

Canadian Architectural Certification Board 2014 Conference – Educating Future Architects

Report

Conference Summary & Proceedings

September 26-27, 2014
Saint-Sauveur, Quebec

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Purpose and Structure of this Document

This document captures the essence of the discussions that took place at the 2014 CACB Validation Conference held in Saint-Sauveur, Quebec on September 26th and 27th.

The report is structured as follows:

The Context and Background section provides the reader with the context for the conference and the manner in which the Conference Organizing Committee developed the conference themes and discussion questions.

Sections 1 and 2 offers a summary of the discussions on two themes of the conference as reported in plenary by the spokespeople from each break-out discussion. The conference facilitators took copious notes of the break out reports and provide a summary of the major “headlines” emerging in the plenary. A transcript of the major points discussed in the break sessions are found in Appendix A (for theme 1 on the Changing Context of Architectural Practice and Education) and in Appendix B (for theme 2 on Schools and Firms as Educational Partners).

Sections 3 and 4 present the results of the discussions from themes 3 and 4 on Accreditation and Internship. This section shows the “best thinking” that emerged from the substantive discussions that took place on these themes. Transcripts of the discussion on themes 3 and 4 are found in Appendix C and D.

Finally, the section title Closing Remarks and Next Steps captures the main points that were raised in the closing of the conference.

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Context and Background

On September 26th and 27th, 2014, thirteen years after the last validation conference, the CACB once again convened a group of stakeholders from across the profession to discuss the future of education for architectural professionals.

The CACB convened 104 delegates from CALA, CCUSA, CEXAC, NAAB, NCARB, along with practitioners, interns and students for two days at the Manoir Saint-Sauveur, in Saint-Sauveur, Quebec. The full agenda and a list of delegates are available in Appendix E and F respectively.

Conference Objectives

The objective of the conference was to engage those involved in educating, training and developing Canadian architects in a dialogue on the future of architectural education and internship in Canada.

The conference aimed to influence:

- Future changes to the Conditions and Procedures for Accreditation, and
- Future changes to the Internship Program and process of becoming an architect in Canada.

Conference Themes

In order to have meaningful and productive discussions over the two days, the CACB asked the profession to submit position papers, which were then used as a starting point for the design of the conference. In their request for papers, the Conference Committee provides this context as a starting point:

“The roles of architects and the face of the profession are changing. Current practice does now, and future practice will, require new knowledge and skills. How we prepare graduates for success in this evolving and expanding discipline is critical to our collective futures. It is time to take a collective fresh look at how the delivery of architectural education and the requirements of post-graduate internship can be better integrated and how the partnership between educators and those in professional practice can support a shared outcome.”

The Conference Committee received twenty six submissions from across the country in response to their request for papers. All papers were summarized by theme and used to create a number of key questions that the delegates then discussed over the two-day conference. These questions were grouped into four themes:

- **Theme 1:** Changing Context of Architectural Practice and Education
- **Theme 2:** Schools and Firms as Educational Partners
- **Theme 3:** Accreditation
- **Theme 4:** Internship

Opening Remarks

The morning of September 26th, 2014, Branko Kolarevic, President of the CACB, Nathalie Dion, President of the OAQ, Annmarie Adams, Chair of CCUSA, and Ivan Martinovic, Conference Committee Chair all welcomed the delegates to the first day of the CACB validation conference.

Together they emphasized the importance of the conference, and the opportunity that it presents to the profession to come together to make architecture stronger in Canada. They talked about the responsibility of the delegates to

take their task seriously, to have big visions for the content of architectural education, and to see the education of new architects as a critical means by which to shape the future of the profession.

They also talked of the challenges facing the profession – from globalization and changes in technology, to collaboration and finding ways for regulators, educators and practitioners to work together to build the profession.

Finally, each of the opening speakers thanked the delegates for taking time to participate in such an important conversation, and recognized the efforts of the CACB and the Conference Committee in hosting the conference.

At dinner the night before the conference, the delegates listened to James Timberlake give a keynote on innovative business models in architecture and business-based research.

