

**Assessment of the Effectiveness  
and Benefits of Articulated  
Programs in the Maritimes**

October 2010

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ISBN: 978-0-919471-80-1

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We thank the universities and partner institutions who participated in this assessment of the effectiveness and benefits of articulated programs.

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## Executive Summary

Articulated programs are defined as programs that could not be conferred or offered by universities were it not for the participation (and the content) of the partner institution which does not normally grant degrees (e.g. colleges, hospitals, and private providers). The Maritime Provinces Higher Education Commission (MPHEC) was instrumental in defining and approving articulated programs. When the first programs were approved in 1996 and 1997, the Commission agreed to review the effectiveness and benefits of this new program structure, when a sufficient number of programs had been implemented.

Twenty articulated programs offered by four universities (St. Thomas University, Université de Moncton, University of New Brunswick, and University of Prince Edward Island) in partnership with community colleges and hospitals were surveyed. The effectiveness and benefits of articulated programs were assessed from the point of view of the students. The critical question to be answered by this assessment is whether students are well-served by the articulated program structure.

### KEY FINDINGS

- In general, articulated programs in the Maritimes are successful from the students' perspective, as long as the proper mechanisms are in place to ensure program integration and a smooth transition between institutions.
- Factors associated with high student persistence and graduation rates and with student satisfaction are:
  - Field of study: Programs that are closely linked to the labour market, such as health-related programs, show high persistence.
  - Program structure: Programs with a simple structure, where one component of the program is completed at one institution before transferring to the other institution, are less complicated logistically for students.
  - Geographic proximity: Programs that are offered by two institutions in close geographic proximity show higher student persistence.
  - Inter-institutional coordination: Ongoing coordination between the institutions plays a major role in program success and student satisfaction. Programs that are offered as seamless and integrated from start to end, with mechanisms in place to ease the transition between the institutions, show high persistence.
- Articulated programs offer new opportunities for college diploma graduates to complete a degree in the form of a cohesive and integrated program. These programs have been developed in a collaboration between the two or more partners taking into account the curriculum at both institutions.
- The lack of data on graduate outcomes and satisfaction does not allow us to assess whether articulated programs effectively provide graduates with more timely access to significant jobs or earnings, and ensure that they have indeed acquired both occupation-specific and general post-secondary education competencies.
- The findings of this study reinforce the importance of the MPHEC guidelines currently in place for developing and offering new articulated programs:
  - An institution should have in place an inter-institutional coordinating mechanism. This mechanism is the key to a cohesive program and a smooth transition between institutions for students.
  - A program evaluation procedure should be integrated and comprehensive, assessing all components of the program, including the components delivered by partner institutions.
  - A graduate follow-up process should be in place to assess the linkage to the labour market and suitability of program content.



## 1. Introduction

In the mid to late nineties, the Maritime provincial governments strongly supported an increase in the applied nature of post-secondary education. The provincial governments also indicated strong support for an increase in the articulation of programs between post-secondary institutions and, in particular, between community colleges and universities. The objective of such programs, from a public policy point of view, would be to provide graduates with a more timely access to significant jobs or earnings, and ensure that they have indeed acquired both occupation-specific and general post-secondary education competencies. Universities in the Maritimes responded, with the collaboration of community colleges and other post-secondary education providers, by developing several new degree programs offered in partnership between the two types of institutions, now defined as articulated programs.

The Maritime Provinces Higher Education Commission (MPHEC) was instrumental in defining and approving articulated programs. A total of 29 articulated programs at seven Maritime universities have been approved by the Commission since 1996 (Appendix A). The majority of these articulated programs are Bachelor's degrees, but two articulated Master's degrees and one university level certificate have also been approved. Articulated programs currently approved in Maritime Universities can, in general, be grouped in three main areas of study: Health Sciences, Applied Management, and Applied Arts. More recently, articulated programs have also been approved in different fields such as Aviation and Agroforestry.

Since the approval of the first articulated program in the Maritimes, other jurisdictions across the country have explored new ways to expand post-secondary access and applied learning. In 1999, representatives from universities and colleges signed the Ontario College-University Degree Completion Accord (also referred to as the Port Hope Accord) that sets out a series of principles for developing degree-completion agreements. In 2000, Ontario looked into increasing access to a broader range of degree opportunities<sup>1</sup>. At the time, colleges of applied arts and technology did not grant degrees, but had arrangements in place for graduates from certain programs to complete a degree at a university in Ontario or elsewhere<sup>2</sup>. Since then, the majority of colleges in Ontario have developed and now grant applied degrees.

Both Manitoba and Saskatchewan allow baccalaureate programs to be offered jointly by colleges and universities in several fields of study (e.g. nursing, integrated resource management, and communications). In June 2009, the *Colleges Act* in Manitoba was amended to allow colleges to grant baccalaureate degrees with an applied focus.

In Alberta, the granting of applied degrees by public colleges or institutes was first authorized in 1995, under the amended *Colleges Act* and *Technical Institutes Act*. Baccalaureate and Applied Studies Institutions can grant applied degrees and baccalaureates in specified areas, and Comprehensive Community Institutions can grant applied degrees and offer baccalaureate degrees in collaboration with a degree-granting institution. In British Columbia, consequential amendments to the *Degree Authorization Act* in 2002 expanded the degree granting-authority of public institutions. Public colleges were allowed to grant applied baccalaureate degrees, and public university colleges and provincial institutes<sup>3</sup> to grant applied master's degrees.

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<sup>1</sup> Ontario Ministry of Training, Colleges and Universities. 2000. *Increasing Degree Opportunities for Ontarians: A Consultation Paper*.

<sup>2</sup> As of March 24, 2010, there was a total of 408 collaborative program agreements in Ontario. Of these, 12 were joint/integrated programs and 36 concurrent programs between colleges and universities; [www.ocutg.on.ca](http://www.ocutg.on.ca)

<sup>3</sup> The *University Act* was amended in 2008 to grant university status to four university colleges and one provincial institute in British Columbia.

Partnerships and articulation agreements between universities and community colleges have increased in the Maritimes and elsewhere in the country. Quebec has increased the number of degree completion options for CEGEP diploma graduates by offering integrated DEC-BAC options. Students who complete a three-year technical college diploma (i.e. DEC) can be credited with one year in a university bachelor's program (i.e. BAC). Students can complete a degree by completing two additional years at the university instead of three. The goal of these agreements is to eliminate duplication of content already covered at the college level, and to allow college graduates to earn a degree faster.

More recently there has been an interest in developing more partnerships between community colleges and universities in the Atlantic region. The New Brunswick *Action Plan to Transform Post-Secondary Education*<sup>4</sup> calls for an increase in applied learning opportunities by establishing formal partnerships between universities, community colleges and communities. "These formal partnerships will develop new, applied and articulated programs" and "will also engage other partners in the development and delivery of specialized education such as hospitals and other health care providers, energy, manufacturing, construction and other industrial stakeholders."<sup>5</sup> On September 24, 2009, Atlantic Canada's universities and community colleges announced the signing of a Memorandum of Understanding that outlines the guiding principles for the encouragement of transfer agreements between and among public community colleges and universities.<sup>6</sup>

When the first articulated programs were approved in the Maritimes in 1996 and 1997, the MPHEC agreed to assess, within three to five years, the effectiveness and benefits of all implemented articulated programs. For several reasons, this review, initiated in 2001, was determined to be premature. The Commission agreed that a preliminary review would be conducted with the information available at that point, and that a more conclusive assessment would be conducted at a later date<sup>7</sup>.

