Focus on Learning:

A Student Vision for Improving Post-Secondary Education in Nova Scotia

students ns

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Abstract

This report is the first by StudentsNS to focus principally on the organisation's quality value. This paper conceptualizes quality in post-secondary education (PSE), examines the tools used by PSE institutions in Nova Scotia to uphold and enhance quality, and finally, recommends policies to develop a more student-centred approach to quality measures and assessments. Our understanding of quality in PSE has shifted overtime from the traditional notions of excellence and exclusivity to a focus on access, accountability, learning outcomes, and the student experience. This shift, however, has not been fully realized within the different mechanisms for supporting and measuring PSE quality. As a result, many of these mechanisms do not effectively address the real factors affecting learning, institutions are insufficiently accountable for students' learning, and student voice is not adequately supported. More research is needed to better understand the state of teaching and learning, especially within universities. However, it is clear that, across the system, a greater emphasis needs to be placed on continual improvement in instruction and pedagogy, on learning outcomes, and on effective quality assurance. Recommendations in the report address these three themes, envisaging a more student-centred, evidence-based, teaching-and-learning-driven PSE system for our province. The report does not provide StudentsNS' last word on PSE quality, but represents the first of many projects to explore ways that Nova Scotia's PSE institutions can better meet students' expectations and support their lifelong success.

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Recommendations

The Province, in partnership with the universities, the Maritime Provinces Higher Education Commission, Students Nova Scotia and faculty representatives, should undertake a comprehensive review of the current state of teaching and learning in Nova Scotia universities.

A Teaching and Learning Envelope should be created within the University Funding Distribution Formula, tied to initiatives to train current and incoming faculty to develop instructional skills.

The Maritime Provinces Higher Education Commission's Maritime Degree Level Qualifications Framework should be used as a starting point to develop a set of program-level learning outcomes common to all universities.

The Department of Labour and Advanced Education should work with stakeholders (including the Department of Education, post-secondary institutions, the Maritime Provinces Higher Education Commission, and students) to implement the Collegiate Learning Assessment to test first-year and graduating university students.

The Universities-Government Partnership should fund a pilot ePortfolio project, to be introduced at one or more Nova Scotia universities in partnership with the Prior Learning Assessment Centre and Students Nova Scotia.

The Province of Nova Scotia and our post-secondary institutions should guarantee that all international graduates of Nova Scotia post-secondary institutions have sufficient language fluency to succeed in Canada's labour market.

The Maritime Provinces should provide adequate funding to the Maritime Provinces Higher Education Commission so that it can provide reputable and reliable data on post-secondary issues in the region.

The Maritime Provinces Higher Education Commission should maintain the scope of its Graduate Survey.

The Maritime Provinces Higher Education Commission should conduct more detailed research into credit transfers between designated institutions.

The Maritime Provinces Higher Education Commission should establish a database to show students the equivalencies of courses taken at designated institutions across the Maritimes.

In partnership with universities, the Province and student organizations, the Maritime Provinces Higher Education Commission should develop a certification program to

recognize universities that have met established quality assurance standards.

Post-secondary stakeholders should collaborate to develop and implement a standard tool to report on Collegiate Learning Assessment results and a set of inputs, outputs, and secondary outcomes.

Institutional quality assurance policies should be clear and explicit and provide guidelines for self-study and clear criteria for assessing academic units.

Institutions should administer course evaluations at both the end and midpoint of courses.

All post-secondary institutions' quality assurance policies should include a requirement for students to participate in and help lead program review activities.

Non-academic units should be included on all institutional program review schedules and appropriate assessment criteria should be established.

A Quality Assurance Envelope should be created within the University Funding Distribution Formula, be tied to institutions' adherence to the Maritime Provinces Higher Education Commission proposed quality assurance certification standards.

The Province should require that universities obtain the proposed Maritime Provinces Higher Education Commission quality assurance certification to be allowed to recruit internationally.

Students Nova Scotia should be empowered in the selection of Nova Scotia's student representative at the Board of the Maritime Provinces Higher Education Commission.

The Maritime Provinces Higher Education Commission's Board should be expanded to include an international student representative, who should be selected by Students Nova Scotia and the primary student representative organizations of New Brunswick and Prince Edward Island.

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Statement of Values

StudentsNS' mandate is to represent Nova Scotia students at the provincial level, and move forward four fundamental values:

ACCESSIBILITY: Every qualified Nova Scotia student who wishes to pursue post-secondary education should be able to do so, irrespective of their financial situation, socioeconomic or ethnic background, physical, psychological or mental disability, age, sexual orientation, geographic location, or any other factor other than qualification.

AFFORDABILITY: The cost of post-secondary education in Nova Scotia should not cause undue hardship upon any student, restrict their ability to pursue the career path they choose, or make them financially unable to live in the community that they choose.

QUALITY: Policies, programs, and services in post-secondary education should meet student expectations to help prepare them for lifelong success, including in their citizenship, careers, and personal wellbeing.

STUDENT VOICE: Nova Scotia students must be empowered to actively participate in setting their post-secondary system's direction via engagement through their representative student bodies, within their post-secondary institutions, and through the broader democratic process.

Our Research Process

Position papers are the primary outputs of our research. They aim to describe and clearly articulate Students Nova Scotia's Principles in approaching an issue, and Concerns that obstruct the realization of those principles. Finally, we propose Recommendations aimed at addressing the policy issues (and our specific concerns) in a manner that is consistent with our organization's values.

The Students Nova Scotia Board of Directors is comprised of student representatives from our eight member associations. It sets annual priorities for Students Nova Scotia activities, including research. Position Papers represent formal Students Nova Scotia policy and are approved by the Board of Directors at bi-annual Board Policy Retreats, following a draft's one-month release for consultations with students and other relevant stakeholders.

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List of Common Abbreviations

AAU – Association of Atlantic Universities

APCCC – Atlantic Provinces Community College Consortium

AST– Atlantic School of Theology

CBU – Cape Breton University

CCEDP – Community College Education Diploma Program

CCSSE – Community College Survey of Student Engagement

CLA – Collegiate Learning Assessment

CUSC – Canadian University Survey Consortium

HEQCO – Higher Education Quality Council of Ontario

MPHEC– Maritime Provinces Higher education Commission

MOU – Memorandum of Understanding

MSVU – Mount Saint Vincent University

NSCAD – Nova Scotia College of Art & Design

NSLAE – Nova Scotia Department of Labour and Advanced Education

NSSE – National Survey on Student Engagement

OECD– Organisation for Economic Cooperation and Development

OOP – Out-of-Province

OUSA – Ontario Undergraduate Student Alliance

PIAAC – Programme for the International Assessment of Adult Competencies

PSE – Post-secondary Education

QA – Quality Assurance

QAO – Quality Assurance Office of the Nova Scotia Community College

SMU – Saint Mary's university

StFX – Saint Francis Xavier University

StudentsNS – Students Nova Scotia

UKC – University of Kings' College

USA – Université Ste. Anne

1. Introduction

Nova Scotia's universities and community college contribute significantly to the economic and social wellbeing of our province. Their graduates have higher average earnings, better health outcomes, and are more actively engaged in civil society (Saunders, 2006). Furthermore, PSE has been linked to innovation and growth in the economy and reduced crime (Saunders, 2006). Maintaining and enhancing quality in our post-secondary education (PSE) system is fundamental to achieving our province's economic, social and cultural goals.

While Nova Scotia's PSE system has long been recognized for high quality and academic excellence, it is unclear how "quality" and "excellence" have actually been defined. Student survey data, public opinion, and rankings have been cited as evidence, but to what extent are these indicators instructive in assessing instruction, institutional performance, and student learning? How are our institutions and communities evolving and in what ways is this impacting on quality of education?

These are obviously expansive questions, which extend beyond the scope of a single report. This report focuses on the structural picture of education quality, particularly at the university level, including how we measure student learning, and support improvements in programming across the system. Future reports will focus on other aspects of quality, including career preparation, supports for students in academic difficulty, and pedagogical methods, and also address the Nova Scotia Community College in greater detail. Quality remains a core value of StudentsNS and therefore integral to other projects, including our work on system funding and accountability, international students, housing, and accommodations for students with disabilities.

Our first step is to define quality in PSE from the student perspective. Overtime, the concept of PSE quality has shifted from the notions of excellence and exclusivity, to a focus on value, access, and accountability (Harvey & Knight, 1996; CCL, 2009). PSE must be centred on students and learning, through a "transformative" or "value-added" approach that evaluates the processes and outcomes of instruction. Importantly, evaluations of institutional quality should not only support oversight, but also encourage innovation and improvement, and assist all stakeholders in making informed decisions.

Many of the mechanisms currently used to measure quality do not meet these criteria. As a result, much of the popular conversation on PSE quality, particularly at the university level, is excessively focused on inputs and divorced from students' actual learning and the processes that support it. This disconnect stems largely from difficulty in agreeing upon what students are supposed to learn and methodological challenges in measurement. Yet, it is also apparent that insufficient effort has been put into measuring student learning and tracking the processes of instruction.

The mechanisms in place to maintain and enhance student learning, on the whole, better fit with the actual dynamics of student learning. The Maritime Provinces Education Commission (MPHEC) is a particularly valuable institution for both quality assurance and data collection, albeit one that is inadequately resourced to fulfill its mandate. Institutional quality assurance, teaching and learning supports and co-curricular records are also grounded in the right principles and are foundations for bettering student outcomes. In general, however, the different mechanisms remain insufficiently student-centred and oriented to continual improvement.

The report's fundamental finding is that PSE institutions in Nova Scotia, especially universities, need to change their approach to quality in education. Our universities need to focus much more on teaching and learning. We need to collect more and better data to understand the current state of teaching and learning at our universities and the Province needs to build a mechanism into the funding formula to support continual improvement in instruction.

Our PSE system needs to concentrate on student learning outcomes. We need to track whether students are learning what they expect and are expected to at the program level, but also across our institutions. We need to support students to assess their own learning and be able to communicate what they know and can do.

Finally, we need to get the most from the MPHEC and institutional quality assurance processes. The MPHEC needs to be adequately funded to collect and distribute important research on trends in PSE across our region and provide services that support a credit transfer system. The Province should also use the MPHEC to establish and uphold standards for institutional quality assurance. Finally, student representation at the MPHEC should be adjusted to strengthen accountability.

StudentsNS used multiple approaches to collect the research for this report. We con-

ducted focus groups with students on five campuses and interviews with students, PSE institution staff, faculty representatives, MPHEC representatives and provincial civil servants. We also completed a comprehensive review of relevant literature and institutional and governmental statistics. Survey sources for the research included the MPHEC's Graduate Survey, the NSCC Graduate Follow-up Survey, the National Survey of Student Engagement, the Community College Survey of Student Engagement, the National Graduate Survey and the Canadian University Survey Consortium's Graduating Student Survey.

2. Conceptualizing quality

Given the complicated nature of measuring and assessing quality some argue that it is an exercise in futility and relativism and could potentially stifle innovation and autonomy at the institutional level. StudentsNS cannot agree with this argument. As Harvey and Knight (1996) assert "it is irresponsible to assume that quality is too ambiguous to define and so we don't bother" (p. 12). Similarly, the O'Neill Report on Nova Scotia's higher education system emphasizes: "the need for better and more usable information on the universities' core activities" (2010, p. 127). While recognizing the inherent complexities of defining and measuring quality, StudentsNS believes that a common approach, with appropriate assessment tools, is essential to meaningful and informed dialogue on this issue and to meet student and other stakeholder expectations for education quality.

We will start by discussing how quality of education is measured, as this holds will provide important indications of how quality is being defined by different stakeholders in our PSE system.

2.1 Popular approaches to quality measurement

All quality measurement models focus on inputs, outputs, outcomes, or a combination of the three. Inputs are financial, human, and material resources that are used to produce outputs and accomplish outcomes (for example, the professor to student ratio, or the number of books in the library – Nusche, 2008). Outputs are the direct result of an activity and are often tangible (for example, students learn how to read). Outcomes are the change or the difference that results from the outputs and are sometimes referred to as the 'impacts' or 'results' (for example, students are more employable, students become life-long learners).

PRINCIPLE: Quality measurement must focus on both institutional accountability and educational improvement.

The key challenge is determining which inputs, outputs, and outcomes to measure. No quality framework can perfectly capture all the tangibles and intangibles affecting educational quality. It is important that assessment tools not be focused solely

on accountability, but be constructive to encourage the continuous improvement of educational quality.

External factors must also be considered in developing a measurement model. Underlying factors or beginning characteristics may influence or impact on the relationships between inputs, outputs, and outcomes and can include: age, socio-economic status, marital status, etc. (Finnie & Usher, 2005). In different models the terminology may be slightly different, but these are the general components of any evaluation or

Table 1

Approach	Potential Mechanisms	Pros	Cons
Minimum Standards: Standards for measurement determined according to specific objectives and clear criteria, evidence used to assess whether the criteria are being met	-Program Review - Graduate surveys	Collegiality, sensitivity to context	Insufficiently transparent process and results
Rankings/Indicators: Measurement based on inputs and outputs.	-Rankings and League Tables - Key Performance Indicators	Quantitative results intuitively easy to grasp	Indicators frequently meaningless; insensitivity to context
Learning Impacts: Surveys that seek to gauge how students evaluate their learning experience and the "value-added" of PSE	- Graduate surveys - Student engagement surveys - Competency Examinations	Measures what happens "inside the box", potential to unlock true "value-added"	Difficulties in attributing results directly
Continual Improvement: Institutions establish their own process for defining and measuring quality and then the government provides accreditation to institutions that follow their processes	- ISO 9000 (Japan)	Sensitivity to context, development of "quality communities" at each institution	Insufficiently transparent, difficulty in comparing institutions and administratively onerous

Source: (Finnie & Usher, 2005)

assessment framework.

Finnie and Usher (2005, p. 20) have identified four main approaches to quality measurement used by OECD countries: (1) minimum standards; (2) ranking/indicators; (3) learning impacts; and, (4) continual improvement. The mechanisms, pros and cons of each quality measurement approach are summarized in Table 1.

It is impossible for one measure or complement of measures to fully represent quality in PSE. A serious approach to quality must employ multiple measurement mechanisms to do the best possible. It is beyond the scope of this paper to provide a comprehensive overview of every potential measurement of educational quality. The first section of this paper will discuss common measures and indicators of quality identified in the literature and through consultations with students and other PSE stakeholders: rankings, class size, faculty research performance, faculty contract status, graduate and engagement surveys, and measures of competencies.

2.1.1 RANKINGS

The U.S News and World Report first introduced university rankings (or league tables) in 1983 (Sanoff, et al. 2007). Three decades later, there are 11 global rankings and over 60 countries have national ranking schemes (Hazelkorn 2013, 74). Some governments have even made progress on rankings into a major policy objective. In Canada, Maclean's Magazine ranks Canadian universities in an annual publication targeted at prospective students and their families. No ranking system exists for community colleges in Canada.

Scholars attribute rankings' persistence and popularity[1] to massification and an increased appetite for information about PSE, as well as their perceived contribution to accountability and transparency (Hazelkorn 2013, Marope and Wells 2013). Rankings are helpful in initiating a discussion among all stakeholders on success and quality and how this should be measured and reported (Hazelkorn 2013, IHEP 2009, Marope and Wells 2013).

CONCERN: Rankings fail to consider the unique missions and characteristics of different institu-

Critics of rankings highlight their methodology and choice of indicators and argue that they provide a

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[1] Massification refers to a general increase in PSE enrolment and an increase in enrolment among previously underrepresented sectors of the population (CCL, 2009).

limited evaluation of quality and should not be used as the sole tool or resource in assessing institutions or basing student decisions (Hazelkorn 2013). A general critique ties directly to the broader discussion of quality. Maclean's does not explicitly define "quality", but is implicitly outlining what it thinks contributes to educational quality by developing a set of measures and weights. A further review of the publication's methodology further highlights this point and reveals the challenges in using rankings to assess institutional "quality".

The Maclean's rankings classify institutions into three categories: Primarily Undergraduate, Comprehensive, and Medical Doctoral (Dwyer 2013). Nova Scotia universities generally fare very well. The rankings apply weighted performance indicators within six categories (Dwyer 2013):

- Students and Classes (20 percent)
  - o Success of students at winning national academic awards (10 percent)
  - o Full-time student to Full-time faculty ratio (10 percent)

- Faculty (20 percent)
  - o Number of Faculty who have won a major national award (8 percent)
  - o Success of faculty in securing research grants from SSHRC, NSERC, and CIHR (12 percent)

- Resources (12 percent)
  - o The amount of money available for current expenses on each FTE student (6 percent)
  - o Total research dollars (6 percent)

- Student Support (13 percent)
  - o Percentage of budget spend on student services (6.5 percent)
  - o Percentage of budget spent on scholarships and bursaries (6.5 percent)

- Library (15 percent)
  - o Number of volumes per FTE student (5 percent)
  - o Percentage of budget allocated to library services (5 percent)
  - o Percentage of budget spent on updating the collection (5 percent)

- Reputation (20 percent)
  - o Based on responses from a national survey of stakeholders (university officials, high-school guidance counselors, CEOs, and recruiters)

Like other commercial publications, Maclean's does not have direct access to institutional and government data. Their rankings therefore focus largely on what is easily

measured (primarily inputs) and not necessarily what best represents quality, using proxies rather than direct measurements (Hazelkorn, 2013; Sanoff, et al, 2007). This can be problematic for a number of

reasons. For example, inputs such as Library Acquisitions are used as measures; however the number of books in a library is not in and of itself an indication of quality; students may not actually need the books that are available for their courses. Research output is also used as an indicator in the rankings. Research is an important activity at universities, but the amount of research output, or grants received by Faculty does not definitively mean that students are receiving quality teaching or the support they need to succeed.