Section 1: **Changing Context of Architectural Practice & Education**

The conference was designed in two parts: Day 1 focused on the context in which architectural education takes place. This provided an opportunity for delegates to develop a shared understanding of their environment and served as an introduction to the two main topics of the conference: accreditation and internship, which were discussed on Day 2.

Day 1 consisted of two discussion sessions: *Theme 1: Changing Context of Architectural Practice and Education* was discussed in the morning, and *Theme 2: Schools and Firms as Educational Partners* was discussed in the afternoon. All delegates participated in these discussions structured around groups of 8 participants. Each table was arranged to ensure a maximum mix of perspectives. A note taker captured the key points of each table discussion, and these notes are available in Appendices A and B.



1.1 Background to Theme 1 – Changing Context of Architectural Practice and Education

Kendra Schank Smith, professor at Ryerson University and member of the Conference Organizing Committee, introduced Theme 1. She explained how the Conference Committee arrived at the context statement and the six key questions for Theme 1.

Context: *In order to guide us in a process that is aimed to help envision a future state of architectural education, research and practice, we need to first understand the context from which we have come. What was architecture in the past? What is it today? In other words, what have we achieved? Where are we going? As a profession, have we been reactive or are we leading the evolution of these changes? Why? Can we achieve a common definition of architecture that can be agreed to by practitioners, regulators and educators? Looking into the future of architecture, how will this evolve?*

Questions for Discussion:

- 1.1 *How was architecture taught, acquired or learned in the past? What is similar and what is different today?*
- 1.2 *What forces or influences are changing the practice of architecture? Both from the concept of architecture as discipline or architecture as profession?*
- 1.3 *What forces or influences are changing the landscape of higher education in Canada and how might that influence the education of architects?*
- 1.4 *What are the global expectations for the education of professional architects, especially in the context of rapidly changing circumstances?*
- 1.5 *How are changing funding models for both practices and academia similar? How are they different? How do they affect outcomes?*
- 1.6 *What are the core tenants of architecture that are common to educators, regulators and practitioners?*

In their assigned groups, participants discussed the context statement and the associated questions and then provided a short summary of their conversation in plenary. The highlights from these report-backs are captured below, and detailed notes of these discussions are captured in Appendix A.

1.1 How was architecture taught, acquired or learned in the past? What is similar and what is different today?

- **The studio** was and remains central to the school experience. However, the way the studio has operated has changed overtime. Today, the studio is still the biggest demand for student time and school resources, but other things about it are changing. For example, studios have moved from hand drawing to computers. There is more emphasis on collaborative work, which is changing both the output and experience of students and teachers. The ratios for studio have remained the same, ranging from between 1-12 to 1-16, but studio culture is changing and this is having an impact on the teaching environment in most schools. These changes cause us to ask ourselves whether or not the studio has become less meaningful, less enabling of informal learning and self-teaching.
- **The academic environment** has changed significantly over time. We have moved largely from a bachelor format to a master's format, from a trade-school mindset towards an advanced academic mindset, which has placed greater emphasis on research. Additionally, our accreditation process has moved from a prescriptive model towards a performance-based model, which allows for larger diversity of approaches in architecture schools in Canada.
- The change in **architectural teachers** is related to this shift in the academic environment. In the past, a large percentage of tenured faculties were registered architects. This was largely because it was easier to become registered while teaching. The rate of registration amongst tenured professors is now closer to 1 in 4, which may be related to the challenges associated with registered architects fitting into the research model that has become prevalent in the academy. This trend presents a challenge to having a balance between theoretical and professional experience amongst teachers at architectural schools. Achieving this balance requires that teachers come with a diversity of experience profiles, not all of which will fit well within the current academic funding model.
- Some of the **skills** that architects require have not changed. For example, design remains a central and important skill for our students to learn. However, we need to update how we teach these skills, and we need to broaden the types of skills that we teach to include practical skills that students will need to be able to lead as an architect in our society. This will include business skills, leadership skills, and communication and engagement skills that enable us to interact with our communities – something that is now essential to architectural design.

- The **gender ratio** of the profession is changing rapidly towards a greater portion of female students and practitioners, and yet a large proportion of the mentors, employers and teachers established within the profession remain male. We do not yet understand this shift, but that we will need to adapt to it quickly.