The comprehensive assessment of articulated programs, the subject of this report, was defined by the Association of Atlantic Universities and the Maritime Provinces Higher Education Commission (AAU-MPHEC) Academic Advisory Committee in 2006, ten years after the approval of the first articulated program. The renewed interest in applied programs and the growing collaboration between universities and colleges in the region further emphasize the timeliness of assessing the effectiveness and benefits of articulated programs that have been offered over the last decade in the Maritimes.

The effectiveness and benefits of articulated programs are assessed from the point of view of the students. The critical question to be answered is whether students are well-served by the articulated program structure. More specifically:

- Are students persisting and completing articulated programs?
- What factors are related to program completion and student satisfaction in articulated programs?
- What mechanisms need to be in place to ensure student success and satisfaction?

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<sup>4</sup> Government of New Brunswick. 2008. *Be inspired. Be ready. Be better. Action Plan to Transform Post-Secondary Education*.

<sup>5</sup> Ibid., p. 20.

<sup>6</sup> Holland College in Prince Edward Island is the only college in Atlantic Canada that grants a degree. In 2006, the provincial government amended the *Holland College Act* to allow the college to grant an Applied Degree in Culinary Operations.

<sup>7</sup> The findings of the 2001 review were reported in *Preliminary Assessment of the Effectiveness and Benefits of Articulated Programs Delivered in the Maritimes*, 2003, prepared by the AAU-MPHEC Academic Advisory Committee for the MPHEC. At the time, only nine of the 15 implemented programs had reported graduates. Universities surveyed in the preliminary assessment included St. Thomas University, Université de Moncton, University of New Brunswick (Fredericton and Saint John campuses), University of Prince Edward Island and Dalhousie University.



- Does the program meet the objective of providing graduates “with a more timely access to significant jobs or earnings and ensure that they have indeed acquired both occupation-specific and general post-secondary education competencies”?
- What are the benefits of an articulated degree program compared to those of more traditional program structures?

## 2. Articulated Programs in the Maritimes

The AAU-MPHEC Academic Advisory Committee was asked, in the course of assessing the first proposal for an articulated program, to provide leadership in better defining the parameters for such programs. Following the approval of the first program in 1996, guidelines for the preparation of proposals for articulated programs were developed and were used for all later proposals.

### 2.1 Definition

An articulated program is defined as a substantively new program that articulates components of a university program with components of a program delivered by another educational partner<sup>8</sup>. The partnership results in the implementation of a program that a university could not offer/confer were it not for the participation (and the content) of the partner institution, which does not normally grant degrees (e.g. colleges, hospitals, and private providers). The partner institution's component is normally focussed on a specific area of employment/occupational training, while the university component provides related post-secondary education competencies.

The general aim of such programs is to expand the opportunities for graduates to acquire both occupation-specific and general post-secondary education competencies. The objectives of articulated programs, from a public policy point of view, are to provide graduates with a more timely access to significant jobs and earnings and to ensure that they have indeed acquired both occupation-specific and general post-secondary education competencies.

The two institutions partnering to offer an articulated program often grant two different types (levels) of credentials. The institutions will generally be a community college and a university. However, other education providers (publicly or privately funded) could also be involved. An articulated program can have one or more exit points at varying levels:

- When there is only one level and exit point, the program is delivered by two institutions, but its completion leads to only one credential.
- When there are two (or more) levels and exit points, the program is delivered by two (or more) institutions, and its completion normally leads to two recognized credentials, generally at two different levels. One credential may be earned as a requirement to earn the other, or they may be earned concurrently or independently.

An articulated program is not limited to credit transfers, although it will probably include provisions for credit transfer agreements between institutions. An articulated program is more than the simple juxtaposition or addition of existing programs. Articulated programs may lead to credentials in, for example, applied arts, applied sciences, applied social sciences, or technology, or they could lead to more traditional designations (for example, in Arts or Science).

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<sup>8</sup> The Maritime Provinces Higher Education Commission. 2005. *Policy on Quality Assurance*.

Three Nova Scotia institutions under the Commission's schedule offer technical/college-level diplomas and also grant degrees: Cape Breton University (formerly the University College of Cape Breton), Nova Scotia Agricultural College and Université Sainte-Anne (which merged with Collège de l'Acadie in 2003). All three of these institutions offer degree programs that combine technical and general academic content. While these programs incorporate both technical and general post-secondary competencies, the different components of these programs are offered within the same institution, and therefore they are not defined as articulated programs. These programs were not included in this assessment as they do not present the same types of challenges as articulated programs.

The terms "articulation" or "articulated" have also been used in the Maritimes and other jurisdictions to describe agreements between institutions, that authorize studies undertaken in specific programs at one institution to be credited toward, enable direct entry into, or provide advanced standing in, specific programs at another institution. Articulation or credit transfer agreements that offer advanced standing in a program that could normally be taken entirely at the university are not considered to be articulated programs under the MPHEC definition. These credit transfer arrangements therefore are also not included in this assessment of articulated programs.

## 2.2 Guidelines for Articulated Programs

The guidelines for articulated programs developed by the Commission have two objectives: program quality and suitability of services for the students involved. Four key dimensions distinguish articulated programs from a program consisting only of credit transfer or a block of transfer credits: program content, inter-institutional coordinating mechanism, labour market linkages, and program evaluation.

### *Program content*

Articulated programs combine components of a program at one level with components at another level. The structure and content of an articulated program should address the following three components:

- *Occupational content*, i.e., course content directly related to the practice of an occupation in the field;
- *Occupationally related content*, i.e., courses usually delivered, especially at the upper level, by a university (e.g. English, Political Science, History, Psychology, and Management), where the content has been tailored to the clientele of the program (for example, English or Political Science for journalists or business courses for students in tourism and hospitality); and
- *Other academic content*, i.e., courses in other fields that contribute to the education of the student.

### *Inter-institutional coordinating mechanism*

This mechanism bridges the two or more partners in the delivery of an articulated program and can be represented by one or more individuals (for example, a program coordinator or a coordinating committee). This coordinating mechanism is essential in facilitating student transfer from one institution to the other, especially in the early implementation period of the program. This mechanism is responsible for:

- establishing the roles and responsibilities of the two or more partners delivering the program;
- setting and maintaining common standards in relation to program design and admission requirements;
- setting standards for progression through, and graduation from, the program;
- clarifying cost and revenue-sharing;
- evaluating the program;
- and advising students and providing other student services.

#### *Labour market linkages*

Articulated programs should have a close connection with the practical requirements of the labour market. Labour market linkages are established through an industry advisory group or by members of the inter-institutional group, which includes industry partners. These linkages ensure that the need for the program exists and that its relevancy is maintained. This expertise is especially pertinent in cases where a subset of courses within an articulated program must meet accreditation requirements or standards for a license to practice (e.g., health-related programs, trades and technology programs). Labour linkages also facilitate opportunities for student placements.

