

Bologna Through Ontario Eyes:¹ The Case of the Advanced Diploma in Architectural Technology

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Abstract

Inspired by Ontario's burgeoning interest in postsecondary student mobility, this article examines how elements of Europe's Bologna Process can help bridge the college–university divide of Ontario's postsecondary system. Via discourse analysis of relevant qualification frameworks and program standards, it argues that the current system disadvantages students by failing to recognize that the Ontario advanced (three-year) diploma in Architectural Technology is equivalent to a baccalaureate-level qualification in the international context. The article concludes by discussing the larger significance of these findings in terms of ongoing debates about the “changing places” (HESA, 2012) of degrees in the Canadian higher education system.

Résumé

Inspirés par l'intérêt naissant de l'Ontario envers la mobilité des étudiants postsecondaires, les auteurs du présent article examinent comment les éléments du processus de Bologne en Europe peuvent contribuer à combler le fossé collège-université du système d'enseignement postsecondaire de l'Ontario. Grâce à l'analyse du discours portant sur des normes de programme et des structures de qualification pertinents, l'article fait valoir que le système actuel désavantage les étudiants du fait qu'il omet de reconnaître que le diplôme ontarien de niveau avancé (trois ans) en technologie de l'architecture équivaut à une qualification d'un niveau correspondant au baccalauréat dans

un contexte international. Enfin, l'article conclut en abordant l'importance plus grande de ces constatations en termes de débats ayant cours à propos des « autres lieux » (HESA, 2012) des diplômes ou grades du système d'enseignement supérieur du Canada.

Overview: The Bologna Process, Ontario, and Fanshawe College

The complex reforms to European postsecondary education generally federated under the heading of “The Bologna Process” (hereafter Bologna) have exercised considerable pull on the imaginations of Canadian public policymakers and stakeholders in Ontario and beyond. This article adds local Ontario voices² to the ongoing discussion, with our Bologna-inspired analysis of the advanced diploma program in architectural technology (hereafter ATY) at Fanshawe College—a large, publicly assisted College of Applied Arts and Technology (CAAT) in London, Ontario. Specifically, we analyze how qualifications frameworks enable translation of the ATY program into European transfer terms in order to promote our students' mobility in the European Higher Education Area (EHEA) and other systems influenced by the EHEA.

Bologna, Wellington, and London, Ontario: Specific Implications for the Advanced Diploma Program in Architectural Technology

In 2011, a team of ATY students from Fanshawe worked with a team from Victoria University of Wellington (VUW), New Zealand, on an entry in the U.S. Department of Energy's Solar Decathlon. Our students so impressed VUW leaders that discussions between Fanshawe and VUW soon arose, with the goal of allowing ATY graduates direct entry into the VUW master's program in building science if they meet a minimal one-semester bridging requirement. However, such special arrangements, though laudable, are only necessary because Ontario's advanced diploma graduates would *not otherwise* gain entry to a graduate program via normal admission procedures. Although VUW could see that our advanced diploma students had substantially met learning outcomes necessary for success in its master's program, any additional information regarding Fanshawe and its ATY program would help cement the agreement by validating VUW's highly positive impressions of our students. Because New Zealand has been actively engaging with Bologna, Fanshawe decided to document our program's quality by expressing it in Bologna terms. Our project thus provides a tentative model for how other Ontario colleges might approach the increasingly important questions of mobility both within and among international systems of higher education.

A chief motivation of Bologna was to promote labour mobility by ensuring easy recognition of credentials, thus facilitating movement across the increasingly permeable borders within the EHEA. Although it would be a mistake to overemphasize equivalencies between the distinct educational contexts of Canada and the EHEA, Bologna's mobility elements would in Canadian form help our students move across *institutional* (as well as political) borders (Clark, Moran, Skolnik, & Trick, 2009, p. 20; Usher & Green, 2009, p. 21). To explain exactly how, though, more background on the precise details of the Bologna Process is necessary.

Literature Review

The Bologna Process: What It Is, What It Isn't, and Why It Matters for Ontario and Fanshawe

Numerous public-policy documents address Bologna-influenced areas for change in the Ontario postsecondary system (see, among others, Clark et al., 2009; Higher Education Strategy Associates [HESA], 2012; Usher & Green, 2009), with a particular focus on credit mobility and broadening institutional contexts for baccalaureate degrees. Made-in-Ontario adaptations of the European system would promote credit transfer and international mobility. Such adaptations, however, require a “common definition of a credit [in Ontario, which] would almost certainly have beneficial aspects on credit transfer” (HESA, 2012, p. 15); Ontario would also benefit from a “Tuning”³ project to “start talking about agreed-upon outcomes at the disciplinary level” (p. 15). Credit mobility provides economic benefits as well: in a report commissioned by Ontario to propose strategies for controlling provincial finances, Don Drummond (2012) calls for a “comprehensive, enforceable credit recognition system between and among universities and colleges” (p. 247) and explicitly mandates that this system be “two-way” (p. 248). Indeed, this paper arose from a project funded by the College-University Consortium Council (CUCC) to investigate Bologna-inspired solutions for Ontario’s credit mobility problems.