1.2 What forces or influences are changing the practice of architecture? Both from the concept of architecture as discipline or architecture as profession?

- **Technology** has impacted both the practice and the education of architects. It has changed the role that individuals play within a firm, often resulting in younger architects and interns being more knowledgeable about new tools than their mentors and senior partners. Digital tool integration has impacted the whole industry, from design to delivery and construction, and this has allowed collaboration to take place across space and time in a way that was not previously possible. Distributed teams can work effectively from different corners of the world, making globalization a tangible phenomenon in the field of architecture. Of equal importance is the degree to which information and communication technology has opened up a knowledge base that was once only available through architectural schools and libraries, and made it available to the world on any laptop or smart phone. In a field where our knowledge was once very concentrated, it is now disseminated and accessible to all.
- **Globalization** and our increasing interconnectedness bring positive changes to the field of architecture, along with challenges that will require the profession to adapt. Globalization has provided greater access to expertise and practitioners from around the world, allowing practitioners to work from anywhere, and practice over larger geographic areas. This introduces the challenge of maintaining our local knowledge and understanding of site conditions and the social context that are necessarily micro and grounded in particular spaces. Culturally, architecture has always been an important vehicle for identity, with built spaces reflecting the values and ideas of the people who live in and around them; something that may take on new meaning in a world of global practice. Globalization brings with it administrative challenges as well, with tensions arising between local licencing authorities and the reality of global practice.
- **Changes in procurement** and the increased speed at which projects are expected to be delivered, are having a significant impact on the profession. There is greater pressure to deliver projects quickly and clients seem to have less understanding, or willingness to consider, the complexity of building projects. The “instant society” we see in the world of technology is carrying over into the world of design and construction, and this poses questions and challenges in ensuring quality and fit of final products.
- The **specialization of roles** previously held by architects is resulting in a shift away from architect as “master builder” and towards architect as coordinator of experts. This change is potentially dangerous to the future of the profession as architects lose prominence and respect in the field, and the public becomes increasingly confused about their role in the generation of the built environment.
- **Sustainability** has become a major driving force in architecture. The public, and our clients increasingly put pressure on the profession to incorporate sustainability into design, which often results in greater complexity of our buildings. Additionally, climate change and global warming are changing the economics and the landscapes in which we work.
- A **lack of political and social engagement by architects** has resulted in the profession becoming increasingly disconnected from the public and key decision makers. Because we, as a profession, are not as engaged as we could be, we have a hard time communicating our value and introducing architectural ideas and values to clients and to society in general.

- A **shift in scale of practice** has resulted in a polarization between small practices and large corporate structures. These two environments in which we practice architecture require different skills and therefore have different training needs.

1.3 What forces or influences are changing the landscape of higher education in Canada and how might that influence the education of architects?

- **Emphasis on research.** In the past, schools have had more autonomy in how they run their programs, but now universities are placing a greater emphasis on research and hiring professors who will be able to access grant money. Because it is easier to access funding for social science research, and more difficult to access research funding for design, universities are more likely to hire PhDs instead of practitioners. The impact of this model is that it ultimately changes what is being taught to architecture students. While we continue to understand that professors have a triple mandate to conduct research, teach and provide service to the community, this can be a difficult balance to strike. Ensuring that students benefit from the cross-pollination of diverse approaches and ideas is important to architectural education.
- **Global awareness** is increasingly important for students. This requires that architectural schools invest more time in educating students on global contexts, questions, and skills required by architects in a global workforce.
- **Tools and technology** are also influencing higher education in ways that impact architects. Online tools and the major changes to social culture have an impact in the classroom for all students and teachers.
- **Funding models** for higher education, and especially professional education are changing. Schools will need to change their funding models in order to survive. There is significantly more funding (both private and public) transferred to schools of engineering and medicine than to schools of architecture. Part of attracting this funding will require architectural schools to define themselves as more than technical schools, but as places where technical skills and art come together to shape the lived environments in our society.

1.4 What are the global expectations for the education of professional architects, especially in the context of rapidly changing circumstances?

