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Research Report

Supplemental Report: Phase 1 *Narrative Analysis*

to accompany Comparative Data Graphs (2022) and CACB Research Report Phase 1 (Sept. 2021)

Nov. 7, 2022

Prepared by the CACB Research Committee
Lisa Landrum (Chair & Academic Lead) with Eva Rodriguez (Student Researcher, UManitoba)

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Background

The CACB Research Initiatives Task Force was established in 2017 to explore the development of research in support of the CACB mandate. This task force became a regular CACB committee to oversee and undertake research, develop research questions and funding plans, and report to the CACB Board. In 2018, the CACB committed $7,500 towards a successful MITACS grant application, earning an additional $7,500 in matching funds to support Phase 1 research, conducted in 2019. A second phase of MITACS-supported research was undertaken in summer 2022.

2019- Research - Phase 1

Canadian Architectural Education, Accreditation, and Certification trends in a Changing Environment - led by Prof. Anne Bordeleau, with a graduate student research assistant at the University of Waterloo, Jessica Hanzelkova. Phase 1 research focused on:
•gathering and organizing data from 2003-2019 – establishing a base for future work;
•plotting the data graphically in a series of preliminary charts;
•identifying data gaps and challenges impacting comparison and interpretation;
•advancing understanding of certain trends and articulating overarching questions about architectural education in changing academic and social-cultural contexts.

A Phase 1 Research Report was published Sept. 14, 2021, including a 1.5-page narrative summary of preliminary findings (with no graphic data analysis – although charts were commenced): https://cacb.ca/cacb-research-committee-releases-phase-1-report/

2022- Supplemental Graphics and Narrative Analysis for Phase 1 Research

Canadian Architectural Education, Accreditation, and Certification trends in a Changing Environment - led by Prof. Lisa Landrum, with a graduate student research assistant at the University of Manitoba, Eva Rodriguez.

The primary purpose of the present report is to complement the 2019 research and 2021 report with supplemental graphics and narrative analysis.

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Data Sets

Phase 1 examined data from documents regularly collected by the CACB as part of the accreditation process from 2003 to 2019, including: Annual Reports (ARs) – the primary data source; Architectural Programs Reports (APRs); and Visiting Team Reports (VTRs).

AR
Annual Report

Submitted by June 30 each year notwithstanding each program's accreditation term. ARs include narrative and statistical sections, providing quantitative data on students and faculty.

APR
Architecture Program Report

Submitted typically every six years. APRs present the Program's identity, strengths and challenges, with a self-assessment, curriculum details, school structure, and previous ARs and VTRs.

VTR
Visiting Team Report

The VTR conveys the Visiting Team's assessment of the Program and APR as measured by the student's performance and the overall learning environment.

Notes on Inconsistencies

A significant outcome of the Phase 1 research was to identify data gaps impacting the ability to reliably compare and interpret the data. While efforts have been made to accurately convey data provided by schools and to normalize some differences in program structures, some gaps and contradictions in the original documentation have resulted in inconsistencies in the charts.
In particular:

- ARs are not available for every year for every school.
- Some data reported in the ARs is approximate.
- There are some gaps in the data.
- For student application data, it is sometimes unclear if "Advanced Standing" students are included in the "Total Admitted" or in addition to the "Total Admitted".
- Student and Faculty numbers provided in the breakdown of data (such as gender data) do not always add up to the total numbers reported.
- For degrees awarded and enrollment data, some schools reported totals only and not gender balances.
- The AR template changed in 2018-2019, and data reported in 2019 for the previous two years does not always match the data provided in the previous reports.

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Research Value

Notwithstanding inconsistencies, graphically charting the available data for 2003-2019 provides a baseline for further research and interpretive analysis, and evaluation of how reporting processes might be improved for the benefit of future research programs.

