EU-CANADA TUNING FEASIBILITY STUDY

Enhanced co-operation in Higher Education between
the European Union and Canada by Aligning Standards and
Reference Points

Contract number: EAC 2011- 0297

FINAL REPORT

Groningen, 12 July 2012

Contents

EXECUTIVE SUMMARY

This study, executed by an EU team of experts, investigates how higher education cooperation between Canada and the European Union can be strengthened, having the Tuning Methodology in mind. Tuning offers a number of key characteristics relevant for curriculum reform in a global context, in particular for output based learning. The study has focused on three objectives: alignment of academic standards and reference points in higher education based on case studies of three subject areas (Engineering, History and Nursing); the relevance of a Tuning approach for Canada and the identification of best ways to implement a possible pilot project, including the scope of the undertaking and issues at stake. The study, which was limited in time and scope, presents the outcomes of desktop research and study visits undertaken by a team of Tuning experts to a selected number of higher education institutions. A first draft of the report has been discussed and validated at a joint meeting of the EU expert team and key Canadian stakeholders involved in the study.

After describing the general features of Canadian Higher Education, identifying strengths and weaknesses, the most relevant observations from the site visits made to a selected number of institutions are presented. The EU team has noted that the focus is still very much on the use of learning objectives (what the teacher intends to teach), and less on the use of learning outcomes as a basis for degree programme design and delivery (what the students are intended to learn). Although awareness of outcomes based education is widespread in Canada, but implementation varies. In Nursing and Engineering (following the Washington Accord) there is already a lively interest in the learning outcomes approach, while in History there seems little coordinated work in the learning outcomes direction, and no general coordinated projects appear to have been envisaged.

The general impression of the EU team was that development of an outcomes approach is at level one: the establishment of LOs in the curriculum. Little evidence was seen of alignment of LOs with teaching, learning activities and assessment techniques. Similarly, it is concluded that the lack of a nationally recognized credit system based on student workload impedes mobility and the accreditation of prior learning.

On the basis of comparing the main characteristics of the Tuning approach with the current situation in Canada, it has been concluded that a full-scale Tuning project would be helpful and meaningful. Work done so far in Canada suggests there is a good basis for setting up Tuning pilots to enable universities to trial a collaborative method of setting commonly agreed standards to enable transparency for all and mobility for graduates and students. These pilots should be tailor made for the disciplines to be involved and would therefore slightly differ in scope and content. It is expected that the outcomes of these pilots would serve both the interests of Canadian higher education institutions themselves and the position of the Canadian higher education sector with the outside world, in this case in particular with the European higher education sector. Such pilots would also be of interest to those in Canada interested in the accreditation of qualifications from overseas, since they would help to clarify the Canadian system.

1. INTRODUCTION

The main objective of this study was to investigate how higher education cooperation between Canada and the European Union in a global context can be strengthened. The first stage of the investigation was a *Canada – EU Tuning Feasibility Study*, executed by the Tuning Association in close cooperation with the Canadian Bureau for International Education (CBIE).

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The study derives from the EU-Canada Policy Dialogue within the context of the third EU-Canada Agreement in Higher Education, Training and Youth, 2006-2013. This dialogue intends to support the following specific objectives of the *Agreement between the European Community and the Government of Canada Establishing a Framework for Cooperation in Higher Education* (Helsinki, 2006)

- To improve the quality of transatlantic student mobility by promoting transparency, mutual recognition of qualifications and periods of study and training, and where appropriate portability of credits [Article 3, paragraph 3(b)]; and

- To support transatlantic mobility of professionals (including professionals-in-training) with a view to improving mutual understanding, and expertise, of issues relevant to European Union-Canada relations [Article 3, paragraph 3(d)].

To achieve these objectives there need to be ways established to facilitate greater cooperation between key higher education *institutions and stakeholders* in Canada and the European Union; to enable closer ties between *academic discipline communities* in Canada and the European Union; to enable closer ties between *higher education policy makers* in Canada and the European Union; to develop more transparency between *higher education systems* in Canada and the European Union; and to establish a foundation for the development of a *shared understanding and terminology* for Canadian and European higher education stakeholders in their approaches to curriculum development, standards, qualifications frameworks and quality assurance. The Tuning Association has played a major and successful role in higher education in Europe and many other countries since 2000 in developing appropriate methodologies to encourage work and dialogue in these issues.

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The current study had three broad objectives:

- To investigate the alignment of academic standards and reference points in higher education for Canada and the European Union based on case studies of three subject areas (Engineering, History and Nursing);

- To determine the relevance of a Tuning approach for Canada;

- To chart the best way to implement a pilot project, including the scope of the undertaking and issues at stake.

This report presents the outcomes of the desktop research and study visits undertaken by the team of Tuning experts to a selected number of higher education institutions. The institutions were selected on the basis of location, size, links with other post-secondary institutions, and participation in the three disciplines under consideration. The report was revised after a first draft had been discussed at the CBEI offices in Ottawa at a meeting attended by members of the EU team, senior personnel at CBEI, and representatives from the universities and subject areas included in the study.

The report can provide a basis for further dialogue between stakeholders in both Canada and the EU. This interest should focus in particular on offering competitive education, international mobility and common understanding phrased in terms of compatible and comparable outcomes based learning and recognition of prior learning and mobility periods.

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The EU Tuning team which undertook the feasibility study consisted of the following experts:

- *Nursing:* Mary Gobbi (University of Southampton)
- *History:* Ann Katherine Isaacs (University of Pisa)
- *Engineering:* Alfredo Soeiro (University of Porto)
- *General issues, including assessment of student learning:* Arlene Gilpin (senior Tuning expert; formerly University of Bristol, UK)

The team was coordinated by one of the two Tuning Association joint coordinators: Robert Wagenaar (Director of Studies - University of Groningen). Administrative and organization support was offered by the Tuning Management Coordinator at Groningen University, Ingrid van der Meer.

The team received organizational support from CBIE staff, in particular Marianne Fizet and Jennifer Humphries, vice president of CBIE, and from the universities involved in the study. The work could not have been accomplished without the commitment of all faculty and supporting staff of those institutions.

2. BRIEF BACKGROUND ON CANADIAN HIGHER EDUCATION

Political structure

Canada, a country with 10 provinces and three territories, has no central Ministry of Education. Each of the 13 jurisdictions is responsible for the management of education at all levels. The management structure varies with some provinces having one Ministry of Education while others have two. Every province is distinctive and shows variations in both structure of government and also the relationships that Ministries have with higher education, e.g.in some provinces universities enjoy considerable autonomy while in others there is a much closer managerial relationship between the Ministry and the institutions.

Structure of Education

There are four main patterns for the organization of Education, illustrated in the diagram below. As far as the structure of Post-Secondary Education is concerned the main difference lies between the Province of Quebec and the rest of Canada. In Quebec there is an upper secondary education stage between K11 and university which is undertaken at a post school college. Thus Quebecois students enter university with 13 years of pre university education, rather than the 12 found in other provinces. In all provinces there is provision to move from secondary school into either vocational colleges or university, and there is also an indication that there can be transfer from vocational/technical college to university. In some cases the first degree is of four years duration, in others three, and this may be an impediment to mobility.

Recognition of qualifications in Canada is particularly challenging since the "learning recognition system is a patchwork of systems and methods". Federal and provincial or territorial governments are each responsible for parts of the system, creating a complex structure, which results in mobility issues for everyone.

Provincial and territorial governments have jurisdiction over most skilled trades and professions, higher education, and have delegated authority to regulatory bodies to determine licensing and certification requirements.

Barriers exist within certain regulated professions and trades that prevent people from having their qualifications and experience recognized in another jurisdiction in Canada. Further, those who have gained university or college qualifications in one institution often have difficulties having them recognized by another institution when transferring credits. As one interview respondent noted in another study, "overcoming provincial barriers is the biggest challenge to creating pan-Canadian credential recognition standards" (Hawthorne 2008).