Furthermore, Maclean's Rankings weights "Reputation" quite heavily. Typically, reputation is based more on an institution's age and profile rather than direct assessments of quality (Hazelkorn 2013)[2]. This is also a subjective measure dependent on the knowledge of the respondents. In the 2013 rankings the survey used to assess reputation had a total response rate of 9.2% (736 respondents in total) among those polled (Dwyer 2013). University officials had the highest response rate, however, at 29%, such that their views are most represented within the survey results. It is reasonable to assume that university officials may display some bias, especially with respect to their own institutions.

However, compared to prominent world ranking schemes, MacLean's methodology is much more comprehensive. The Academic Ranking of World Universities has four criteria and six indicators (Shanghai Ranking Consultancy, 2013):

- Quality of Education (10 percent)
    - o   Alumni of an institution winning Nobel Prizes and Fields Medals

- Quality of faculty (40 percent)
    - o   Staff of an institution winning Nobel Prizes and Fields Medals
    - o   Highly cited researchers

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[2] Reputation may contribute to recruitment of students from outside of an institution's immediate vicinity, which some also consider an indicator of quality. Nova Scotia has been very successful in recruiting from out of province. From 2002-2003 to 2012-2013 international student enrolment in Nova Scotia increased 122% and Nova Scotia currently has the highest percentage of out-of province (OOP) students in Canada at 32% in 2012 (The Nova Scotia Commission on Building our New Economy 2014, 38). However, an institution's recruiting success does not intrinsically signal that students are learning and could as easily be a product of effective marketing as good quality instruction.

- Research output (40 percent)
  - o   Papers published in Nature and Science
  - o   Papers indexed in Science Citation Index-expanded and Social Science Citation Index

- Per Capita Performance (10 percent)
  - o   Per capita academic performance of an institution

A review of the criteria and indicators shows a high focus on research (especially in the sciences) and the receipt of prestigious awards. This methodology reflects a "quality as excellence" approach whereby exclusivity and high quality inputs are understood as equating with high academic quality. It is difficult however, to infer direct causality between the accomplishments of alumni, and the quality of teaching and learning in an institution's classrooms. Furthermore, the selective definitions of success (e.g. receipt of a Nobel Prize, focus on scientific journals) provide a very narrow understanding of what quality is and the unique attributes and services provided by PSE institutions.

The importance placed on rankings and their subsequent use is largely stakeholder-relative and this is sometimes referred to as the "Rashomon Effect" (IHEP, 2009, p. 25). For example, recruiters and institution marketers may put more importance on rankings than an institution administrator who is removed from activities like recruiting, advising, etc. (IHEP, 2009). In fact, research conducted by the Institute for Higher Education Policy (IHEP) found that university administrators seemed to place little importance on rankings and rankings did not seem to impact an institution's strategic plan, particularly at Canada's strongest universities. The IHEP did, however, find that faculty members were concerned about how rankings impacted student and faculty recruitment and consequently academic quality. Furthermore, while administrators may express disinterest in rankings, universities are quick to advertise when they have been ranked favourably.

In producing rankings, commercial entities are filling an identified gap and providing information that students and families may not be able to access elsewhere. Assuming rankings are targeted at potential students and not the institutions themselves, however, greater focus should be on the processes of learning, teaching, evaluations, student participation in the university, and services that meet the students' needs. Also, rankings are nota substitute for institutional accountability, transparency, and self-assessment and improvement.

2.1.2 RANKINGS

In focus groups, students universally identified class size as a measure of education quality. However, establishing the direct impact of class size on teaching quality and student performance is difficult, if not impossible.

There is a lack of consensus on the impacts of class size at the post-secondary level, although some evidence indicates that class size can have effects in the K-12 system (Kerr, 2011; Kokkelenburg et al., 2006). It is difficult to isolate the variable of class size from student and faculty perceptions and preferences, and also to define a "large" class as size is relative to the year of study, discipline, and type of class (ex. lecture, lab, or seminar – Kerr, 2011).

CONCERN: Class size is not necessarily a direct indicator of education quality.

Studies have indicated that an increase in class size has generally had a negative effect on student retention, particularly among first-years (Kerr, 2011). Yet, study results have been mixed as to whether or not class size has any effect on student performance (Kerr, 2011; Kokkelenburg et al., 2006). A Cornell University study concluded that there was a negative relationship between class size and grades, but the researchers emphasized that they could not conclude that less learning took place in large classes (Kokkelenburg et al., 2006). Linked to this is the negative impact of increased class size on student engagement. It is reasonable to assume that increasing class sizes without a corresponding increase in faculty will result in an increased workload for professors, who consequently will not have as much time to engage with individual students one on one or give the comprehensive feedback that many students value. Feelings of isolation or insignificance in the classroom can impact a student's ability to feel active and motivated in their learning (Kerr, 2011).

Despite these findings, researchers argue that instructor skill, teaching methods, and course design are likely more important factors in student learning than class size alone (Kerr 2011). A study at Kwantlen University (2003) concluded that: for "courses that emphasize recall of facts, large classes are equally as effective as small classes; for courses emphasizing "problem-solving, critical thinking, long-term retention, and attitude toward the discipline (...) small classes are more successful" (Kokkelenburg,

Dillon and Christy 2006, 5). This assertion points to the importance of context in discussing class size and quality. Class size is easily measurable, but we do the education system a disservice by overly focusing on what is easily measurable instead of whether students are actually learning. If teaching methods and course design are more important factors that class-size alone, it is likely in the best interest of students to put resources into supporting these activities rather than reducing class size. In a recent (2014) survey conducted by the Ontario Undergraduate Student Alliance (OUSA), students identified "training for instructors in teaching methods" as a higher priority for directing resources than "smaller class sizes". [3]

2.1.3 FACULTY RESEACH PERFORMANCE

In terms of workload, a brief review of faculty collective bargaining agreements with the universities, confirms that faculty members have three main responsibilities: teaching, research, and service. There is an idea that responsibilities are distributed according to 40% teaching, 40% research, and 20% service. In practice this 40/40/20 split is an expectation rather than a contractual responsibility and workloads can vary within departments and programs.

PRINCIPLE: Teaching, research and services are the fundamental responsibilities for university faculty and must be given appropriate emphasis.

American researchers have argued that research expectations for university faculty have risen to the point where research output has become the main criterion for faculty hiring and promotion (Prince et al., 2007). The focus on research output has largely been driven by two main factors: universities' reliance on external research funding to fund general operations, and the weight given to research output in world rankings (Prince et al., 2007). It is also much easier to faculty performance based on easily quantifiable data like the number of publications written and conference presentations, compared to whether their students learn (Paulsen & Feldman, 1995).

CONCERN: Universities prioritize research output over teaching in assessing institutional quality and in recognizing and promoting faculty.

With respect to teaching, university administrations and faculty also justify an em-

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[3] 39% of students prioritized "training for instructors in teaching methods" compared to 27% for "increased research opportunities for faculty and students" and 25% for "smaller class sizes" (OUSA, 2014).

phasis on research by arguing that research en-
hances, teaching (Prince, et al., 2007). Yet, Prince
et al. (2007) argue that administrators and faculty
are emphasizing the potential for research to en-
hance teaching, whereas studies have shown only
a negligible correlation between research output

CONCERN: Research output does not correlate positively with higher quality instruction.

and teaching performance in practice. After reviewing 42 studies, Richard Feldman concluded: "the likelihood that research productivity actually benefits teaching is extremely small...the two, for all practical purposes, are essentially unrelated" (Prince, Felder, & Brent, 2007, p. 283). The negligible correlation between teaching and research may not only be a result of incompatibility, but that a high-level researcher may put a lower priority on teaching activities (Prince, Felder, & Brent, 2007).

Despite the findings, there is reason to think that research could enhance teaching if it is properly incorporated into the course objectives (Prince, Felder, & Brent, 2007). University departments must support faculty in instructional development and re-ward those departments that have developed initiatives and demonstrated a com-mitment to teaching, in order to better emphasize teaching and support the integra-tion of research and learning.

A recent study of faculty workloads conducted by HEQCO found that (on average) research active faculty taught fewer courses than not research active faculty (Jonker & Hicks, 2014). While these findings and the study methodology have been criticized by the Ontario Confederation on University Faculty Associations (OCUFA), among others, the report challenges the reality and desirability of the 40/40/20 workload, and argues that if not-active researchers taught more "the teaching capacity of full-time professors in Ontario's universities could increase by 10%" (Jonker & Hicks, 2014). While this data is from Ontario, it is not unreasonable to suspect that faculty workloads in Nova Scotia also deviate from the "40/40/20 rule".

2.1.4 FACULTY CONTRACT STATUS

According to study interviewees, gaps in teaching capacity are being filled by ses-sional instructors rather than with the hiring of new tenured faculty, as a cost-saving measure. Some interviewees and students assert that the use of sessional instruc-tors has diminished teaching quality because these instructors do not have the nec-essary resources (e.g. office space and time to meet with students) and have lesser

experience.[4] On the other hand, some university administrators assert that hiring contract instructors is not simply a financial calculation, but is also used to address gaps in human resources and allow for the teaching of courses that may not have otherwise been available from tenured professors (Macdonald 2013).[5]

> **PRINCIPLE**: Faculty members have a right to dignified terms of employment commensurate with their training and the services they provide.

The real quality impacts of hiring contract instructors are difficult to ascertain. There is very little system-level data on the number of contract instructors and the percentage of courses they teach. [6]

According to a review conducted by Aleamoni (1999), the research is mixed as to how students perceive the quality of teaching according to a professor's contract status. In some studies, tenured professors received better assessments from students, in some studies teaching assistants, and in other studies there was no significant difference between groups (Aleamoni 1999). It is reasonable to assume that an educator's personal qualities and pedagogical methods ultimately impact more on teaching quality than their contract status. This does not however, absolve institutions from supporting new and existing faculty in developing pedagogical skills and providing the resources (both financial and otherwise) to fulfill their professional responsibilities to the best of their abilities.

> **CONCERN:** Informed discussion on the situation of sessional instructors is impeded by a lack of accessible, system-level data on the number of sessional instructors and the percentage of courses they teach.

2.1.5 GRADUATE SURVEYS

The Maritime Provinces Higher Education Commission (MPHEC), the Nova Scotia Community College (NSCC), and many individual universities conduct graduate

[4] The work conditions of sessional instructors are also problematic, with possible implications for teaching quality.

[5] University spending is something that StudentsNS takes very seriously. A full and informed discussion on faculty contracts is beyond the scope of this paper; however it is being considered as a topic for a future StudentsNS report and is an important consideration in any discussion of teaching quality.

[6] In February 2014, StudentsNS submitted a request under the Freedom of Information and Protection of Privacy Act to all Nova Scotia PSE institutions for data concerning the number of contract/sessional instructors and the percentage of total courses they teach. At the time this paper was published, Acadia, AST, NSCAD, SMU, UKC, and USA had provided data

surveys. These surveys cover a wide range of questions on student satisfaction and outcomes such as employment and income.

The NSCC conducts an annual Graduate Follow-up Survey with graduates one year after graduation. The survey collects data on employment outcomes and satisfaction with their NSCC experience (NSCC, 2012). In terms of graduate satisfaction, the class of 2010-2011 reported a 93% satisfaction rate (see table 2).

Table 2: Graduate Satisfaction with the NSCC (classes of 2008-2009, 2009-2010, and 2010-2011)

	2010	2011	2012
Overall satisfaction with NSCC experience	95%	95%	93%
Overall satisfaction with Portfolio Learning	90%	90%	84%

Data source: (NSCC, 2012)

The MPHEC surveys university graduates. In 2011, the MPHEC released the findings of its 2009 Maritime Graduate Survey of the 2007 graduating class. One section of the survey asked graduates to report their satisfaction with four aspects of their program: computer equipment, class size, availability of professors outside of class, and the quality of teaching (MPHEC 2011c). The survey found that a high percentage of graduates surveyed were "satisfied" or "very satisfied" with these aspects of their program (see Table 3).

Table 3: Proportion of Nova Scotia university graduates who reported they were "satisfied" or "very satisfied" with aspects of program

	"Satisfied"	"Very Satisfied"
Class size in general	45%	51%
Availability of professors outside of class time	46%	49%
Quality of teaching in most classes	55%	40%
Computer equipment	53%	34%

Data source: (MPHEC 2011c, 6)

Included in the same MPHEC survey was a qualitative assessment of student 'transformation' (see Table 4). Graduates were asked to report on their skill development in the areas of: "decision-making, independent/critical thinking, speaking/communication, writing, and math" (MPHEC, 2011c). In these first four areas, approximately 90% of the surveyed graduates reported that their program had supported their skill development to "some extent" or a "great extent". On the other hand, only 60% of graduates thought that their program had supported development of their math skills to the same extent.[7,8]

Table 4: Proportion of NS first-degree holders reporting that particular skills were developed to "some extent" or a "great extent"

	"Some Extent"	"Great Extent"
Think independently/ critically	35%	61%
Writing	43%	45%
Speaking/communicating	44%	46%
Decision-making	47%	45%
Math	32%	20%

Data source: (MPHEC 2011c, 6)

The MPHEC's findings suggest that the majority of students in Nova Scotia have a high level of satisfaction with their PSE experience after they graduate. However, the survey findings are not on their own sufficient to evaluating quality. To "some extent" or to a "great extent" are highly subjective measures, which could have been interpreted very differently across the survey sample. Furthermore, without a baseline measure of students' skills prior to their PSE studies, or the skill development of those who do not undertake PSE studies, it is difficult to quantify to what extent learning and skills development and "transformation" have occurred and whether or not they can be attributed to their formal PSE.

Another critique of both the MPHEC and NSCC surveys is that they do not survey students who have dropped out of their institutions. Students drop out of school for a number of reasons, not all connected to the quality of their education. However, it would be very useful for institutions and the system as a whole to have a clearer picture of the reasons students drop out and to identify barriers and gaps (quality

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[7] There was no significant difference between the percentages of satisfaction for the 2007 cohort and the 2003 cohort (MPHEC, 2011c).

[8] The variation in math transformation can be partly explained by the varying degrees to which math is part of different programs, ex. humanities vs. science (MPHEC, 2011c).

related or otherwise) within the PSE system.

Despite these limitations, the MPHEC's Graduate Outcomes Survey has been a crucial tool for researchers and policymakers. Due to budget constraints, the Graduate Survey has been eliminated and a new Maritime Graduate Outcomes Survey has been proposed as a replacement (MPHEC 2012b, 4). The new survey has a redesigned methodology, sampling two cohorts of students two and four years after graduation, and will be linked to existing K-12 system survey tools.[9] It will focus on five research themes(MPHEC 2012b, 13):

- Financing education
- Employment outcomes
- Graduate mobility
- Further Education
- Graduate perceptions of university experience

CONCERN: the Maritime Provinces Higher Education Commission's new Graduate Outcomes Survey will not uphold the same standard as the previous Graduate Survey or collect consistent data.

The fifth has been identified as a lower priority theme, which seems contrary to the Commission's assertion that students and quality are their top priority (MPHEC 2012b, 13). The new survey is smaller in scope, sample size, and comprehensiveness and will not include a high-level analysis in the final report. For example, graduate students will no longer be included in the MPHEC survey, which is especially unfortunate since MPHEC data indicates that undergraduate students are increasingly going on to do a second degree.[10] It seems likely that in the near future governments will see the need to once again expand the scope to include graduate students and regret this change.

2.1.6 STUDENT ENGAGEMENT SURVEYS

A number of PSE institutions in Nova Scotia use the National Survey on Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE) to measure levels of student satisfaction and engagement. A survey of student engagement is an indirect quality measure that assesses aspects of a student's learning environment.

[9] Interview with MPHEC representative, November 26, 2013
[10] For those who graduated with a bachelor's degree in the Liberal Arts and Sciences, 70% pursued further study within two years. Far fewer graduates of Applied Arts and Sciences/Professional programs (37%), and Commerce and Administration programs (50%) had pursued further education within two years (MPHEC, 2011c).

First piloted in 1999, NSSE is an annual survey of university students in the US and Canada. Participating Nova Scotia universities include Dalhousie, StFX and CBU. In Canada, participants are selected through a random sampling of first-year and senior-level undergraduate students (CCI Research Inc. 2009).[11] The survey focuses on five themes of engagement adapted from the Survey's Benchmarks of Effective Educational Practice (NSSE, 2013; O'Neill, 2010):

> **PRINCIPLE**: Student engagement surveys provide an important indirect measure of student engagement with their learning environment and the value-added of PSE.