- **Training architects to think and practice globally** is becoming an expectation for a number of our schools of architecture in Canada. Local questions that architects face in today's practice – such as sustainability and cultural considerations – are often linked to bigger global questions. How can these questions be translated, and what responsibility do schools have to teach this translation?
- **Should architectural education be rooted in place?** Given the diversity of students in our classrooms today, it is important to ask ourselves whether the value of the education we provide is specific to Canada. We know that a number of our students intend to return to their countries of origin to practice architecture there. Will they have the skills they need to be successful outside of Canada? Is it the responsibility of our schools to ensure that they do?
- **Globalization** is also shifting global expectations for the education of architects in a number of ways. The growing diversity of students presents both opportunities and challenges. The increased availability of information means that students are not as dependent on faculties and libraries as the sole source of information. The urbanization of the planet means that architects are more needed than ever to lead towards positive densification and functional, liveable cities.

- **Leadership** may be a critical skill for architects. It was suggested that architects should take on more decision-making roles in industry and government, and that their influence would have a positive impact on our society. For this to happen, leadership skills may need to be built into accreditation processes, classrooms, and graduate attributes.

1.5 How are changing funding models for both practices and academia similar? How are they different? How do they affect outcomes?

Different

- **Research funding** is largely a challenge of the academy, although increasingly private firms are engaging in some research. Faculty members are required to find their own funding, and practitioners who do try to engage in research often do so in spite of clients. Because of the challenges associated with the model, and specifically the challenges of funding design research, academics and practitioners are looking for alternative sources of funding. In the private sector this can include consulting and other services outside the traditional realm of practice. In the academy this includes looking for new ways of bringing in more tuition, etc.
- **The type of research being conducted** may also be impacted by these changes in funding models. It may be more difficult to find funding for innovation, or exploring new ideas that could move the profession forward. If there is more funding available from client-funded research, we may see a bias towards more concrete, incremental advancements in design knowledge.

Similar

- **Funding dependent on productivity:** in academia productivity is considered in terms of research, while in practice productivity is providing services to clients.
- **Administration** requirements are expanding for both schools and offices.
- **“More for Less”** has become the mantra for both academics and practitioner in the field of architecture. Both are poorly funded and are low in their respective food chains, so do not tend to be part of assigning value.
- The **concentration of the profession** is impacting both practice and academia as small schools and small firms are being acquired by, and merged with bigger firms and faculties.
- **Competition between academy and practice** is a potential consequence of both groups expanding into new realms looking for alternate funding. Community design initiatives and project-based research are two potential areas where the two worlds may collide (or come together).
- **A new model** may be required, to enable architects to sustainably fund education and practice. This might include architects leading teams of other practitioners, or taking an integrated design – build approach in which architects own more of the project. This might include incorporating non-traditional sources of revenue, like research, public-private partnership, or others. Finally, architects may need to expand the realms within which they apply their design thinking. Design thinking is increasingly being applied in more professions, and architects may have a role in helping spread this way of thinking.

1.6 What are the core tenants of architecture that are common to educators, regulators and practitioners?

Some of the core tenants of architecture shared across the profession include the following:

- We all share a general public appreciation of, and trust in the profession.
- Together, educators, regulators and practitioners are responsible for the quality of the built environment.
- We share a commitment to serving to the public interest. Architects must understand the needs of society. This is taught in school, verified by regulators and is a central goal for practitioners.
- We are jointly accountable for the sustainability of the profession – of the education system, the practice of architecture and of regulation.
- All parts of the system need to understand the competitive nature of the field and operate with this context in mind.
- All groups should promote the role of architects in society. It will take a combined effort to bring back our leadership role in society as thinkers and visionaries.
- Continuing education is required of all architects.
- Collaboration and dialogue between all parties will be critical to make improvements to the profession overall. All parties are critical to ensuring a positive future for the profession.

Section 2: **Schools and Firms as Educational Partners**

2.1 Background to Theme 2

Myriam Blais, professor at l'Université Laval and member of the Conference Organizing Committee, introduced Theme 2. She explained how the Conference Committee arrived at the context statement and the five key questions for Theme 2.