Canada's Education Systems
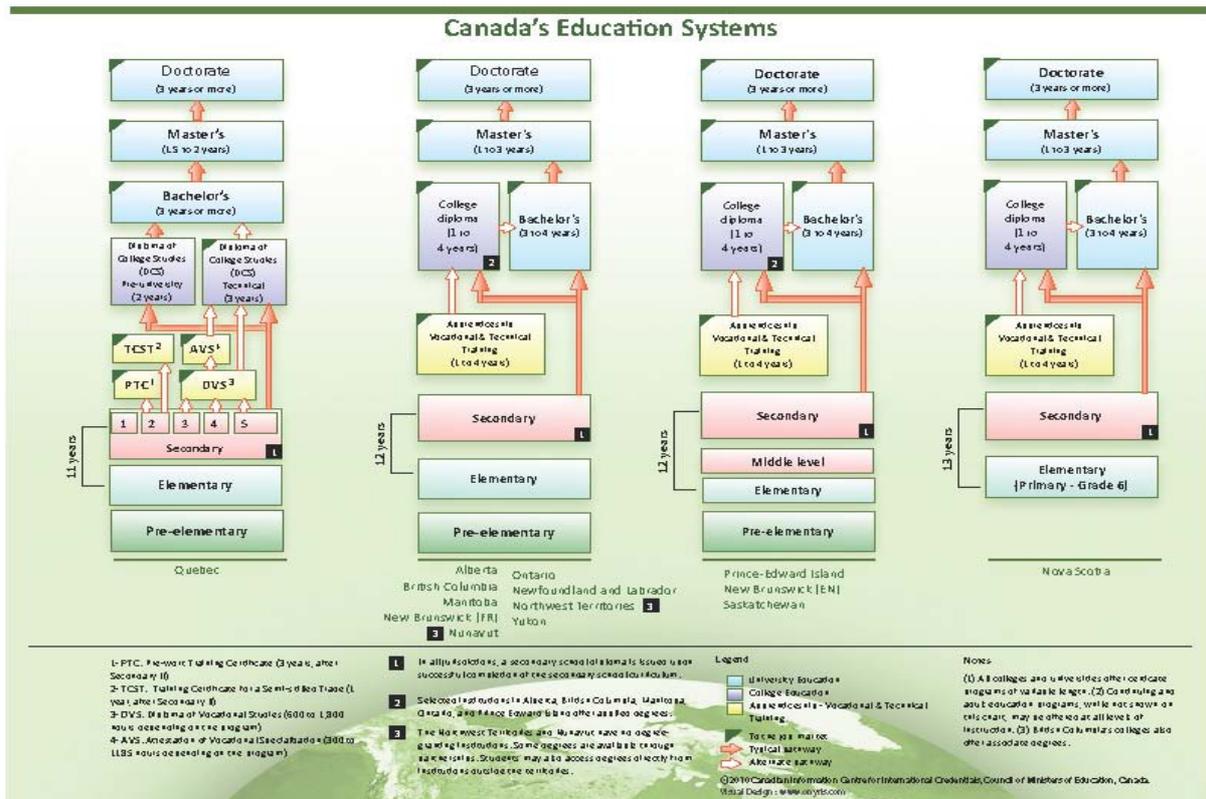
Source: Canadian Information Centre for International Credentials **(CICIC)**, a unit of the [Council of Ministers of Education, Canada (CMEC)](#), Education in Canada's Provinces and Territories: http://www.cicic.ca/444/provinces-and-territories.canada

General features of Canadian Higher Education

Fees are generally low on both technical and academic tracks. Programmes are organized by sector and domain and at first cycle, or bachelor degree, are normally less specialized than in Europe. It is therefore possible to change tracks of study between fields like humanities and engineering within the same institution. There is nothing similar to the European Diploma Supplement issued by the universities.

Although recognition between provinces and institutions can be an issue (as in the USA, for example), both credit transfer and credit articulation exist widely. Credit transfer involves an equivalency comparison of individual courses at one institution to courses offered at another institution. The details and flexibility of the process vary by institution. Articulation involves formal agreements between institutions on programme delivery and the awarding of credits in specific programmes. For example, a college may deliver the first two years of an articulated degree programme and a university delivers the final two years and awards the credential, or a university and a college may develop a joint, or integrated, programme. Comprehensive transfer guides are made publicly available. There are tens of thousands of credit-transfer agreements between private and public universities, colleges, and institutes, and they are subject to the programme-review processes at each institution. The Nursing programme at York University is

an example of an articulated programme; that at the University of Regina is an integrated programme, where there is not articulation in the classical sense but an affiliative relationship between the University of Regina and SIAST. In the articulated model the students typically take the part of the programme at a college and the rest at the partner university. In the case of the University of Regina and SIAST, staff teach in every year of the programme, an unusual arrangement in Canada.

Language ability may be a problem for mobility within and between provinces. At Laval University in Quebec, for example, undergraduates are expected to be able to function fluently in English in their chosen field of study in order not to hamper their future employment mobility opportunities.

Outcomes based curriculum design in Canada

From the material studied and the site visits the Tuning team has concluded that there are differences in the application of learning objectives and learning outcomes between institutions and subject areas for curriculum design and implementation. While the use of learning objectives is widespread (what the teacher intends to teach), this is less the case for learning outcomes (what the students are intended to learn), although this focus is expanding.

It was not possible to undertake an in depth analysis of the assessment of student learning, although it was clear in discussions that a wide range of techniques were drawn upon. The team were unable to judge the degree of alignment between intended learning outcomes, teaching and learning practices and assessment of learning.

As a follow-up to the signing of the Washington Accord (www.washingtonaccord.com), an initiative of professional organizations in the industrial countries, engineering schools have started to organize their curricula formally on the basis of a learning outcomes approach. Descriptors are formulated which are referenced to those of other engineering schools in Canada. Some schools have taken the lead here. In Nursing – the other regulated profession looked at in this study - there is clear evidence that programmes are outcomes based at curriculum design level. This was less clear for the non-regulated subjected area, which is represented in this feasibility study by history. Although the notion of learning outcomes based programmes certainly exists in the discourse, its real application across all disciplines does not yet appear to be a reality.

Some Universities have developed academic level descriptors for the University or for individual subject areas. The extent to which the learning outcomes are constructed to represent increasing degrees of complexity, depth and application of knowledge is variable. In the absence of national academic frameworks, it is sometimes difficult to establish how learning outcomes could be used transparently for transfer of credit or for recognition and accreditation of prior learning. Within the professional courses, the presence of national standards aids professional recognition, but not necessarily academic recognition.

Assessment of Student Learning

The importance of assessment as a driver of learning cannot be overestimated. All sensible students look at what is assessed and how it is assessed and behave accordingly. Although the consultation did not allow access to much actual data from institutions one example of

assessment from a well-developed programme pointed to a preponderance of traditional assessment techniques e.g. 48% were exam based; 28% assessing practice, 24% other. Student workload and the comparative amount of assessment were issues in discussions with colleagues in a number of institutions: there may be cases where over-assessment is an issue (links to equity and fairness).

Credit structure and mobility

Canadian higher education institutions use a credit structure which is based on the credit hour. Each academic year appears to correspond to 30 credits. There is variation, with some understandings of credit being linked to staff contact time. In some jurisdictions the ways in which part-time staff emoluments are calculated may be an impediment to a full student workload conception of credit.

Mobility of students (and numbers here may be quite small) is based on the number of credits recognized by the receiving institution with all programmes stipulating an upper limit to the number that can be accepted. Some universities have international agreements that facilitate the international mobility of students with automatic recognition of studies, indeed one of the striking facts of the encounters with colleagues in Canada is the large number of international links that departments participated in.

Terminology

There are some differences in terminology in the discourses around higher education in Canada and Europe. CICIC produced a useful glossary in 2008 (appendix 4) which could be used initially. It could be part of the work of a Tuning pilot to further refine or add to this glossary to include the terminology from within teaching, learning and assessment. The CICIC glossary is shown below in appendix 4

3. OBSERVATIONS AT SITE VISITS: AN OVERVIEW

Below is an overview of the most relevant observations – in the context of this feasibility study – ordered by subject area: Engineering, Nursing and History.

Engineering

Academic programme organization

Engineering programmes are grouped in three cycles. The first cycle lasts generally for four years (120 credits), the second for one year and a half (45 credits) and the third cycle is normally around three years (90 to 100 credits). The cycles have mandatory discipline based courses with some optional ones.

Outcomes based teaching and learning

From 2014 all engineering programmes must be outcomes based. Currently there are twelve criteria, also known as graduate attributes, assessed during the engineering accreditation (identical to the Accreditation Board for Engineering and Technology (ABET) criteria). There is an involvement of teachers and students to define the competences, the context of their application and the related indicators of achievement. For each criterion an indicator verifies the alignment of the programme with the criterion. However, in order to ensure that the competences/outcomes are achieved it is necessary to develop an assessment framework that is aligned to the intended learning outcomes. The twelve graduate attributes are just part of what is assessed. There is also a requirement for continual improvement of the programmes; there are also criteria regarding students programme environment, and curriculum content and quality.

Professional accreditation

The academic programmes are accredited by the Canadian Engineering Accreditation Board. This accreditation allows graduates to become licensed engineers. The accreditation considers minimum levels of accreditation units (proportional to hours of lectures or laboratory work) in different dimensions of the academic programme: total, mathematics, engineering science, engineering design, etc. Licensed engineers participate in the accreditation teams to ensure the usefulness of the programme outcomes. The accreditation team looks for evidence linking indicators with intended Learning Outcomes. Universities and accreditation look for good practice, and continuous improvement is the expected attitude. Provincial requirements of the accreditation team may vary according to the local contexts. Some disconnection may exist between provincial associations and Engineers Canada.