#### *Program evaluation*

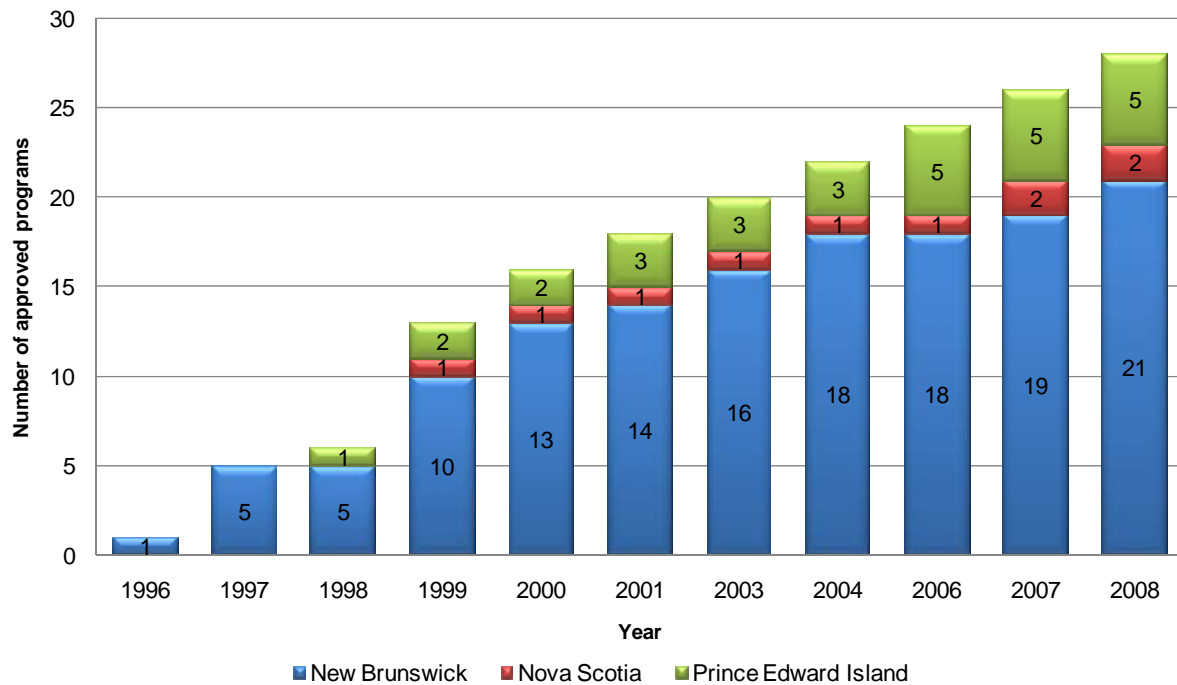
Given the unique dimensions of an articulated program, clearly defined program evaluation policies and procedures are imperative. The policy must clearly define the roles and responsibilities of each partner, including the designated partner (the partner granting the degree for the articulated program), who will be responsible for the overall management of the assessment process. The coordinating unit responsible for the review of an articulated program must be able to mesh each partner's policies and procedures, frequency of reviews, standards, and scope of program review. The policy should include a graduate follow-up process to measure the success of the program in meeting its major objectives (to provide graduates with a more timely access to significant jobs or earnings and to ensure that they have acquired both occupation-specific and general post-secondary education competencies). The evaluation process, as well as program delivery, should be integrated and cooperative.

### **2.3 Approved Articulated Programs in the Maritimes**

The first set of articulated programs was approved by the MPHEC in New Brunswick in 1996 and 1997; Prince Edward Island followed in 1998 with its first program (Fig. 1). Between 1996 and 2000, 16 articulated programs were approved in Maritime Universities. Since then, approximately two new articulated programs a year have been approved by the MPHEC.

All universities in New Brunswick and Prince Edward Island now offer at least one program under the articulated degree structure. All approved articulated programs in New Brunswick and Prince Edward Island are bachelor's degrees, with the exception of one undergraduate certificate. In Nova Scotia, only two articulated programs have been approved (Fig. 1), and these are both Master's degrees (Appendix A). The partner institutions are generally community colleges, but also include hospitals and private education providers.

Figure 1: Cumulative number of articulated programs approved in Maritime universities by province of university



Articulated programs offered by Maritime Universities and partner institutions can be grouped under a few general fields of study: applied arts, business/administration, health related and other fields (e.g. aviation, agroforestry) (Table 1). The complete list of approved programs and the programs included in this survey can be found in Appendix A.

Table 1: Number of Articulated Programs approved in Maritime Universities by Field of Study

Field of Study	Number of Programs Approved	Number of Programs Surveyed*
Applied Arts	5	5
Business/Administration	9	5
Health Related	9	9
Other	6	1
Total	29	20

\*More information on which programs were surveyed is available in section 3.1.

### 3. Assessment of the Effectiveness and Benefits of Articulated Programs

#### 3.1 The Assessment Process

The 2003 preliminary assessment report<sup>9</sup> concluded by recommending steps that institutions should take in order to facilitate a full assessment of articulated programs at a later date. In particular, universities were to develop mechanisms to collect and evaluate data on attrition, retention rates, graduation rates, student satisfaction while in the program and after graduation, and graduate outcomes, for example: time to employment in area of study; employment rate; average or range of earnings; relatedness of employment; local and regional employment opportunities for graduates; and success rates of graduates in obtaining their license for practice, when required. The current assessment process is aligned with the recommendations of the 2003 report.

Only institutions that had graduated at least one cohort of students in an articulated program were formally surveyed. Four universities were included in the assessment: St. Thomas University, Université de Moncton, University of New Brunswick (Fredericton and Saint John campuses) and University of Prince Edward Island<sup>10</sup>. Any articulated programs implemented at these four universities at the time of the assessment, whether or not they had graduated students, were also surveyed.

Phase one of a two-phase assessment process was designed to collect graduate and student outcome data for all articulated programs approved by the Commission. Phase two, to occur once the quantitative data were collated and analyzed, involved interviewing relevant individuals at participating institutions in order to provide context to the analysis and findings.

Data were collected by administering a questionnaire that was designed to gather quantitative information on student enrolment, graduation, persistence, attrition and program completion for each program (Appendix B). The questionnaire also gathered information on student and graduate satisfaction and outcomes. Respondents at the universities were asked to provide copies of their survey instruments and aggregated results of student and graduate surveys. In January 2008, questionnaires were sent to the four Maritime universities that had graduated at least one cohort of students in an articulated program.

Twenty articulated programs were surveyed. In response to the questionnaires, all institutions provided annual enrolment and graduate data since program implementation. In some cases, aggregated responses from student, faculty and/or employer evaluations of the program were also provided. Respondents to the questionnaires indicated how they had addressed the feedback from students and faculty, and described the changes to the programs.

Enrolment data and the number of degrees granted in articulated programs were obtained from the MPHEC Postsecondary Student Information System (PSIS) database and reconciled with data provided by the universities for each of the programs in response to questionnaires. PSIS data from 2000-01 to 2008-09 were used to create longitudinal records of students enrolled in articulated programs to calculate persistence and graduation rates in the program<sup>11</sup>.

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<sup>9</sup> *Preliminary Assessment of the Effectiveness and Benefits of Articulated Programs Delivered in the Maritimes*, 2003, prepared by the AAU-MPHEC Academic Advisory Committee for the MPHEC

<sup>10</sup> The Master of Business Administration (Information Technology) at Dalhousie University, approved in 1999, was terminated in 2009 and the last intake of students in the program was in 2001. Dalhousie University was not included in this survey.

<sup>11</sup> Data in the PSIS format are not available before 2000.