In one of the most comprehensive external surveys of Bologna thus far, Clifford Adelman (2009) notes the need to carefully specify “what Bologna is and what it is not”: key elements include the prominence of student learning outcomes, including within qualifications frameworks, and “the relationship of these frameworks to credits and curriculum reform” (p. x). These same elements animate ongoing discussions in Ontario, which has system gaps paralleling some (but not all) areas addressed by Bologna (Clark et al., 2009; Drummond, 2012; HESA, 2012; Usher & Green, 2009), including its lack of an integrated system for college-to-university transfer.

International transparency across different postsecondary systems requires a degree of system harmonization. The resulting common model is the familiar bachelor’s–master’s–doctorate progression, known in Bologna documents as first-, second-, and third-cycle qualifications (Adelman, 2009, p. 22). Additionally, although “no official Bologna Process document stipulates such a pattern” (Rauhvargers, 2006, p. 44),⁴ the bachelor’s degree seems to have decreased to three years. Although variations obviously exist (Adelman, 2009, p. 124), it seems undeniable that the Bologna bachelor’s is overwhelmingly *perceived* as a three-year degree (Adelman, 2009, p. 124; Bell & Watkins, 2007, p. 18; Bergan, 2006, p. 176; HESA, 2012, p. 4; Roper, 2007, p. 55).⁵ To account for postsecondary studies between the vocational and bachelor’s levels, Bologna and its most closely associated European qualifications framework (the Qualifications Framework for the European Higher Education Area [QFEHEA]) also recognize a “short-cycle” qualification of two or fewer years (Bologna Working Group on Qualifications Frameworks, 2005, p. 193). The Ontario advanced diploma could conceivably end up mapping onto either the Bologna short cycle or the first cycle; its three-year duration, however, suggests equivalency with the three-year first-cycle qualification. Additionally, “Ontario appears to be the only jurisdiction in North America in which a three-year program is a ‘diploma’ program, rather

than a ‘degree’ program” (Colleges Ontario, 2012, p. 8). This discontinuity could be resolved by simply turning it into a degree, as Colleges Ontario recommends (pp. 8-9), and any equivalency between the Ontario advanced diploma and the Bologna first cycle would provide more evidence for this transformation.

Mobility Tools: Qualifications Frameworks

Program duration is certainly not the only basis for comparison between programs. More concrete support for the ATY advanced diploma’s equivalency with first-cycle qualifications comes from an analysis of qualifications frameworks. Qualifications frameworks can exist at the regional/national or overarching levels. The European Parliament (2008) defines a national qualifications framework⁶ (the definition can be extended to regional ones like the Ontario Qualifications Framework) as

an instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which aims to integrate and coordinate national qualifications subsystems and improve the transparency, access, progression and quality of qualifications in relation to the labour market and civil society. (p. 4)

Overarching versions exist to, among other things, “establish real transparency between existing . . . systems of higher education through the development of a shared basis for understanding these systems and the qualifications they contain” (Bologna Working Group on Qualifications Frameworks, 2005, p. 19). By providing objective measures in which to ground procedures for enhancing credit mobility, these frameworks are the fundamental instruments for enabling student mobility. They provide the levels that contextualize European Credit Transfer and Accumulation System (ECTS) credits, they define qualifications, and their overarching versions provide “an articulation mechanism between national frameworks” (p. 29). ECTS⁷ credits, for instance, are ostensibly tied to learning outcomes, which should in turn map onto “level descriptors in national and European qualifications frameworks” (European Communities, 2009, p. 11).

Unlike many North American jurisdictions, Ontario already has a qualifications framework, the Ontario Qualifications Framework (OQF), which thus provides a useful guide for mapping Ontario’s courses and learning outcomes. The OQF is intended to act as a communication instrument that clearly indicates how Ontario’s various qualifications compare to each other; it is not legislatively binding. The Ontario program standards for an advanced diploma in ATY are binding for colleges and represent the minimum threshold of learning outcomes for ATY programs (specific college ATY programs may exceed these minima). The program standards reveal the specific expected outcomes for the advanced diploma in ATY, while the OQF provides a more general description of the levels and outcomes associated with all advanced diploma programs. The “Discussion” section of this article therefore maps the OQF advanced diploma and the Ontario program standards for an advanced diploma in ATY to both European qualifications frameworks.