International professional mobility

Engineers Canada consists of the professional engineering organizations in the country. It is a member of the Washington Accord (www.washingtonaccord.com), is involved with APEC Engineers Register, has mutual recognition with similar organizations in Hong Kong, USA, Australia, France and Ireland. These agreements facilitate the mobility of engineers.

Lifelong learning

Continuing Professional Development (CPD) is mandatory in most organizations that belong to Engineers Canada. Engineers Canada includes CPD in its Code of Ethics. Most academic institutions have provisions for CPD and for distance learning. There are other providers of CPD that are accepted by Engineers Canada members.

Nursing

Background and context

Like other academic disciplines, from an academic perspective, nursing is quality assured through the individual university and its related provincial higher education governance systems. In addition to university regulation, as a regulated profession, nursing can be regulated or approved via a statutory body of the Provincial Government (usually a Provincial Nurses Association) and professionally accredited through external agencies like the Canadian Nurses Association (CNA). These agencies are usually a College or Professional Association, professionally accredited through the Canadian Association of Schools of Nursing (CASN); for undergraduate programmes. CNA does not accredit undergraduate programmes in Canada. There are three types of practicing nurse in Canada, the Licensed Practical Nurse (LPN), the Registered Nurse who is a generalist (RN) or a Registered Psychiatric Nurse, (RPN) and the Nurse Practitioner (NP).

Typical Nursing Programmes

Registered nurses typically complete a 4-year undergraduate programme. In addition to the 4-year option, most Schools offer a second-degree or post-degree option whereby students with a pre-existing degree can complete their nursing degree in two years. There are also acceleration options available to nursing students and they can complete their degree in less than four years (courses offered during the summer months enable a student to finish her or his degree in 2.5, 3, or 3.5 years). Licensed practical nurses undertake a 2 year programme with the opportunity to 'top up' or undertake a bridging course to become a Registered Nurse. Nurse practitioner programmes are typically at Master's level. In most provinces there are requirements for evidence of current and continuing competence, and thus for RNs whose license has lapsed, some Universities or Colleges run 'Return to Nursing' Programmes.

Regulation

Within Canada, regulation of the nursing profession is mainly at provincial jurisdiction level, with each Province having a Statutory Organization/Association responsible for public safety, setting standards for education and practice for the profession and registering nurses to ensure their competence. The Associations also, to varying degrees, ensures continuing competence, manage professional conduct, set codes of ethics and the approval processes for education and training for the different licenses. In some provinces, the Licensed Practical Nurses are regulated by a separate agency

As part of the approval processes for licensed programmes, the relevant governing authority will scrutinize a range of factors often including the programme, the curriculum, student factors, graduate achievements, and resources, both clinical and academic environments.

In Canada, there is an Agreement on Internal Trade that addresses labour mobility of regulated workers. Under Chapter 7 of the agreement, a regulated person in any jurisdiction that would like to move to another jurisdiction where there is an equivalent category of worker (i.e. RN or NP) must be registered without having to undergo additional education, training or testing. The regulator may refuse to register a worker or impose terms or conditions or restrictions on the ability to practice where it is felt necessary to protect the public interest as a result of complaints, disciplinary or criminal proceedings in another jurisdiction related to competency, conduct or good character. Demonstrating language proficiency may also be required. There is a mutual recognition agreement (MRA) in place that supports the regulators in recognizing equivalence for the purpose of registration.

Role of the Canadian Nurses' Association

According to the Canadian Nurses Association (CNA), nursing is a profession that has three types of regulation: the registered nurse, the licensed practical nurse, (In Ontario known as the registered practical nurse), and the registered Psychiatric nurse (In four provinces only). The CNA provides an overall Framework *For The Practice Of Registered Nurses In Canada* (CNA 2007) which defines the registered nurse, outlines good practice for regulation, education and training, scope of practice, standards and ethical conduct. The CNA acknowledges two other nursing types, the nurse practitioner and the clinical specialists for whom there is an Advanced Nursing Practice National Framework (2008). Qualification for these roles is normally at Masters level. The Regulatory Bodies (Colleges and Professional Associations) have contracted out to the CNA to administer the Canadian Registered Nurse Examination [CRNE]. This "arm" of the CNA currently provides a testing service which will become defunct in 2015 as the regulatory bodies in Canada will contract out to an American-based organization to administer the Canadian licensing examination in an on-line format. The CNA was not able to provide an on-line version of the CRNE. The exam remains *Canadian* however, although the tester will be based in the USA.

The CNA also has certification programmes (post-registration). RNs can write certification exams in various practice areas, e.g., community health nursing, critical care nursing, etc. The CNA does not engage in accreditation of nursing programmes. That is the purview of the Canadian Association of Schools of Nursing (CASN).

It is important to note that the nursing competences are assessed in the jurisdiction in which the nurse, or student nurse, resides. All applicants for registered nurse registration in Canada (except in Quebec) must write the national Canadian Registered Nurse Examination (CRNE). Quebec examinations are recognized for the purpose of registration in other jurisdictions (e.g. Alberta). Successful completion of the CRNE is 'required to obtain a license to practice in all Canadian provinces and territories except Quebec which has its own examination' (CNA, 2007: 11). The CRNE assesses those competences, or aspects of the competences, amenable to examination in the written form. The CNA makes it clear that the standard of education should

be undergraduate education, as it is with all provinces except Quebec. The CRNE is based upon the nationally agreed competencies, developed by the provincial/territorial regulatory bodies, in cooperation with Assessment Strategies Inc., a subsidiary of CNA that develops and maintains the exam.

Nurses educated outside Canada, are deemed to be ' internationally educated nurses' and special criteria apply to them. They must also pass the CRNE.

The Canadian Association of Schools of Nursing

The Canadian Association of Schools of Nursing (CASN) is the national accrediting body for nursing education in Canada and this has become its core function. The accreditation is concerned with excellence, quality enhancement and the process of education. It addresses collaborative provision, distance education, quality dimensions, standards and descriptors. It is designed to enable a flexible approach to the regional, social, professional and institutional situations. CASN operates by a *voluntary* accreditation process and has a hallmark for striving for excellence. It describes itself as the ' national voice for nursing education, research, and scholarship and represents baccalaureate and graduate nursing programs in Canada'.

Mobility issues for Canadian and internationally educated nurses

Given the freedom to set professional educational standards at Provincial level, there is some variability in the content and outcomes of the education training systems between provinces. This is compounded by differences in the credit systems, the flexible organization of curricula enabled at institutional level and the absence of a national framework of credits and qualifications.

Curriculum design, content/competences

The curricula reviewed were written in a modularized framework which outlined programme competences or programme outcomes, learning objectives/ outcomes, learning and teaching strategies and evaluation methods (assessment). A full range of assessment strategies similar to the European model is evident.

A rich range of diverse contemporary and traditional teaching methods is employed within the programmes. Variations on problem based and emancipatory learning are evident, for example context based learning (Alberta, Edmonton), action sensitive pedagogy (Regina) and the principles of cooperative, anticipatory-innovative learning (York collaborative). Practical strategies include, evidence based practice, formal lectures, seminars, tutorials, e-learning, experiential group work, laboratory practicums, simulations and clinical practice in health service environments.

Similarly, diverse assessment methods were utilized throughout the curricula, generally aligned to the curriculum content and course objectives/outcomes. In the absence of a qualification framework level descriptors, it is difficult to determine the depth of knowledge expected within individual modules. The assessment strategies ranged from examinations, multiple choice tests, use of portfolios, reflective journals, skills logs, presentations (oral and visual), clinical practice

and simulation assessments, capstone projects and assessments. The term 'evaluation' is used rather than 'assessment'.

History

The situation of history with regard to Tuning is obviously different from the other two subject areas involved in the feasibility study. Both Engineering and Nursing need to respond to the challenges and constraints entailed by their professional and regulated character. History served to counter-balance the impressions gained from the other two subject areas, and it may be representative of subject areas that are not regulated.

Normally, as in Australia or in the United States of America, History is taught at Bachelors level as a part of more general Humanities studies or Area studies. Unlike the current situation in most European countries, specialisation in Canada occurs later, at the Master's and Doctoral levels. Programmes thus differ in their degree of generality and their research organization on the two sides of the Atlantic.

Both Nursing and Engineering are proposing and testing paths which will lead to a more comparable approach in their disciplinary areas. Also, because of the nature of the disciplines of Nursing and Engineering, there is already a lively interest in learning outcomes approaches, and many qualified and committed people are working on these matters, both within institutions and within professional organizations. However, in the case of History the experts observed little coordinated work in the learning outcomes direction, and no general coordinated projects appear to have been envisaged.