- Academic Challenge
- Learning with Peers
- Experiences with Faculty
- Campus Environment
- High-Impact Practices

Data collected in the Survey includes: contact with faculty, frequency and duration of homework, and reading requirements for courses (O'Neill 2010). NSSE does not directly measure learning outcomes, but measures "the correlation of good learning outcomes and assumes learning is taking place on the basis of it" (Finnie & Usher, 2005, p. 13). Thus, while NSSE does not provide a complete picture of educational quality on its own, it does go beyond measures of inputs and to provide important insight into the learning process (O'Neill 2010).[12]

CCSSE is a sister survey to NSSE. CCSSE was developed in the US, but is being administered by two Canadian colleges including NSCC. Like NSSE, CCSSE has identified five benchmarks of student success:

> **CONCERN:** Institutions are not required to release the findings of the National Survey of Student Engagement, which limits access to the findings, accountability and the survey's usefulness in understanding and enhancing quality

- Active and Collaborative Learning,
- Student Effort,
- Academic Challenge,
- Student-Faculty Interaction, and
- Support for Learners

Feedback from the NSCC's first CCSSE was generally positive; although some concerns were expressed with regard to the need for changing some demographic

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[11] The survey is administered in February-March and consists of 100+ questions that typically take 15 minutes to complete (CCI Research Inc., 2009).
[12] In 2013, 621 colleges and universities particpated in the survey and 371,284 students completed the survey (NSSE, 2013).

questions to better reflect a Canadian context (CCI Research Inc. 2009, 48).

There are some important differences between NSSE and CCSSE. Firstly, the questions are tailored to the particular target audience, in recognition of differences between colleges and universities. Secondly, NSSE is an online survey students can complete on their own time whereas CCSSE is administered during class time.[13] Finally, and perhaps most importantly, the results of CCSSE must be made available publicly, whereas dissemination of NSSE is at the discretion of the university (CCI Research Inc. 2009). NSSE produces an annual report that discusses broad trends, but the institutional data is accessible only by the participating institutions, not by the general public. The university is only obliged to release their data if they receive a Freedom of Information – Protection of Privacy (FOIPOP) request. This institutional control limits the possibility of external evaluation and NSSE's utility in tracking student satisfaction and educational quality.

2.1.7 COMPETENCY EXAMINATIONS

In October 2013, the Organisation for Economic Cooperation and Development (OECD) released the data from its Programme for the International Assessment of Adult Competencies (PIAAC). PIAAC assesses the numeracy and literacy of adults in the 24 OECD countries. Statistics Canada conducted surveys in 2011 and 2012 to collect the data for Canada.[14]

Looking at Nova Scotia specifically, respondents (aged 16-65, all levels of educational attainment) scored at the OECD average for literacy and below average for numeracy (Statistics Canada, 2013).[15] Importantly, literacy scores for Nova Scotians aged 16 to 65 years with a bachelor's degree or higher, are above the OECD average.

While the Nova Scotia literacy findings are positive, Canada's mean literacy and numeracy scores for those with tertiary level education rank below the OECD average (OECD, 2013). Furthermore, the average literacy score for Canadians aged 18-30 (of any level of educational attainment) decreased from 1994 to 2012 (OECD,

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[13] CCSSE uses a stratified random sample according to credit courses instead of a random sample as used by NSSE (CCI Research Inc., 2009).
[14] The survey sample was aged 16-65 and with various levels of educational attainment (HEQCO, 2013).
[15] Numbers divided according to educational attainment were not available.

2013, Table Annex B).[16] These findings should be concerning to all Canadian educators, especially given our significantly higher than average levels of PSE attainment and average spending on PSE compared to other OECD countries (Usher, 2013; StudentsNS, 2013a).[17]

Measuring what a student has learned is difficult without a baseline measurement, i.e. a starting point that can be compared against. For example, a competency examination of university graduates at two universities could reveal a higher average literacy rate at University A than at University B. One may then make the assumption that University A offers higher educational quality. However, it is possible that University A accepts students with higher starting skill levels than at University B, but University B's students show a greater overall improvement over the course of their study suggesting University B delivers higher quality of education in terms of value-added.[18] The point is not to demonstrate that one university had better quality than the other, but rather to provide a more nuanced analysis of graduate skill levels and notably evolution over time.

PRINCIPLE: Student learning should be at the centre of quality assessments.

In this view, cross-sectional and longitudinal assessments have been developed to measure "value-added".[18] The Collegiate Learning Assessment (CLA) developed by the Council for Aid to Education (CAE) in the US is one example.

The CLA was designed to test: "critical thinking, analytic reasoning, problem solving, and written communications" (Klein, et al. 2007). These competencies were selected because they are relevant to all PSE programs of study and are found in many institutions' mission statements. The CLA provides information to administrators, faculty, and students about "some of the competencies that need to be developed, the level of performance attained by students at their institution, and most importantly, whether that level is worse, better, or about the same as what would be expected given the ability level of its incoming students"(p. 418).

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[16] According to Statistics Canada (2013), more research needs to be conducted to explain the change over time.

[17] PSE attainment has a positive relationship to literacy and numeracy.

[18] It could be very problematic to infer higher quality to an institution on this basis as well, because skill improvements at a certain point may become more difficult to attain (diminishing returns).

The CLA can be administered either in a cross-sectional or a longitudinal design. The "value-added" is calculated by determining the difference between students' expected performance and actual performance (Lennon, 2014). Expected performance is determined using test scores that are adjusted to account for external factors (in the US the SATs are used as the baseline – Lennon, 2014). The CLA uses the institution as the unit of analysis rather than the student. Individual students do not receive their personal test score; rather institutions receive data on their student body as a whole relative to other institutions and how the students have improved since entry (Klein, et al. 2007).

In fall 2011, the Higher Education Quality Council of Ontario (HEQCO) launched a CLA pilot program at eight PSE institutions to determine the CLA's usefulness in assessing generic skills in Ontario (Lennon, 2014). HEQCO provided resource support, but each institution was responsible for test administration and reporting. The final pilot report identified a number of difficulties with administering the CLA including: low participation rates, lack of advertising, self-selection bias, delays obtaining approval from institutional research ethics boards, lack of faculty and student buy-in, and loss of participants through attrition (Lennon, 2014). To obtain reliable data, the sample size and composition are very important and these are serious concerns. Institutions tried various methods to increase participation: mandatory participation, or the option to write the CLA in place of another assignment were more successful ways to boost participation (Lennon, 2014).

In light of these challenges, the HEQCO report concluded that the new CLA+ program might be more suitable (Lennon, 2014). CLA + provides some individual feedback and even issues digital badges to students that exhibit proficient or advanced levels in the skills assessed (Council for Aid to Education, 2014). These badges can be included on resumes, online employment profiles, etc.

Assessments such as the CLA are valuable tools in directly assessing learned competencies and the value-added of PSE. One tool cannot, however, capture all the complexity of PSE and the CLA should be used in combination with other direct and indirect methods (such as student engagement surveys) to measure education quality (Klein, et al. 2007). Furthermore, as evidenced by the Ontario pilot, effective implementation is crucial to using the CLA successfully and obtaining an appropriate sample.

2.2 Approaches to Quality

Harvey and Knight (1996, pp. 15-24) have identified five approaches to quality which are widely cited within the literature: (1) quality as exceptional, (2) quality as perfection or consistency; (3.1 and 3.2) quality as fitness for purpose (customer specification and mission); (4) quality as value for money; (5) quality as transformation.

The first approach, "quality as exceptional" is focused on universities in particular. Quality is viewed as excellence and a system characterized by elite and high-quality inputs, which are achieved through only recruiting the most high-level students and faculty(Harvey and Knight 1996). This approach is in conflict with the direction of PSE in Nova Scotia. We have shifted our emphasis from elitism and exclusivity to wide access and internationalization. The resulting 'massification' of higher education has meant a general increase in PSE enrolment, including among previously under-represented sectors of the population(CCL, 2009). This is especially important as the global economy is becoming increasingly knowledge-based and it is estimated that as many as 70% of jobs created in the next decade will require a PSE credential (StudentsNS, 2013a).

The second approach, "quality as perfection", is also used in manufacturing and describes processes whereby each stage conforms to specifications and the final output is free of any defect(Harvey and Knight 1996). This approach is more appropriate to administrative processes than complex human dynamics like learning, and as such more applicable to activities such as student registration than learning(Harvey and Knight 1996).

From a review of institutional policies, and discussions with representatives from PSE institutions, the third approach, "fitness for purpose-mission", is seemingly the most widely used at Nova Scotia's PSE institutions. Neither the institutions, nor the MPHEC provide a concise, explicit definition of quality. They instead defer to the broad institutional mission statement or the specific objectives of an individual course. Table 6 provides mission statements from each of Nova Scotia's publicly funded PSE institutions:

Table 6: Institutional Mission Statements

Acadia University	To provide a personalized and rigorous liberal education; promote a robust and respectful scholarly community; and inspire a diversity of students to become critical thinkers, lifelong learners, engaged citizens, and responsible global leaders.
Atlantic School of Theology	Cultivates excellence in graduate-level theological education and research, creative and faithful formation for lay and ordained ministries, and understanding among communities of faith.
Cape Breton University	Create a synergy of high quality university education and research that engages and inspires our learners and partners and has significance, relevance and application in contexts from local to global.
Dalhousie University	Learning, discovery and innovation, and social engagement (with our students, the university and the world).
Mount Saint Vincent University	... We will be the national leader in creating the best university experience for all members of our community... and in developing thoughtful, engaged citizens who make a positive impact on their world.
Nova Scotia College of Art and Design	Is dedicated to providing the best possible conditions for the study, practice, research and teaching of art, craft and design.
Nova Scotia Community College	Building Nova Scotia's economy and quality of life through education and innovation
Saint Francis Xavier University	Has upheld a commitment to the intellectual and spiritual development of its students.
Saint Mary's University	To offer undergraduate, graduate, and continuing education programs; to engage in research and disseminate its results; and to serve the community from the local to the international level
Université Sainte Anne	L'Université mise sur une approche personnalisée pour offrir un enseignement de qualité en français à ses étudiants acadiens, francophones et anglophones. Elle offre à ses étudiants un environnement qui facilite leur épanouissement personnel et professionnel, et les prépare aussi bien à des études supérieures qu'au marché du travail.

The mission statements are necessarily broad as they must try to encompass the wide range of ser- vices and programs offered by the institutions, and a fitness for purpose approach is seemingly appro- priate to recognizing the unique offerings of each institution.

However, these mission statements are generally too broad to develop a comprehensive set of as- sessment measures. Furthermore, using mission statements as de facto definitions of quality is problematic, as it positions quality as being defined exclusively by the institution itself, and not other stakeholders such as students, faculty and the public.

The "value for money" approach has emerged from a drive for accountability. How- ever, the value of PSE is practically impossible to quantify in dollar terms. This ap- proach also positions students as "consumers", a perspective that is not sufficiently nuanced to capture the complex relationship between students and their PSE institu- tion.

Finally, the fifth approach to quality, "quality as transformation" or "value-added", is commonly favoured as more student-centered (CCL, 2009; Harvey & Knight, 1996; Finnie & Usher, 2005). As Harvey and Knight (1996) argue: "quality needs to be understood as a transformative process, which means that it cannot be addressed separately from issues to do with assessment, learning and teach- ing" (p. 9). This approach to quality goes beyond measuring inputs and outputs to assess the out-

comes of the teaching and learning processes. Essential to this approach is that students are understood as active 'participants' in their learning and in the quality assurance (QA) process, instead of just passive recipients or "consumers".

Each of these five approaches implies different ways to measure quality. Generally speaking, however, any PSE system will employ a combination of approaches at the

course, program and system levels and the different approaches are not necessarily mutually exclusive.

Table 7: Summary of Harvey and Knight's Five Approaches to Quality

Approach to Quality	Characteristics
1. Quality as Exceptional	- Traditional notion of quality understood as meeting or exceeding high standards. - Measures inputs and outputs exclusively
2. Quality as perfection or consistency	- Focus on consistency and reliability of process-es- "zero defects" - More suitable for administrative processes than learning
3.1. Quality as fitness for purpose- customer specification	- Quality only has meaning in relation to the purpose of the product or service - Very different from approach 1 as it assumes everything has the potential to be of quality so long as it meets its stated purpose
3.2. Quality as fitness for purpose-mission	- Quality is understood as the institution meeting its mission or mandate - Assumes a sort of free market for education along a basic rational model of economics
4. Quality as value for money	- Populist, market-based approach to quality - Relies on performance indicators - Quality is a by-product of accountability
5. Quality as transformation	- Quality is understood in terms of how the institutions has 'transformed' the individual - Value-added- how the institution has enhanced the individual - Students viewed as participants

2.3 Emerging trends in post-secondary quality

A number of new approaches to understanding, measuring and enhancing quality are emerging in many OECD countries. Many of these support or are supported by mechanisms and approaches that we have discussed already, but seek to better address some of their shortcomings.
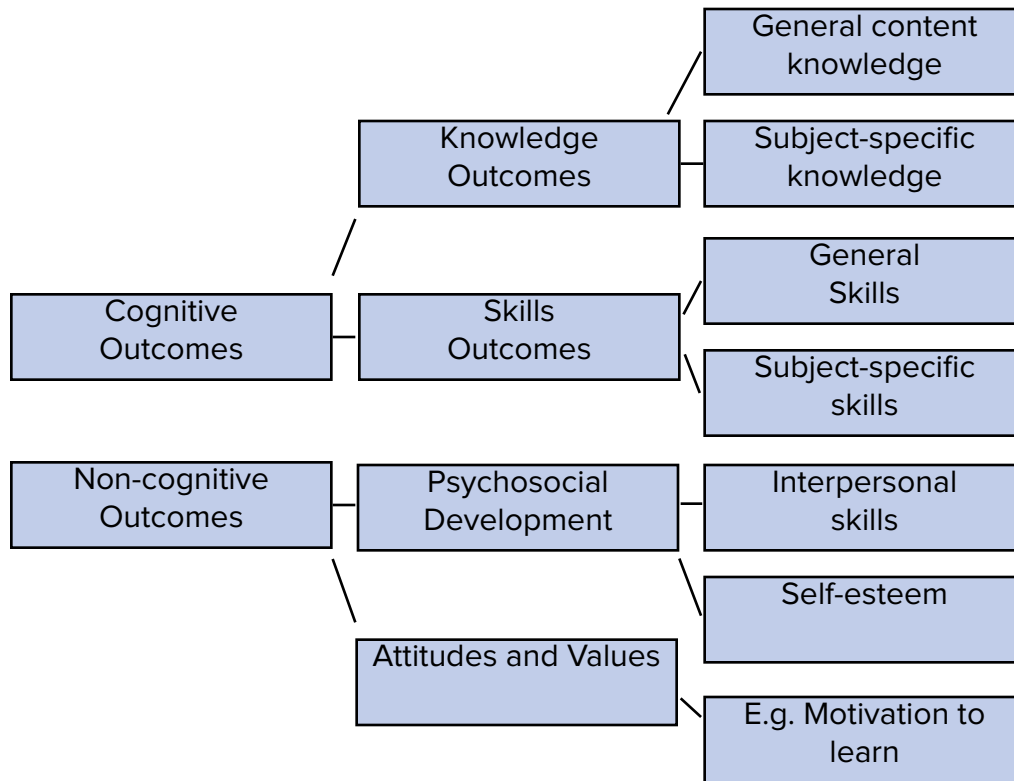
2.3.1 EMPHASIZING LEARNING OUTCOMES

To measure whether PSE institutions are delivering results and students are learning what they are supposed to learn, there has been an increasing trend towards an outcomes-based understanding of education quality. PSE outcomes can be understood in terms of learning outcomes and secondary outcomes (Nusche 2008). Secondary outcomes are indeed benefits of PSE, but do not directly describe what has been learned, nor can it be certain that they result directly from the quality of post-secondary education. For example, a range of factors impact on employment besides the quality of PSE, such as students' social networks, socio-economic backgrounds, and field of study, as well as external realities in the economy.

Learning outcomes have been defined as: "what a learner knows or can do as a result of learning" and can be observed, demonstrated, and measured (Nusche, 2008, p. 41). For simplicity, learning outcomes can be divided into cognitive and non-cognitive outcomes.

Cognitive outcomes can be further classified into knowledge and skills outcomes (Nusche 2008). Cognitive knowledge outcomes include general content knowledge and subject-specific knowledge. General content knowledge refers to "essential learning" that all students should have regardless of their major field of study. Most PSE institutions focus more on subject-specific knowledge and providing students with the specialized skills they need to excel in their chosen field. Cognitive skills outcomes can also be subdivided according to general and subject-specific skills. An example of a cognitive skill is problem solving. This skill can transcend various disciplines, or be specific to a certain problem solving skill required for a specific discipline of study. Measuring cognitive skills is made more challenging because it is difficult to confidently attribute this learning to their post-secondary education experience, as opposed to a student's individual intelligence, maturity, and prior learning.

Non-cognitive development is generally gained through extra-curricular activities such as involvement with societies, teams, and leadership roles(Nusche 2008). This development can be divided into psychosocial development and attitudes and values. Psychosocial development can include interpersonal skills and self-esteem. Attitudes and values developed through PSE could include motivation to learn. Non-cognitive development can also be difficult to directly attribute to PSE.