There are two overarching frameworks currently active in the EHEA: the QFEHEA, which stems from the Bologna Process, and the European Qualifications Framework for Lifelong Learning (EQF-LLL), which stems from the Copenhagen Process⁸ and is intended to be both more comprehensive than the QFEHEA (Bergan, 2009, p. 134) and more responsive to short-cycle and other sub-bachelor’s qualifications. The fact that there are two of these overarching frameworks is a confusing problem (Higher Education Author-

ity, 2010, p. 5). In our experience, the EQF-LLL is less usefully detailed than the QFEHEA and, despite its claims to the contrary, does not neatly map onto the QFEHEA. Nonetheless, since both frameworks are in play, we must map the Ontario advanced diploma and the Ontario program standards for an advanced diploma in ATY against both.

There are established (albeit hazy in practice) procedures for mapping a qualifications framework to either the QFEHEA or the EQF-LLL. Countries and regions that wish to map their systems to the QFEHEA are required to perform a self-certification process (Bologna Working Group on Qualifications Frameworks, 2005, pp. 10-11). Officially mapping to the EQF-LLL requires a referencing process (Coles, Ulicna, Andersen, Mernagh, & Loumi-Messerer, 2011, p. 6).⁹ Both self-certification and referencing require the involvement of authoritative government bodies, the demonstration that the mapping relies on learning outcomes (understood broadly), the demonstration of clear links between national/regional qualification levels and overarching European levels, the careful publication of all findings (including publishing findings in a diploma supplement¹⁰ [European Commission, 2007]), and the transparent application of quality assurance procedures (Coles et al., 2011, pp. 16-24; European Higher Education Area, 2005, p. 7). It is important to realize that research information on qualifications and qualifications frameworks, especially in relation to public policy, is “in short supply” (European Centre for the Development of Vocational Training, 2010, p. 40); in some ways, this field of research is still in the earliest stages of development.

Despite the apparent rigor of the self-certification and referencing processes, the key step—demonstrating how and why a particular national qualification maps onto a particular level of one of the European frameworks—is the fuzziest. As the UK complained in reference to the EQF-LLL, “there is no agreed methodology for referencing national frameworks or systems to the EQF[-LLL]” (Qualifications and Curriculum Development Agency, 2010, p. 70). Similarly, the 2008 “Official Bologna Conference” in Tbilisi concluded “that it is crucial that [self-certification experts] share the same criteria and procedures” (Št’astná, 2008, p. 11) and that “there was a very clear demand for elaboration of reference points and guidelines which could be used by the experts for verification of national frameworks for qualifications” (p. 15). The referencing instructions for the EQF-LLL bluntly state that “there is no research that provides a proven model for a referencing methodology” (Coles et al., 2011, p. 30).

The *de facto* consensus on self-certification and/or referencing is that a version of discourse analysis is the only option. This consensus has emerged across participating countries’ published self-certification and referencing reports, of which there are far fewer than would be ideal. For example, Ireland and Scotland are often heralded as exemplars of good self-certification and referencing practices (Coles et al., 2011, pp. 46 and 49; Ministry of Education and Science of Georgia, 2008, p. 6). The Irish self-certification report contains a straightforward matching of level descriptors in the Irish National Framework of Qualifications to level descriptors in the QFEHEA (Steering Committee for National Consultation, 2006, pp. 33-36); the Irish referencing report uses the same method (National Qualifications Authority of Ireland, 2009, pp. 101-110). The Scottish self-certification report includes far more detail and a bit more nuance, but essentially proceeds the same way:

each qualification descriptor of the Scottish [framework] is compared to its proposed “partner” cycle descriptor [and] [e]ach segment of the cycle descriptor is matched with the pertinent component(s) of the relevant qualification descriptor to demonstrate where there is considered to be a strong correlation. (Scottish Working Group, 2007, p. 22)

The EQF-LLL referencing instructions advocate “reading across the descriptors” (Coles et al., 2011, p. 17) in order to gain “[a]n appreciation of level” (p. 17), as well as “comparing a qualification with EQF descriptors from the levels above and below the target level” (p. 50). However, this attempt at more nuanced discourse analysis apparently has yet to permeate practice. Finally, the QFEHEA self-certification guidelines contain few useful details on how to perform level-to-level mapping.

