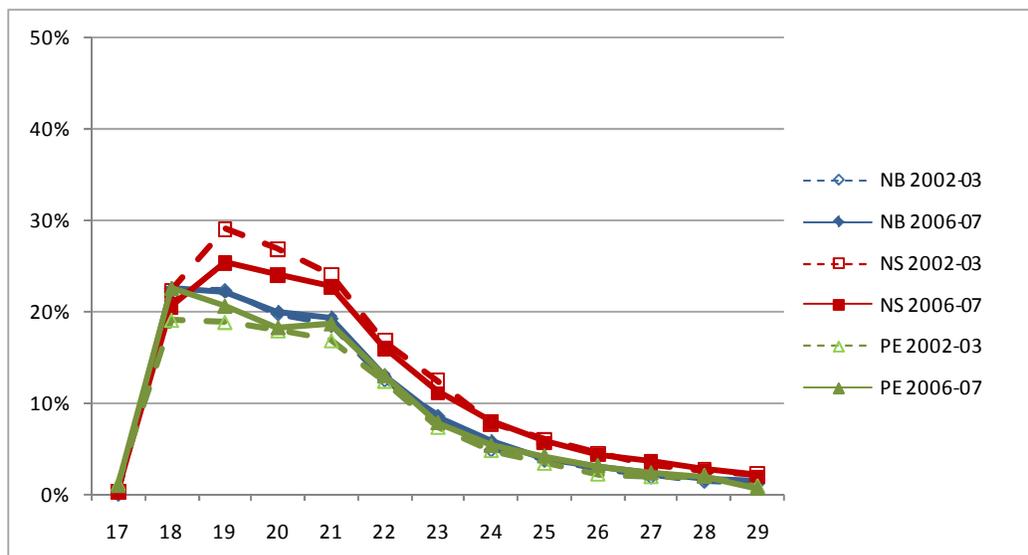
### Recent Trend

Of the six groups illustrated in this chart, the participation rate of the population aged 18-24 enrolled full-time in their home province is the highest among female Nova Scotians; the rate for this group was at its highest in 2002-03 (24%), and has since declined to 22% in 2006-07. Females from New Brunswick and Prince Edward Island track below this group, standing at 20% and 19% in 2006-07. Neither of these two groups has varied more than a point in four years. It is interesting to note that males from all three provinces have lower participation rates than all groups of females, and that the same overall provincial pattern is repeated, with Nova Scotia having the highest participation rate, and with New Brunswick and Prince Edward Island tracking very closely.

## Home Province Participation Rate by Age Cohort

### Definition

Number of *students aged n years enrolled full-time in their home province* divided by the provincial population aged *n* years.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This definition provides more detailed information on the participation of individual age cohorts, and can help inform policy decision-making and recruitment efforts. This definition includes only students enrolled in their home province, and zeroing in on this sub-population gives an accurate account of the extent to which universities are serving students in their province.