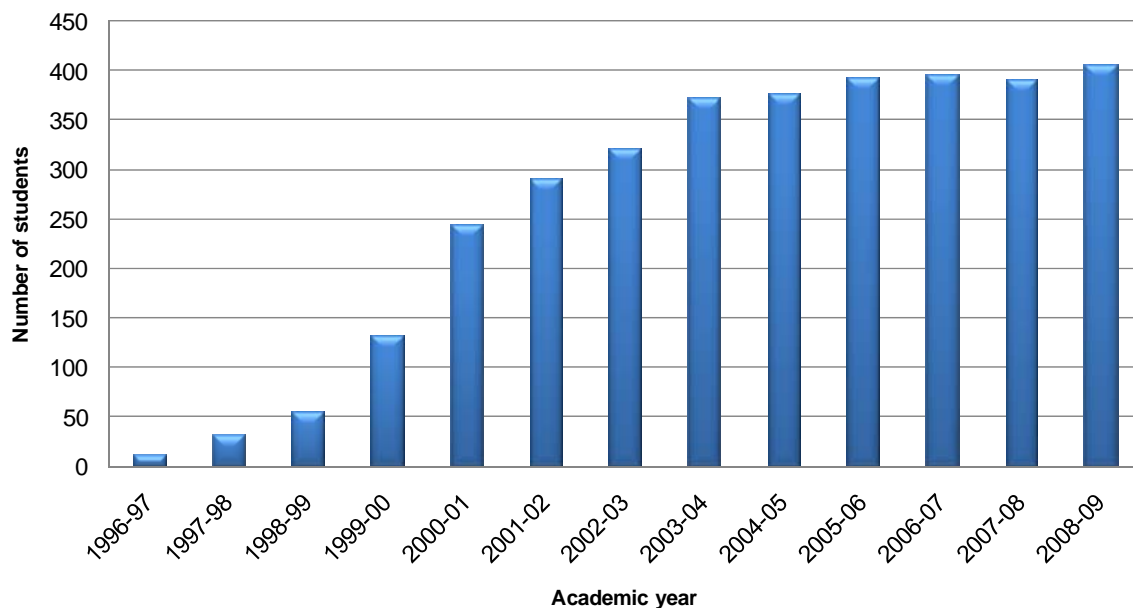
For each program, contacts at the university and partner institution were provided as part of the responses to the questionnaires. Program contacts included program coordinators, faculty deans at the universities, and program directors at the community colleges. For each program, at least one contact was interviewed in March 2010 to solicit feedback on the preliminary findings and to obtain more information on student success and satisfaction in the program, quality assurance mechanisms, challenges encountered, and lessons learned. Twenty-four individual program contacts were interviewed.

### 3.2 Enrolment in Articulated Programs

Figure 2 shows enrolment in all articulated programs as reported by the universities. Enrolments in articulated programs increased steeply between 1996-97 and 2003-04, the period when several new articulated programs were approved by the Commission. Since 2003-04, approximately 400 students per year are enrolled in articulated programs in all Maritime universities, either part-time or full-time.

In a few cases, students remain registered at the university for the entire duration of the program but, in general, enrolment in an articulated program while attending the partner institutions is not reported.

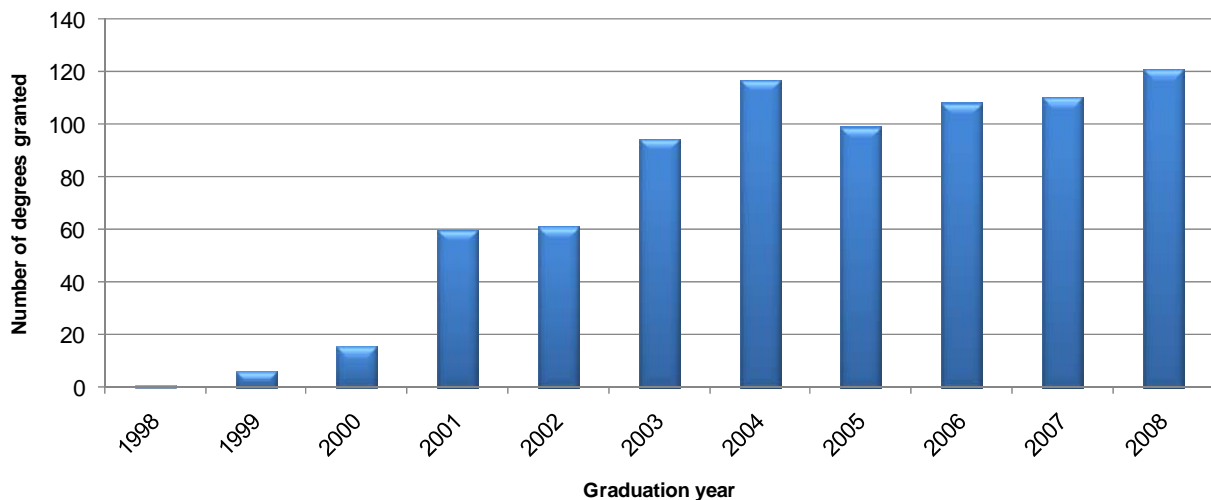
Figure 2: Number of students enrolled in all articulated programs in Maritime universities



### 3.3 Degrees Granted in Articulated Programs

The university ultimately grants the articulated degree, and data on graduates are therefore easy to obtain. There are now over 100 articulated degrees granted in the Maritimes every year, and, as of 2008, a total of 792 articulated degrees have been granted by Maritime Universities since 1997 (Fig. 3).

Figure 3: Articulated degrees granted in Maritime universities from 1998 to 2008



### 3.4 Student Success

#### *Persistence and graduation rates*

In a traditional bachelor's degree, such as a Bachelor of Arts or Bachelor of Science, where students enrol directly from high school, persistence is calculated as the percentage of students still enrolled at the institution after one or more years. Program completion or graduation rates are calculated as the percentage that earns a degree within six years of first enrolling<sup>12</sup>. In the Maritimes, on average, 79% of students remain enrolled at the university where they first enrol one year after admission, and 58% of students complete a degree within six years at the first university where they enrol directly from high school. Persistence and graduation rates are highest in Applied Arts and Science and Professional programs, where more than 84% of students remain enrolled after one year and 65% complete a degree within six years.

Students are usually admitted and enrol in an articulated program after at least one year of university or college. In general, the persistence and graduation rates for articulated programs cannot be based on a cohort of first-year students, but can be calculated as the percentage of students that completes the articulated degree after being accepted into the program. In most cases, longitudinal records of students enrolled in articulated programs can be created using MPHEC PSIS data.

Enrolments at the partner institution (college or hospital) are usually not available unless students are registered at the university for the entire duration of the program. Graduation rates can still be calculated for students who enrol at the university for the final two years of an articulated degree after earning a diploma, but the rates are not directly comparable to those for students enrolled in traditional four-year bachelor's degrees.

In some health-related programs, all students interested in completing a degree enrol in the program at the university for their first year of study. However, because seats are limited for the college portion of the program, not all students who would like to continue or are qualified are

<sup>12</sup> The Maritime Provinces Higher Education Commission. 2010. *Student Progression within University of First Entry: Persistence and Graduation*. Trends in Maritime Higher Education. Vol. 8, N. 1.

necessarily admitted to the program. In these cases, persistence rates are not indicative of student success, but of the ratio of students interested in the program *versus* the seats available.