Context: *With change being inevitable, collaboration and partnership play an important role for architecture. We must be prepared to explore new modes of cooperation between schools and practices if we are to improve performance, quality, and maintain excellence in education and practice of architecture.*

- 2.1 *What are the opportunities that should be provided to students and interns in order to enhance their learning environments? What is the potential for improvement with respect to said environments?*
- 2.2 *How can we define the respective roles of schools and practices in the education and preparation of future architects?*
- 2.3 *How could the teaching of the necessary skills and competencies be shared between both bodies? Can the transition between the two be improved?*
- 2.4 *What means/tools/metrics will encourage partnerships between schools and practices? How should they be revisited or re-evaluated so that they are flexible enough to adapt to changes and emergent issues?*
- 2.5 *How can schools and regulators cooperate in research, continuing education, etc. in order to be mutually beneficial and foster an appropriate architectural approach for today and tomorrow?*

In their assigned groups, participants discussed the context statement and the associated questions and then provided a short summary of their conversation in plenary. The highlights of the report backs are captured below. Detailed notes of these conversations are captured in Appendix B.

2.1 What are the opportunities that should be provided to students and interns in order to enhance their learning environments? What is the potential for improvement with respect to said environments?

Problems:

- **Disconnect between education and practice.** Interns are worried that they are finishing schools and they are not equipped with marketable skills that they need to be prepared for the constraints of the real world. This is a critical problem for the field of architecture overall – for employers, for interns and for educators.
- **Lack capacity to support interns.** While Canada has a regulatory requirement for internship, we do not have a mechanism for placing interns in offices. As architectural firms are tightening their budgets, we need to look at the fiscal side of this challenge and consider if the practice can sustain this model. We need to protect interns from the shift towards lower and unpaid internships.
- **Challenges to better integrating school and practice.** There are a number of challenges that architecture faces in trying to better integrate school and internship. First, students are the responsibility of schools, while interns are the responsibility of the regulators. This division often means that the transition is not well managed. Second, because not all students intend to become registered, it is much more difficult to tailor any possible solution to the diversity of different types of students that currently attend architecture schools and programs in Canada. Finally, some of the schools of architecture in Canada are not located near industry, and therefore there are limited opportunities for students to gain work experienced in the same city as their school.

Possible Solutions:

- **Increase Design / Build.** Incorporating more design to build projects in school may help students apply their knowledge in ways that are more applicable to the practice of architecture.
- **Increase access to Coop programs.** While co-op programs can help students get an early idea of what the profession is about, it also raises questions as to the capacity of the profession to manage a significant increase in co-op students.
- **Mentorship** programs for students may help bridge the gap between school and practice. This would require practicing architects to be willing to discuss and share their experience with students. Alternatively, older architectural students may be able to mentor younger ones.
- **Improve professional practice courses** to include more business focus and strive to prepare architectural students for the realities and constraints of “professional practice.”
- **Office observation** may be a less expensive, more feasible model than co-op. Students could shadow senior architects to see and understand what the practice of architecture looks like, without the need to create a paid position and fill specific experience requirements.
- **Office accreditation** may be another option that would ensure better quality of internship experience. Offices would undergo accreditation to show that they are willing to invest time in interns and are committed to the learning process. This may be challenging for firms that are already financially pressed.
- **Portfolio-based internship assessment** may be worth exploring as a way to make the internship more flexible.

2.2 How can we define the respective roles of schools and practices in the education and preparation of future architects?

- **School and practice are fundamentally different environments.** Given that schools cannot possibly reproduce the real pressures and responsibilities that come with the profession, how can they prepare students for these environments?
- **School is for theory, breadth and thinking.** School is an important space in which students can explore the broad options within architecture and be exposed to different types of architectural practice. While students need technical skills in some areas, this should always be framed in the more theoretical space. Even with all the technical expertise that we now ask of our schools, schools still need to teach people how to think. Practice should be the place where architects master their practical skills. The academy needs to remain a place of “sober second thought” a place where scepticism and critical thinking are priority.
- **Communication across boundaries.** There is a need for professionals and educators to know more about what each other are doing. People running internships should know more about the curriculum, and educators should know more about the constantly changing fields of practice. This might help with the transition for students between school and internship.
- **Co-op** may be an important tool in building this bridge between school and practice. It is an opportunity for students to engage in a reciprocal relationship where the reality of workplace is brought back into the studio, and ideas from the studio are carried into the workplace.
- **Zone of collaboration.** The profession as a whole must focus on the grey area – the zone of collaboration – where schools and practice meet. Bringing clarity and collaboration to this grey area will be important in improving the experience of interns, which is ultimately in everyone’s best interest.