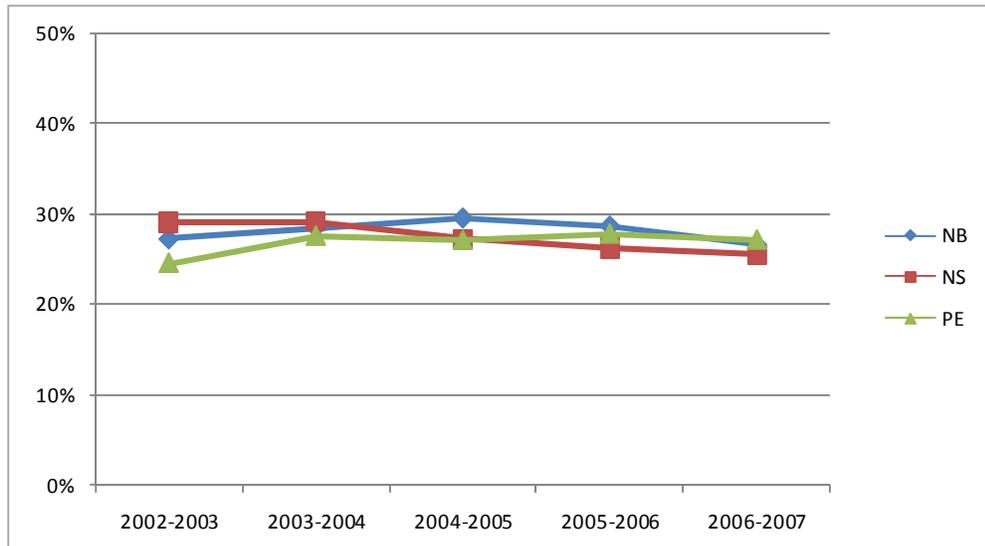
### Recent Trend

The age peak differences for the provinces (Nova Scotia = 19; New Brunswick & Prince Edward Island = 18) appear to be correlated to provincial differences in school entry cut-off dates (that is, children turning five on or before the designated cut-off date are eligible to enter in September); for Nova Scotia, this has historically been October 1st; for New Brunswick, December 31st and Prince Edward Island, January 31st of the following year. Compared to the profile of 2002-03, the New Brunswick participation rates across age cohorts for 2006-07 remained relatively unchanged. Like Prince Edward Island, the highest participation rates were among 18 and 19 year-olds. Over the interval shown, participation rate profiles showed the greatest change in Nova Scotia, followed by Prince Edward Island. In Nova Scotia, the participation rate of 19 year-olds was 29% in 2002-03 and 25% in 2006-07, a decline of four percentage points. Smaller declines were also observed over this period among 18, 20 and 21 year-olds. In Prince Edward Island, the participation rate of 18 year-olds was 19% in 2002-03; this rate increased four percentage points by 2006-07. Smaller increases were also observed among the 19 and 21 year-old cohorts. Across all provinces, very little change was observed in the older age groups (22 – 29 years). Accounting for the different trends among the provinces may include elements of economic factors - where there is a participation rate decline (i.e., Nova Scotia), there may be more young people entering the work force instead of enrolling. Recent student finance policy changes in Prince Edward Island, including the Island Student Award<sup>4</sup>, may have influenced the recent increase on this statistic for that province.

## Direct Entry Rate of Resident High School Students

### Definition

Number of *first-year direct entry* (determined by proxy: age  $\leq$  18 years as of Dec. 31<sup>st</sup>) *full-time students in year n* divided by the number of high school graduates in year *n-1*.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This measure illustrates the rate of home province enrolment direct from high school, which is the traditional source of new recruitment for institutions. It is this group that is affected by the predicted demographic declines. This definition uses a proxy (age  $\leq$  18 years as of Dec. 31<sup>st</sup>) to designate first-year, direct (from high school) entry students. Universities tend to have a particular interest in the direct-from-high school enrolments, as they comprise the main feeder group and target of recruitment campaigns.