The concepts of *best fit* and, in the case of the EQF-LLL, *social analysis* further complicate matters. The 2008 Bologna conference in Tbilisi emphasized that the mapping of national/regional levels to the QFEHEA would uncover “elements which fit to a higher or lower level of the [QFEHEA] than the level at which the qualification as a whole is placed” (Ministry of Education and Science of Georgia, 2008, p. 7), but did not ultimately view this complication as a serious problem. The EQF-LLL instructions also emphasize the importance of trying for a best fit when matching levels across frameworks (Coles et al., 2011, p. 17). However, the concept of social analysis introduced by the EQF-LLL is more problematic, since it advocates consideration of “current practice [in a nation/region] in relation to implicit levels . . . for example, seeking out common understandings of what a specific level of learning represents in terms of a hierarchy of learning, jobs and future opportunities for the learner” (p. 31). England provides an example of what this social analysis means in practice—essentially, they chose the most expedient solution to a difficult mapping dilemma (Qualifications and Curriculum Development Agency, 2009, pp. 19-20). All of this leads directly to what Karseth and Solbrekke (2010) found in their excellent analysis of the Scottish, German, and Danish QFEHEA self-certification reports: “the three countries have exploited the space [of self-certification mapping] to manoeuvre according to their preference, but within the outer borders of the avenue” (pp. 570–571). A conservative approach to mapping the OQF to the QFEHEA or the EQF-LLL risks preserving the existing stark divisions between advanced diplomas, bachelor’s degrees, and honours bachelor’s degrees in the names of social analysis and best fit just to be expedient, despite evidence to the contrary. Indeed, as Karseth and Solbrekke (2010) observe, such approaches undermine the purpose of self-certification and referencing processes: to clearly show how a system compares to others, not merely to reinforce its statements about its own architecture.

Methodology

Since this article does not arise from a concerted effort by the Ontario government to officially self-certify and/or reference the OQF, we cannot meet many of the formal self-certification/referencing requirements. We also cannot, within the scope of this article, map the entire OQF to the two European frameworks, despite the fact that this is the expected approach. However, we can as a first step map the Ontario advanced diploma descriptors and the program standards for ATY, our test case, to the European frameworks. Although unorthodox, singling out this qualification for mapping closely mirrors stu-

dents' lived experiences when they attempt to seek alternate pathways for their original qualifications within foreign systems. Students want foreign higher education systems to properly value their individual qualifications; they are generally not primarily interested in how their home systems compare globally with other systems. Thus, Ontario's holders of advanced diplomas will mainly be interested in having this particular qualification properly and optimally recognized.

Our mapping uses discourse analysis because this method introduces more nuance than is typically found in the resultant reports and more closely reflects the EQF-LLL mapping best practices. Additionally, this method has the advantage of avoiding the expediency trap by not allowing the OQF's overall architecture to influence where the discourse analysis places the advanced diploma. We do not, however, consider the Ontario advanced diploma in a total vacuum: the meaning of its descriptors partially derives from their position in the OQF continuum.

We have also decided to map to both the QFEHEA and the EQF-LLL in order to reinforce our findings. It is not strictly necessary to map to both frameworks: since the EQF-LLL encompasses the levels covered by the QFEHEA, and both frameworks are routinely judged compatible, it is enough for a country/region to map its qualifications framework onto only one of these frameworks (Št'astná, 2008, p. 15). Ontario is decidedly an outsider in this process, though, and consequently will probably require more robust evidence than EHEA countries. This requirement is why we also map the Ontario standards for an advanced ATY diploma. These standards are more detailed than the OQF advanced diploma descriptors and thus help to further explicate the OQF. They also provide additional corroboration that we have accurately mapped the OQF descriptors for this program.

The principal focus of this mapping is to determine whether an Ontario advanced diploma can be considered a short-cycle (sub-bachelor's) or first-cycle (bachelor's) qualification in the context of the two European frameworks. It is not conceivable that it would match any other levels in the frameworks, so our analysis concentrates on the distinctions between the short-cycle and the first-cycle qualifications.

Finally, in an attempt to get a European perspective on Fanshawe's advanced diploma ATY program, we asked the Cork Institute of Technology in Ireland (which offers a very similar program at both the Ordinary Bachelor [three years] and Honours Bachelor [four years] levels) to evaluate our program against both of their own, each of which have already both been placed at the first-cycle level on the overarching European frameworks (National Framework of Qualifications, 2003a, 2003b).