The same however -- it must be pointed out -- was true for European history programmes when Tuning and the projects which laid the foundations for it began. History programmes were among the most diverse on a pan-European scale. History is, however -- perhaps as a consequence of this diversity -- a subject in which the Tuning approach, world-wide, has had a significant impact: it has put very separate historiographical communities together, and encouraged historians to rethink their teaching and learning activities in terms of competences, as well as providing important and novel empirical data on the way that the competences developed in the study of History impact on employability of graduates.

The experience of Tuning History, first in Europe, then in Latin America, the Russian Federation, Georgia, Central Asia and elsewhere has proved very useful, as it has encouraged communication between national academic communities and allowed them to collaborate in learning about each other and establishing internationally shared guidelines and reference points. These are in no way prescriptive or invasive, but rather lead to a better understanding of what History teaching and learning are and potentially can be.

Work done in Tuning History in Europe and around the world can be seen as a pilot or model for many other subject areas, particularly in the Social Sciences and the Humanities. In general, in Canada, we might consider History to be typical of all non-regulated subject areas, and - because of its links with programmes in various contiguous subject areas - particularly suited to act as a multiplier.

Although the design of History curricula in Canada is different from the EU and the levels of specialisation are different, this should not be an obstacle to collaboration between the two sides of the Atlantic: on the contrary, Tuning tools can help to make the differences -- advantages and disadvantages on both sides -- clear in terms of competences and learning outcomes.

Summing up: the EU team found little evidence of coordinated work going in the History area in Canada, but precisely for this reason it believes that there is great potential for a Canadian History Tuning, for the development of such studies in Canada, for its value as a model for other non-regulated disciplinary areas, and because of the possibility of interaction with the History Subject Area Groups around the world.

4. DETERMINE THE RELEVANCE OF A TUNING APPROACH AND TO DECIDE WHETHER A FULL-SCALE TUNING PROJECT WOULD BE HELPFUL AND MEANINGFUL FOR CANADIAN HIGHER EDUCATION INSTITUTIONS

The Tuning Methodology offers a number of key characteristics which make it adaptable to any contexts in Higher Education where curriculum reform - in its broadest sense -is undertaken. The most important elements are twofold.

- Firstly, the inclusion at every stage of a range of actors – which may include academics, employers, students, professional bodies, and officials – who are enabled to engage in constructive and guided debate on key issues. This inclusive openness is vital if a reform is to be understood, owned and disseminated.
- Secondly, the methodology is methodic and proceeds from programme initiation to quality assurance, and can be absorbed into the curriculum reforms that an institution or nations undertaking. Each stage has well established and trialed 'tools' to facilitate discussion, all of which can be adapted to particular contexts.

The first stage looks at programme design: what content and outcomes are appropriate at each level. This involves consultation with employers, officials, professional bodies, academics and students – former and current In Engineering and Nursing in Canada this may already have been done effectively in order to reach the national guidelines for curriculum content; in History this is less obvious. There is no coordination in this respect either on regional or on national level. Institutions are fully autonomous in designing and delivering degree programmes.

The second stage examines Teaching, Learning and Assessment and considers how these are best designed and effected in order for students to achieve the intended learning outcomes This is a stage where academics would work together, sharing good experience within and across subject boundaries. Students are also useful participants here, and we saw in Alberta, for example, an example where the Students' Union was actively involved in matters to do with student learning and the results of their research became part of the curriculum reform debate among academics.

An important element at this stage is assessment (evaluation) of student achievement for progression, in relation to overarching Qualifications Frameworks (QFs), which set out level descriptors for each degree level and (ideally) each level within a degree. In Canada there is a national framework suggested, and both Ontario and the Atlantic provinces have a QF. There may be other provincial frameworks, and all of these may be valuable. They do differ, however, and one outcome of a Tuning pilot might be that academics from different jurisdictions might be able to agree on the main elements of a Canadian Qualifications Framework.

The third stage examines credits and student workload, an area where in Canada there may be a need for cross discipline, institutional and provincial discussion. There is no 'right' way of allocating credits or calculating workload, but in the interests of national and international student mobility there are now guiding parameters that need to be taken into consideration.

Finally, the last stage is Quality Assurance and Enhancement. The EU team observed that Quality Assurance schemes operate in all jurisdictions and within disciplines. During the short mission they were unable to delve into how quality enhancement works: how do institutional and discipline based assurance measures reach down to the students, e.g. in terms of giving and obtaining feedback from students and then using this for elements of programme enhancement. All too often quality assurance becomes an administrative tool which teaching staff succumb to, and not a tool they can use for improvement.

Comparisons between Canada and other contexts where a Tuning Approach has been valuable

There are striking similarities between the political structures in Canada and those where Tuning has proved to be effective in assisting curriculum reform in university education. The separate jurisdictions with their own ministries; the lack of an overarching qualifications framework with level descriptors; the lack in many cases of pan Canadian structures to facilitate greater convergence of curricula; differential course lengths and notions of whether credits are student workload based or input based are some of the key issues that would enable greater advantage to students and graduates in terms of mobility and employability. It is true that Canada has very useful web sites to explain qualifications and other requirements for immigrant personnel, but these have to refer the enquirer on to the provincial level descriptors at all levels. A Tuning pilot would enable universities to trial a collaborative method of setting commonly agreed standards to enable transparency for all and mobility for graduates and students.

Credits and Mobility

Mobility can be hindered by an absence of credit accumulation and transfer schemes that relate to learning outcomes, differential level descriptors with respect to student achievement and volume of student workload. Credits may be assigned in relation to tutor input or contact time rather than student workload in relation to achievement of learning outcomes. This is not always the case and some universities assess the student workload for credit.

It is also understood that some internal trade agreements between employers and Faculty staff are related to the credit hours. This is particularly the case where hourly paid teaching staff are employed, a practice that has increased in recent years to reduce teaching costs. This means that staff members are paid according to the number of credit courses they deliver.[1] This reinforces an input credit model. Typically, credit values of 3 credits are assigned for 3 hours tuition per semester of about 12-13 weeks. Qualification programmes would specify the number of credits per degree (e.g. bachelors programme of 142 credits), and in the case of nursing, the

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[1] Substantial changes in the university educator population have occurred. From 1994–1995 to 2004–2005, the number of full university professors and associate professors declined. In comparison, the number of educators in the "other" category (seasonal lecturers, part-time teaching staff, etc.) increased by 42.6%. In 1994–1995, 23.8% of all full-time faculty were from the "other" ranks, compared with32% in 2004–2005: CCL-CCA 2009.

percentage of credits/programme accorded directly to nursing topics. This also varies from province to province.

One implication of this system is that there is no parity in typical student workload for a credit. It was reported in each centre, that sometimes students were overloaded with work because concurrent modules / course units expected different volumes of student activity for the same credit value. Indeed this was also mentioned as sometimes being different between disciplines within the same University.

Language ability maybe a problem for mobility among provinces but established mechanisms exist between provinces. In French speaking Quebec all students must be able to operate in English as well as in French.

5. To a full-scale Tuning Canada project ? Views by subject

Engineering in Canada and Tuning

The qualification of the engineers relies in an academic structure that is similar to the European. Students access the university degree programs generally with the twelve years of school. Thirteen years of school exist in some EU countries before entering the university. The exact comparison can be obtained with the data from Eurydice. The structure of the three engineering cycles is similar to the EU. The duration is different with most EU first cycles lasting for three years that are shorter than the four year first cycle in Canada. The second cycle in Canada is shorter than in most European cycles. In the third cycle the durations are comparable. The professional qualifications of the engineering programmes have a similar approach based on LOs and competences acquired. The Canadian approach also defines minimum values for the total and the parts of the programmes. The EUR-ACE and the Tuning AHELO-OECD qualifications frameworks define LOs in general and specific ones.

The comparison of the accreditation programmes shows similar processes to accredit the programmes. Although there are differences in the periods of accreditation, in the constitution of the accreditation teams, of the methods used to evaluate the quality and of the dimension of Learning Outcomes analysed the main goals and contents are identical. The EUR-ACE and the Tuning-AHELO qualification programmes establish Learning Outcomes to all similar engineering programmes and that ensures an easier acceptance of the graduates by other countries and by other engineering professional organizations. In Canada it is assumed that with the minimum duration of each scientific part of the programme this equivalence will be established. The European qualifications frameworks (QF and EQF) group LOs according to its nature (Knowledge, Skills and Attitudes) while the Canadian system does not. The EQF and QF also facilitate the recognition of prior and of informal learning allowing recognition of acquired qualifications outside the formal system.