2.3 How could the teaching of the necessary skills and competencies be shared between both bodies? Can the transition between the two be improved?

- **Defining the Challenge.** The transition between school and practice is not a local problem, but a problem that is shared across the country. Internship is the part of the system that connects regulators, practitioners, schools and students, and so it is naturally one of the most significant challenges for the profession. Additionally, architecture is unique in the way that it mixes soft skills with technical skills, which presents an additional challenge for the profession when it comes to transitioning future architects from school to practice.
- **Simplifying the process** of transitioning from school to practice may make it easier for everyone involved to understand how to improve the experience.
- **Support.** We may need to invest in the key players in this process in order to improve the experience overall. Volunteers (mentors, etc.) need to be trained on their role in educating intern, on how to provide effective mentorship, and finally mentors need recognition for the significant time and energy they invest. Students also need to be supported in this process and given some space for reasonable flexibility in the system.
- The current **three-E system** (Education, Experience, Examination) is the result of a lot of hard work, and we should be proud of what we have in place. However, there are some important gaps in the “experience” category, including the potential for continuing education programs for interns. There is room for continued growth in “education” as well, with the potential to introduce business skills and others to the curriculum (construction contract administration seems to be particularly relevant for interns).

- **Other key points** were:
 - Need to reduce silos between schools, internship and practice.
 - International exchange is a critical part of growth and development of interns.
 - Well-structured co-op experience could count towards internship.
 - Pairing students with practitioner mentors may be a good way to build the relationship early.

2.4 What means/tools/metrics will encourage partnerships between schools and practices? How should they be revisited or re-evaluated so that they are flexible enough to adapt to changes and emergent issues?

Means in Schools

- **Flexibility for practitioner-teachers.** Practitioners may be more likely to teach in schools if the opportunities to engage were more flexible. This could take the form of practitioner-based modules, design charrettes or other short-term forms of engagement. It is important to find ways to engage these different types of architectural practitioners to demonstrate to students the different models of practice available to them.
- **Multi-year research studio** may be a more effective way to engage students and provide opportunities to connect with firms. This could include more “reality-based” design-build studios.
- **Graduate students paired with a practitioner thesis supervisor.** Creating a mix of academic and practitioner supervisors could create an early mentoring relationship and introduce “real-world” thinking to graduate work.
- **Invite practitioners** to school presentations, events, thesis defences, etc.
- **Firm-sponsored courses.** Practitioners could offer expertise, while the university could offer space, research equipment, promotion and other assets. This type of model would need to be worked out in a context in which the university is able to maintain its credibility.

Means in Offices

- **Increased communication** between practice and academia, including consultation opportunities with practitioners to develop joint research agendas.
- **Office observation.** Offices provide opportunities for students to shadow a professional.
- **Joint events and opportunities for learning.** Encourage events that provoke exchange between students and practitioners, including an openness to learn from students.
- **Continuing Education Points.** Provide practitioners with CEPs for time spent engaging with students.

Means for Regulators

- **New member category.** Create a member category for educators to involve them more directly in internship.

2.5 How can schools and regulators cooperate in research, continuing education, etc. in order to be mutually beneficial and foster an appropriate architectural approach for today and tomorrow?