Discussion

Mapping the QFEHEA to the OQF Advanced Diploma and the Program Standards for an Advanced Diploma in ATY

Again, it is possible for the OQF advanced diploma and the program standards for an advanced diploma in ATY to map to either the short cycle or first cycle of the QFEHEA. The program standards should be viewed in this context as further elaboration of the more general OQF advanced diploma descriptors. The logical starting point is thus to consider the OQF advanced diploma descriptors in the context of the QFEHEA descriptors (see Table 1¹¹).

Table 1
QFEHEA Short- and First-Cycle and OQF Advanced Diploma Descriptors

QFEHEA: Short-Cycle Students	QFEHEA: First-Cycle Students	OQF: Advanced Diploma Students
“can apply their knowledge and understanding in occupational contexts”	“have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study”	can perform a variety of activities, “most of which would be complex or non-routine in an occupational setting”; can apply skills “across a wide and often unpredictable variety of contexts”; can “anticipate” as well as solve problems
“identify and use data to formulate responses to well-defined concrete and abstract problems”	can “gather and interpret relevant data”	can “analyze, evaluate and apply relevant information from a variety of sources”
“can communicate about their understanding, skills and activities, with peers, supervisors and clients”	can communicate relevant information “to both specialist and non-specialist audiences”	can communicate in ways that “fulfil . . . the purpose and meet . . . the needs of the audience” (with no restrictions on the constitution of the audience)
can “undertake further studies with some autonomy”	can “undertake further study with a high degree of autonomy”	can “manage their own professional development”
No parallel: outcome introduced in first cycle	have knowledge that “includes some aspects that will be informed by knowledge of [sic] the forefront of their field of study”	can create “[n]ew/additional applications of technical, creative or conceptual knowledge”
No parallel: outcome introduced in first cycle	can reflect “on relevant social, scientific or ethical issues”	will have “exposure to at least one discipline outside the main field of study . . . to increase awareness of the society and culture in which they live and work”

Sources: Bologna Working Group on Qualifications Frameworks (2005, pp. 193–195); MTCU (2009).

As Table 1 illustrates, the OQF’s advanced diploma descriptors strikingly parallel the progression of the QFEHEA descriptors from the short cycle to the first cycle: both frameworks chart an increasing ability to handle complexity and unpredictability, construct more open-ended arguments involving broader contexts and audiences, collect and analyze data, function autonomously, work at the advanced boundaries of disciplinary knowledge in the field, and reflect on the broader implications of disciplinary practice. These progressions manifest across the levels in both frameworks in terms of the removal

of restrictive terms, the addition of terms indicating more difficult types of information collection and analysis, and the addition of terms indicating broader reflection beyond the limited confines of specific vocational problems. Since the OQF's advanced diploma descriptors closely match those of the QFEHEA first cycle (and not those of the short cycle), it is thus reasonable to conclude, based solely on these descriptors, that our advanced diploma is, in fact, a first-cycle qualification. The fact that its length parallels the new Bologna bachelor's degree (three years in both cases) only strengthens this association.

Similar analysis of the ATY program standard supports this finding. It should be noted that the program standards are extremely detailed and could function quite well as a *de facto* course catalogue for the corresponding program, at least in terms of learning outcomes. Such dense detail means that some descriptors span several levels in the qualifications frameworks. However, the existence of *some* descriptors at a lower level than the final classification of a program is not a problem. The *ECTS Users' Guide* (European Communities, 2009) notes that national variations in credit profiles for programs are acceptable (p. 16), and some of the components of those profiles will necessarily be at a lower level than that of the eventual award. In any case, the QFEHEA descriptors "do not represent minimum or threshold requirements" (p. 15). Thus, the QFEHEA first-cycle descriptors represent the *apex* of the students' abilities, with the implication that students will also learn lower-level skills.

Two of the key developments in the first cycle of the QFEHEA that are also found in the program standards are the abilities to "gather and interpret relevant data" and "be informed by knowledge of [sic] the forefront of [the] field of study" (Bologna Working Group on Qualifications Frameworks, 2005, p. 194). The Ontario program standards repeatedly emphasize data-analysis skills: "collect, organize and interpret graphical information" (Ministry of Training, Colleges and Universities [MTCU], 2008, p. 8); "identify relevant data sources and develop appropriate strategies for data collection" (p. 9); "collect, collate, and organize data from drawings and specifications" (p. 10). Furthermore, students are also expected to remain familiar with the forefront of knowledge in their field: they will "keep up-to-date with available and emerging environmentally friendly building materials and systems" (p. 18); "keep up-to-date with Canada Green Building Council Standards such as the Leadership in Energy and Environmental Design (LEED)" (p. 18); and "use and evaluate current and *emerging* [emphasis added] technology to support building projects" (p. 19).