Pilot proposal:

Choose a number of Engineering programmes in EU and in Canada and proceed as in the Tuning (European) pilot phase:
• Involve Engineering organizations in Canada: Engineers Canada, Provincial engineering bodies, the National Council of Deans of Engineering and Applied Science (NCDEAS), the Canadian Engineering Education Association (CEEA); and possibly outside Canada the European Federation of Engineering Organizations (FEANI), the World Federation of Enginering Organizations (WFEO) and European Society for Engineering Education (SEFI), among others.
• Establish a proposal of LOs accepted by Canada and EU
• Take advantage of the current changes in the Canadian HE system and propose a series of dissemination actions of Tuning

Nursing in Canada and Tuning

The competence descriptions appear to be well aligned with respect to the subject specific competences, and comparable with those used in Europe. Due to the lack of generic academic qualifications frameworks, nursing qualifications are articulated with respect to locally based graduate attributes/ expectations and the CNA and/or provincial regulator competences. Within programmes, there may be progression descriptors by year or level of development of the student. However the development of a commonly understood language to articulate student achievement with respect to depth and complexity is not yet established. Different models of articulation were encountered, and there was a general absence of experiential related descriptors.

More detailed work on the actual percentage of nursing and its cognate disciplines across the different provinces is needed to fully appreciate the equivalence of curriculum content in relation to the scope of practice of the registered nurse. The situation of Quebec needs further analysis as we were unable to dialogue with nursing colleagues.

There is a real difference between Europe and Canada in this subject area with regard to student mobility. As noted above, the fact that the student workload is based on input hours means that there are severe challenges to mobility between institutions and provinces.

Pilot proposal:

- Consult or, preferably, convene a meeting of CASN, CNA, and the recently established Canadian Council of Registered Nurse Regulators to discuss the proposal focussing on the articulation of student achievements and mobility. Then, depending on this consultation
- Select a number of different universities representing different provinces, collaborative and other undergraduate programmes preparing Registered Nurses. This phase is followed by
- Establishing a generic framework based on well defined overarching descriptors which identify progression routes and facilitate mobility and recognition.

History in Canada and Tuning

In the case of History, for the reasons explained above, it seems advisable to begin with an information campaign, and -- beginning with the historians at the institutions which already expressed interest during the site visits -- distribute material about the findings of the History Subject Area Groups in Europe, Georgia, Russia, Latin America and so forth, as well as about the European History Networks, their activities and their collaboration with other historians' organisations worldwide. Subsequently a call can be made, and an appropriately balanced group of participants gathered.

With this Tuning Canada Subject Area Group, it should be possible to carry out a full-scale Canadian History Tuning, whose results would be useful in Canada as well as for all the other History 'Tuners'. The particular strengths of the Canadian approach should be highlighted, and the advantages of international collaboration exploited.

Pilot proposal:
- Consult stakeholders such as the Canadian Historians Association, local and provincial teachers associations, history students' associations, employers and accreditation bodies as appropriate. Present to this group the work that History Tuning has done in many countries and discuss the potential for Canada. If this group were amenable to the idea of a pilot, then:
- Select from different 'jurisdictions' and institutional types (public/private Large/small Francophone/Anglophone) a number of History programmes, or if necessary liberal arts or area programmes with a strong History component, at undergraduate level.
- Follow and where necessary modify the 'classical' Tuning approach, to produce guidelines and reference points for History Programmes, and to propose tools for fostering new approaches to learning/teaching and assessment.

6. CONCLUSIONS

This feasibility study was conducted within a strict budget and time frame, and so consultation was limited of necessity. However, between talking with a range of colleagues and researching published material, and meeting key personnel in Ottawa to discuss the draft report, it has been agreed that a fair picture had been achieved.

From the three broad objectives defined for this study, a number of key points emerged.

Awareness of outcomes based education is widespread in Canada, but implementation varies, even in the regulated professions. University policy also influences this, e.g. in the degree of autonomy subjects enjoy. Methods of implementation also vary: some are university wide, in some cases experts are employed to guide and support innovation, in others we observed the involvement of Teaching and Learning Centres, and also the consultation and involvement of students. Nevertheless, the general impression was that development of an outcomes approach is at level one: the establishment of LOs in the curriculum. Little evidence was seen of alignment of LOs with teaching, learning activities and assessment techniques.

Similarly, the lack of a nationally recognized credit system based on student workload impedes mobility and the accreditation of prior learning.

What a TUNING exercise could do (among other things) would be

- To support work already in progress in Canada.
- To share good practices in aligning LOs and assessment via learning activities.
- To move towards a better description of levels of achievement of learning outcomes.
- To allow discussion of equitable student workload related to credits.
- To develop a shared vocabulary in relation to educational practices to enable the further development of the national (and international) discourse around teaching, learning and assessment.
- To link to other work being done by other bodies perhaps linked to particular subjects or topics (engineering as above, but also bodies like UNESCO who have done much work on subject under discussion in their work on migration of teachers for example).
- To encourage frank discussion across institutional and provincial borders.

To determine the relevance of a Tuning approach for Canada, its main characteristics have been compared to the situation in Canada to find out whether a full-scale Tuning project would be helpful and meaningful for Canadian higher education institutions. On this basis the team has drawn the following conclusions:

- Given the diversity of the educational structures in higher education in Canada, a first step in determining the establishment of a Tuning pilot should be to convene meetings with the key stakeholders in the three fields of study represented in this report. They could then decide how the Tuning methodology, modified where necessary to suit the context, might be helpful in overcoming some of the barriers to mobility and transparency that were noted in tertiary education in Canada.

- On the basis of work done so far there there seems to be a good basis for setting up Tuning pilots to enable universities to trial a collaborative method of setting commonly agreed standards to enable transparency for all and mobility for graduates and students. These pilots should be tailor made for the disciplines involved and should therefore slightly differ in scope and content.
- It is expected that the outcomes of these pilots would serve both the interests of Canadian higher education institutions themselves and the position of the Canadian higher education sector with the outside world, in this case in particular with the European higher education sector. Such pilots would also be of interest to those in Canada interested in the accreditation of qualifications from overseas, since they would help to clarify the Canadian system.

Appendix 1:

Documentary evidence /bibliography; general and by subject area

- Documents and websites

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Nursing

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History

The European History Networks: www.clioh.net, www.cliohworld.net, www.cliohres.net

The Canadian Historical Association - Société historique du Canada: http://www.cha-shc.ca/en

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Appendix 2

Itinerary and Meetings

MARCH 11-16, 2012
EU team arrives in Toronto on Saturday, March 10 and Sunday, March 11

Sunday 11th March
Evening team meeting

Monday, 12th March
11:30-13:00: Working lunch with Harvey Weingarten, HEQCO president and Fiona Deller, Research Director
York University, Toronto, Ontario
14:30-17:30: Meeting with study partners from York University and Georgian College
This meeting was with both members of York's History department; and with members from the faculty of Nursing at York University and at Georgian College in Barrie, Ontario, who deliver a joint programme in Nursing.

Tuesday, 13th March
Université Laval, Québec City, Québec
With Marianne Fizet on behalf of CBIE
11:45 (approx.): Working lunch with Richard Poulin, Director, International Office, and Nicole Lacasse, Associate Vice-Rector, Academic International and Activities
13:00 (approx.) -16:30: Meeting with representatives from Nursing, Engineering and History

Wednesday, 14th March
Dalhousie University, Halifax, Nova Scotia
12:30-17:00: Working lunch followed by meeting with representatives from Engineering
In attendance from Dalhousie: Dr. Pemberton Cyrus, Associate Dean, Academic; Ms. Barbara Kerr, Teaching and Learning Specialist; Dr. Chris Watts, Professor (chris.watts@dal.ca)

Thursday, 15th March
University of Alberta, Edmonton, Alberta
9:15 Olive Yonge and Katie Peterson meet the team at their hotel.
9:30-10:30 Meeting of Tuning delegation with Alberta government (Connie Harrison, representatives of Alberta Quality Council and ACAT/Alberta Council on Admission and Transfer)
11:00-12:00 Tuning team to give a formal presentation in ECHA. (Invitations sent to UAI listserve, SACIE members, Academic Standards Committee, Committee on Learning Environment, select Chairs, Deans, Associate Deans)
12:00-13:00 Buffet lunch hosted by UAI

13:00-14:30 UofA presentations on learning outcomes, competencies (presenters being determined)
15:00-17:00 Campus tour/on-going conversations
17:00 Departure for airport
19:30 Team leaves for Regina, Saskatchewan

Friday 16th March
University of Regina, Regina, Saskatchewan
8.30 to 15.00 Meetings and lunch with staff : Luigi Benedicenti, Associate Vice-President (Academic); Dr. David Gregory, Dean of Nursing; Ms. Bonnie Dobson, Faculty of
Nursing, Faculty Administrator; Dr. David deMontigny, Associate Dean of Engineering (Student Services)

Saturday 17th March
Departure following team meeting at hotel

Appendix 3

Additional notes on Subject specific matters

Nursing

The Canadian Association of Schools of Nursing

The Canadian Association of Schools of Nursing (CASN) describes itself as the ' national voice for nursing education, research, and scholarship and represents baccalaureate and graduate nursing programs in Canada'.