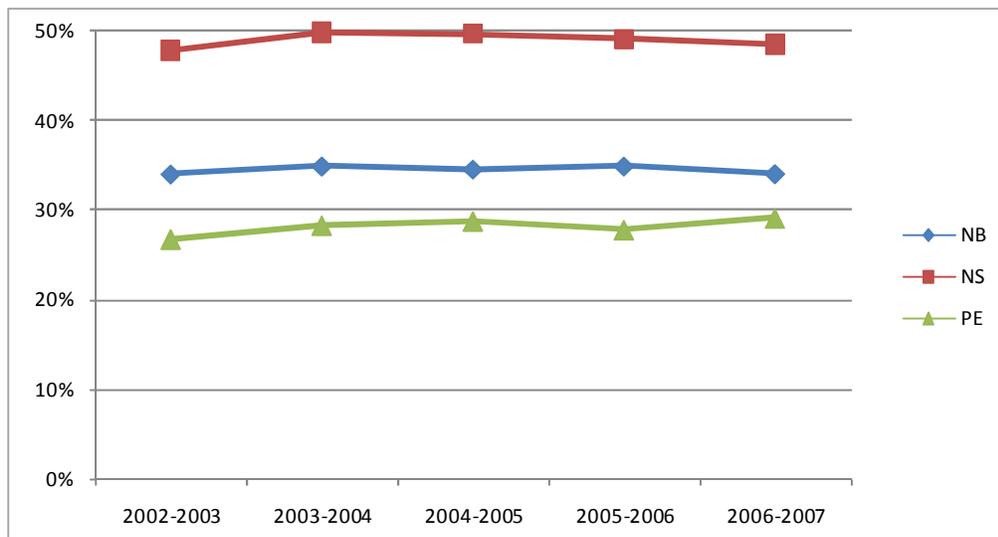
### Recent Trend

Compared to 2002-03, the proportion of high school graduates enrolling directly in universities in their home province has declined three percentage points in Nova Scotia (from 29% to 26%) but has not changed in New Brunswick (resting at 27%). In Prince Edward Island however, the direct entry rate has increased two percentage points from 25% in 2002-03 to 27% in 2006-07. Recent student finance policy changes in Prince Edward Island, including the Island Student Award, may have had an impact on this statistic.

## Overall Full and Part-Time Participation

### Definition

Number of *students enrolled full or part-time* divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This measure is based on the Overall Participation Rate; the difference is that both full and part-time students are included in the numerator. The denominator, the population aged 18-24, remains the same. As with the Overall Participation Rate, this definition measures general student activity as a proportion of the typical university-aged student population in the province; with all full and part-time students included in the numerator, it is the most 'generous' definition and thus records the highest participation rates. The same cautions recorded for the Overall Participation Rate definition stand for this one: as the definition includes all students regardless of age or geographic origin, and substantial numbers come from outside the region to study, the definition is not an accurate measure of the extent to which a province's universities are serving its typical student-aged population. Furthermore, part-time students are more likely to be older (than 24) thus adding to the numerator more students outside the range of the denominator.

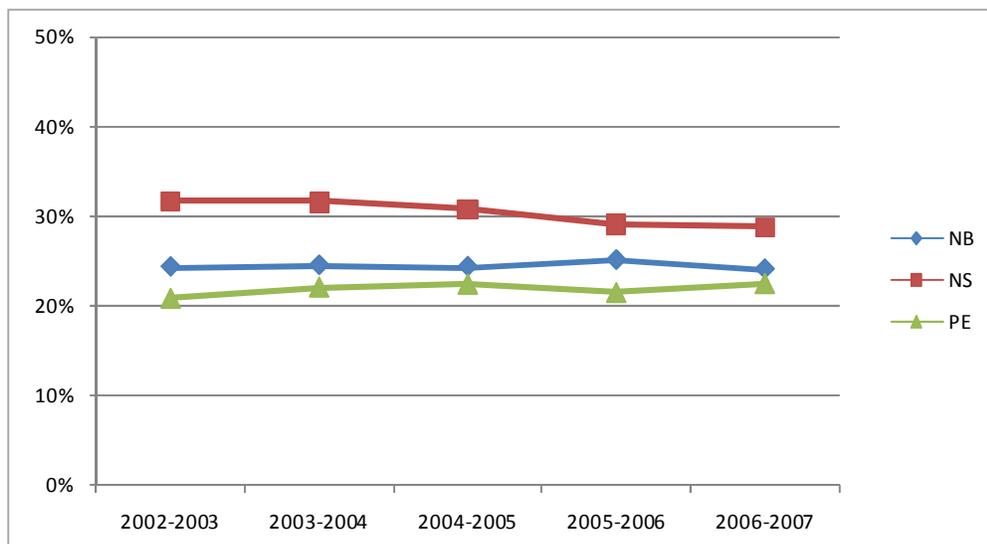
### Recent Trend

After increasing two percentage points between 2002-03 and 2003-04, the Overall Full and Part-Time Participation Rate reached 50%, in Nova Scotia; this figure has recently declined slightly to 49%. Again, Nova Scotia's high rate reflects its high number of out-of-province students, and tracks well above the rates of New Brunswick and Prince Edward Island. Over the past five years, the rates for these provinces have varied little; most recently (2006-07), New Brunswick stood at 34%, and Prince Edward Island at 29%.