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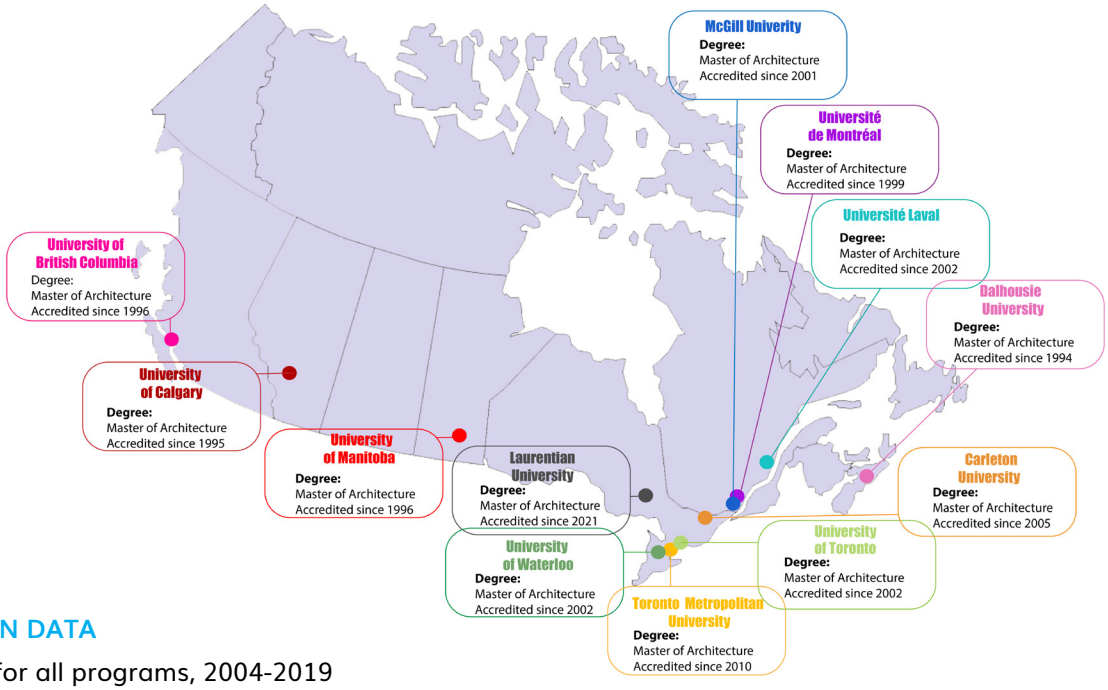
Map of the 12 CACB Accredited Programs



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GENERAL OBSERVATIONS ON THE DATA

(for each #-see the corresponding graphic chart #)

1. STUDENT APPLICATION DATA

1.1 Total Applicants for all programs (2004-2019)

Overall, programs report about triple the number of applicants to Pre-Professional programs compared to Professional programs. Numbers vary widely between schools. At one end of the spectrum, Waterloo reports eight times more Pre-Professional applicants than Professional, and TMU about six times more. At the other end, Manitoba has about double the number of Pre-Professional applicants as Professional, and Laval about 2.5 times more. Programs not reporting Pre-Professional applicants include Calgary, Toronto, and UBC. In general, the number of applicants to each school is proportionate to the population of province and city, with Ontario and Québec programs reporting the highest numbers. **See Graph Here**

1.2 Pre-Professional Program: Total Applicants and Students Admitted (2004-2019)

Nearly **700** students commence Pre-Professional architecture programs each year in Canada. Waterloo and TMU report the highest numbers of Pre-Professional applicants, with TMU averaging about 1300/year and Waterloo about 1100/year. Dalhousie and Manitoba have the lowest numbers of applicants, ranging between 100-300/year. Waterloo, TMU and McGill have the most competitive acceptance rate of 5-9%, 7-10% and 8-10%, respectively. Acceptance rates at Dalhousie and Manitoba range from about 20% to nearly 70% in some years. **See Graph Here**

1.3 Professional M. Arch: Total Applicants and Students Admitted (2004-2019)

About **550** students commence professional M.Arch programs each year in Canada. Most programs show an incremental increase in applications since 2004. In some cases the number of applications has doubled or tripled in the last fifteen years. The number of M.Arch admissions, however, has been relatively steady with only marginal increases or none. UBC, Carleton and Toronto report the highest numbers of M.Arch applicants, reaching 500 in 2019. Overall, UBC and TMU report the most competitive acceptance rate for Professional Programs: 10-24% and 7-23% respectively. **See Graph Here**