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                                    ┌─────────────────────┐
                                    │  General content    │
                                    │     knowledge       │
                    ┌──────────────┐└─────────────────────┘
                    │  Knowledge   │┌─────────────────────┐
                    │  Outcomes    ││  Subject-specific   │
                    └──────────────┘│     knowledge       │
                                    └─────────────────────┘
                                    ┌─────────────────────┐
                                    │      General        │
                                    │      Skills         │
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 │  Cognitive   │   │   Skills     │┌─────────────────────┐
 │  Outcomes    │   │  Outcomes    ││  Subject-specific   │
 └──────────────┘   └──────────────┘│      skills         │
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 ┌──────────────┐   ┌──────────────┐┌─────────────────────┐
 │ Non-cognitive│   │ Psychosocial ││   Interpersonal     │
 │  Outcomes    │   │ Development  ││      skills         │
 └──────────────┘   └──────────────┘└─────────────────────┘
                                    ┌─────────────────────┐
                                    │     Self-esteem     │
                    ┌──────────────┐└─────────────────────┘
                    │ Attitudes and Values │┌──────────────┐
                    └──────────────┘│ E.g. Motivation to  │
                                    │       learn         │
                                    └─────────────────────┘
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There are three main ways to measure learning outcomes: direct methods, indirect methods, and performance-based methods (Maki 2004). These methods are generally consistent with the assessment tools used for transformative approaches to quality. Direct methods include standardized tests such as the CLA; indirect methods include measures of student engagement such as the NSSE and the CCSSE; and, performance-based methods include the assessment of how students demonstrate knowledge and skills through conducting projects. A comprehensive assessment strategy would include a mixture of all three types of methods (Maki 2004).

PRINCIPLE: Assessments of quality should consider the relationships between inputs, outputs, secondary and learning outcomes and external factors.

An approach that focuses on outcomes and incorporates inputs, outputs and background characteristics is recommended by Finnie and Usher, who understand assessments of quality as measuring: "the improvement in learning and secondary PSE outcomes"(Saunders

2006, Finnie and Usher 2005). An assessment of competencies and/or learning outcomes would complement existing institutional and MPHEC input, outputs and outcome measures to provide a more comprehensive understanding of learning at our PSE institutions.

The MPHEC has identified a list of broad measures, sub-measures, and indicators to assess quality (see Table 8).[19] The outcomes identified by the MPHEC are very important to understanding the PSE context in the Maritimes and the pathways of the region's students. However, they are focused primarily on secondary outcomes and not learning outcomes.

Table 8: MPHEC Broad outcome measures and indicators

Broad Measures	University Participation	Student Progression	Progression within institutions of first entry
Sub-measures/ Indicators	- Overall full and part-time - Home province full and part-time - Maritime full and part-time - National full and part-time - Home province 18-24 - Direct entry rate of high school students.	- Persistence after 1 year - Graduation after 6 years	- Time-to-degree - Stop-outs - Switching programs - Switching institutions - Number of courses completed relative to number required by program - Annual course load - Course success/ failure - Distance to institution from address of application

An outcomes-based approach requires that the curriculum be organized according to explicit student outcome statements. The statements detail what the student is expected to know, understand and/or be able to do at the end of a course or a defined period of learning (Nusche 2008). Explicit learning outcomes help manage student expectations of a course and allow them to make choices not based solely on course content, but on the actual competencies they are expected to learn. Learning outcomes are certainly not new and are already used by a number of professors in Nova Scotia, but not by everyone.

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[19] The MPHEC's Maritime Provinces Degree Level Qualifications Framework articulates learning outcomes and all new university programs are assessed according to this framework.

Institutions have different missions and mandates and individual professors may have different objectives in designing their courses. It would be impossible to define and measure all the learning and secondary outcomes of learning, thus in developing learning outcomes, instructors must focus on the outcomes that are most relevant to their course and institutional objectives(Nusche 2008).

In Nova Scotia, the MPHEC's Maritime Degree Level Qualifications Framework articulates the general "expected degree level standards" for undergraduate and graduate degrees to assist institutions in designing new programs of study, identifying clear learning outcomes, and recognizing credit transfers. The Framework includes a description of the skills and capacities an undergraduate should have achieved in seven categories: depth and breadth of knowledge in the field; depth and breadth of knowledge outside the field; conceptual and methodological awareness; level of analytical skill; level of application of knowledge; professional capacity and autonomy; level of communication skills; and, awareness of limits of knowledge (MPHEC n.d.). The MPHEC uses the framework to assess new university programs before giving approval in its QA process. Yet, while one of the Framework's aims was to develop clear learning outcomes, it is not clear to what extent corresponding learning outcomes have been developed and applied at the institutional or system level.

PRINCIPLE: Institutions have a responsibility to manage student expectations by establishing clear learning objectives and measuring the learning outcomes.

Universities such as Guelph, McMaster, and Carleton are important examples of Canadian universities leading the way towards a more outcomes-based approach. In 2010, the University of Guelph began consultations and research into learning outcomes and released a report in 2012 detailing five university-level learning outcomes, with associated skills and detailed rubrics for each (Desmarais 2012). The five proposed outcomes are: critical and creative thinking, literacy, global understanding, and communicating, professional and ethical behaviour. In developing these outcomes, the university aimed to provide students with information on what they were expected to learn and ensure than curriculum was "coherent, aligned, and integrated" (Desmarais, 2012, p. 1). In 2012, McMaster University started administering the CLA to graduating students in the Faculty of Arts and Social Sciences in the winter semester and then first-year students in the fall semester (McMaster University 2014).

Carleton University is currently conducting a pilot project on developing program-

level learning outcomes. The project emphasizes the program-level, over course-level outcomes, because "it allows faculty to look at their programs as a whole, rather than just a sum of courses and other requirements"(Carleton University Office of Quality Assurance 2014). According to the Carleton University Office of Quality Assurance (2014), program-level learning outcomes are beneficial in that they:

- Provide a clearer sense of what holds the program together
- Ensure course activities, assessments, and content are aligned in a coherent way
- Establish a (high) minimum standard students should work to meet or exceed
- Communicate to students what is expected of them.

The Office of Quality Assurance at Carleton University uses the following diagram to conceptualize learning outcomes and how they contribute to program improvement:
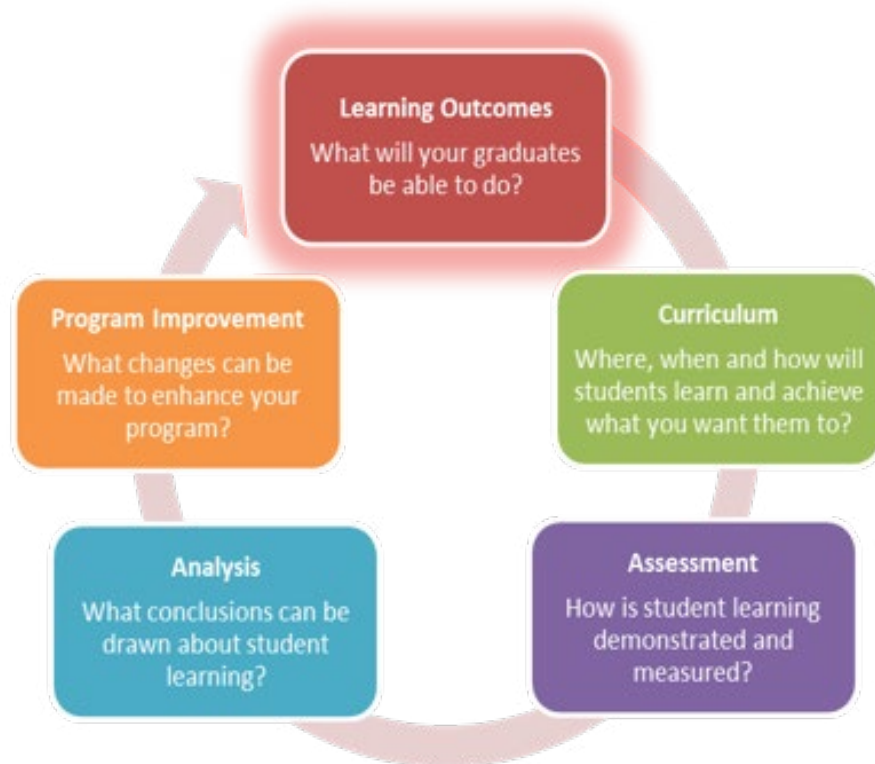

Image source: (Carleton University Office of Quality Assurance 2014)

Faculty groups have voiced concerns over the proliferation of learning outcomes. The Confederation of University Faculty Associations of BC (2013) has criticized the approach as being part of a broader trend to "replace professional autonomy with

command and control management". Learning outcomes also put the responsibility for student learning on the faculty, which may effectively remove student agency from the process (Clift 2013). In consideration of Faculty concerns around academic freedom, the Carleton pilot emphasizes the faculty role in defining learning outcomes. Additionally, the greater awareness of the learning process that comes from developing and assessing learning outcomes can assist faculty when conducting the self-study component of a program review.

Learning outcomes are not a panacea for challenges to educational quality or gaps in QA processes. In assessing quality, learning outcomes do not capture the complexity of the PSE system on their own. Like course evaluation and department self-studies, they are only one QA strategy. Process measures should also be used to achieve a more comprehensive understanding of learning and the 'student experience' (OUSA, 2013). Yet, if used effectively, learning outcomes assist faculty in developing curriculum and critically reflecting on their teaching, provide stakeholders with information on strengths and weaknesses in the PSE system, and provide students with important information on the skills and competencies they are supposed to develop through their studies, thus helping them make more informed choices on their education and future employment. At a system-level, common learning outcomes allow comparison between institutions, which can facilitate credit transfer and student mobility, and the recognition of prior learning.

2.3.2 COMPETENCIES

Competencies are broader than learning outcomes and there may be more than one learning outcome for a given competency. Competencies can be defined as: "a mix of action, knowledge, values and goals in changing settings"(Nusche 2008, 45). Competencies are often more associated with professional skills and knowledge than learning outcomes and to possess a competency, an individual must often be able to exercise a skill at a certain level in various different contexts, e.g. in the classroom and the workplace (ESDC, 2013). Like learning outcomes, competencies can be divided between general and occupational. General competencies are applicable in a wide-range of settings, whereas occupational competencies are those that apply to a specific occupation and are also referred to as "employability".

Considerable research has been done both nationally and internationally to define generic and occupational competencies. In Canada, Economic and Skills Develop-

ment Canada (ESDC) has identified key competencies for the workplace. According to the Department, essential skills: "provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change" (ESDC, 2013). The identified competencies are:

o	Reading	o	Thinking
o	Document use	o	Problem-solving;
o	Computer Use	o	Decision-making;
o	Writing	o	Critical thinking;
o	Numeracy	o	Job task planning and organizing;
o	Oral Communication	o	Significant use of memory; and
o	Working with Others	o	Finding information
o	Continuous Learning		

The government also identifies levels of complexity to measure the skills needed to perform a specific task (ESDC 2013). There are five levels, 1 being basic and 4 and 5 advanced. For example, in determining the level of complexity of writing, consideration is given to: length, purpose, style, structure and content(ESDC 2013).

2.3.3 A POST-SECONDARY EDUCATION "SYSTEM"

According to Hazelkorn (2013, pp. 90-91) a 'world-class university system' is characterized by differentiated institutions that offer a breadth of educational and research activities, wide-access, the development of knowledge and skills that graduates use to contribute to the labour market and society more broadly, and, lastly, an international outlook and responsiveness to change.[20] The term 'world-class' is arguably overused. However, the characteristics mentioned emphasize the importance of ensuring institutions play unique roles while also articulating common goals.

> **PRINCIPLE**: A system approach is needed to support post-secondary education quality in Nova Scotia.

With respect to an outcomes-based approach, outcomes themselves can be different between institutions based on their unique course offerings, but a group of

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[20] The Nova Scotia Commission on Building Our New Economy (2014) recommended a more outward perspective for PSE education in Nova Scotia as part of the efforts to rebuild our trade economy, including by "strengthening curricula in colleges, universities and professional trade associations on aspects of international trade, more opportunities to work and study abroad and programming to equip graduates with international trade-related certificates and credentials" (p. 59).

standard outcomes should be in place across post-secondary institutions of the same type (e.g. among universities in the case of Nova Scotia). Systemized outcomes would demonstrate a commitment to students and learning that ensures degrees' value is recognizable, while also facilitating student mobility, assisting faculty in designing programs, and allowing for comparable data.

> **CONCERN:** Nova Scotia's post-secondary institutions have not historically taken collaborative approaches to addressing common challenges.

The European Union (EU) is implementing a highly ambitious system of common competencies across institutions, national borders and language barriers. The TUNING Educational Structures project, launched in 2000, compliments the Bologna Process system level changes in an effort to "[re-]design, develop, implement, evaluate and enhance quality first, second and third cycle degree programmes" (European Commission Directorate-General for Education and Culture 2014). TUNING has worked to identify generic and specific competencies for specific subjects through consultation with students, employers and academics. For illustration, the generic competencies include: ability to plan and manage time; capacity to create new ideas (creativity); ability to search for, process and analyze information from a variety of sources; ability for abstract thinking, analysis and synthesis; and, ability to design and manage projects (European Commission Directorate-General for Education and Culture 2014). As a result of the process, graduates will be able to have their credentials recognized across the EU.

> **CONCERN:** Nova Scotia's university system lacks long-term system-level thinking, clear public policy goals and objectives, and accountability mechanisms.

British Columbia (BC) is taking a system's approach to international student recruitment. According to a 2013 survey of international students, 75% of respondents identified quality of education as "very important" or "essential" to their decision to study in Canada (CBIE, 2013, p. 24). An amendment to the Immigration and Refugee Protection Act, to take force in January 2014, will require "a foreign national to apply for a Study Permit (only) if he/she has been accepted to a designated educational institution" (CIC, 2013, p. 2). After considering this policy in developing its provincial approach to QA, BC will only allow those institutions with a certain level of QA to enroll international students and be eligible for the StudentAid BC designation (Ministry of Advanced Education, Innovation and Technology 2013). This will create clear, tangible incentives to ensure institutions evaluate and improve upon their existing

QA policies and processes.

Nova Scotia features some elements of a post-secondary education system. At the community college level, the development of the NSCC certainly has created a unified system delivering services across the province. The picture at the university level is significantly more nuanced. The MPHEC fulfills a very important role in bringing together stakeholders around common QA standards and providing external oversight, among other activities that will be discussed in greater detail in the next section.[21] As well, the Memoranda of Understanding (MOUs) between the Province of Nova Scotia and Nova Scotia Universities do set some common policies and direction for all the province's universities. The current MOU stipulates that work be conducted to create change in key areas including "expanded collaboration to reduce costs while maintaining or enhancing program quality"; "improvements in quality assurance and accountability"; and, "measures to improve credit transfer and accessibility and affordability for Nova Scotia students" (NSLAE; CONSUP, 2012). Yet, these mechanisms have only generated limited system-level initiatives to help address the challenges facing our province and our students. Nova Scotia is developing a single university application portal, but the extent to which this has emerged from a genuine systems-approach is questionable.

Nova Scotia must strike a balance between institutional autonomy and a system approach. To date, institutional autonomy has been possibly over-emphasized, with too limited efforts by all parties to find system-level approaches and solutions. This view is consistent with findings of the CCL (2009), which found that Canada's post-secondary institutions had strong internal QA processes, but weaker external bodies and processes.

2.4 Defining quality for students

In 1993, a survey was conducted with Canadian university students to identify the most important criteria for assessing quality(Harvey and Knight 1996). Participants ranked 111 different criteria by order of importance, concerning: faculty, students, administrators, programs of study, institutional environment, and external context or factors (Harvey and Knight 1996, 34). The top ten results were:

1.   Teaching competence of staff

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[21] EduNova and Novanet are other examples of collaborative endeavors by Nova Scotia's PSE institutions.

2.   Teaching staff have effective communication skills

3.   Interpersonal skills and leadership abilities of administrators

4.   Administrators' concern for quality and excellence

5.   Teaching staff up-to-date in subject matter

6.   Students' commitment to learning

7.   The planning and innovating abilities of administrators

8.   Decision-making ability of administrators

9.   Ability of students to analyze, synthe size and think critically

10.   Commitment of administrators to institutional goals and objectives

> **PRINCIPLE**: Policies, programs, and services in post-secondary education should meet student expectations to help prepare them for lifelong success, including in their citizenship, careers, and personal wellbeing.

While this survey is 20 years old, the results mirror the responses of students who participated in focus groups for this project. Key themes emerge such as teaching, access to resources, student evaluation and assessment, and clear communication and articulation of course and institutional goals. While some input/output criteria are present, the respondents focused mainly on the process of learning and the ways in which resources are organized. These responses affirm the position that to adequately include students in the quality discourse, assessments need to go beyond the inputs and institutional goals to include teaching and the learning process.

StudentsNS defines post-secondary education quality as follows: Policies, programs and services in post-secondary education should meet students' expectations to help prepare them for lifelong success, including in their citizenship, careers, and personal wellbeing. The idea of "expectations" is an important part of this definition

> **PRINCIPLE**: Students, faculty, staff, and policymakers are all responsible for quality in post-secondary institutions and should all be active participants in an institution's quality culture.

as it speaks to the belief that the stated objectives of students' programs of study be met and clearly articulated from before a student is even enrolled. To support students' "lifelong success" and meet their expectations post-secondary education should focus on the outcomes (including competencies) that students achieve and the processes that foster those outcomes.