- **Allow more overlap between school and internship.** If experience gained during schools could be counted towards internship, students would be encouraged to seek experience that gives them a better understanding of what it means to be an architect. This concept could even be taken as far as wrapping internship into education so that licensure and graduation would happen at the same time.
- **Applied research** is another potential way that schools and regulators could coordinate in research. There is a potentially strong business case and return on investment for schools and practices to undertake applied research together. This could provide opportunity for students to be involved in real projects, and leverage private / public partnership to attract research funding
- **Invest in the mentoring relationship.** The quality of the internship experience could be improved by training and accrediting employer mentors and developing a mentoring contract with clear expectations and performance criteria. It may also be helpful to motivate mentors through ConEd points.
- **Communicating to the public.** There is a need to increase communication between schools, regulators and firms to ensure expectations are clear and existing initiatives are understood. But there is an even greater need to communicate the value of architects and architecture to the public.
- **Schools as convenors.** Schools could play the role of a neutral party that can convene firms that want to collaborate, and share research.

Section 3: Accreditation

Day 2 of the conference was focused on using the context gained from Day 1 to develop specific ideas, or “best thinking” about how accreditation and internship should be adapted in the future. The conference delegates were split into two groups for the day – half discussed accreditation, while the other half discussed internship.

Participants in both the accreditation group, and the internship group discussed their respective six questions at table groups in the morning. They were then asked to identify their best thinking and put ideas forward in the format:



“Our best thinking suggests that _____ in order to _____.”

Accreditation and Internship participants arrived at 61 and 54 statements of their best thinking, respectively, all of which have been captured in the tables below. The groups were then given the opportunity to indicate which ideas they felt were good ideas, or priority ideas for consideration by the CACB, and which ideas they felt were less strong, or of low priority for the CACB. Using sticky dots, the participants identified the ideas that they “liked” using blue dots, and ideas that they “disliked” using red dots. A word of caution to the reader of this section – this dotting exercise was to allow for preferences to be expressed by participants in the immediate context of the Conference. In addition, a few comments were formulated by participants during the Internship brainstorming exercise and were noted alongside the idea. The results from this exercise are also captured in the tables below.

In some instances, participants indicated their thinking behind the results, and where possible this has been captured in the “comments” column of the tables below. In general, participants emphasized that these tallies should not be considered definitive and should not be used as a black and white tool for decision-making. For example, a number of participants commented that they had “disliked” an idea because of a small detail about it that they could not support, but supported the general concept behind the idea. This type of nuance is important to keep in mind as these results are considered.

3.1 Theme 3: Accreditation

Context - *One of the outcomes of this conference will be a series of recommendations on changes to the conditions and procedures for accreditation. In light of our discussions yesterday, how would we go forward with a more robust process for accreditation that reflects the needs of the profession in the coming years?*

Questions for Discussion

- 3.1 *Broad education including liberal arts remains important for the education of a professional; how can we maintain this foundation while emphasizing specialized knowledge?*
- 3.2 *The Accreditation process, instituted in Canada in 1991, has seen an evolutionary change in Architectural education in Canada. Is the overall model still sound and of value? What are the alternatives?*
- 3.3 *Graduates educated outside of the CACB and NAAB accreditation process continue to be evaluated according to the Canadian Educational Standard (CES). Should this process be reconsidered in light of accreditation? Why? Why Not?*
- 3.4 *The current Conditions for Accreditation reflect a number of input parameters (such as institutional structure, budgets, space needs, staffing, etc.) that reflect typical structure of architectural education at the time the Conditions were written. Given the broader mandate of the conference to examine the evolving needs of and pressures on architectural education, what changes should be considered to the Conditions?*
- 3.5 *Similarly, the Student Performance Criteria (SPC) identifies expected levels of ability and knowledge on the part of graduates ready to enter internship. What changes should be considered making these Criteria (simplification, condensing, clarifications, and additions) to reflect evolving expectations of interns and changes in the profession?*
- 3.6 *As a result of discussions at the conference, recommendations will be made to the CACB regarding the proposed changes to the procedures for achieving and maintaining accreditation. How might the CACB revise the Procedures to improve the effectiveness and efficiency of the process and consistency of its outcomes?*

The notes emerging from the discussions of these questions are found in Appendix C: Theme 3 – Table Notes starting on page 47 of this report.