More recently however, it has become the national accrediting body for nursing education in Canada and this has become its core function. The accreditation is concerned with excellence, quality enhancement and the process of education. It addresses collaborative provision, distance education, quality dimensions, standards and descriptors. It is designed to enable a flexible approach to the regional, social, professional and institutional situations. CASN operates by a voluntary accreditation process and has a hallmark for striving for excellence.

Accreditation and approval

Within the Canadian context, it is crucial to distinguish between the approval of licensed nurse education programmes and their accreditation by various bodies. Approval is conducted by agencies on behalf of the licensing authorities/regulation bodies to ensure public protection and that the students meet the 'entry to practice requirements'. Approval is mandatory. Accreditation aims to promote quality in nurse education standards through the demonstration of achievements benchmarked against national standards of excellence involving external peer review. Across Canada, the extent to which provinces embed the CASN accreditation mechanisms within their own requirements varies. However, most schools of nursing participate within the CASN accreditation process.

Within the health sector itself, there is an organisation called 'Accreditation Canada' which itself is accredited by the International Society for Quality in Health Care (ISQua). This non profit making independent agency provides health organisations with external peer review with respect to service delivery so as to promote quality health care. This has relevance for the provision of placements for the clinical component of the nursing programmes. Accreditation Canada also approves education and training programmes for the health service providers.

Curricula

Programmes are clearly articulated in both their underpinning philosophies of nursing , health, society and healing/caring and professional roles. The values base is evident and explicit within course materials. The competence based framework adopted through the 'entry to practice' competences articulated by the CNA augmented by provincial regulator standards determines a competence based model from which the universities design their curricula. Programme materials and outcomes explicitly referred to a range of generic graduate skills applied to the nursing context, these included:
- Self reflection/reflective practice

- Team work
- Criticality
- Problem solving
- Professionalism and ethical, caring values
- Leadership skills
- Cultural awareness or diversity
- Justice/social awareness and empowerment skills
- Information, communication and literacy skills
- Relational practices
- Global awareness

The nursing competences and learning outcomes from each University and the CNA competences resonated clearly with the Tuning 2008 competences, written in a national context. In other words, the Tuning domains were all matched within the Canadian competences and programmes, for example:

1. Professional values and the role of the nurse
2. Nursing practice and clinical decision making
3. Knowledge and cognition
4. Communication and interpersonal skills (including technology for communication)
5. Leadership, management and team working.

Mobility and collaboration

At province level, in response to two drivers, namely intra province mobility and increasing bachelors level education, some universities have developed collaborative relationships with each other, colleges of nursing education and the health service sector (evident in York, Alberta and Regina). This means that a variety of programmes can be integrated between institutions to provide different nurse outputs and enable movement of the student or graduate. This mechanism can also accommodate flexibility and opportunities for those transferring from LPN to RN status. It is important to note that the first 2 years of the RN programme may not align perfectly with the LPN programme, so a student leaving the RN programme after 2 years cannot automatically apply for the LPN license. They may need a bridging programme. This became a dilemma in some provinces when there was a a demand for LPNs and vacant posts, but a reduction in RN posts. Some RNs then sought to achieve LPN status so as to gain employment.

Where a collaborative arrangement does not apply, then should a student wish to transfer their education from one province to another, or indeed one university/college to another, there are several obstacles. In the absence of a national qualifications framework with progression/level descriptors within it for nursing programmes, then courses/modules may be situated in a different university programme at a different time and level. It is also difficult for the internal transfer of credit where there are no internal progression points at provincial level (e.g. Saskatchewan). When the curricula do not align in structure, then students often find that they can have very little credit transfer in reality.

Some provinces and universities have identified their own level descriptors or expectations of student achievement for each year of the programme. They have also articulated 'graduate attributes or expectations' (for example Ontario's graduate and post graduate descriptors).

These factors mean that it is difficult to not only accredit prior learning as the curriculum architecture may be vastly different, but timetabling may be challenging. Furthermore, the learning outcomes achieved may be different with respect to their depth and complexity. This is difficult to discern as the credit based system is largely tutor input led.

For internationally educated nurses, accreditation of prior learning can also be problematic for similar reasons. In some provinces internationally educated nurses sit examinations to determine the competence level of the candidate. For example in Saskatchewan the international assessment centre (SIAST) uses Objective Structured Clinical Examinations, written tests, and case scenarios.

Meeting at York University: participants

Dr Claire Mallette (York) , Director of Nursing School
Diane Kilpatrick, Karen MacDonald, Georgian College

Meeting at Regina: participants

David Gregory, Professor and founding Dean Faculty of Nursing

Bonnie Dobson, Faculty Administrator

Meeting at Alberta, Edmonton: participants

Team led by Dean of Nursing: Professor A. Molzahn and Professor Joanne Profetto-McGrath, Vice Dean

Appendix 4

CICIC Guide to Terminology Usage in the Field of Credentials Recognition and Mobility in English in Canada (also available in French)

ACADEMIC QUALIFICATIONS

Knowledge and skills required for enrolment in an educational institution or practice in an occupation. Academic qualifications are usually obtained through formal study in a recognized educational institution and are documented. In the absence of documentation, academic qualifications may be established through prior learning assessment and recognition (PLAR)

ACADEMIC RECORD

A file containing academic information on each student at an institution. It may include such information as a student's program of study, transfer credits awarded, names of credit and non-credit courses completed, course grades and grade-point average, repeated courses, prior learning assessments, disciplinary actions, and appeals.

ACCEPTANCE

The willingness to allow credentials obtained outside a jurisdiction or institution to be used for entry into an educational program of study or occupation, but without the formal or official granting of an equivalency. In some occupations, acceptance takes the form of provisional licensing. The term acceptance is most often used in European Union countries.

See also: Equivalency; Recognition

ACCREDITATION

A process of quality assurance through which accredited status is granted to an educational institution or program of study by responsible authorities. It means that standards of education established by professional authorities have been met. In Canada, individuals and educational institutions are not accredited. The term applies only to educational programs of study. The process usually includes self-assessment by the program under review and on-site visits by qualified, external reviewers from government and/or nongovernmental agencies. Degrees, diplomas, or certificates emanating from non-accredited programs do not have the same status as those issued by accredited programs and may not be recognized at all. A program's accreditation status is normally subject to periodic review and may be withdrawn by relevant professional authorities.

ACCREDITING BODY

The authority that is acknowledged as having the responsibility of granting accreditation to formal education programs. Accrediting bodies can be (but are not necessarily) mandated by legislation or by regulatory bodies and can consist of government representatives, stakeholder representatives, external academic experts, and professional regulatory bodies.

ADMISSION

An educational institution's or occupational body's formal acceptance of a person to enter a program or occupation.

ADVANCED STANDING

The waiving of the requirement to complete a course or unit of coursework. Formal credit for the waived coursework is not normally given.

See also: Credit Transfer; Transfer Credit (External)

APPLIED DEGREE

An undergraduate degree offered by postsecondary institutions normally requiring four years of full-time study. Degrees are primarily in technology fields, emphasize technical applications, and frequently involve fieldwork or practical training.

APPRENTICESHIP

A workplace-based training program involving in-school studies and supervised on-the-job training, during which the apprentice learns the knowledge, skills, tools, and materials of an occupation. Apprenticeship may be regulated by legislation or custom, according to an oral or written contract that imposes obligations on the apprentice, sponsor, and workplace. Occupations may require a term of apprenticeship as a condition of licensing.

APPROVAL

A process by which a governmental agency or other body establishes basic standards for the review of educational programs. Approval is distinguished from accreditation in that the approval process is generally not a voluntary process, and the standard-setting entity is usually governmental (whereas accreditation bodies may include non-governmental components). [Canadian Nurses Association]

ARTICLING

A one-year period of paid workplace training as part of a formal educational program in law.

ARTICULATION AGREEMENT

An agreement between two institutions that authorizes studies undertaken in specific programs at one institution to be credited toward direct entry into or advanced standing in specific programs at another institution.

ASSESSMENT

The identification and measurement of learning, credentials, and other forms of qualifications required for entry into programs of study or occupations. Assessment may include testing, examinations, or other prescribed activities.

ASSOCIATE DEGREE

An undergraduate degree offered by colleges and university colleges, normally requiring two years of full-time study.

BACHELOR'S DEGREE

An undergraduate degree offered by universities, normally requiring three or four years of full-time study.

BLOCK TRANSFER

The transfer and granting of credit for a group of completed courses from one institution to another without requiring course-by-course assessments.