The program standards further emphasize that this program requires first-cycle abilities that are "demonstrated through devising and sustaining arguments and solving problems in [the students'] field of study" (Bologna Working Group on Qualifications Frameworks, 2005, p. 194), rather than the short-cycle emphasis on simply applying knowledge. Examples of first-cycle problem-solving and argumentation skills in the program standards include the following descriptors: "assist in the preparation of tender documents by calling for tenders, and receiving, analyzing, and recommending contract award" (MTCU, 2008, p. 10); "analyze alternative solutions to technical problems" (p. 11); and "contribute to the analysis, planning, and preparation of site planning documents" (p. 14). All of these descriptors exceed the short-cycle ability to simply "apply . . . knowledge and understanding in occupational contexts" (Bologna Working Group on Qualifications Frameworks, 2005, p. 193), just as the first-cycle emphasis on problem solving and analysis exceeds this ability.

Finally, like the OQF advanced diploma, the program standards emphasize the ethical orientation and professional autonomy that we find in the first cycle. Students will “comply with the legal and ethical requirements of an architectural technologist” (MTCU, 2008, p. 15), including the abilities to “demonstrate respect for diversity and equality in the workplace” and to “promote the potential of technology for the betterment of society” (p. 15). Students will also “be self-directed and show initiative” (p. 21); this requirement, combined with the requirements to remain constantly up-to-date, parallels the first cycle’s emphasis on pursuing further knowledge “with a high degree of autonomy” (Bologna Working Group on Qualifications Frameworks, 2005, p. 195), rather than simply the short cycle’s emphasis on doing so “with some autonomy” (p. 193).

The obvious conclusion, then, is that both the Ontario advanced diploma and the specific program standards for an advanced diploma in ATY map onto the first cycle, not the short cycle, of the QFEHEA. In fact, the program standards even *exceed* the first cycle in some respects: the QFEHEA does not introduce the capacity to demonstrate “originality in developing and/or applying ideas” (Bologna Working Group on Qualifications Frameworks, 2005, p. 195) or to work “within a research context” (p. 195) until the second cycle—the master’s level. The program standards emphasize participating in “building products research” (MTCU, 2008, p. 9), a descriptor that does not appear until the second cycle in the QFEHEA.

Mapping the OQF Advanced Diploma and the Program Standards to the EQF-LLL

The EQF-LLL defines Level 5 as a short-cycle qualification and Level 6 as a first-cycle qualification (European Commission, 2008, p. 3). The EQF-LLL is, unfortunately, less usefully detailed than the QFEHEA: for example, communication skills and ethical awareness are not covered, the differences between levels are not as concrete, and the QFEHEA’s neat scaffolding of descriptors is absent. Table 2 illustrates the descriptor progression.

Unlike the QFEHEA descriptors, these descriptors are less clearly scaffolded: “comprehensive, specialised, factual and theoretical knowledge” (Level 5) is difficult to distinguish from “advanced knowledge” (Level 6); moreover, “comprehensive . . . theoretical knowledge” (Level 5) is difficult to have without “critical understanding” (Level 6) (p. 3). Indeed, the EQF-LLL suffers from typical deficits of poorly written learning outcomes: although they seem specific, they are under-defined and difficult to measure. Mapping onto the EQF-LLL therefore becomes more a matter of searching for vocabulary matches than charting the variations in emphasis between its levels and then using those variations to guide mapping decisions.

The OQF advanced diploma fits both Levels 5 and 6 because of the lack of clear semantic difference between them. It should be noted that the OQF advanced diploma descriptors mention an awareness of the limits of students’ knowledge, a skill that would seem to place it at a minimum at Level 5, but this descriptor recurs verbatim through higher OQF qualifications as well. In any case, the advanced problem-solving abilities that we identified in relation to the QFEHEA first cycle likely position our advanced diploma at Level 6 of the EQF-LLL. The OQF advanced diploma also clearly emphasizes working with “complex or non-routine” situations (MTCU, 2009). This descriptor clearly corresponds to the Level 6 ability to “solve complex and unpredictable problems” (European Commission,

2008, p. 3). The program standards further cement this association with descriptors that require both mastering the field and innovating within it: “assist in the preparation of building products research” (MTCU, 2008, p. 9); “analyze alternative solutions to technical problems” (p. 11); “design building sub-systems, including building envelopes, to suit user requirements and to accommodate effects of climate, region, topography, and orientation” (p. 13); “assess buildings and their interiors, and make recommendations for their repurposing and renovation” (p. 16); “select, recommend, and evaluate sustainable design strategies” (p. 18).