## Full and Part-Time Home Province Participation Rate

### Definition

Number of *students enrolled full or part-time in their home province* divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

This definition can provide insight into the extent a province's universities are accessible to its typical university-aged population. This definition is different from the Home Province Participation Rate, however, in that it includes students enrolled either full or part-time in their home province. While most participation rates in the literature focus on full-time enrolments, this measure widens the scope to include part-time students as well.

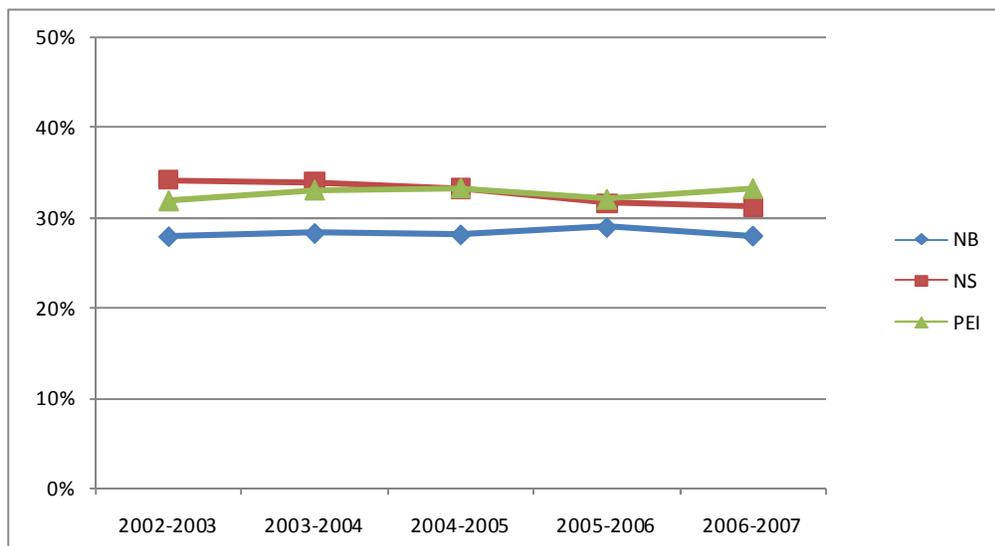
### Recent Trend

The trend illustrated here is similar to full-time Home Province Participation, with a slightly larger gap between Nova Scotia and the other two provinces. Between 2002-03 and 2006-07, the rate for Nova Scotia has declined three percentage points from 32%. New Brunswick, stood at 24% in 2006-07, the same rate as recorded for 2002-03. Prince Edward Island increased two percentage points from 2002-03 to reach 23% in 2006-2007.

## Maritime Full and Part-Time Participation of Residents

### Definition

Number of *provincial residents enrolled full or part-time in a Maritime university* divided by the provincial population aged 18-24.



Source: MPHEC PSIS database; Statistics Canada Census

### What this Measure tells us

Like the Maritime Participation of Residents definition on which this is based, this definition provides the regional picture of the accessibility of university education to a provincial population and the extent of its intra-regional mobility, as it encompasses the enrolment of provincial residents in all Maritime universities. Certain sub-populations may be more likely to seek education outside their province, such as for programs unavailable in their province, or French-language instruction. Because both full and part-time students are included and because part-time students are more likely to be older (than 24), more students are added to the numerator which are outside the range of the denominator. Therefore, the rates are higher than in the Maritime Participation of Residents definition.

### Recent Trend

Compared to the Maritime Participation of Residents definition, the provincial trendlines track similarly, although with overall higher rates. In 2002-03, Nova Scotia had the highest rate at 34%, followed by Prince Edward Island at 32%, and New Brunswick at 28%. Most recently (2006-07), Prince Edward Island residents enrolled full or part-time in Maritime universities at the greatest rate (relative to the 18-24 year-old population) (33%), followed by Nova Scotia residents (31%) and New Brunswick residents (28%).