BRIDGING PROGRAM

A program of study involving courses designed specifically to provide individuals with skills and knowledge required for entry into an occupation or a higher-level educational institution. It supplements learning outside a jurisdiction or at another institution and may consist of workplace training and occupation-specific skills acquisition, as well as language training.

BURSARY

A financial award made to students based on an assessment of financial need.

CALENDAR

A book of rules, regulations, policies, programs, and courses for a specific institution.

CERTIFICATE

A document attesting to the successful completion of an educational course or program that is normally less than four semesters in length. A certificate may also qualify holders for entry into an occupation (e.g., Certificates of Qualification in the skilled trades).

See also: Credential; Diploma

CERTIFICATION

Documented recognition by a governing body that a person has attained occupational proficiency.

Renewal: Certificate holders may be required to undergo periodic renewal procedures involving reassessment, retesting, and/or proof of continuing and upgraded education or training.

Revocation: Certification may be revoked if requirements are not met.

CHALLENGE EXAM

A method of assessment developed by subject matter experts and/or faculty to award credit for previously acquired learning. It measures learning through a variety of written and nonwritten evaluation methods including examinations and demonstrations.

See also: Portfolio; Prior Learning Assessment and Recognition

CLINICAL TRAINING

A period of on-the-job, generally supervised, training included in a professional or vocational qualifying program of study. May be required in addition to academic qualifications for entry into a trade or profession.

See also: Apprenticeship; Internship

COMPETENCY

A measurable skill or set of skills, level of knowledge, and behavioural practices obtained through formal, non-formal, or informal learning; ability to perform occupation-specific tasks and duties.

COMPETENCY ASSESSMENT

Measurement of skills, level of knowledge, and behaviours obtained through formal or non-formal education, work experience, or other means, with the purpose of establishing applicant's possession of requirements for a trade or profession or for a program of study, or to identify training needs. Competency assessment may be in the form of examinations or task-based performance testing.

See also: Assessment; Prior Learning Assessment and Recognition

COMPETENCY-BASED MODULE

Sets of short training sessions that teach discrete associated skills and knowledge that in combination constitute a training program. Used for training and evaluation purposes.

CONTINUING COMPETENCE

The ability over time to integrate and apply the knowledge, skills, judgment, and personal attributes required to practise an occupation safely and ethically. Occupational bodies may require members to verify that they have met continuing competence standards.

COOPERATIVE EDUCATION

Educational programming in which classroom instruction is alternated with semesters of work placement and performance evaluation in workplaces related to the field of study.

COURSE

A single unit of study offered by educational institutions.

COURSE DESCRIPTION

A documented description of a course. It may include learning outcomes, objectives, content, texts and other resources, and student evaluation methods.

CREDENTIAL

Documented evidence of learning based on completion of a recognized program of study, training, work experience, or prior learning assessment. Degrees, diplomas, certificates, and licences are examples.

See also: Certificate; Diploma

CREDENTIALING

Pertaining to the recognition of qualifications through the issuance of formal documentation.

CREDIT

A unit of recognition indicating successful completion of study, training, or a defined competency as documented in an academic record.

CREDIT TRANSFER

Acceptance or recognition of credits by a host institution from another institution within or outside the jurisdiction.

See also: Advanced Standing; Transfer Credit (External)

CRITERION

An objective and measurable indicator relating to skill level, knowledge, and/or competency. Most often standards refer to a set of criteria and required levels.

CURRENCY

The period of time during which something is valid, accepted, or in force.

CURRICULUM

List of subjects composing a structured training and/or education program organized into a course, courses, or work experiences which develop the knowledge, skills, and abilities of learners. The curriculum has an implicit or explicit set of goals and objectives with respect to learning outcomes.

DACUM

An acronym for Developing a Curriculum, a model used in competency-based training for developing learning activities that generate specific skills required by an occupation.

DEGREE

A title awarded by a university or other authorized academic institution for successful completion of a program of academic study.

DESIGNATION

Term used to select or denote educational institutions, programs, or courses of study according to set criteria of eligibility (e.g., for student financial assistance programs, certain designated institutions are accessible to students for financial aid purposes). This term also sometimes refers to restricted occupational titles. In the context of apprenticeship, designation refers to a trade that has been formally recognized through provincial/territorial legislation for apprenticeship training and certification.

DIPLOMA

Title awarded upon or document attesting to the successful completion of a program of postsecondary academic and/or vocational training and education. (Ontario: Document of recognition awarded by a board of governors of a College of Applied Arts and Technology to a student who has completed an approved program of at least four semesters' duration or the equivalent.)

See also: Certificate; Credential

DIPLOMA SUPPLEMENT

A document produced by national institutions in European countries that is appended to credentials and that provides a description of the nature, level, context, content, and status of studies pursued and successfully completed by an individual. Attached to the diploma supplement is a description of the national higher education system within which the individual named on the original qualification graduated.

DISCIPLINE

A grouping of several related fields of study that forms the basis for organizing educational programs.

DOCTORATE

A graduate degree that is one level higher than a master's degree.

E-LEARNING

Distance learning conducted through the Internet.

ENTRANCE REQUIREMENTS

A set of criteria stipulating education and other types of training or experience for eligibility to enter an educational program or occupation. May include minimal levels of achievement and/or scores on examinations.

EQUIVALENCY

A term used to describe and/or determine a relationship of parity between one system, jurisdiction, or institution and another with respect to the value and significance of courses, diplomas, certificates, licences, and/or degrees. Ideally, these relationships are mutual so that holders of equivalent credentials are treated in the same way by institutions and occupations.

See also: Acceptance; Recognition

EVALUATION

See Assessment.

EXEMPTION

The waiving of specific courses as requirements for completion of a formal program of study based on an assessment of prior studies or prior learning through work or other life experience. Exemptions are granted on a case-by-case basis and result in advanced standing. Students may be required to replace exempted courses with alternatives.

EXPERIENTIAL LEARNING

Learning acquired through doing. Can be acquired in formal and non-formal education programs or through informal work and life experience.

FORMAL LEARNING

Learning acquired in educational institutions.

GRADUATE STUDIES

Studies normally taken following an undergraduate degree (most often a master's or doctoral degree).

INFORMAL LEARNING

Learning acquired through work and life experience, using unstructured methods and settings.

INTERNSHIP

A supplementary period of practical, supervised, on-the-job training designed to give practitioners the required skills and knowledge for entry into a trade or profession. An intern is an advanced student or recent graduate in a professional field who is getting practical experience under the supervision of experienced workers.

JOINT PROGRAM

An educational program developed and delivered by two educational institutions and resulting in credits being awarded by both institutions. It can also refer to an educational program developed and delivered by two different areas within the same institution.

LANGUAGE REQUIREMENT

Stipulated requirement for applicants to demonstrate oral and/or written language skills and general comprehension prior to entry into an educational institution or a trade or profession. Minimum standards may be set by the institution, trade, or profession, and may include trade- or profession-specific comprehension skills.

LANGUAGE TESTING

Process of determining oral and written language skills, as well as general comprehension, based on achievement scores in a written and/or oral examination. Sometimes used as part of certification process or for entry into an academic institution or for membership in a trade/professional body.

LEARNING OUTCOME

A statement of what a person knows and can do as a result of learning. It is often used in connection with academic courses and programs and can also be used to describe knowledge and skills acquired through work and life experiences.

LETTER OF PERMISSION

A letter issued to a student by a postsecondary institution stating that credit for a course taken at another institution will be granted upon receipt of a transcript confirming successful completion of the course.

LICENCE

A document used by some trades and professions to signify that the licence-holder meets competency and other requirements and is entitled to practise. Although generally used within a regulatory system prohibiting practice without a licence, there are occupations for which licensing is voluntary. Licences may also be granted to services and facilities (as in a licensed day-care facility).

LICENSING BODY

An authority charged with the exclusive right to determine eligibility for and to issue licences in a specific occupation or set of occupations. Licensing bodies set the minimum standards of practice for many professions.

See also: Regulatory Agency; Right to title

LICENSURE

Mandatory procedures for determining licence eligibility, granting licences, and protecting the public regarding licensed occupations.

LIFELONG LEARNING

All learning that is acquired throughout a person's life, including formal, non-formal, and informal learning.

MAINTENANCE

The process of renewing standards, updating curricula, and upgrading professional/ occupational development of certificate and licence holders for the purposes of keeping their professional and occupational practice and standards current.

MASTER'S DEGREE

A graduate degree offered by universities. It normally follows an undergraduate degree and takes one to two years of full-time study.

MENTORSHIP

A service associated with educational programs and licensing/registration processes, through which individuals obtain ongoing advice and assistance from persons experienced in their field of study or occupation.