Because of administrative differences in the way students are registered in articulated programs, longitudinal records could not be created for several of the programs, but information on the “success” of students in the programs could still be gauged from enrolment and graduation statistics, and information from program coordinators. In response to the questionnaires, and during the interviews, respondents often indicated that “almost all students complete the program” or “attrition rates were very high in the program”. These comments could be verified, to a certain extent, by the high or low number of graduates compared to the enrolments in these particular programs.

Longitudinal records could be created and graduation rates calculated for eight of the 20 programs surveyed. Graduation rates were generally above 70%, and often between 80 and 90%. These statistics are well-above the 58% degree completion rate of the direct-from-high school cohort in traditional bachelor’s degrees. The graduation rates for articulated programs are more similar to regular bachelor’s programs if we account for first- and second-year attrition. The statistic is more similar to completion rate of second-year students in more traditional bachelor’s programs, where the percentage of second-year students that complete any degree within six years is 72%. It makes sense that persistence rates would be high in articulated programs since, by the time students enrol in these programs, they have already completed some post-secondary education.

A small percentage of students that enrol in an articulated program switch programs and complete a different degree program. If we include students who enrol in an articulated program and complete any degree (those who have switched programs within the same university), the completion rates increase by one to two percentage points. When students do switch programs, they usually complete a related degree (e.g. Bachelor of Applied Management students switch and complete a Bachelor of Business Administration, or Bachelor of Applied Arts students switch and complete a Bachelor of Arts degree). In contrast, approximately 20% of first-year students who enrol in a traditional bachelor’s degree switch their discipline of study after one year.<sup>13</sup> Articulated programs are usually so-called ‘terminal’ degrees, and students who wish to go on to graduate school may need to complete a more traditional Bachelor’s degree to pursue advanced studies.

In all fields of study, most students who do not complete the articulated degree program usually leave the university within one year after first enrolling in the program. Students that persist beyond the first year of university study will usually complete the articulated degree. This is comparable to traditional degrees where most of the attrition occurs after the first year of study.

Overall, then, persistence and graduation rates are high in articulated programs in the Maritimes when compared to the rates for other bachelor’s degrees. Important variables related to persistence are: field of study, inter-institutional coordination, program structure and geographic proximity of the institutions.

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<sup>13</sup> MPHEC PSIS Longitudinal Database



### *Field of study*

Students in health-related programs enjoy high rates of employment in jobs related to their field of study. Because of the structure of health-related programs, the fact that many students are accepted in the program after varying number of years at the university, and several students may complete their degree part-time while they are employed, it is difficult to create a cohesive cohort and to calculate graduation rates. However, the data available and responses from the survey indicate that almost all students accepted in programs requiring a degree for entry-to-practice graduate from the program.

In health-related fields where a degree is not yet a requirement for entry-to-practice, students are usually employed once they have completed the college portion of the articulated program.<sup>14</sup> Results from follow-up surveys of diploma graduates indicated that they often continue their degree part-time while employed in their field of study.

Because students have often completed more than one year of university before being admitted to the college portion of the program, they may only have a few university courses left to complete in order to obtain their degree. Students have reported difficulties in completing the remaining courses part-time because of the lack of options through distance education. Longitudinal student records indicate that these students in health-related programs can often take many years to complete all the requirements of the degree program, and it is difficult to account for all program graduates.

Other fields of study, such as the applied arts, where the link between the program and the labour market are not as tight and employment rates are not as high as in health-related fields, other factors such as program structure, program cohesiveness, and student support services have a greater impact on completion and graduation rates.

### *Program structure*

Various permutations of program delivery structures exist for articulated programs. At the outset, 14 of the 20 articulated programs surveyed were designed so that students would alternate between the university and the partner institution. Students would study the different types of program content when deemed to be most appropriate. Because the university grants the articulated degree, the final year was to be offered at the university to “cap off” the program. Some articulated programs were designed so that students would be exposed to both occupationally related and general academic content during their first two years of post-secondary study. In several programs, the student may earn a certificate or diploma part way through, after completing the college portion of the program. In the case of health-related programs, one year of university is usually required before applying to the articulated program. These programs were designed so that student start their studies at the university, apply to the program after one year, and then alternate studies between the university and partner institutions.

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<sup>14</sup> Labour Market Analysis Branch, Government of New Brunswick. 2008. *Survey of 2007 New Brunswick Community College Graduates*. Fifty-five graduates were surveyed in the Radiology, Medical Laboratory Techniques, and Respiratory Therapy programs. Diploma graduates reported 100% employment rate in these three fields.

Another articulated program model offered by Maritime universities is sequential, where students usually complete a college diploma prior to applying to the university. These programs are sometimes referred to as 2+2 programs. Six of the 20 articulated programs surveyed were designed as sequential programs. Students usually complete two years at a college and then two years at the university. The diploma is often a condition for admission to the degree portion of the program. The reverse also exists for health-related programs, where the university portion can be completed before the college or hospital portion of the program.

Program contacts who were interviewed agreed that a program structure that required students to alternate between institutions was logistically more complicated for the students, and has resulted in low persistence rate for some programs. Students were often reluctant to relocate to a different city in the middle of their program. A simpler structure with two distinct blocks seems logistically simpler for the student.

The programs surveyed were generally designed for students with no previous post-secondary education. However, students who have enrolled in articulated programs have various academic backgrounds. Students may have already completed several years of university or have already earned a college diploma before enrolling in an articulated program. Flexibility in the program structure has allowed students with different academic backgrounds (e.g. not direct from high school) to enrol and complete programs that were originally designed for students with no post-secondary education.

Survey respondents indicated that most programs that were developed as alternating at the outset, have also attracted students who had already earned a college diploma and only needed to complete the university portion of the program to earn the articulated degree. In the applied arts, the majority of students now follow a sequential (2+2) sequence, instead of starting the program at the university. Health-related programs designed to admit students after one year of university often admit students with several years of university, and sometimes students who have already earned a bachelor's degree.

#### *Geographic proximity of institutions*

The persistence rates are lowest in programs where students start at one institution, relocate to a different city in the middle of the program, and then return to the first institution to complete the program (2<sup>nd</sup> and/or 3<sup>rd</sup> year away). Students seem less likely to persist if they are required to relocate and change institutions more than once. This does not appear to be an issue if the student moves between different institutions within the same city or only changes location once (e.g. two years at a community college, followed by two years at the university in a different location). Programs that separate the technical and university components, as in a 2+2 model, appear to be logistically easier for the students if they are required to relocate to a different city during the program.

#### *Inter-institutional coordination*

Inter-institutional coordination appears to play the major role in program success and student satisfaction. Programs where contacts reported that there was ongoing communication and coordination between the partner institutions had high graduation rates. These programs were also offered as a seamless program from start to finish with mechanisms in place to ease the transition between the institutions. Program coordinators also identified the need to create the sense of cohort for articulated program students. In some programs, this has been done by offering a course specific to students in the articulated program, or a section of a course reserved specifically for the articulated program students at the university.

Programs that were presented or marketed as an option for college diploma graduates to complete a degree, rather than a joint and cohesive program of which the diploma or partner institution's content was part, showed lower persistence rates. For some programs, contacts indicated that the coordination of credit recognition and transfer took place at the institutional level rather than the program level, and there was no program coordinator and no ongoing collaboration between the partners to monitor the program and student satisfaction or success.

### **3.5 Graduate Outcomes**

Community colleges have tracked the success of their graduates in diploma programs, and have collected data related to employment rates, employment related to training, and salaries. Comparable data are not available for university graduates in most articulated programs. Although one of the recommendations of the 2003 report was to implement mechanisms to track graduates, in most cases this recommendation does not seem to have been implemented.