This definition reflects most specifically a transformative approach, whereby quality is centered on student achievement and the 'value-added' of the university experience (CCL, 2009, p. 18). Fitness-for-purpose and value-for-money approaches remain relevant to students as well, the latter notably because students must balance quality with affordability.

O'Neil (2010) cautions that a value-added assessment would provide very useful information for assessing what the PSE institution and/or system added to the typical students' skills and competencies, but measuring value-added would not be: "a proxy for the quality of education that generated those outcomes" (O'Neill 2010, 128). It is therefore important to use a mix of measures when assessing quality and, once again, emphasize the learning process in addition to outcomes.

Underlying any effective approach to quality is a strong quality culture. There is no singular definition of a quality culture. Each institution is unique, with its own organizational culture and mandate. However, there are certain common elements shared by strong quality cultures: strong leadership and the ability to delegate, and a defined role for all stakeholders so that everyone has a sense of responsibility and purpose (Vettori, Lueger and Knassmuller 2007).

Trust is a crucial aspect of a quality culture as QA, for example, needs to be conducted in the spirit of collegiality and work towards a common goal. A decentralized approach to QA gives everyone a sense of ownership and responsibility in the process and requires that all parties trust one another to fulfill their role (Vettori, et al., 2007).

Students have an important role to play in a quality culture. Research conducted at a Scottish PSE institution identified three areas of good practice in engaging students within a strong quality culture(Gibbs and Ashton 2007):

a.   Committee attendance
b.   Student participation at university level committees
c.   Program representatives

Having committee attendance and student participation as two separate areas highlights how the two are not one and the same. Being present at a meeting is not the same as participating in the meeting and both are required for meaningful student engagement. The study found that student attendance was lower than that of other

committee members, but identified barriers to attendance such as scheduling conflicts, the availability of transportation, and, for some, the perception that student input was not highly valued (Gibbs and Ashton 2007). Students who attended committees generally participated during the meetings, but were not typically given follow-up work.

Gibbs and Ashton (2007) found that students do not sit on faculty committees and thus their voice was missing. This problem speaks to the final area of good practice: having students on faculty committees at the institution and program level.

PRINCIPLE: Nova Scotia students must be empowered to actively participate in setting their post-secondary system's direction via engagement through their representative student bodies, within the post-secondary institutions themselves, and through the broader democratic process.

PRINCIPLE: Commitment to continual improvement in teaching is fundamental to a high quality post-secondary education system.

According to researchers, an institutional culture that is supportive of teaching and its improvement "enhances the effectiveness of all strategies for improving instruction" (Paulsen and Feldman 1995). According to Paulsen and Feldman (1995), there are certain characteristics that define a 'supportive' culture including: a "commitment to and support of teaching between administrators and faculty; shared values about the importance of teaching between administrators and faculty, the presence of effective department chairs who are supportive of teaching and its improvement; frequent interaction and collaboration among faculty and a sense of community among faculty regarding teaching-related issues; a faculty development program or campus teaching centre; a broad, expanded view of scholarship and scholarly activities; decisions about tenure and promotion connected to rigorous evaluations of teaching; and a requirement that some demonstration of effective teaching be part of interviewing and hiring new faculty" (p. iii). For students, commitment to continual improvement in teaching is fundamental to a high quality PSE system.

3. Mechanisms for supporting quality

Post-secondary institutions and systems use a number of different mechanisms to support and enhance quality of education. Obviously almost any institutional activity or investment could be seen as impacting on quality of education, including maintenance and construction of buildings, food services, etc. We must necessarily constrain the purview of this report, but will focus on different mechanisms directly related to the academic aspects of our quality vision.

3.1 Key Performance Indicators (KPIs)

In general, KPIs are rooted in the 'value for money' approach to quality. They first emerged in the US as a means for governments to increase institutional accountability by attaching funding to defined outputs (Finnie and Usher, 2005). Common KPIs include employment rates, graduation rates, persistence/retention rates, maintained/increased enrolment, low administration costs, and research indicators. In Canada, Alberta, Newfoundland, British Columbia, Ontario, and Quebec have used KPIs to some extent, but only Alberta and Ontario have tied KPIs to a small percentage of operating funding (less than two percent).

> **CONCERN:** Tying funding to poorly developed key performance indicators can create perverse incentives and negatively impact on education quality.

In North America, graduation rates and low administrative costs are the most commonly used indicators (Finnie and Usher, 2005). While keeping costs low and ensuring students complete their degrees are certainly legitimate goals for the PSE system, neither of these indicators can be directly attributed to education quality. The quality of inputs (students recruited, professors, infrastructure) impact on outputs, thus measuring outputs alone does not provide a clear and comprehensive picture of education quality.

Tying funding to KPIs can create perverse incentives and negatively impact on education quality. For example, it may encourage universities to be more selective in who they recruit and enroll and fail to recognize those institutions that accept less accomplished students, but can demonstrate more improvement in learning outcomes. KPIs can also have a homogenizing effect on the university system as they

create incentives for institutions to concentrate on a certain set of outputs. Additionally, when PSE institutions lose funding because of low performance, they may no longer have the resources that allow them to improve or even maintain their quality (OUSA 2013).

Yet, measuring performance may support improvement in institutional performance in a number of areas that may go beyond teaching and learning, especially when tied to funding. The effectiveness of KPIs depends entirely on the choice of indicator and the funding amount that they are tied to. Unfortunately, most indicators used to date in North America have arguably been poorly selected.

3.2 Quality Assurance

QA refers to the policies and procedures in place to monitor, evaluate, and report on how institutions are meeting defined standards. In Canada, program review is the main tool of the academic QA processes (Finnie & Usher, 2005).

3.2.1 ACADEMIC QUALITY ASSURANCE AT NOVA SCOTIA UNIVERSITIES

In the Maritimes, university QA is guided by the MPHEC. This section will provide an overview of the MPHEC's mandate and activities and a more micro-view of institutional QA policies, including at the NSCC.

3.2.1.1 THE MARITIME PROVINCES HIGHER EDUCATION COMMISSION

CONCERN: No formal mechanisms are in place to ensure student representatives at the Maritime Provinces Higher Education Commission's Board of Directors are actually accountable to the students they represent.

The MPHEC was established in 1974 as an agency of the Council of Maritime Premiers (MPHEC, 2013c). Its mandate currently covers seventeen post-secondary institutions, including all the universities in Nova Scotia (MPHEC, 2013c). When it comes to education quality, the MPHEC is one of the most important actors in Nova Scotia's PSE system and one of which students (and in some cases faculty and administrators) are probably the least aware.

The Commission is governed by its Board of Directors, which is comprised of the Chief Executive Officer and 20 board members from the three Maritime Provinces(MPHEC, 2013d). Board members are appointed under three categories: institutional representatives, senior public officials, and public-at-large (MPHEC, 2013d). In each group there must be a representative from each province and the public-at-large category must include a minimum of two students (MPHEC, 2013d). Currently, the MPHEC conducts a call for applications to fill student positions at its Board.[22] The Commission has seven standing committees which address key Commission issues and activities such as quality assurance, statistical methodology, and information and analysis (MPHEC, 2013e).

According to the Maritime Provinces Higher Education Commission Act 2005, the MPHEC has five main functions: QA, data and information, cooperative action, regional programs, and province-specific services (MPHEC, 2013b, p. 1). The five key functions of the MPHEC are not mutually exclusive, but interact to support the MPHEC's overall goals and mandate.

The MPHEC has three main instruments for QA that aim to support both accountability and continuous improvement (MPHEC 2013a):

• Assessment of new and modified academic programs prior to implementation. The MPHEC is responsible for assessing programs at publicly funded universities and institutions that fall under the Nova Scotia Degree Granting Act (MPHEC 2013f). This assessment is the first stage in QA as programs are evaluated to ensure they meet pre-established quality standards.

• Monitoring to verify that institutions assess their existing programs and activities with a focus on students and learning. This is a two-cycle process. The first cycle was conducted over a number of years and completed in 2013. The first cycle assessed the existing policies at Nova Scotia universities according to established guidelines. The second cycle of monitoring will seek to address the identified gaps from the first cycle and enhance existing policies(MPHEC 2013a, 7). The Commission released its first QA framework in 1999, and since 1999 revisions have occurred in response to stakeholder input and identified good practice.

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[22] StudentsNS' Executive Director is a member of the Board of Directors of the MPHEC.

• Monitors students' participation and progression through their education, as well as graduate outcomes: This includes data collection and administration of the MPHEC Graduate Outcomes Survey.

The above instruments are built around two major considerations. First, universities are autonomous and responsible for designing and implementing their own quality activities. As a result of this, the MPHEC does not have an explicit definition of quality but uses a 'fitness for purpose' approach that respects institutional autonomy in determining what constitutes quality according to their unique missions and mandates. Secondly, stakeholders have a legitimate need for assurances about quality and cost-effectiveness (MPHEC, 2013a). The MPHEC favours a student-centered approach to quality and emphasizes the characteristics of students' educational pathways in developing its guidelines and recommendations (MPHEC, 2013c).

The MPHEC currently provides data on topics such as rates of enrolment, persistence, and graduation. This data is crucial to institutions, policymakers, and organizations such as StudentsNS. Conducting this research on a regional basis rather than provincially, provides a more comprehensive picture than possibly disparate measures and assessments conducted by each province individually, ensuring that standard metrics are used and comparisons can be made between provinces.

PRINCIPLE: Quality assurance processes should not be so arduous as to impose an undue administrative and/or resource burden on post-secondary institutions and unduly divert important resources away from core activities.

The MPHEC has an overall budget of approximately $1 million (MPHEC, 2012b, p. viii). According to its business plan, the MPHEC's QA program costs approximately $400,000 per year to operate and it would likely cost each province the same to conduct a similar program individually (MPHEC, 2012b, p. viii). Beyond the clear cost savings, there are significant benefits that result from the MPHEC's collaborative approach, in terms of accountability, innovation and knowledge sharing.

The three Maritime Provinces collectively spend over $1 billion annually on universities, with even more invested by students and their families when you consider foregone wages (MPHEC, 2012b, p. vii). Yet, the public only invests $1 million per year

into the MPHEC, approximately one-tenth of a cent for every dollar invested in universities.

Just as pressure for the university system to deliver more value has increased, the MPHEC has in fact faced a decrease in resources(MPHEC, 2012b). This undermines the Province's efforts to develop a system-wide approach to quality and the support available to PSE institutions in developing and implementing their QA activities. More specific impacts include:

o   Extended timeline for quality assurance activities;
o   More limited ability to conduct consultations, which could cause policies and activities to be insensitive or unaware of some stakeholder needs and objec tives (MPHEC, 2012b, p. 17); and,
o   Reduced data collection projects

The data and analysis provided by the MPHEC is very important to researchers and policymakers. The findings of the 2009 Graduate Survey, for example, have been reported throughout this document and replacing this program with a lesser product to save just $55,000/year is particularly shortsighted.

The United Kingdom Example

The United Kingdom's former approach to quality assurance in its higher education system is often cited as a case study of what not to do (Finnie and Usher, 2005). In the early 1990's the government established the Quality Assurance Agency (QAA). In theory, the Agency's quality assurance process was a mix of minimum standards and known performance indicators. The QAA review involved the review of a unit self-study, a 3-4 day site visit, and an in-class evaluation of a professor's teaching performance. Many (particularly faculty) considered the heavy external presence of this approach intrusive and the amount of paperwork to complete the self-study was arduous and distracting from other activities. Since 2001, the QAA has taken a "lighter" approach to quality assurance, but continues to emphasize minimum stan- dards and rankings/KPIs. This case demonstrates the importance on developing QA policies that strike the balance between trust and accountability and do not require unreasonable amounts of faculty and administrators' time. Faculty members are not above reproach and having someone evaluate their classroom activities is not un-

reasonable, but everyone must be on board with the process and focus on improvement over comparison.

3.2.1.2 ACADEMIC QUALITY ASSURANCE POLICIES AT NOVA SCOTIA UNIVERSITIES

The MPHEC created its Guidelines for Institutional Policies in 1999. According to these, effective and successful QA policies are guided by four key principles: the pursuit of continuous improvement, a focus on students and learning, the necessity of encompassing all functions and units of an institution, and accountability and transparency (MPHEC, 2010b, p. 7). Individual institutions' QA policies generally adhere to these Guidelines. Table 9 provides an overview of current institutional QA policies, focusing on the program review component.

Table 9: Overview of PSE institutions' QA policies[23]

	Review Cycle & Duration	Self-study Y/N	External Review Y/N	Coordination and Approval bodies
Acadia	5-7 year review cycle.	Y	Y	The Office of the VP Academic, the Academic Program Review Committee, the Dean, and the unit under review
AST	Accreditation is granted for an initial period of 7 years	Y	Y	Commission on Accrediting of the Association of Theological Schools; the Academic Dean and administrative staff
CBU	7 year review cycle	Y	Y	The Vice-President Academic and Professional Studies, the Quality Assurance Committee (QAC), and the Review Committee (RC)
Dal/ UKC[24]	7 year review cycle	Y	Y	The Senate Academic Programs and Research Committee (SAPRC); composed of the Senate Vice-Chair (Academic Programs) the Chair of Senate, the Vice-President, Academic and Provost, the Vice-President, Research, a faculty member from each faculty, and 2 student senators.

[23] Table contents were compiled from a review of institutional QA policies, interviews with institutional representatives, and from the AAU-MPHEC Quality Assurance Policy and Procedure Assessments. Documents are fully cited in the bibliography.

	Review Cycle & Duration	Self-study Y/N	External Review Y/N	Coordination and Approval bodies
MSVU	7-year review cycle	Y	Y	The Senate Committee on Academic Policy and Planning (CAPP); composed of the Vice-President (Academic), Deans, the Director of Distance Learning and Continuing Education, the Registrar and faculty and student representatives.
NSCAD	10-year cycle	Y	Y	The Provost and Vice-President (Academic Affairs and Research), the Program Review Committee (formed by the Academic Council and consists of the Provost and two faculty members).
StFX	8-year review cycle	Y	Y	The Academic Vice-President and the Committee on Academic Reviews (CAR)
SMU	7-year cycle	Y	Y	The Vice-President (Academic and Research), and the Academic Planning Committee (a committee of Senate)
USA	5-year cycle	Y	Y	VP Academic and Students

	Role of Students	Public/Private Reporting
Acadia	Importantly, there is no explicit requirement in the QA policy that a student participate in the review. Students are consulted as part of the review but do not have a formalized role.	The final report is made available to the Dean, the unit under review, and other interested parties and is normally considered a public document.
AST	Students participate in QA through the completion of course evaluation and by participating in the School's graduating survey.	Self-study reports can be publically released, but not the final evaluation report prepared by the Board of Commissioners.

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[24] UKC does not have its own unique QA policy (except for its School of Journalism). It does coordinate its own QA activities such as instructor/course evaluations and participates in program review(AAU-MPHEC Quality Assurance Monitoring Committee, 2009d)

	Role of Students	Public/Private Reporting
CBU	There is a requirement for a student or alumnus of the School to be on the review committee. Broader student body is consulted through graduate surveys and review process	Reports will eventually become public record.
Dal	In addition to their inclusion on the SAPRC, students participate directly in the QA process through their presence on review and curriculum committees. Additionally, students are encouraged to provide input into the program and faculty review process.	The reports on reviews conducted by Senate and by Faculties are disseminated, when appropriate, to the President, Vice-President Academic and Provost, relevant deans, department heads and school directors, faculty, and other relevant decision makers. Reports are filed with the Office of Institutional Affairs.
MSVU	Students are part of the review committee and are consulted during the external review.	The final review report is submitted by CAPP to the Senate and includes recommendations and a timetable for actions.
NSCAD	Students are included on the program review committee and participate in the self-study.	Final report prepared by the Program Review Committee, and finally implementation of the Program Review Committee report. The Program Review Committee report includes recommendations and a timeline for implementation.
StFX	Students are involved in the review process through consultations, their roles on committees and through their responses to the graduate survey.	The final report is not available publicly.

	Role of Students	Public/Private Reporting
SMU	Students are on Senate and are consulted during the review process.	The self-study, PCR report, and departmental responses are considered by the APC and a final report submitted to Senate.
USA	Students are consulted during the review process.	Recommendations are developed based on the findings of the self-study and external review report.

At the profiled universities, Senates are generally responsible for program and departmental reviews, and the Vice-President Academic administers the process, coordinating the review committee and the external review team. Exceptions to this include Dalhousie, where the Senate reviews faculty and the university's relationships with other institutions (ex. UKC), and the individual faculties review their own programs.[25] The MPHEC Guidelines state that policies must: "require a self-study component, usually involving faculty and students participating in the program or unit"(MPHEC, 2005b, 51). To meet this requirement, institutions need to go beyond an informal consultation of students, to ensure that policies provide for formal student representation on review committees.

Discussions with representatives from PSE institutions identified the following mechanisms in place to solicit feedback from students related to quality[26]: Graduate surveys, interviews of students during program reviews, correspondence between students and the senate, faculty and administration office hours, instructor and course evaluation, and student assessments during accreditation processes. An institution's student union or student association is the main channel for bringing student concerns to Senate and other senior administrators.