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2. STUDENT ENROLMENT DATA

2.1 Pre-Professional Program (2004-2019)

Overall, nearly **2000** students are enrolled in Pre-Professional architecture programs each year across Canada. Of the eight Universities reporting on Pre-Professional programs, TMU has the highest enrolment, averaging just over 400 students per year; and Dalhousie has the lowest at nearly 120 students per year. Enrolment is relatively consistent over the years with no clear trends. Significant changes in data for certain schools, including Manitoba in 2016-2019 and Laval between 2011 to 2016, are likely indications of program changes and/or changes to the program's method of counting students (and not significant changes in actual student numbers). See Graph Here

2.2 Professional M. Arch Program (2004-2019)

Overall, nearly **1000** students are enrolled in Professional M.Arch programs each year in Canada. Toronto reports the highest M.Arch enrolment, reaching over 250 students in most years since 2008. At the other end of the spectrum, Manitoba, TMU, McGill and Dalhousie report the lowest numbers, averaging 60 to 80 students. There appear to be no clear trends in the Professional M.Arch enrolment. Some anomalies – such as a drop in numbers at Laval and Toronto between 2011 and 2016 – may be a result of program changes and/or changes in the method of counting enrolment. See Graph Here

2.3 Pre-Professional Program Gender Balance (2003-2019)

According to the available data,* all schools report noticeably higher numbers of women students than men in Pre-Professional programs, except one, which reported 47% women. In 2018-2019, the AR included an option for reporting non-binary student data. Three of the eight schools reported non-binary data that year for Pre-Professional programs. See Graph Here

* NOTE: It must be emphasized that this data is incomplete. About 25% of the data is missing, and there are some inconsistencies in the content provided. For instance, student gender breakdowns do not always equal totals;and data was optional on the AR's from 2011-2017, so some schools did not report those years.

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2.4 Professional Program Gender Balance (2003-2019)

According to the available data,* six of the eleven schools reported higher numbers of men than women in Professional programs. Overall, the balance ranges from 60:40, men to women, to 60:40 women to men. In 2018-2019, the AR included an option for reporting non-binary student data. One of the eleven schools reported non-binary data that year for Professional programs. **See Graph Here**

* See note to 2.3.

2.5 Student Gender Balance for All Schools in Aggregate (2003-2019)

Overall,* the gender balance among all schools in aggregate appears relatively equal, with slightly more women than men in the Pre-Professional programs and slightly more men than women in the Professional programs. Previous charts (2.3 and 2.4) provide more perspective on how that balance varies by school. **See Graph Here**

* See note to 2.3.

3. DEGREES AWARDED

3.1 Degrees Awarded by Region

Schools in the Eastern region award the highest number of degrees in both Pre-Professional and Professional programs. In the Western region, only the University of Manitoba reports Pre-Professional graduates. **See Graph Here**

3.2 Pre-professional Program (2003-2019)

Nearly **550** students graduate with Pre-Professional architecture degrees each year in Canada. The average number of degrees awarded per year by program ranges between 46 to 93, with TMU reporting the highest numbers of graduates. Overall the number of graduates appears relatively steady, except for TMU which shows a trend of decreasing in numbers since it started reporting as an accredited program in 2010-2011. Manitoba appears to show a decrease since 2016, but that is likely accounted for by a change in its manner of reporting. **See Graph Here**

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3.3 Professional M.Arch (2003-2019)

About **450** students graduate with Professional M.Arch degrees each year in Canada. The average number of degrees awarded per year by program ranges between 24 to 60, with **Toronto, Laval** and **Montréal** awarding the most degrees each year. There are no clear overall trends. Some programs show modest gradual growth, including **UBC, Toronto, Waterloo** and **Laval**; others remain somewhat consistent, including Montreal; others show spikes and dips varying by year. **See Graph Here**

3.4 Pre-Professional: Gender Balance (2003-2019)

All schools, except one, report higher numbers of women (up to 65%) earning Pre-Professional degrees. The gender balance among graduates is, overall, slightly less among women compared to enrolment (see chart 2.3). Every school but one shows a 1 to 4% decrease in the number of women graduates compared to students enrolled. In 2018-2019, the AR included an option for reporting non-binary student data. One of the eight schools reported non-binary data that year for Pre-Professional graduates. **See Graph Here**

* See note to 2.3.

3.5 Professional M.Arch: Gender Balance (2003-2019)

Seven of the eleven schools report higher numbers of men graduates from Professional programs. The proportion of women and men varies by school, from about 60% men to 60% women. The gender balance among graduates is relatively similar compared to data for enrollment (chart 2.4). In 2018-2019, the AR included an option for reporting non-binary student data. No school reported non-binary data that year for Professional graduates. **See Graph Here**

* See note to 2.3.