## Measures of Student Progress and Outcomes

The Maritime Provinces Higher Education Commission (MPHEC) has launched a project to develop measures of student progress and outcomes to help fulfill its mandate to assist institutions and governments in enhancing the post-secondary learning environment. The measures developed will be valuable to institutions in their continuous quality improvement, to governments in providing accountability and transparency, and finally to students, their families and the general public.

The development of measures is in part a response to a rising demand among the Commission's stakeholders for enhanced standardized statistics informing key questions about the post-secondary sector. The drive for measures goes beyond notions of league tables and a narrow definition of accountability; rather the focus is on enhancing the quality of the educational process and the support of its ongoing improvement, which clearly is the MPHEC's primary orientation. While this project does not aim as high as defining quality, the fact is that certain dimensions of quality can and should be measured.

The approach to developing these measures includes assuring their relevance to Commission stakeholders, feasibility (can be produced from existing, in-house data sources such as PSIS and the MPHEC's graduate surveys) and comparability where possible. In developing definitions, existing models are considered.

Key to determining the relevancy of the measures is the involvement of stakeholders in their development: the MPHEC is developing these measures with assistance from a working group composed of institutional researchers from the region's universities. In addition, the work is overseen by the AAU-MPHEC Advisory Committee on Information and Analysis with final approval resting with the Commission. The project is funded in part by the Canadian Council of Learning.

This article is the first in a series that introduces a set of measures informing a single policy theme under the umbrella of student progress and outcomes. In this series will be the themes of participation, student persistence, graduation/completion, and course success/failure. This paper focuses on the set of measures addressing the theme of participation.

## Methodological Notes

<sup>1</sup>**Enrolled:** Includes students enrolled at all levels in universities under the MPHEC mandate

**Source:** MPHEC Post-secondary Student Information System (PSIS) final audited data

Acadia University	Saint Mary's University
Atlantic School of Theology	St. Francis Xavier University
Cape Breton University	St. Thomas University
Dalhousie University	Université de Moncton
Mount Allison University	University of King's College
Mount Saint Vincent University	University of New Brunswick
Nova Scotia Agricultural College	University of Prince Edward Island
Nova Scotia College of Art and Design	Université Sainte-Anne

<sup>2</sup> MPHEC 2000 Statistical Compendium 5<sup>th</sup> Edition

<sup>3</sup>**Canadian University:** Enrolment in Canadian Universities outside the Maritimes:

**Source:** data compiled from individual university sources (publicly funded universities only, does not include university colleges; based on statistics from 2004-2005 (Statistics Canada), PSIS, universities and provinces with the largest enrolment of Maritimers have been sampled.

Memorial University of Newfoundland - Factbooks 1999 to 2006

Université de Sherbrooke, Bureau du Registraire – Section exploitation des données

McGill University Enrolment Report, Fall 2003 to Fall 2006

Concordia University, Institutional Planning

Université Laval, Bureau du Registraire

Université de Montréal, Régistrariat, statistiques officielles

Université du Québec, Base de données, PRISME, Vice-présidence à l'enseignement et à la recherche

Information System – University Affairs Report (USIS-UAR)

University of Alberta Summary of Statistics (1997 to 2006)

University of Calgary, Fact Book, Office of Institutional Analysis (2001-02 to 2006-07)

University of Lethbridge, Fact Book, (2004-05, 2005-06)

University of Regina Fact Books, Office of Resource Planning

University of Manitoba, Office of Institutional Analysis

Simon Fraser University, Fact Book, Office of Analytical Studies

<sup>4</sup>**Island Student Award:** PEI residents registered full-time in both academic semesters at Island educational institutions are eligible for the Island Student Award. UPEI students who meet the eligibility criteria will now receive \$400 in second year, \$600 in third year and \$600 in fourth year. The lifetime maximum for the Island Student Award is \$1,600.

Source: <http://www.gov.pe.ca/educ/index.php3?number=1000748>.