Responses to questionnaires indicated that there was no follow-up of graduates in most articulated programs. During the interviews with program contacts, respondents agreed that tracking degree graduates can be a challenge. The program coordinators that have been successful in collecting data on graduate outcomes indicated that they were aggressive in tracking students after graduation. Graduate follow-ups occurred through short telephone surveys or e-mail surveys within one year of graduation.

In most cases, however, university graduates have not been formally surveyed but some information on graduate outcomes is still available through informal means. During the interviews many respondents indicated that their programs were small, and usually they knew the outcomes of most of their graduates (e.g. who went on to graduate school, or where graduates were employed). Some program coordinators have also attempted to keep in touch with program graduates using social media web sites and e-mail. Most of the information on the outcomes of articulated program graduates, however, is anecdotal. In the absence of data on graduate outcomes, it is difficult to assess whether students in articulated programs are meeting the original objective of articulated programs: namely, to provide graduates with a more timely access to significant jobs or earnings.

### **3.6 A Closer Look at Inter-Institutional Coordination**

Respondents to the survey indicated that, in the early stages of program development, inter-institutional committees played a greater role in reviewing and adjusting the program content and structure to address students' concerns regarding content duplication or prerequisites. Once programs were in operation for several years, the inter-institutional coordination often became less formal. The ongoing collaboration between the partners, formal or informal, appears to be what distinguishes programs that attract and retain students from those where students do not graduate from the program.

#### *Student satisfaction and graduate outcomes*

A requirement for the accreditation of health-related programs is that there are mechanisms in place to track student success and satisfaction in the program. These include student evaluations of each course and stage of the program, as well as employer and graduate follow-ups. Even in programs where graduation rates are high, eliminating duplication of content and integrating the different phases of the program appear to enhance the student's experience. Persistence and graduation rates are high in health-related programs, but student satisfaction surveys indicate that program cohesiveness, program structure and distance between partners,

inter-institutional coordination and student support services all play a role in student satisfaction with the program.

#### *Student support services*

Inter-institutional program coordinators play an important role in making sure the proper student support services are in place for students enrolled in articulated programs. Several issues related to the status of a student at one institution while enrolled at the partner institutions were identified by program coordinators during the implementation of articulated programs.

These included:

- the portability of scholarships
- access to library and e-mail
- course registration at the other institution
- fees
- access to sport facilities and eligibility for varsity athletics
- eligibility to health plans
- services (e.g. counseling services)
- and the admission process.

Different arrangements or policies were put in place at some institutions after the first articulated programs were implemented. For example, in some programs, students have access to services from both institutions during the entire duration of the program. In other cases, special arrangements were put in place for library access at the university while the students are studying at the partner institution. In one case, the option to apply to the articulated program at either partner institution was confusing, and the admission was streamlined so that students would only apply through the university. Not all issues identified can be resolved, but in these cases the students should be made aware of the policies in place. For example, on one university's website, the policy outlining the ineligibility of students for a university entrance scholarship while enrolled at another institution is clearly stated.

#### *Program review*

A coordinating committee overseeing the entire program is important to ensure integration between the different stages of a program, and to assess and address issues as they arise. In the absence of a committee or a review (internal or external) of the program as a whole, the effectiveness of the program structure cannot be monitored.

The results of the evaluations of health-related programs underline the importance of assessing the program as a whole. As part of the survey, universities provided aggregated results of program evaluations by students, faculty and coordinating committees. In some programs lack of integration, duplication, or transition between the different institutions were identified as issues based on program evaluations. Respondents gave examples of changes made to the program content, structure, and/or entrance requirements to address these issues. In some cases, the offerings of online courses were increased to allow health sciences students to complete their degree part-time after they were already employed.

In other fields of study, there were usually no formal student evaluations of the articulated program as a whole. Respondents indicated that the components at the different institutions were usually evaluated separately. Students enrolled in articulated programs usually take courses alongside students enrolled in other programs and may not be specifically surveyed. In

small programs, coordinators indicated that they often know which students are enrolled in articulated programs, and are able to make adjustments to the program based on student feedback. In some programs, specific courses which were identified as problematic for students in articulated programs were either modified or pre-requisites were added at the partner institution. In many cases, program coordinators relied mostly on issues that were brought up by individual students in the program to assess how the program as a whole was working. Only a few programs had an inter-institutional coordinating committee that included student representatives.

As noted in *Quality Assurance Policies and Procedures in Maritime Universities*<sup>15</sup>, the university awards the degree in articulated programs, and is ultimately responsible for the quality of the program. However, the university and the partner institution must assume shared responsibilities, and develop an integrated approach to the delivery and review of articulated programs. During its monitoring process of the universities within its scope, the MPHEC Quality Assurance Monitoring committee noted that a review process needs to assess each program. The Committee also noted that, in general, universities do not review the college component of articulated programs, but recognize that this issue needs to be addressed<sup>16</sup>.

### 3.7 Benefits of Articulated Programs

During the interviews, program coordinators were asked about the value-added aspect of an articulated degree when compared to that of a college diploma or a traditional bachelor's degree at the university in a similar field of study.

#### *Compared to diploma programs*

Community colleges have a good record of tracking their graduates and collecting information on their employment outcomes following graduation. During the interviews, program directors from the community colleges indicated that students that complete a degree can fast-track their career. In certain programs, such as those in the applied arts, program coordinators have observed that a degree has offered new employment opportunities to degree holders, for example policy work, that are not available to diploma holders.

University respondents also provided aggregated responses from student satisfaction surveys administered to graduates from health-related programs. Students had earned at least a diploma and were already employed in their field of study at the time of the survey, but not all had completed the degree. Diploma graduates were asked why they had completed or still planned to complete a degree.

In programs with a diploma-exit option, students indicated that they wanted to complete a degree for personal satisfaction, and hoped that a degree would become the entry-to-practice in their field. Several graduates in health-related programs indicated that they did benefit from taking university courses in psychology, sociology, English or French, and that these were all applicable to their jobs. Many students already working in their field of study were continuing a degree part-time because of the perceived benefits of the degree.

In health-related programs, where degrees are not required for entry-level positions, individuals with a degree in the field are still a minority. Interview respondents indicated that there was no

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<sup>15</sup> Maritime Provinces Higher Education Commission (MPHEC). 2010. *Quality Assurance Policies and Procedures in Maritime Universities*.

<sup>16</sup> MPHEC. 2003. *Assessment of St. Thomas University's Quality Assurance Policies and Procedure*; MPHEC. 2006. *Assessment of the University of New Brunswick's Quality Assurance Policies and Procedures*; MPHEC. 2006. *Évaluation de la politique et des pratiques de l'Université de Moncton en matière d'assurance de la qualité*.

difference in entry-level position or salary between diploma and degree graduates, but future advancement possibilities (e.g. management) may be contingent on having the degree. A few respondents indicated that a degree is also important for the mobility of students. As other provinces and countries require degrees for entry-to-practice, achieving this standard for entry-to-practice can be important for the mobility of graduates.

*Compared to traditional bachelor's programs*

Interview respondents indicated that the most important aspect of articulated degrees is that they incorporate applied/technical learning within the program. The technical/applied portion of the program usually includes a practicum and some hands-on experience that are often missing from programs in the same general field of study taken entirely at a university. In the applied arts or applied management fields in particular, the college component adds a practical knowledge and technical experience in the field. For example, articulated programs in Hospitality and Tourism offer hands-on experience in the industry during the college portion of the program that would not be available at the university.