In 2013, the MPHEC completed the first cycle of its monitoring process (or validation) to examine whether institutions have implemented a QA policy according to the 1999 Guidelines (MPHEC 2013a). Students at the Heart: Quality Assurance at Maritime Universities sought primarily to frame discussion on the objectives and processes of the second cycle of the MPHEC's quality assurance monitoring activities, but also presented a summary of findings from the first cycle of monitoring.

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[25]This information was obtained through a review of university senate documents and conversations with university officials.
[26] Interviews were conducted with University and Community College representatives between November and December 2013.

While all institutions now have formal policies in place, the MPHEC discovered that during the initial monitoring phase (from 2003 to 2009) that only "11 [of the 16 public universities covered by its mandate] had a quality assurance policy in place; less than a third assessed functions and units beyond the academic units, and nine did not assess the appropriateness of support provided to students" (MPHEC, 2012b, p. 2). The MPHEC (2013a) identified the following additional gaps:

- Most policies tended to focus on faculty and resources (i.e. inputs);
- The process often failed to yield significant follow-up action;
- Quality of teaching, learning, and the student's overall experience, were not at the centre of the process for most institutions; and,
- Larger institutions seemed more likely to review their programs than smaller institutions.

These gaps in institutional QA are concerning. Again, a focus on inputs fails to provide an accurate picture of education quality for students. Failure to generate follow-up action puts into question the purpose of conducting QA processes at all. Quality of teaching learning and students' overall experience must be at the centre of quality assurance processes at all institutions. Finally, all institutions should be conducting proper QA, regardless of their size. However, these gaps are not the only ones to impact on the institutions' ability to measure and assess the 'student experience' and to include students more prominently in the quality culture.

Additional to the findings of the MPHEC, a review of the institutional QA policies reveals a few gaps. Firstly, the policies do not all articulate explicit assessment criteria. A program review is important, but it needs to be clear what is being assessed. Furthermore, if program review is used mainly for internal purposes, it could be disproportionately focused on inputs, outputs and resource allocation and may not assess how the programs are achieving their learning objectives (i.e. outcomes). The assessment criteria may exist in an internal document, but it would be beneficial to have them incorporated into the main QA policy.

Secondly, not all institutions include non-academic units in their program reviews, even though the MPHEC Guidelines (2005b) indicate: "A quality assurance policy …

should include provisions to cover all the functions and units of the institution (re-search, administration, community service, etc.)"(p. 51). This expectation is reiterated in the revised Standards and the MPHEC is seeking input to determine whether a different approach should be used to assess non-academic services (MPHEC, 2013a, p. 7). Going beyond academic programs to include units such as the registrar's office, career services and housing services would provide a more comprehensive assessment of how institutions are recognizing and addressing the needs of students and the ways in which these units support academic programs.

> **CONCERN:** Not all institutional quality assurance policies explicitly outline the criteria and/or standards by which a program will be assessed.

At StudentsNS member universities, student representatives are on every senate and included on some program review committees. This inclusion is very important. A body in a room is not sufficient to count as engagement, however, and institutions have a responsibility to ensure students are informed of the issues and policies and student input is encouraged and considered. Certain realities and logistics can limit student engagement on Senate and review committees. For example, reviews may take place over many months and there may be turnover of student representatives, with new representatives lacking the institutional memory of other committee members. Additionally, the language of QA is technical and may not be accessible to all students. Whatever the limits of student involvement on a given committee, they are key stakeholders in quality and accommodation must be made to their unique challenges to participating.

> **CONCERN:** Not all institutional quality assurance processes assess non-academic units that are central to the overall student experience, such as libraries, learning centres, etc.

Review reports and QA policies are not available publicly at all institutions. In the spirit of transparency and accountability, it is arguable that these reports should be publicly available. However, this expectation may limit program members' willingness to be self-critical. Considering that honesty, constructive criticism and improvement are critically important to effective QA, program reviews should not be made publically available in their entirety. However, provisions should be in place for communicating how identified problems are being ad-

> **CONCERN:** Not all institutional quality assurance policies include a formal role for students.

dressed and ongoing efforts to improve program quality. That being said, institutional QA policies themselves should be easy to access. These policies were housed in different offices at different institutions, while some institutional representatives were less open to discuss them. Access to these policies helps all stakeholders (especially students) to clearly understand their roles in the QA process and the mechanisms in place to address issues concerning education quality, and thereby be more effective participants in the quality culture.

According to the MPHEC, QA must be conducted in the spirit of institutional improvement, which should be applied to the QA policies and procedures themselves. Yet, QA policies are not periodically reviewed within each institution for their efficacy and appropriateness, and to ensure that the policies are being adhered to during a review.

Since the first round of monitoring, the MPHEC has taken an incremental approach to developing the universities' QA capacities. While significant improvements have been made, the universities remain at various levels of maturity in this respect.

CONCERN: Adjusting the program review schedule to the accreditation schedule saves resources, but may alter the aims of the program review process.

3.2.2 OVERVIEW OF ACADEMIC QUALITY ASSURANCE AT THE NSCC

According to Nova Scotia's Community Colleges Act, the provincial government and the NSCC are both responsible for the NSCC's quality assurance policies and practices (CICIC, 2011). The Minister is responsible for approving all new programs and the guidelines for reviewing new and existing programs (CICIC, 2011). The NSCC is responsible for submitting annual reports, audited financial reports, and any other information requested by the Minister (CICIC, 2011). The Act also requires program reviews and the establishment of college program advisory committees. These committees are largely comprised of industry representatives who advise the Board of Governors (CICIC, 2011).

In 2013, the NSCC established a centralized Office of Academic Quality Assurance (OAQA). As the OAQA is very new, much of the NSCC's quality assurance work is currently in flux. The OAQA is working to standardize QA processes across campuses and to develop public reporting tools. As part of this work, the OAQA is revisiting how quality is defined, though the college has a general concept of quality as: "meet-

ing stakeholder expectations", with the relevant stakeholders identified as industry, faculty, students, and graduates.[27]

The NSCC is mandated by the Province to review its programs. Each is reviewed once every five years. The OAQA is currently conducting a review of academic QA practices within the institution to identify good practice, gaps, and areas for improvement. Practices will then be standardized by the OAQA and the new policies posted online. That the review processes themselves are also scheduled for review shows an overall commitment to improvement.

Generally, a review includes a survey of graduates (grads are surveyed at graduation and then one year later), feedback from current students, and meetings with faculty and industry. Again, the NSCC conducts ongoing consultation with industry to solicit recommendations for the improvement of its programs through focus groups. Input is compared with current programs to identify gaps or unnecessary elements, and all program changes are presented to stakeholders for feedback. In addition to the provincially mandated review, programs undergo an annual 'program reflection', mostly with faculty, supported by the OAQA.

Some NSCC programs are subject to both a program review and third-party accreditation. For efficiency's sake, the program review schedule is often adjusted to the accreditation schedule. The program review and accreditation processes have a lot of similar elements, but are different in their ultimate aims as accreditation examines the state of a program at a specific moment in time, whereas program review is focused on renewal and improvement.

The NSCC faces unique academic QA challenges. In particular, it offers many of the same programs at different campuses, and faculty and administration must ensure consistent offerings and levels of quality. Consistent program design and the use of learning outcomes and objectives are key to addressing these challenges. Learning outcomes and objectives for each program are developed by the OAQA through consultation with subject matter and process experts, and students are informed of learning outcomes from the outset so that they know what to expect from their program of study.

3.2.3 ARTICULATED PROGRAMS AND CREDIT TRANSFER

According to the MPHEC, an articulated program is defined as: "a substantively new

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[27] The information from this section comes from an interview with the NSCC OAQA, December 2013.

program that articulates components of a university program with components of a program delivered by another educational partner" (MPHEC, 2010, p. 9). Articulation programs come in different forms, but the most popular is the "Two + Two" agreement, whereby a student can graduate with a diploma and a degree after completing two years at college followed by two years at university (NSCC, 2009).[28] Maritime provincial governments drove the creation of articulated programs in the nineties, aiming to bring together the college and university systems to provide students with different pathways through the opportunity to have both employment-specific and general education (MPHEC, 2010).

The NSCC system is part of the Atlantic Provinces Community College Consortium (APCCC) along with the community colleges of New Brunswick, Prince Edward Island, and Newfoundland and Labrador (APCCC, 2013). The APCCC works to facilitate collaboration between the provincial systems, and notably to support student mobility through the development of regional block credit transfer agreements (APCCC, 2013). Additionally, the NSCC has articulation and credit transfer agreements with universities across Canada and the US, as well as Nova Scotia high schools.

PRINCIPLE: Articulated programs and credit transfer are important for accommodating diverse students taking diverse post-secondary education pathways.

Transfer students are PSE students who receive credit at one institution for a course previously completed at another institution. Credit transfer can occur on a course-by-course basis or as a block transfer (many credits at once). All Nova Scotia universities accept transfer students and review a student's existing credits on a case-by-case basis to determine their eligibility for credit recognition. The process for having transfer credits recognized varies by institution. The processing time can vary from one to eight weeks and while most institutions do not charge a processing fee, Acadia charges a $10-15 fee (refundable if the transfer is not approved) and CBU charges a $50 non-refundable fee. Importantly, Dalhousie, Saint Mary's and Acadia all offer an online tool that allows potential students to see the equivalent to a credit completed at their own institution.

Credit transfer and articulated programs must be supported by strong QA policies and practices. With respect to articulated programs, when a university develops a partnership with an institution

CONCERN: Credit transfer processes vary significantly by institution.

[28] In Nova Scotia, the NSCC has articulation agreements in certain programs with Acadia University, Cape Breton University, Dalhousie University, Mount Saint Vincent University, and Saint Mary's University (NSCC, 2009).

not under the MPHEC's mandate, such as the NSCC, the university must submit the program to the MPHEC for approval (MPHEC 2013b, 3). The MPHEC has established

guidelines for evaluating articulated programs and they include: clearly defined roles and responsibilities for each partner, the review unit must consider each partner's standards and review policies and procedures, and review policies should include a graduate survey or some sort of follow-up to assess how the program is meeting its stated objectives (MPHEC, 2010, p. 11). Since 1996, the Commission has approved 29 programs at seven different institutions (MPHEC, 2010).

Beyond ensuring quality is upheld for all students, QA minimizes the administrative burden associated with verifying if students meet the minimum standards and have the skills to complete future course work. Credit transfers and articulated programs present special challenges, however. It can be difficult to evaluate the educational experience of students who have transferred credits or completed articulated programs because it is not clear which institution is most responsible for learning (Kuh, 2006). Program assessments involving multiple institutions can also be difficult to coordinate because institutions have different review schedules and procedures. Articulated programs demand particular attention and consideration in the development of institutional QA policies.

In 2013, the MPHEC released a report on credit transfer entitled: Portable Learning: University Students Granted Credit for Prior PSE (MPHEC, 2013g). The study sought to establish benchmarks as to the number of students transferring into Maritimes PSE institutions and found that an increasing number of students are moving between colleges and universities and among universities. The study was a good initial step in researching student mobility in the Maritime region, but more research needs to be done to explore this trend within the Maritime PSE system and to identify good practice and gaps in the system. For example, the report only tracked successfully transferred credits and not the rate at which credit transfer requests are rejected. Furthermore, the report did not discuss the difficulties students may face getting credits recognized and the varied credit transfer processes.

Mobility between institutions is a key element of a system approach to PSE and Stu-

dentsNS could write an entire report on this topic alone.[29] Certainly, credit transfer and articulated programs provide different educational pathways for students and flexibility for the varied needs of a diverse student body.

3.3 Improving Teaching and Learning

In North America, the most common tools for evaluating teaching are: "course evaluations, letters from students and colleagues, in-class/peer evaluations, the receipt of teaching awards, course materials and texts, and evidence of innovative strategies and practices" (Gravestock & Gregor-Greenleaf, 2008, p. 9). Student-led evaluations and teaching awards are two ways in which teaching effectiveness is assessed and recognized at Nova Scotia PSE institutions.

PRINCIPLE: Quality assurance is integral to an effective credit transfer system.

CONCERN: More research needs to be conducted to understand post-secondary student mobility.

3.3.1 INSTRUCTOR AND COURSE EVALUATIONS

Instructor or course evaluations are the most prevalent assessment tool used by all of Nova Scotia's publicly funded PSE institutions.[30] Student feedback is used to assess an educator's performance and inform departmental decisions around resource allocation, curriculum and course offerings for subsequent terms.

Broadly speaking, there are two main types of course and instructor evaluations: formative and summative (Berk, 2005). Formative evaluations are designed to provide feedback on how a course or instruction can be improved. Summative evaluations assess the overall performance or success of a person or program and are used for making decisions on promotion and tenure.

Course evaluations can vary in content and format even within institutions, but are generally completed anonymously, at the course's conclusion, and include both qualitative and quantitative elements (Gravestock and Gregor-Greenleaf, 2008). Evaluations are generally administered in a paper form, but some schools use an online model. Dalhousie University switched to an online model in fall 2012.Since the change the evaluation, the participation rate has significantly declined, such that just

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[29] While this section focuses on student mobility, mobility could also include the sharing of faculty and resources

[30] This was determined through interviews with students and institutional representatives conducted in November-December, 2013.

41.7% of students evaluated their professors in fall 2013, compared to 63.6% in fall 2011 (Willick, 2013). The Dalhousie Faculty Association (DFA) has expressed concern over the drop in participation, as a lower response rate makes the results less statistically reliable (Willick, 2013).[31] A 2013 article in the Chronicle Herald (Willick, 2013) noted: "so few students submitted evaluations [in 2012-13] that deans and department heads were cautioned not to make any major decisions based on the results, and at least one faculty deemed the results unusable". According to the literature, reasons for the lack of responses to an online version can include: "apathy, technical problems, perceived lack of anonymity, lack of importance, inconvenience, inaccessibility, and time for completion"(Berk, 2012, p. 14).

CONCERN: A decline in participation rates undermines the benefits of conducting course/instructor evaluations.

Previous studies comparing the two delivery methods for course evaluations have found that paper-based methods have a higher response rate, but online forms secure longer and more thoughtful responses (Briggs and Ho, 2012). Reasons for the longer responses to online forms could be the lack of a time constraint, more space for responses, and comfort with typing over writing (Briggs and Ho, 2012). These findings suggest that institutions using paper-based evaluations should provide students more time for comment than the typical ten minutes at the end of class.

Critics suggest that course evaluations can have issues of bias and statistical reliability, and are limited in their ability to accurately measure teaching quality (Gravestock and Gregor-Greenleaf, 2008). Proponents, however, consider evaluations to be a critical measure of teaching performance. Scholars such as Aleamoni (1999) have gone so far as to challenge the claims of bias concerning student evaluations and have identified 16 "myths of student ratings" perpetuated by faculty and administrators (for example, gender bias, student immaturity, class size bias, etc.).

Interviewed students recognized the value of course evaluations. However, some felt they were just a compulsory exercise and were conducted too late in the semester, leaving insufficient time for instructors to respond by making changes to the course and/or their teaching methods. This finding is consistent with other studies on student perceptions of evaluations (Gravestock & Gregor-Greenleaf, 2008).

Despite their imperfections, instructor and course evaluations are the most prevalent tool used to gather student input and by designing and administering them properly

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[31] Even 63.3% is not itself a very high rate of participation and some scholars suggest something closer to 80% is more sufficient (Berk, 2012).

they can offer key insights and encourage student participation in a quality culture. Instead of viewing online and paper models as a trade-off between quality and quantity the two methods need to be used together and lessons learned and incorporated in order to maximize the numbers of responses and the depth of the feedback. The administration must consider the research in deciding which method of course evaluation to use (online vs. paper copy) and consider their particular institution, current response rates, and goals of the evaluation in selecting a method. Given the various concerns with evaluations, it is clear that careful design and implementation is necessary to achieve their ultimate aims of assessment and improvement (Gravestock and Gregor-Greenleaf, 2008).

> **CONCERN:** Instructor and course evaluations are administered too late in the semester to effect change.

> **CONCERN:** Students and faculty do not adequately understand the value of instructor and course evaluations and how they inform quality assessments.

Berk (2012) makes several recommendations as to how institutions can improve response rates with the online method. Students, faculty and administrations have to be clear and open about the benefits of these evaluations and how the input is used. Faculty must approach the exercise as something serious and consider the feedback as valuable not just a formality. They must also assure students that all comments are anonymous or confidential. These principles should apply to course evaluations in general to ensure they are supporting enhanced teaching and learning and a strong quality culture in general.

3.3.2 TEACHING AWARDS

The assessment of courses and instructors allows institutions to identify gaps and good practices. The next step is to develop strategies to encourage instructional improvement.

Many individual faculties, departments, and institutions have introduced awards to recognize those faculty members who have demonstrated excellence in teaching. At the regional level, the Association of Atlantic Universities (AAU) offers the Distinguished Teacher Award and the Instructional Leadership Award. At the national level, the Society for Teaching and Learning in Higher Education has a suite of awards

including the 3M National Teaching Fellowship.

There is little evidence as to the effectiveness of teaching awards in improving over-all institutional instructional quality (Carusetta, 2001). They are certainly effective for recognizing excellence and showcasing talented teachers and may create incentives for on-going improvement or provide models for other instructors. At the same time, some argue that individual teaching awards can have the perverse effect of discouraging collabora-tion and cooperation in teaching (Carusetta, 2001). All told, it is our view that teaching awards should help to evaluate teaching and recognize excellence, but can only have a limited impact on institutional quality. Much of their institutional impact is more closely related to marketing, but a few great educa-tors do not alone make for a high quality institution.