Table 2
EQF-LLL Short-Cycle and First-Cycle Descriptors

EQF-LLL Descriptor Classes	Short Cycle (Level 5)	First Cycle (Level 6)
Knowledge	“comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge”	“advanced knowledge of a field of work or study, involving a critical understanding of theories and principles”
Skills	“a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems”	“advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study”
Competence	“exercise management and supervision in contexts of work or study activities where there is unpredictable change” and “review and develop performance of self and others”	“manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts,” and “take responsibility for managing professional development of individuals and groups”

Source: European Commission (2008, p. 3).

The EQF-LLL introduces managerial capabilities for its “Competence” descriptors, an area in which the QFEHEA is silent. The corresponding Level 6 descriptors inject slightly more emphasis on responsibility. The OQF advanced diploma emphasizes “*significant* [emphasis added] judgment in . . . planning, design and technical leadership” (MTCU, 2009). The adjective “significant” surely places this descriptor in the more responsibility-heavy realm of Level 6 than in the more general Level 5. The program standards further support this reading with the indication in the “Preamble” that

[g]raduates are prepared to assume responsibility for their work and may work independently as a self-employed architectural technologist or interdependently as a part of an architectural or multidisciplinary building team. Also, graduates are prepared to contribute to the management of building projects. (p. 4)

Finally, as with the QFEHEA, the program standards map partially onto the master’s level (Level 7), although not for the same reasons. Despite the EQF-LLL’s confident as-

sersion that “the [QFEHEA] descriptor for the first cycle . . . corresponds to the learning outcomes for EQF level 6” (European Commission, 2008, p. 3), the EQF-LLL has taken the first-cycle stipulation about knowledge at the “forefront” (Bologna Working Group on Qualifications Frameworks, 2005, p. 194) of its field and moved this keyword to Level 7, the second cycle: “highly specialised knowledge, some of which is at the forefront of . . . a field of work or study” (European Commission, 2008, p. 3). As we have discussed, the program standards clearly emphasize work at the forefront of the field. Additionally, the program standards’ emphasis on graduates’ competency to work in a “multidisciplinary” (MTCU, 2008, p. 4) context maps onto the Level 7 “critical awareness of . . . the interface between different fields” (European Commission, 2008, p. 3).

Moreover, our discourse analysis against both the QFEHEA and the EQF-LLL parallels both the Cork Institute of Technology’s recent finding that Fanshawe’s ATY program and their own three-year Ordinary Bachelor program are equivalent, and VUW’s implied finding that Fanshawe’s ATY program and their own three-year Bachelor of Building Science are equivalent. Cork has offered to accept graduates of Fanshawe’s ATY program into the final year of its four-year Honours Bachelor program without any bridging requirements, and VUW is in the process of finalizing an articulation agreement that will allow graduates of Fanshawe’s ATY program direct entry into VUW’s Master of Building Science program with two advanced-standing credits (the only bridging requirement is writing two 400-level papers). Additionally, since both of Cork’s programs (Ordinary Bachelor and Honours Bachelor) are officially first-cycle, these findings offer further corroboration that Fanshawe’s advanced diploma in ATY is a first-cycle/Level-6 qualification.

It is possible to have more than one qualification in an hierarchical system map clearly to the QFEHEA first cycle, as Ireland discovered when it mapped its Ordinary Bachelor program and its Honours Bachelor program. The Irish National Framework of Qualifications explicitly states that, while the honours bachelor gives access to second-cycle (master’s) programs and the ordinary bachelor does not, they both are nonetheless first-cycle qualifications in the context of the QFEHEA (National Framework of Qualifications, 2003b). Ontario could thus preserve its distinctions between an advanced diploma, a bachelor’s, and an honours bachelor’s, even if all three qualifications map onto the first cycle. This course of action may not be efficient or advisable, though, especially since Ontario’s advanced diploma is not a credential that exists in or is understood by most of the rest of the world (Colleges Ontario, 2012, p. 8), and since its length and requirements seem to clearly mirror the Bologna bachelor’s program. It therefore makes sense to seriously consider Colleges Ontario’s recommendation that a three-year advanced diploma be converted into a three-year bachelor’s degree (pp. 8-9).