While intuitively the added value of hands-on experience during a degree appears to be an advantage, there are no data to show that this is indeed the case. A graduate follow-up and/or employer survey specifically evaluating this aspect of articulated programs would be one way to assess this potential added benefit of articulated degrees.

*Compared to block credit transfer arrangements*

The main difference between articulated programs and other types of credit transfer arrangements is program cohesiveness. While articulated programs were not directly compared to other types of credit transfer arrangements, there were differences in student success and satisfaction related to the degree of program integration. Student persistence and completion rates were highest in programs with ongoing coordination between the partner institutions that were also marketed as a joint/integrated degree, instead of being presented as a simple articulation agreement.

In most cases there appeared to be close collaboration between the partners during the development of articulated programs and during the first few years after program implementation. Programs that appeared the most successful, as measured by increasing enrolment and high persistence rates, were the ones where this collaboration continued beyond the implementation phase of the program. While articulated programs are supposed to be "integrated", several have taken the form of block credit transfer arrangements, and program coordination between the partner institutions is virtually non-existent. Community college contacts were aware of the admission requirements for articulated programs at the university, but also reported students that had encountered problems transferring between institutions.

Interview respondents provided multiple examples of how certain courses were added to either the university or the partner institution's curriculum during the implementation of new articulated programs to ensure that the appropriate pre-requisites were offered for smooth transition for students between institutions. As some of the articulated programs have evolved, agreements have been reached with new partner institutions. These tend to take the form of block transfer agreements, with no formal ongoing coordination between the partners. There are no data available, however, on how the success of the students transferring from these new partner institutions compares to students from the first partner with which the program was developed.

### *Increasing opportunities for college graduates*

Program coordinators have indicated during the interviews that articulated programs have offered college graduates new opportunities to earn a degree. Even in programs that were not initially designed with a 2+2 structure, diploma graduates have earned a degree by completing the university portion of the articulated programs. In most cases, students enrolling in articulated programs after completing a diploma outnumber students who enrol in the programs at the university directly after high school.

Community college contacts also indicated that diploma students were usually aware of the articulated programs and other degree completion options, such as advanced standing in other more traditional bachelor programs, and often inquired about entry requirements for degree programs at the universities. Interviewees indicated that students who have already completed two years of applied training at a community college and pursue a degree are often focussed and want to progress in their field. These students often perform as well or better than other students in their third-year university classes. This observation is supported by the high persistence and graduation rates of students who enrol in an articulated degree after completing a college diploma.

According to one interview respondent, the college route may have more parental support because of the applied nature of college programs. A study of the factors affecting student preference for community college or university in Ontario showed that the choice of institution depended more on socio-economic status and parental educational background than on academic performance<sup>17</sup>. First-generation students (neither parent had postsecondary education) were more likely to choose college after high school over university. A few interview respondents also indicated that, for some students, starting at the college was less intimidating, and provided a good stepping-stone to a university environment. Colleges often have smaller classes, and often are perceived to offer a more nurturing and supportive environment. A similar perception of college was found in the assessment of collaborative nursing degree programs in Ontario<sup>18</sup>.

It appears that articulated degree programs that are developed in collaboration with community colleges can provide a structured program that offers the opportunity to college graduates to earn a university degree. In general, ongoing collaboration between the partner institutions leads to a smoother transition between the two environments, and to a higher proportion of college diploma graduates persisting at the university and completing a degree.

## **4. Conclusions and Implications**

### **4.1 Findings**

Enrolment in articulated programs in Maritime Universities has grown in the past decade to over 400 students a year. As of 2008, almost 800 degrees have been granted in articulated programs. The articulated program structure can be effective and benefit students, as long as the proper mechanisms are in place to ensure student success and satisfaction.

Articulated programs in the Maritimes have also offered new opportunities to students by combining technical and applied learning with general post-secondary competencies within a

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<sup>17</sup> Lang, D. W. 2007. *The Effects of Articulation on College Choice*. Vol. 10, No. 4.

<sup>18</sup> Ontario College University Consortium Council (CUCC). 2007. *Implementation Evaluation of Ontario's Collaborative Nursing Programs*.

degree. Notably, articulated programs have offered the opportunity to college diploma graduates to earn a university degree in the form of a cohesive program.

Factors associated with student success and satisfaction in articulated programs include field of study, program structure and geographic proximity of partner institution, and inter-institutional.

- Programs in health-related fields show high persistence and graduation rates because of their close link to the labour market. Nearly 100% of students are employed in their field of study after completing the program. Program cohesiveness and structure have a greater impact on persistence rates for students enrolled in other fields of study.
- Programs structures that require students to relocate to a different city for a year or two in the middle of the program are logistically more complicated for students. These programs show the lowest persistence rates. Program structure does not seem to be an issue if the student moves between different institutions within the same city or only changes location once (e.g. two years at a community college followed by two years at the university in a different location). Flexibility in the structure of articulated programs is also important to accommodate students with different academic backgrounds.
- Inter-institutional coordination is the key to the success of articulated programs. A coordinating committee or a program coordinator at each institution overseeing the entire program is important to ensure integration between the different stages of a program and a smooth transition between the institutions, and to assess and address issues as they arise. Cohesive programs that are offered as a continuous integrated program with ongoing communication between the partner institutions are more successful. Without this coordination there is no integrated program, but a simple juxtaposition of two components from different institutions.

## 4.2 Gaps and Areas of Further Study

### *Graduate follow-up surveys*

One critical dimension of articulated programs is the linkage to the labour market. Without tracking program graduates there is no information on the link between articulated programs and the labour market. Interview respondents indicated that tracking program graduates can be challenging. In general, it appears that graduates usually obtain employment related to their field of study, but this information is generally anecdotal. Institutions that have successfully conducted a follow-up of graduates indicated that they had been aggressive when trying to track students.

In addition to information on employment and earnings, graduate follow-up surveys should also include questions on how their program provided the knowledge and skills needed for their job. A survey of employer perception of articulated programs and/or survey of program graduates would also address the link between the program of study and the labour market.



### *Comprehensive program evaluations*

In general, program contacts indicated that program evaluations usually did not assess programs as a whole. Health-related programs that are reviewed for accreditation are the exception. The university is ultimately responsible for granting the degree, and it needs to put in place a mechanism that can evaluate the program as a whole to assess issues of content duplication, integration and transition between institutions. In programs where duplication and integration were identified as issues based on program evaluations by student, faculty or committee, changes could be made to the program content, structure, and/or entrance requirement to address these issues.

Most of the information on student satisfaction in the programs was obtained from program contacts (with the exception of student survey responses provided for health-related programs). Exit surveys, completed by students enrolled in articulated programs, with specific questions addressing the integration of the different phases of the program, would be helpful in assessing the effectiveness of a program.

### *Effectiveness of other types of credit transfer arrangements*

As more and more articulation and block transfer agreements are developed between post-secondary institutions, and the number of student transfers between colleges and universities increase, a comparison between articulated programs and other types of advanced standing arrangements in other degree programs would be interesting. Program efficiency of articulated programs (e.g. measured as the number of years to degree completion) compared to other types of student transfers from colleges to university could help to assess the effectiveness of the articulated program structure.