> **CONCERN:** Teaching awards are a good tool for recognizing individual excellence, but are insuf-ficient to encouraging faculty-wide instructional improvement.

3.3.3 PROFESSIONAL DEVELOPMENT

The PSE classroom is evolving and faculty must be able to adapt to the new chal-lenges and opportunities. To support faculty, PSE institutions offer a range of pro-fessional development programs according to institutional need and resources. To better understand the landscape and the resources available to faculty, it would be beneficial to have more information on the types of programs available, participation rates, and the success of these programs in meeting their objectives.

Some Nova Scotia PSE institutions have centres for teaching and learning to support their faculty and students, including Dalhousie and Saint Mary's Universities. These centres offer services that can include: teaching resources, workshops, assistance with classroom technology, and administration of program reviews and instructor/course evaluations (CAID, 2014; CLT, 2014). Not all institutions have the resources or interests to establish such a centre, but they can be an important resource for addressing challenges in the classroom and supporting faculty in developing their teaching skills. [32]

Providing training to PhD students who are pursuing academic careers is one way to emphasise the importance of teaching and improve education quality in the longer term. Carleton University's Educational Development Centre offers a one semester

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[32] Teaching and Learning Centres will be discussed further in an upcoming StudentsNS position paper on student success.

Preparing to Teach Certificate for PhD candidates (Carleton Educational Development Centre, 2014). The program provides participants with hands-on experience with a range of teaching and assessment methods, and how to manage specific circumstances such as small or large class sizes.

Established faculty members can also benefit from pedagogical training. The Instructional Skills Workshop (ISW) Program is one such training program available to PSE instructors. The three to four day workshop provides: "information on the theory and practice of teaching adult learners, the selection and writing of useful learning objectives with accompanying lesson plans, techniques for eliciting learner participation, and suggestions for evaluation of learning" (ISW Network, 2014). The ISW approach is highly participatory; during the workshop instructors design and conduct three 'lessons' and then receive feedback from their peers and workshop facilitators.

The ISW focuses on developing a student-centered approach to teaching that encourages participatory and experiential learning and focuses as much on the process of learning as on the course content (Dawson, Borin, Meadows, Britnell, Olsen, & McIntyre, 2014). Crucially, this approach to teaching supports a transformative approach to learning and teaching quality. A recent study conducted by Canadian researchers found that four months after training those instructors who had participated in ISW were less teacher-focused in their instruction and more reflective on their teaching than those who had not participated in ISW (Dawson, Borin, Meadows, Britnell, Olsen, & McIntyre, 2014).

The NSCC requires all incoming faculty to successfully complete the Community College Education Diploma Program (CCEDP) as a pre-requisite for consideration for appointment to regular status(Lowry & Froese, 2001). One study (Lowry and Froese, 2001) found that college faculty saw their role as primarily to teach and they were attracted to the position because of the teaching and community service aspects. Community College faculty face three main challenges: diversity in the student population (both in terms of academic preparedness and cultural differences); less cohesion in the student body as some pursue their studies full-time and others on

part-time basis, or a variation of the two. Recognizing these challenges and the variable teaching experience of faculty, the CCDEP supports employees in their learning journey while providing foundational training in key aspects of adult education.

The CCEDP is led by the Organizational Learning Department of NSCC and is taught by internal and external instructors. It consists of 15 half-credit courses, of which ten must be completed. Of the ten, up to five can be credited based on prior learning. Completion of studies at a month-long Summer Institute is also required. Each course has thirty-nine hours of instruction and it usually takes two years to complete the program(Lowry & Froese, 2001).

In 2001, Lowry and Froese conducted a survey to evaluate the effectiveness of the CCEDP in assisting instructors in working in adult education. Fully 92% of respondents agreed that the CCEDP had helped them become more effective teachers, and 87% said they would recommend the CCEDP to anyone planning to become a college teacher. Another study to determine how the CCEDP has contributed to student satisfaction and the achievement of their learning outcomes would be very helpful.

3.4 Co-curricular records and Portfolios

In recognition of the skills developed at universities through extra-curricular experiences, Acadia, Dalhousie, MSVU and SMU offer students the option to complete a Co-Curricular Record (CCR). CCRs vary by institution in their level of reflection, from a simple list of activities to a requirement to write a statement for each experience. In general, they allow students to track their on-campus activities and reflect on what skills they have learned or developed through these experiences. Relevant activities could include participation in sports teams, or volunteer work.

CCRs encourage reflection and an understanding that learning occurs outside of the classroom. Yet, they have also been criticized for their focus on university-approved extra-curricular activities. Focusing on university-approved activities does not recognize all students' pathways, and may put increased pressure on students to participate in particular activities when they already feel overwhelmed by academic responsibilities (Elias and Drea, 2013). Furthermore, some students may not be able to benefit because they have to work part-time to finance their studies and simply do not have time to study, work and volunteer.

A 2013 survey at Trent University (Presant, 2014) found that employer interest in reviewing CCRs was minimal. Respondents reported that students should use CCRs as a reflection tool, but should incorporate the relevant skills and activities into their resume or cover letter for employment purposes rather than providing a separate document. On the other hand, a 2013 survey of 318 employers conducted by the Association of American Colleges and Universities, found that more than 80% of respondents would be interested in reviewing an e-portfolio to assess an applicant's knowledge and skills for the job (Presant, 2014).

CONCERN: Co-curricular records can unduly focus on university-approved extra curricular activities at the expense of other activities.

A portfolio is distinct from a co-curricular record in that it is not just a list or recording of recognized campus activities but is intended for informal and formal learning and a broad range of experiences and achievements, be they academic, professional or social, on or off campus (Tosh, Werdmuller, Chen, & Haywood, 2006). Portfolios help students identify goals, transferable skills, and reflect upon their development as a learner, with ePortfolios doing the same through digitally represented items (NSCC, 2014; Presant, 2014).As a result, they are relevant to all students, not just those engaged in specific campus activities, and better recognize the unique experiences and learning pathway of each PSE student.

There are a number of PSE institutions in both the United States and Canada that use portfolios and ePortolios. In Nova Scotia, the NSCC uses a portfolio learning approach and requires all students to develop a portfolio of their work as a condition for graduation. Canadian universities employing portfolio education include McMaster, Guelph, Mount Royal and Trent.

PRINCIPLE: Students should be empowered to assess and recognize their own learning as they move forward in their education and/or careers.

For the NSCC's portfolio, each individual determines the development process and contents, but must address the following questions (NSCC, 2014):

1.   Where am I now?
2.   Where do I want to be?

3.   How do I get there?

A portfolio will typically include components such as: A statement of career goals; a resume; work samples; a skills inventory; evidence of knowledge and abilities; and learning narratives and reflections (NSCC, 2014). Completed portfolios do not receive a final grade, but are evaluated by the student and instructors prior to graduation according to the thoroughness and appropriateness of the content, evidence of reflection, and relevance to the program of study or career choice (NSCC, 2014).

The McMaster model emphasizes a student's 'progress in learning' and assists students in defining and articulating individual learning goals and how a particular course or activity supports these goals. A McMaster working group articulated a set of principles in developing the program: flexibility; student driven; integrating curricular and co-curricular; mentorship; student participation; and, faculty and administrative involvement (Capelle, et al. 2013). McMaster uses the Learning Environment learning management system for its portfolio. This program is flexible and allows students to control content and use a wide range of mediums to present their work, experiences, and knowledge including: documents, graphics, audio files, videos, presentations, course work. Students can also customize the portfolio for different audiences (e.g. faculty, potential employer, mentor – Desire2Learn, 2014). The process encourages students to be active in their learning and take ownership of their learning path (Capelle, et al. 2013).

Portfolio programs complement an outcomes-based approach to learning. They encourage students to develop reflection, critical thinking, and communication skills, in particular in regards to their own learning. This preparation can serve students throughout their lives and is essential both for job seeking and planning further education.

4. Meeting Nova Scotia Students' Expectations for Post-Secondary Education

In Nova Scotia there are critical gaps in how quality is currently being defined, assessed and reported. In particular:

o   Approaches to quality do not adequately include student voice and consider student expectations

o   Learning and 'transformation' are not sufficiently considered in assessing quality

This section will discuss recommendations that aim to address these concerns and develop a system-level, transformative approach to quality that goes beyond a focus on inputs and outputs to emphasize the outcomes of PSE and encourage inclusion and collaboration. We propose to enhance our PSE system by treating students as participants in PSE, managing student expectations, helping students and their families make informed choices, and increasing accountability to the public.

4.1 Supporting teaching and learning

Teaching quality is fundamental to good quality PSE for students. Yet, inadequate emphasis is placed on teaching quality in general, as well as its continual improvement, across the university system in particular. This needs to change.[33]

Recommendation: The Province, in partnership with the universities, the Maritime Provinces Higher Education Commission, Students Nova Scotia and faculty representatives, should undertake a comprehensive review of the current state of teaching and learning in Nova Scotia universities.

The review should describe the current state of teaching and learning at universities in Nova Scotia because we simply do not have adequate data to understand the state of teaching and learning in Nova Scotia universities or how it can be improved. Research items should include:

o   Student experiences in the classroom, controlled by institution, program of instruction, gender, sessional or tenured faculty, ethnicity, domestic or interna

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[33] Teaching and learning will be discussed in greater detail in an upcoming StudentsNS position paper on the topic of student success.

tional status, etc.;

o Standard faculty qualifications in instruction and pedagogy;

o Standard practices for professional development of faculty with respect to teaching and learning;

o Proportion of courses taught by sessional or tenured faculty;

o Classroom size by institution, program, year of study;

o Diversity of pedagogical methods used; and,

o Use of learning outcomes and extent to which programs support system-wide learning outcomes.

The review should be funded adequately to achieve its objectives, and use both current data sources as well as new primary data. Using the review, PSE in Nova Scotia can systematically reorient towards a greater emphasis on teaching and learning.

Recommendation: A Teaching and Learning Envelope should be created within the University Funding Distribution Formula, tied to initiatives to train current and incoming faculty to develop instructional skills.

The Teaching and Learning Envelope (TLE) could be tied to institutional activities (e.g. a teaching and learning centre, programs on offer are appropriate to faculty needs). The general orientation will be towards processes, however, as opposed to outcomes. Appropriate initiatives could include mandatory teaching instruction course for graduate students interested in a career in academia; mandatory faculty-wide sessions;[34] orientations and mentoring programs for new faculty; and an award recognizing faculty members that have demonstrated great collaborative effort (thus moving beyond the individualized nature of many current teaching awards). Although we would suggest that only a modest proportion of university operating grants be assigned to the TLE each year, to the tune of 1% per year depending on the extent of conditions, we believe that the TLE could help reinforce the importance of faculty instruction and hopefully change the cultural emphasis within universities towards a greater emphasis on pedagogy.

4.2 A focus on learning outcomes

Structuring PSE around learning outcomes informs students about what to expect from their program, and enhances institutional accountability to ensure students learn what they are supposed to. This will in turn help to orient programs towards

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[34] Topics could include: developing and using learning outcomes in the classroom, fostering diversity in the classroom, developing a high-impact learning environment, tools for teaching a large class, etc.

learning and skills development in a spirit of continuous improvement.

No two PSE institutions are identical. Learning and secondary outcomes will vary to some extent according to institutions' missions and unique course offerings. Yet, there are common outcomes that should be expected of all graduates receiving a certain type of credential (i.e. BA in English, BSc in Biology) to give that credential true meaning, facilitate student mobility, and permit comparison between institutions.

Recommendation: The Maritime Provinces Higher Education Commission's Maritime Degree Level Qualifications Framework should be used as a starting point to develop a set of degree-level learning outcomes common to all universities.

Developing common degree-level learning outcomes would represent a critical step in developing a stronger university system in Nova Scotia. The MPHEC's Maritime Degree Level Qualifications Framework provides the best available starting point, notably as it is used by the MPHEC to assess and approve new academic programs and therefore provides continuity in the QA process.

While PSE institutions have a responsibility to students and the public to prepare students for future employment, assessment should not focus solely on occupational competencies. Students should also have the opportunity to develop general competencies and prepare for life-long cultural and social success, not just for their career. Student diversity should be considered in the development of learning outcomes, notably through consultation with students and institutions' international student and disabilities offices.

Some outcomes should be common to all programs. Assessing a set of institution level competencies and outcomes would allow for a system-level assessment. The CLA would assess outcomes that are common across a range of programs efficiently.

Recommendation: The Department of Labour and Advanced Education should work with stakeholders (including the Department of Education, post-secondary institutions, the Maritime Provinces Higher Education Commission, and students) to implement the Collegiate Learning Assessment to test first-year and graduating university students.

The CLA is a useful tool for directly measuring the "value-added" of PSE, establishing institutional benchmarks, and assessing the generic skills of Nova Scotia PSE

students. The HEQCO pilot revealed the importance of proper implementation and research design to ensure reliable and comprehensive data. Nova Scotia institutions could draw lessons from the findings and recommendations of the HEQCO report, including the potential use of the new CLA+ instead of the CLA.

It is important that this kind of evaluation be done objectively. The CLA has the additional advantage of providing external verification.

Many of these mechanisms focus on assessing and reporting learning at the program, institution and system levels. However, students must also be empowered and supported to assess their own learning.

Recommendation: The Universities-Government Partnership should fund a pilot ePortfolio project, to be introduced at one or more Nova Scotia universities in partnership with the Prior Learning Assessment Centre and Students Nova Scotia.

Portfolio programs are excellent in empowering students in their own learning and preparing them to succeed during and after their studies.

Multiple elements must be considered in developing a portfolio program, however, including cost, privacy, portfolio ownership, administrative burden, appropriate technology, training for staff and faculty, expectations for student and faculty participation, etc. While programs have been developed at other institutions, notably McMaster, which can be used as models, institutions introducing a portfolio program will need to make a significant investment in its upfront development.

In light of this, the Province of Nova Scotia should offer funding for an e-portfolio pilot, possibly through the University Excellence through Innovation Fund. The portfolio program would help to improve student learning and also important secondary outcomes such as graduate employment.

Finally, language learning is a key challenge for international students in Nova Scotia's universities. Students' report (2013b), International Students and the Future of Nova Scotia's Universities, envisioned a strong outcomes-based approach to this issue, which bears repeating in this section.

Recommendation: The Province of Nova Scotia and our post-secondary institutions should guarantee that all international graduates of Nova Scotia post-secondary in-

stitutions have sufficient language fluency to succeed in Canada's labour market.

The Language Fluency Guarantee (LFG) would require students whose first language is not their language of instruction complete a language exam, free of charge, at the end of their studies in order to receive their degree. To pass the exam, students would have to obtain the required score to be eligible for permanent residency under their National Occupation Classification. Students who do not pass the language exam would receive language training at a designated institution for up to six months, with tuition covered by their university. The student would be required to cover their living costs during this period, in recognition that they share responsibility for their language skills acquisition. At the end of the six months, these students would be permitted to retake the language exam for free. The LFG would give institutions a share of the responsibility for their students' language proficiency, although the Province also needs to ensure adequate resources are available to support language learning.

4.3 Strengthening the MPHEC and quality assurance

In a region facing demographic decline and widespread economic stagnation, we must ensure our investments in post-secondary education are having the greatest impact possible (StudentsNS, 2013a). The expanded use of outcomes will be critically important, but the quality assurance mechanisms and the MPHEC have an important role to play in improving institutional processes.

The MPHEC is in fact a critical tool in identifying room for improvement, providing the research to inform policy-making, and ensuring the system is as effective as possible. The Maritime Provinces have a responsibility to provide the MPHEC with the resources to meet its mandate.

Recommendation: The Maritime Provinces should provide adequate funding to the Maritime Provinces Higher Education Commission so that it can provide reputable and reliable data on post-secondary issues in the Maritime region.

The work of the MPHEC is invaluable to developing a system approach to quality and having reputable and reliable data from which to base institutional and governmental decision-making. StudentsNS would propose, for discussion, that the MPHEC receive 0.2% of the public funding delivered to universities through their operating

grants. For the 2014-2015 academic year that would mean a funding increase of roughly $634,000 (63.4%).[35]

We have identified a number of ways in which the MPHEC could deliver greater value to our students and province with these additional resources.

Recommendation: The Maritime Provinces Higher Education Commission should conduct more detailed research into credit transfers between designated institutions.

Student mobility is fundamental to a strong post-secondary system and more re-search needs to be conducted into how students move between institutions and how credit transfer systems are, or are not, functioning. As discussed, past MPHEC research on this topic has been helpful, but inadequate in only showing the propor-tion of credits that are successfully transferred and not discussing the systemic bar-riers that impact credit transfer and student mobility. Further research, in partnership with the NSCC, that considers failed credit transfer applications and how the process could be standardized between institutions would help to inform the creation a bet-ter system for credit transfer.

Recommendation: The Maritime Provinces Higher Education Commission should establish a database to show students the equivalencies of courses taken at desig-nated institutions across the Maritimes.