MOBILITY

The extent to which a worker is able to move freely from one jurisdiction to another and to gain entry into an academic institution or occupation without undue obstacles or hindrances.

NON-FORMAL LEARNING

Learning acquired in structured programs outside formal educational institutions.

OCCUPATION

A group of related job activities consisting of sets of knowledge, skills, and related tasks.

See also: Profession; Trade

OCCUPATIONAL STANDARDS

Identification of relevant tasks, knowledge and/or skills, and performance levels associated with a particular occupation. Benchmarks for skills and knowledge against which the practice of an occupation is measured. Generally established by the regulatory body governing the occupation.

PLACEMENT RECOMMENDATION

Judgment made regarding an applicant's appropriate level within an educational institution and based on an evaluation and assessment of prior credentials. Does not constitute formal equivalency or recognition.

PORTABILITY

The condition of transferability and recognition of a credential between one jurisdiction or institution and another. (Also called TRANSFERABILITY)

PORTFOLIO

Formally presented documentation and other supporting evidence that demonstrates and provides validation of learning achieved from prior experience and that articulates the learning toward course or program requirements.

See also: Challenge Exam; Prior Learning Assessment and Recognition

POSTGRADUATE STUDIES

Studies normally taken following completion of the highest-level credential available in a field of study (e.g., postdoctoral).

POSTSECONDARY EDUCATION

Formal education at a higher level than secondary school.

PRACTICUM

A unit of work undertaken by a student that involves the practical application of previously studied theory and the collection of data for future theoretical interpretation.

PREREQUISITE

A course that must be completed before a more advanced course can be taken.

PRIOR LEARNING ASSESSMENT AND RECOGNITION

Identification and measurement of skills and knowledge acquired outside formal educational institutions. Assessments are most often used to grant academic credit or determine eligibility to practise a trade or profession. Recognition is based on an assessment of skills and knowledge obtained through work and other life experiences. Prior Learning Assessment and Recognition may also include determination of future goals and individual training needs.

See also: Challenge Exam; Portfolio

PROFESSION

An occupation that typically requires a bachelor's degree and in some cases a period of postgraduate study. Professions are normally self-regulating, with members adhering to a code of ethics and standards. However, profession and professional have a wide variety of more common usages that include semi-professional and technical occupations as well as creative and performing arts occupations.

See also: Occupation; Trade

PROFESSIONAL ASSOCIATION/ ORGANIZATION

A body in which membership is based on common occupational interests. Membership is voluntary in some professional bodies and mandatory in others. Activities range from advocacy on behalf of members to formal regulatory responsibilities. Activities generally include the protection of their members' interests, hosting conferences and meetings, information dissemination, professional development and training, and publishing. Membership may imply adherence to a code of professional conduct and discipline.

PROFESSIONAL DEVELOPMENT

Studies completed by individuals to enhance knowledge and skills in their fields of practice.

PROGRAM

An integrated group of courses or learning activities in a particular field of study, completion of which leads to an academic credential.

PROVISIONAL LICENCE

A licence that permits practice in an occupation on a temporary basis. It may contain restrictions on the practice or conditions that must be met for the holder to qualify for a permanent licence.

QUALIFICATION

Possession of knowledge, skills, and experience for entry to an educational program or practice in an occupation.

QUALITY ASSURANCE/QUALITY ASSESSMENT/QUALITY CONTROL

Planned and systematic review process of an institution or program to determine that acceptable standards of education, scholarship, and infrastructure are being met. Some regulatory bodies also have structured quality assurance or continuing competency programs.

RECOGNITION

Formal acceptance of a student's knowledge, skills, or former academic studies and the granting of advanced standing or credit. May also apply to formal acceptance of an educational institution by another institution or public authority.

See also: Acceptance; Equivalency

RED SEAL TRADES

Trades for which common interprovincial standards have been established, allowing opportunity of portability of credentials as related to the designated trades. These trades are designated by the Interprovincial Standards Program under the authority of the Canadian Council of Directors of Apprenticeship, the body which is also responsible for setting standards in the trades. A nationally registered trademark symbol adopted for the Interprovincial Standards Program to signify interprovincial qualification of tradespersons at the journeyperson level, the Red Seal is a passport that exempts the holder from further examinations, when moving between participating provinces and territories.

REGISTRATION

Formal entry following admission into an educational institution; acceptance into a professional body in compliance with regulations governing the profession.

REGULATION

Governance of a trade or profession with regard to entry requirements, occupational standards and ethics, credentials, licensure, discipline, professional development, continuing competence, compliance with legislative provisions, portability, etc.

REGULATORY AGENCY

An organization that has legislated authority to carry out the governing legislation of a profession.

RESERVED TITLE

Occupational title not required for practice of a trade or profession or certain parts of a trade or profession, but available to individuals who can satisfy the regulating body that they have achieved a certain skill level, and can be used only by individuals who are members of the regulatory body. Offered as evidence that the regulating body has scrutinized the practitioner's credentials, that the practitioner has satisfied the standards set by the regulating body, and that he/she agrees to uphold the standards maintained in the profession or trade.

RESIDENCY

A specific amount of time that must be spent or number of courses or credits that must be completed by a student at a specific institution in order to receive his or her credential.

REVOCATION

Cancellation of a certificate or licence or withdrawal of permission to offer an educational program. Certificate or licence holders may be subject to disciplinary measures by the issuing body, including cancellation of the certificate or licence. Permission to offer an educational

program may be withdrawn if the institution no longer meets the faculty or program requirements set by the program's accrediting body.

RIGHT TO TITLE

A provision in legislation that authorizes use of a professional title.

See also: Reserved title; Licensing Body

SCHOLARSHIP

A financial award made to students based on an assessment of academic performance and other education-related activities (e.g., participation in community or volunteer activities).

SKILL

Ability to perform a task or set of tasks, as acquired through formal or informal education and/or training, work and life experience, or other means; identifiable in an occupation specific context, and measurable through a variety of instruments.

SKILL LEVEL

The amount and type of education and training required to enter and perform the duties of an occupation, taking into account as well the type of experience required to practise the profession or occupation, considering its complexity and its responsibilities.

STANDARD

The desirable and achievable level of performance for tasks, knowledge, and skills required for entry into an educational institution or admission to a trade or profession.

STANDARD SETTING

The process of identifying the pertinent tasks, knowledge, and skills within an educational program, profession, or trade and establishing the required performance levels.

STANDARDIZED TESTING

Measurements designed to assess knowledge and skills, and intended to be applied on a uniform basis, for the purpose of entry into a trade or profession. A set of questions or exercises is administered to an individual, measuring his/her performance and comparing it to that of a large group of individuals for the purpose of evaluating the individual's degree of learning, knowledge, skills, or competencies. Standardized testing may be used to measure success in an academic or training program or qualifications to enter a trade or profession.

SUBSTANTIAL EQUIVALENCY

Comparability in program content and educational experience. It implies reasonable confidence that individuals possess the academic competencies needed to enter a program of study or begin professional practice at the entry level.

SYLLABUS

A written description of a program of study and its courses.

TECHPREP

A program of study developed by the education sector in partnership with the private sector that begins in high school, continues at a postsecondary institution, and culminates in a credential in a vocational occupation. It may also link a community college program to a four-year college/university or apprenticeship program.

TRADE

Occupations generally regarded as requiring one to three years of postsecondary education at a community college or university; or two to four years of apprenticeship training; or two to three years of on-the-job-training, or a combination of these requirements. A licence/certificate may be required to practise the trade.

See also: Occupation; Profession

TRANSCRIPT

The official document or record of a student's enrolment, progress, and achievement within an education institution. The transcript identifies courses taken (title and course number), credits and grades achieved, and credentials earned.

TRANSFER CREDIT (EXTERNAL)

Advanced standing for individual courses awarded on the basis of successful completion of courses at another educational institution.

See also: Advanced Standing; Credit Transfer

TRANSFERABILITY

See Portability.

TRANSNATIONAL EDUCATION

All types of educational courses, programs, or services in which the learners are located in a country different from the one where the awarding institution is based.

UNDERGRADUATE STUDIES

First level of studies at a university (bachelor's degree program).

VALIDATION

Sometimes used interchangeably with ?verification,? ?certification,? and ?recognition.? Also used to indicate bona fide origins of documented credentials. Another use of the term refers to

validity of standards in the sense of ?credibility.? Validation is the stage of development of standards during which they are subjected to scrutiny to assess the validity of their content or the confirmation by a larger group of knowledgeable individuals that the tasks, sub-tasks, and enabling objectives of an occupational analysis, which was developed by a skilled group of practitioners, are representative and reflect actual occupational requirements.

VERIFICATION

Confirmation of credentials.

VOCATIONAL QUALIFICATIONS

Credentials related to formal training courses and/or practical, on-the-job preparation for entry into a trade.