## **4.3 Implications**

The findings of this study and the gaps in information regarding the outcomes of articulated program graduates reinforce the importance of the current MPHEC guidelines for the development of articulated programs. These guidelines are to ensure program quality and suitability of services for the students involved.

- Institutions should have in place an inter-institutional coordinating mechanism. This mechanism is the key to a cohesive program and a smooth transition between institutions for students.
- A program evaluation procedure should be integrated and comprehensive, assessing all components of the program.
- A graduate follow-up process should be in place to assess the linkage to the labour market and suitability of program content.



## Appendix A: List of Approved Articulated Programs in Maritime Universities

	Date approved	Partner institution(s)	Included in this survey
<b>New Brunswick</b>			
<b>Mount Allison University</b>			
Bachelor of Science, Major in Aviation	28/04/2008	Moncton Flight College	No
<b>St. Thomas University</b>			
Bachelor of Applied Arts in Journalism	16/09/1996	New Brunswick Community College, Woodstock	Yes
Bachelor of Applied Arts in Gerontology	02/06/1997	New Brunswick Community College, Saint John	Yes
Bachelor of Applied Arts in Criminal Justice	08/09/1997	New Brunswick Community College, Miramichi	Yes
<b>Université de Moncton</b>			
Baccalauréat appliqué en sciences de techniques radiologiques	28/06/1999	Collège Communautaire du Nouveau-Brunswick – Campus de Dieppe and Régie régionale de la santé A	Yes
Baccalauréat appliqué en intervention touristique	12/12/2000	Collège Communautaire du Nouveau-Brunswick – Edmundston	Yes
Baccalauréat appliqué en sciences de laboratoire médical	05/02/2001	Collège Communautaire du Nouveau-Brunswick – Campus de Dieppe and Régie régionale de la santé A	Yes
Baccalauréat appliqué en agroforesterie	22/09/2003	Collège Communautaire du Nouveau-Brunswick – Campus d'Edmundston	Yes
Baccalauréat appliqué en thérapie respiratoire	20/09/2004	Collège Communautaire du Nouveau-Brunswick – Campus de Dieppe and Régie régionale de la santé A (l'Hôpital régional Dr-Georges-L.-Dumont - Moncton)	Yes
<b>University of New Brunswick, Fredericton Campus</b>			
Bachelor of Medical Laboratory Science	02/06/1997	New Brunswick Community College, Saint John campus	Yes
Bachelor of Applied Arts in Craft and Design	28/06/1999	New Brunswick College of Craft and Design	Yes
Bachelor of Business Administration with a concentration in Aviation and Operations Management	24/11/2004	Capital Airways	No
Certificate of Business Administration and Aviation	08/08/2008	Capital Airways	No
<b>University of New Brunswick, Saint John Campus</b>			
Bachelor of Applied Management in Hospitality and Tourism	02/06/1997	New Brunswick Community College, St. Andrews	Yes
Bachelor of Health Sciences in Nuclear Medicine	12/04/1999	New Brunswick Community College and Saint John Regional Hospital	Yes
Bachelor of Health Sciences in Radiation Therapy	12/04/1999	Saint John Regional Hospital and Cancer Care Manitoba (Red River College Winnipeg)	Yes

	Date approved	Partner institution(s)	Included in this survey
<b>University of New Brunswick, Saint John Campus (cont'd)</b>			
Bachelor of Health Sciences in Radiography	12/04/1999	Moncton Hospital (South-East Regional Health authority) or Saint John Regional Hospital (Atlantic Health Sciences Corporation)	Yes
Bachelor of Applied Management (Accounting)	11/05/2000	New Brunswick Community college, Saint John	Yes
Bachelor of Applied Management (Electronic Commerce)	11/05/2000	New Brunswick Community college, Saint John	Yes
Bachelor of Health Sciences in Respiratory Therapy	25/06/2003	New Brunswick Community College and Saint John Regional Hospital	Yes
Bachelor of Applied Management (General Business)	25/06/2007	New Brunswick Community College, Saint John	No
<b>Nova Scotia</b>			
<b>Acadia University</b>			
Master of Science in Applied Geomatics	03/12/2007	Nova Scotia Community College	No
<b>Dalhousie University</b>			
Master of Business Administration (Information Technology)	28/06/1999 [terminated in 2009]	Information Technology Institute Inc.	No
<b>Prince Edward Island</b>			
<b>University of Prince Edward Island</b>			
Bachelor of Business in Hospitality and Tourism	08/06/1998	Holland College	Yes
Bachelor of Applied Sciences in Radiography	12/04/2001	Queen Elizabeth Hospital	Yes
Bachelor of Applied Arts in Print Journalism	26/11/2001	Holland College	Yes
Bachelor of Child and Family Studies	23/10/2006	Holland College	No
Bachelor of Education in Human Resource Development	17/08/2006	Holland College	No
Bachelor of Wildlife Conservation	26/04/2010	Holland College	No

## Appendix B : Articulated Program Assessment Questionnaire

### Assessment of the Effectiveness and Benefits of Articulated Programs

#### Introduction

Articulated programs are new degree programs that a university could not offer/confer if it were not for the program content of a partner who normally does not grant degrees (colleges, hospitals, private providers, etc.). The general aim of such programs is to expand the opportunities for graduates to acquire both occupation-specific and general post-secondary education competencies. The Commission was instrumental in introducing articulated programs in the Maritime region, approving its first articulated program in 1996, and as such is committed to assessing this new degree structure to determine whether students are well served by this new degree standard.

Phase one of the two-phase assessment process, was designed to collect graduate and student outcome data for all articulated programs approved to date by the Commission. Phase two, to occur once the quantitative data are collated and analyzed, involves interviewing relevant individuals at participating institutions in order to provide context to the analysis and findings.

According to our records, your institution offers the following articulated programs:

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Please provide the name and date of implementation of any other articulated programs offered at your institution but not noted above.

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We have provided one questionnaire for each of the above-noted articulated programs approved by the Commission.

Thank you in advance for your cooperation.



8. Please complete the following credential granted table, beginning with the first year of program graduates:

Year	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
# of credential granted											

9. Please complete the following cohort enrolment table, beginning with the year the program was first implemented. The information collected in this table will be used to calculate persistence rate.

Beginning Cohort Year	Number in cohort in Year 1	Number from cohort enrolled in Year 2	Number from cohort enrolled in Year 3	Number from cohort enrolled in Year 4	Number from cohort enrolled in Year 5	Number from cohort enrolled in Year 6	Number from cohort enrolled in Year 7
1998-99							
1999-00							
2000-01							
2001-02							
2002-03							
2003-04							
2004-05							
2005-06							
2006-07							

10. Please append aggregate results, for all years available, of **student** satisfaction surveys (to include measures of satisfaction with program, faculty and facilities at both the university and the partner institution, etc). A copy of the survey instrument should also be appended. All formats accepted, such as PDF, excel files, etc.
11. If this information is not available, briefly describe why? \_\_\_\_\_
12. Please append aggregate results, for all years available, of **graduate** satisfaction surveys (to include information on employment outcomes such as time to employment in area of study, relatedness of employment to program, average earnings, success of graduates in obtaining their license for practice, if required, etc). A copy of the survey instrument should also be appended. All formats accepted, such as PDF, excel files, etc.
13. If this information is not available, briefly describe why? \_\_\_\_\_
14. Please feel free to provide any additional comments judged important or useful by your institution to assist the Commission in assessing this new degree structure. \_\_\_\_\_