Conclusion/Next Steps

Our analysis illustrates in various ways how Ontario’s ATY advanced diploma aligns with the first-cycle bachelor’s degree under the Bologna Process. Additionally, the program standards for an ATY advanced diploma program meet—and in some cases exceed—the first-cycle European standards. This comparison, however, has limits: it is not a systematic analysis of the two higher education systems, Ontario’s and the EHEA’s. A system-to-system review would have analyzed the entire Ontario postsecondary system in relation to the EHEA frameworks. Nevertheless, despite its limits, our analysis raises

intriguing questions about the structure and value of credentials in the Ontario postsecondary system, as we have indicated throughout, including this one: do other advanced diploma programs in Ontario's CAATs align with the Bologna first cycle? Fanshawe intends to continue this project by mapping its other 20 advanced diploma programs against the QFEHEA and the EQF-LLL. This project will help to answer the question of how Ontario's advanced diplomas in general map to the European frameworks; in addition, it will enhance student mobility, given the current transfer situation in Ontario.

Ontario is at a crossroads. The provincial government has committed to increase transferability for students between the 20 universities and 24 colleges, as illustrated by the creation of the Ontario Council on Articulation and Transfer (ONCAT), supported by \$73.7 million in funding over five years (Popovic, 2012, pp. 9-10). The Bologna Process provides an established roadmap for realizing this commitment. This is not to say that this change would be easy and without opposition, but Canada, including Ontario, is a small higher education system located on the periphery of the Anglo-American sphere (Marginson, 2002) and will need to respond to global changes to remain relevant and create a system of student mobility while containing costs. Given that the 49+ EHEA-associated countries have harmonized their higher education systems, it may be time to consider aligning the province's higher education system with the EHEA's under the Bologna Process, especially considering the Ontario government's current review of the postsecondary system (MTCU, 2012).

More research is needed in this regard. The Bologna Process has been critiqued vigorously by many European academics, who have contended that it has reduced quality and introduced an external (i.e., Anglo-American) qualification: the bachelor's degree as the first-cycle degree. But the main rationale driving the Bologna Process was and is to increase student and labour-market mobility and also to control higher education costs by creating more defined entry and exit points for learners. Should Ontario pursue the Bologna Process, similar criticisms will be made about lowering educational quality and standards. Proponents of Bologna will need to be prepared for these criticisms by focusing on how educational standards and quality will not be lowered. We can look to Europe for some of the steps that they implemented to ensure that quality and standards were met while student mobility was increased. These steps include the introduction of a common credit structure to allow students to accumulate and then transfer credits between institutions, and such quality-assurance mechanisms as the Diploma Supplement (European Commission, 2007), a European and UNESCO document that contextualizes students' achievements and the institutions at which they have studied, to allow easy mobility across systems. Moreover, a focus on qualifications frameworks driven by learning outcomes—as part of a critical, analytical culture in which the practices addressed here inform curriculum practices and system architecture—will likely be a step in the right direction as well (HESA, 2012); however, analysis of potential issues with such an approach being recognized in other contexts (Warring, 2011; Young, 2007) is also necessary. Research linking all of these strands can provide roadmaps for made-in-Ontario improvements to our postsecondary system that adopt and adapt the best elements from other jurisdictions, including the EHEA.🍁

Notes

1. Our title echoes that of Clifford Adelman's (2009) *The Bologna Process for U.S. Eyes*.
2. Our word choice here deliberately echoes Adelman's (2009) repeated vocal metaphor.
3. "Tuning" is a European-driven process of curriculum revision that emphasizes the importance of carefully crafted learning outcomes in order to create pathways and promote student success.
4. This change is partially the result of external market forces (Adelman, 2009, p. 121; HESA, 2012, p. 5; Slantcheva-Durst, 2010, p. 121).
5. It would be a mistake, however, to follow Roper's (2007) lead and assume that "the Bologna Process envisions a common curriculum in which as much as 80% of courses would be the same throughout all European universities" (pp. 55–56); with the exception of a few regulated professions, there is no expectation that even similar courses within the same higher education system will be exactly identical (Adelman, 2009, p. 78).
6. This definition can be extended to regional frameworks, like the Ontario Qualifications Framework.
7. The ECTS is the Bologna credit model, which measures credits in terms of student workload both in and out of the classroom.
8. Begun in 2002, the Copenhagen Process was intended to encompass vocational and lifelong learning alongside the more traditional higher education focus in the Bologna Process (Maguire, 2010, p. 2).
9. In the context of this kind of mapping, "self-certification" exclusively refers to mapping to the QFEHEA, and "referencing" to mapping to the EQF-LLL.
10. A document designed to accompany mobile students and to explicate their originating institution and higher education system.
11. The program standards do not lend themselves to this kind of graphic comparison, since they are too voluminous.

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