3.6 Student Gender Balance for All Schools in Aggregate (2003-2019)

Overall, the gender balance in programs nationally is roughly equal, with more women (averaging 56%) in Pre-Professional Programs and more men (averaging 51% in the Professional Programs). Previous charts (3.3 and 3.4) provide more perspective on how that balance varies by school. **See Graph Here**

* See note to 2.3.

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4. FACULTY DATA

4.1 Faculty Totals and Gender Balance - Regular (Permanent Full-Time)

Overall, there are about **220** regular (permanent/full-time) architecture faculty members across Canada. The number has been relatively steady for the years reported. The total number of regular faculty members varies by program, ranging from about fifty at Toronto to ten at Manitoba. Six of the eleven schools report decreases in the number of regular faculty between 2012 and 2019, with a decrease of one to two members, or 10-15%; two schools remain consistent; while three schools report increases in the number of regular faculty, ranging from marginal increases of two members (10-15%), to a significant increase of approximately doubling in numbers in the case of Toronto.

Of the available data*, all schools report men as the dominant gender among regular faculty - 80% and higher at some schools in some years. This is a considerable difference compared to student gender balance which is, overall, more equal. Gender balance varies by school. Carleton, UBC and Waterloo report the most balanced gender ratio, with women accounting for about 40% in most years. Calgary, Manitoba and McGill report the most imbalanced gender ratio among regular faculty, with women accounting for about 20%, with a range from 13% to 30%. Two schools (UBC and Dalhousie) show relative consistency in gender balance over the years; five show marginal improvement (Carleton, TMU, Toronto, Waterloo, McGill), four show a reduction in the number of women from 2012/13 to 2018/19 (Calgary, Manitoba, Laval, Montreal). See Graph Here

* NOTE: Gender data for faculty members was not required on the AR until 2012.

4.2 Faculty Totals and Gender Balance - Other Appointments

Overall, there are well over **250** other architecture faculty members across Canada in various appointment types. The total number has increased considerably from about 200 in 2012-2013 to nearly 300 (281) in 2018-2019. However, some individual schools report decreases over the same six year period.

Of the available data*, nearly all programs report men as the dominant gender among other faculty - 80% and higher at some programs in some years. Proportions vary widely by program, ranging in the most recent year from 82% men (Manitoba) to 71% women (UBC). See Graph Here

* See note to 4.1.

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4.3 Faculty Gender Balance (all faculty)

Overall, faculty gender balance is about 75% men. Most programs show a consistent gender balance from 2012-2019, except UBC where the proportion of women faculty members grew from 29% to 70% in 2018-2019. See Graph Here

4.4 Faculty Licensure – Regular (Full-time)

Overall, about a third of regular faculty members are licensed. Licensure among regular faculty members varies by program. Of the available data*, licensure proportions vary from 6% to 60%. See Graph Here

* NOTE: There are some gaps in the data, and totals may include licensure in non-Canadian jurisdictions.

4.5 Faculty Licensure – Other

Overall, about half of other faculty members are licensed. Licensure among other faculty members varies by program, ranging from 10% to 70% according to the available data.* See Graph Here

* See note to 4.4

5. STUDENT PERFORMANCE CRITERIA

The matrix shows VTR outcomes of CACB visits for all programs from 2007 to 2018, with all programs having two accreditation cycles during that time. As shown, all programs met all conditions related to CACB "Perspectives" from 2007 to 2018, satisfactorily responding to interests of the Academic Context, Students, Registration, the Profession and Society (1A-E). Additionally, all programs met the following Student Performance Criteria (SPC): Design Skills (B1), Life Safety Systems, Building Codes & Standards (B6); Structural Systems (B7); and Legal Responsibilities (D3).

Every program has "not met" conditions in each accreditation visit. The number of "not met" conditions in a cycle ranges from two to eleven, with the average being five to six. The SPCs most frequently "not met" are Accessibility (B5), Comprehensive Design (C4), Cultural Diversity (A7), Program Preparation (B2), and Building Systems Integration (C2). The Program condition most frequently "not met" is Physical Resources, with three schools recording this as "not met" two accreditation cycles in a row. See Graph Here