The MPHEC is uniquely placed to collect data on equivalencies across the region. This data could then be distributed to institutions and through them communicated to students. The advantage for students will be savings in time and money spent on applications for credit transfers that will be refused. This would likely reduce system costs as well through easing the administrative burdens for institutions to process credit transfers, especially because students will be less likely to apply for a transfer that would be unsuccessful. Dalhousie's credit transfer database is the most compre-hensive and could be used as a model. This project should be a strong candidate for Excellence in Innovation Funding from the Province of Nova Scotia.[36]

Recommendation: The Maritime Provinces Higher Education Commission should maintain the scope of its Graduate Survey.

The MPHEC's former Graduate Survey has been a crucial tool for researchers and policymakers, but the new Graduate Outcomes Survey has reduced scope and ex-

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[35] This calculation is based on the 2014-2015 university operating grant which has been announced as $317 million (Government of Nova Scotia, 2014).

cludes graduate-level students. To continue to have comprehensive data on PSE in Nova Scotia, the Survey should be expanded again to include graduate students and an analysis of their unique challenges and opportunities relative to undergraduate students.

The MPHEC could also play a more significant role in strengthening QA. However, this will require the Province to require institutions to meet QA standards.

Recommendation: In partnership with universities, the Province and student organizations, the Maritime Provinces Higher Education Commission should develop a certification program to recognize universities that have met established quality assurance standards.

It was suggested by one interviewee that an MPHEC brand would provide a simple signal to students and the public that an institution is meeting a quality standard. A brand would also show that there is a regional commitment to quality assurance and raise the profile of the MPHEC.

The requirements to receive the certification should be stringent, extending even beyond the MPHEC's already established QA guidelines.

Recommendation: Post-secondary stakeholders should collaborate to develop and implement a standard tool to report on Collegiate Learning Assessment results and a set of inputs, outputs, and secondary outcomes.

Relevant indicators of education quality need to be collected and reported in a clear and standardized format. This tool could be one of the accountability mechanisms and standard reports detailed in the Post-secondary Policy and Accountability Framework proposed by StudentsNS in a 2013 report: Getting the most from our Universities- Accountability and the Funding Formula. An emphasis on learning outcomes does not render data on inputs, outputs and secondary outcomes useless. The CLA is an important tool to directly measure value-added, but it has limitations. A mix of methods is necessary to adequately assess teaching and learning.

The MPHEC collects much of the input, output and secondary outcome data and could report on the measures and indicators in their previously discussed Measures of Student Progress and Outcomes program. This information would be complemented by the NSSE and CLA findings.

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[36] Such a program is currently in development provincially with all ten universities through funding from the Excellence in Innovation Fund.

Public reporting is not intended to pit one institution against the other. Rather, this is to provide students and the public with valuable information and support an honest and informed discussion about what constitutes quality in our education system, including what are our overarching objectives. As discussed, many prospective students and their families assess educational quality when choosing where to study based on institutions' reputation or the results of third-party surveys. PSE requires a significant investment of time and money and these sources are insufficient to helping students make informed choices. Furthermore, rankings allow third parties to define the agenda on quality, which is not in the best interest of students or PSE institutions.

Recommendation: Institutional quality assurance policies should be clear and explicit and provide guidelines for self-study and clear criteria for assessing academic units.

Clear and explicit policies support a quality culture and allow for more informed and active participation. PSE institutions are at various levels of maturity with their QA policies and some are more clear and explicit than others. As previously discussed there can be barriers to student participation in QA. One barrier is the technical language and processes used in QA policies, and a high turnover rate for student participants. To make policies more accessible to students, and other stakeholders, policies should use plain language, include a clear description of the responsibilities associated with each role and the program review schedule and process, and include clear criteria by which the program will be assessed

In terms of detail and clarity, CBU's QA policy stands out as a possible model for other institutions. The responsibilities of stakeholders are clearly explained, as are the expectations of the self-study. Furthermore, the requirements for the self-study clearly articulate measures that examine the role of learning in the student experience. Having a clear policy does not however ensure that the policy is being adhered to or that program review recommendations are being implemented.

Recommendation: Institutions should administer course evaluations at both the end and midpoint of courses.

Additional mid-term reviews would allow time for faculty and administrators to address any immediate concerns, rearticulate expectations and program objectives, and begin considering long-term adjustments so that they can be in place for the

next semester. These would also demonstrate how institutional faculty and administrations value student feedback and are committed to fostering a strong quality culture with an emphasis on teaching and learning.

Recommendation: All post-secondary institutions quality assurance policies should include a requirement for students to participate in and help lead program review activities.

Every institutional QA policy should include a role for students on the program review committee and students should be supported in this role through clear guidelines regarding their responsibilities, access to information, and accommodation in scheduling reviews and committee activities.

Yet, the student role in quality goes beyond participation in the review process. Students should be engaged in an ongoing discussion of quality and opportunities should be in place for students to raise concerns and discuss with administrators and faculty, and participate in making decisions around teaching and learning. Students have a responsibility to use these mechanisms. Faculty and administrators must ensure students are aware of these mechanisms. Most importantly all must foster a quality culture where student feedback is clearly valued and, most importantly, acted upon.

Recommendation: Non-academic units should be included on all institutional program review schedules and appropriate assessment criteria should be established.

The MPHEC certification should include guidelines for assessing non-academic units. These could include:

o   The cooperative education office
o   Counseling services
o   Disability services
o   Employment centres
o   Housing services
o   Health services
o   International centres
o   The registrar's office

Non-academic units directly support the learning and teaching functions of an institution. The purpose of reviewing these units is not just to look at them separately, but to see how they impact academic activities and enhance or limit the learning experience for students.

One area that is receiving significant attention, notably from Acadia and Dalhousie universities, is timetables and how scheduling, classroom locations, etc. can be improved to positively affect student success. This work is being led by the registrars' offices and demonstrates the importance of reviewing how different institutional units interact to support student success.

Based on the concerns identified by the MPHEC during its first round of monitoring of QA policies, it seems apparent that universities will not necessarily implement QA procedures as advised by the MPHEC. The Province must require that universities will meet the established standards.

Recommendation: A Quality Assurance Envelope should be created within the University Funding Distribution Formula, be tied to institutions' adherence to the Maritime Provinces Higher Education Commission proposed quality assurance certification standards.

Performance indicators are problematic for directly defining and measuring quality, but funding controls are among the only tools government can use to ensure its autonomous PSE institutions are accountable. Given that providing a quality education should be the number one priority of the institution, tying a small share of funding to meeting MPHEC QA standards is not unreasonable. We would suggest that the Quality Assurance Envelope (QAE) be equivalent to approximately 1% of university operating grants per year.

Recommendation: The Province should require that universities obtain the proposed Maritime Provinces Higher Education Commission quality assurance certification to be allowed to recruit internationally.

This recommendation would emulate BC in reinforcing the onus on quality assurance, especially in relation to international students. Evidence suggests that quality is the key determinant in international students' choice where to study. It is therefore entirely appropriate for the Province to establish quality standards for institutions

that wish to recruit internationally, so as to protect and enhance Nova Scotia's PSE brand.

Many of our recommended changes to QA policies seek to enhance student voice. Student voice must be strengthened within the MPHEC itself, however.

Recommendation: Students Nova Scotia should be empowered in the selection of Nova Scotia's student representative at the Board of the Maritime Provinces Higher Education Commission's Board.

The application process is appropriate in that it attracts motivated students and it encourages application from all institutions. However, a student organization should be part of the selection committee and if there are no applications for an advertised position, the StudentsNS Board should be responsible for selecting a Nova Scotia representative from among all Nova Scotia universities. This will ensure that the student representative for Nova Scotia is representative and accountable to Nova Scotia students, much like institutional and government representatives are accountable to their organizations.

Recommendation: The Maritime Provinces Higher Education Commission's Board should be expanded to include an international student representative, who should be selected by Students Nova Scotia and the primary student representative organizations of New Brunswick and Prince Edward Island.

International recruitment is an explicit goal of PSE institutions. Developing a strong level of educational quality assists in recruiting, but most importantly, strong quality assurance practices and a strong quality culture contribute to ensuring that, once arrived, international students receive adequate support. To encourage the international student voice, the MPHEC should include an international student representative.

5. Conclusion

This report offers an opportunity to rethink how we define PSE quality in Nova Scotia, whether our institutions are meeting the expectations of students and the public, and how students can get more from their studies. Much of the conversation to date has been short sighted and often more related to size and distribution of the funding pie than student learning.

Nova Scotia's universities and community college have a reputation for providing high quality education to their students, but this reputation cannot be taken for granted and the institutions, their staff, the province and our students must be committed not only to maintaining quality, but continuously improving it. We must take a transformative, system-based, student-centred approach to PSE, fostering transparency and accountability not only with respect to finances, but more fundamentally surrounding the very activities our institutions were created to do.

Our recommendations would reorient Nova Scotia's universities in particular towards precisely this model. They would reinforce the importance of teaching and learning and our understanding of how our institutions are doing in this area. They would establish an outcomes-based approach to education, tracking whether students are learning what they expect and are expected to. They would strengthen the MPHEC and quality assurance standards. Nova Scotia would end up with a university system where students can be confident they will receive a high quality of education today, and future cohorts will do even better.

Of course, this vision is subject to adequate public funding. We have not discussed funding within this report, as we have discussed it at length elsewhere (StudentsNS, 2013a), but institutions will not be able to implement this vision and education quality cannot conceivably improve without resources. To provide funding, the public, like students, needs guarantees that PSE will deliver value in return. The recommendations of this report would significantly magnify the value of PSE in Nova Scotia, so that the public can have confidence that its investments are supporting the social, economic and cultural success of our students and our province.

Nova Scotia's PSE system can do better. It must do better. This report provides a blueprint for how.

6. Policy Resolution

Whereas StudentsNS holds the following Principles:

Quality measurement must focus on both institutional accountability and educational improvement.

Teaching, research and services are the fundamental responsibilities for university faculty and must be given appropriate emphasis.

Faculty members have a right to dignified terms of employment commensurate with their training, the services they provide and the financial capacity of their institution.

Student learning should be at the centre of quality assessments.

Institutional differences and stakeholder needs must be considered in developing approaches to quality, and quality measurement should not impose a one-size-fits-all approach.

Assessments of quality should consider the relationships between inputs, outputs, secondary and learning outcomes and external factors.

Institutions have a responsibility to manage student expectations by establishing clear learning objectives and measuring the learning outcomes.

A system approach is needed to support post-secondary education quality in Nova Scotia.

Policies, programs, and services in post-secondary education should meet student expectations to help prepare them for lifelong success, including in their citizenship, careers, and personal wellbeing.

Students, faculty, staff, and policymakers are all responsible for quality in post-secondary institutions and should all be active participants in an institution's quality culture.

Nova Scotia students must be empowered to actively participate in setting their

post-secondary system's direction via engagement through their representative student bodies, within the post-secondary institutions themselves, and through the broader democratic process.

Commitment to continual improvement in teaching is fundamental to a high quality post-secondary education system.

To promote cooperation and accountability, a centralized and independent body should provide external oversight to the quality assurance process.

Quality assurance processes should not be so arduous as to impose an undue administrative and/or resource burden on post-secondary institutions and unduly divert important resources away from core activities.

Institutional quality assurance policies should be student and learning focused.

Articulated programs and credit transfer are important for accommodating diverse students taking diverse post-secondary education pathways.

Quality assurance is integral to an effective credit transfer system.

A commitment to continuous improvement in faculty teaching skills is critical to maintaining and enhancing quality of education.

Students should be empowered to assess and recognize their own learning as they move forward in their education and/or careers.

Whereas StudentsNS has identified the following Concerns:

Rankings fail to consider the unique missions and characteristics of different institutions.

Rankings focus too heavily on inputs and outputs in their assessments.

Rankings provide and promote a misleading representation of quality.

Class size is not necessarily a direct indicator of education quality.

Universities prioritize research output over teaching in assessing institutional quality and in recognizing and promoting faculty.

Research activity does not necessarily correlate positively with higher quality instruction.

Informed discussion on the situation of sessional instructors is impeded by a lack of accessible, system-level data on the number of sessional instructors and the percentage of courses they teach.

The Maritime Provinces Higher Education Commission's new Graduate Outcomes Survey has a more limited scope than the previous Graduate Survey.

Institutions are not required to release the findings of the National Survey of Student Engagement, which limits access to the findings, accountability and the survey's usefulness in understanding and enhancing quality.

The average literacy score in the International Assessment of Adult Competencies declined for Canadians aged 18-30 between 1994 and 2012.

Mission statements are too vague to be used as de facto definitions of quality and insufficiently responsive to the needs of students and other stakeholders.

Nova Scotia's university system lacks long-term system-level thinking, clear public policy goals and objectives, and accountability mechanisms.

Nova Scotia's post-secondary institutions have not historically taken collaborative approaches to addressing common challenges.

Trying funding to poorly developed key performance indicators can create perverse incentives and negatively impact on education quality.

No formal mechanisms are in place to ensure student representatives at the Maritime Provinces Higher Education Commission's Board of Directors are actually accountable to the students they represent.

The Maritime Provinces Higher Education Commission does not receive adequate funding to fulfill its mandate.

Universities often fail to implement recommendations that emerge from their quality assurance processes.

Not all institutional quality assurance policies explicitly outline the criteria and/or standards by which a program will be assessed.

Not all institutional quality assurance processes assess non-academic units that are central to the overall student experience, such as libraries, learning centres, etc.

Not all institutional quality assurance policies include a formal role for students.

Not all institutional quality assurance policies explicitly outline the criteria and/or standards by which a program will be assessed.

Not all institutional quality assurance processes assess non-academic units that are central to the overall student experience, such as libraries, learning centres, etc.

Not all institutional quality assurance policies include a formal role for stu-dents.

Institutional quality assurance policies are not always easily accessible and some lack sufficient detail to inform participants.

Adjusting the program review schedule to the accreditation schedule saves resourc-es, but may alter the aims of the program review process.

Credit transfer processes vary significantly by institution.

Acadia University and Cape Breton University are the only universities that charge fees to recognize transfer credits.

It is difficult and often time-consuming for students to determine whether credits will be accepted when they seek to change institutions.

More research needs to be conducted to understand post-secondary student mobil-

ity.

A decline in participation rates undermines the benefits of conducting course/instructor evaluations.

Instructor and course evaluations are administered too late in the semester to effect change.

Students and faculty do not adequately understand the value of instructor and course evaluations and how they inform quality assessments.

Insufficient information is available on faculty training and on-going professional development in pedagogical methods in Nova Scotia.

Co-curricular records can unduly focus on university-approved extra-curricular activities at the expense of other activities.

Be It Resolved that StudentsNS makes the following Recommendations:

The Province, in partnership with the universities, the Maritime Provinces Higher Education Commission, Students Nova Scotia and faculty representatives, should undertake a comprehensive review of the current state of teaching and learning in Nova Scotia universities.

A Teaching and Learning Envelope should be created within the University Funding Distribution Formula, tied to initiatives to train current and incoming faculty to develop instructional skills.

The Maritime Provinces Higher Education Commission's Maritime Degree Level Qualifications Framework should be used as a starting point to develop a set of program-level learning outcomes common to all universities.

The Department of Labour and Advanced Education should work with stakeholders (including the Department of Education, post-secondary institutions, the Maritime Provinces Higher Education Commission, and students) to implement the Collegiate Learning Assessment to test first-year and graduating university students.

The Universities-Government Partnership should fund a pilot ePortfolio project, to be introduced at one or more Nova Scotia universities in partnership with the Prior Learning Assessment Centre and Students Nova Scotia.

The Province of Nova Scotia and our post-secondary institutions should guarantee that all international graduates of Nova Scotia post-secondary institutions have sufficient language fluency to succeed in Canada's labour market.

The Maritime Provinces should provide adequate funding to the Maritime Provinces Higher Education Commission so that it can provide reputable and reliable data on post-secondary issues in the region.

The Maritime Provinces Higher Education Commission should maintain the scope of its Graduate Survey.

The Maritime Provinces Higher Education Commission should conduct more detailed research into credit transfers between designated institutions.

The Maritime Provinces Higher Education Commission should establish a database to show students the equivalencies of courses taken at designated institutions across the Maritimes.

In partnership with universities, the Province and student organizations, the Maritime Provinces Higher Education Commission should develop a certification program to recognize universities that have met established quality assurance standards.

Post-secondary stakeholders should collaborate to develop and implement a standard tool to report on Collegiate Learning Assessment results and a set of inputs, outputs, and secondary outcomes.

Institutional quality assurance policies should be clear and explicit and provide guidelines for self-study and clear criteria for assessing academic units.

Institutions should administer course evaluations at both the end and mid-point of courses.

All post-secondary institutions' quality assurance policies should include a

requirement for students to participate in and help lead program review activities.

Non-academic units should be included on all institutional program review schedules and appropriate assessment criteria should be established.

A Quality Assurance Envelope should be created within the University Funding Distribution Formula, be tied to institutions' adherence to the Maritime Provinces Higher Education Commission proposed quality assurance certification standards.

The Province should require that universities obtain the proposed Maritime Provinces Higher Education Commission quality assurance certification to be allowed to recruit internationally.

Students Nova Scotia should be empowered in the selection of Nova Scot-ia's student representative at the Board of the Maritime Provinces Higher Education Commission.

The Maritime Provinces Higher Education Commission's Board should be ex-panded to include an international student representative, who should be selected by Students Nova Scotia and the primary student representative organizations of New Brunswick and Prince Edward Island.

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