Best Thinking - Accreditation

“Best thinking” put forward by each of the table groups was brought forward to the plenary, and similar ideas were grouped together. Through an iterative, and somewhat messy, process the groups identified themes that captured each grouping of ideas. These themes have been included as the titles above each of the tables below. The tables include all of the different ideas brought forward by the table groups, including some duplicates and similar ideas.

Topic: Program Nomenclature

| Best Thinking | Likes (blue dots) | Dislikes (red dots) |
|--|----------------------|------------------------|
| Clarify nomenclature and organization of all architecture programs in Canada (diagrams published by CACB) in order to increase transparency and legibility of program diversity and identity (versus “autonomy”) | 4 | 0 |

Topic: Portfolio Centered Accreditation

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| The APR be reduced by evaluating the SPC through a portfolio review instead of a course-based review in order to streamline and improve the evaluation process. | 8 | 12 |
| Base accreditation review on portfolio submission of individual students to have an evidence-based assessment of larger scope of curriculum in order to assess synergetic thinking and parallels the first step of internship. | 2 | 0 |
| Conditions should be eliminated that are accredited by other groups in order to focus teams and programs on outcomes, not financial audits (for example) | 2 | 3 |

Topic: Increasing Efficiency and Streamlining the Accreditation Process

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| Streamline the accreditation process in order to reduce unnecessary time and expense and to increase efficiency | 0 | 0 |
| Pre-review accreditation material; accreditation visit only as necessary to focus on items of concern; shorten visits and used as confirmation of material submission | 28 | 7 |
| CACB should consider ongoing accreditation in order to reduce the periodic burden to the schools | 1 | 2 |
| Longer term: Introduce 8 years as term for accreditation and closer scrutiny of annual reports in order to streamline the process | 1 | 2 |
| Increase maximum term of accreditation to 8 years with yearly reporting and not have to repeatedly report on items previously addressed in order to lessen the burden of complying schools. | 15 | 1 |
| Move to 8 year terms in order to save money and focus on excellence | 0 | 0 |
| Make course materials and student work digitally accessible prior to the accreditation visit in order to make process more efficient and congenial. | 4 | 0 |

Topic: Hierarchy of Conditions

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| Value and hierarchy be given to the 12 conditions in order to ensure consistency in evaluation process | 5 | 0 |
| Value and hierarchy be given to condition 3.1 (5 perspectives) in order to ensure consistency in evaluation process | 0 | 0 |

Topic: Visiting Team Composition

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Much smaller visiting team with other expert inputs in order to diversify and deepen the visiting team capacity. | 4 | 6 |
| Maintain size and diversity of revue teams (i.e. 6+ person, perhaps 1 non-Canadian) | 4 | 3 |

| | | |
|---|---|---|
| (EU/US/Other)) in order to protect process from risks associated with single/limited agenda and/or preconceptions. | | |
| Members of the team to be balanced, smaller. (Team: Visiting prof, ED, student (non-voting?), External prof/ ED, observer?) | 2 | 0 |
| Ensure visiting accreditation teams are diverse in order to reflect global equity | 5 | 1 |

Topic: Architecture and the Broader Educational Context

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Liberal arts is part of as many courses as possible throughout the curriculum in order to broaden cultural understanding (not just course counting) | 4 | 0 |
| The foundation of architectural education moves beyond liberal arts to a model of design thinking emphasizing enquiry, material-based (?) and lateral thought process in order to ensure design thinking as a basis for knowledge acquisition, critical thought and problem solving. | 12 | 0 |

Topic: Team Training

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Team Training should be mandatory in order to ensure consistency in the accreditation process | 8 | 0 |
| Teams be better trained and learn from best practices of accreditation in order to make VTRs more comparable | 7 | 0 |

Topic: Space

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| Encourage flexible modes of working within studio, while maintaining physical environment in order to embrace digital modes of exchange. | 0 | 5 |
| Reaffirm social, pedagogical intellectual importance of studio as PHYSICAL SPACE for creative collaboration in order to foster collaborative thinking and intellectual interchange. | 18 | 0 |
| The school space should be adequate to reflect its mission, vision and pedagogy in order to facilitated collaboration, research and exchange between academy, practice and support diversity of programs. | 5 | 0 |
| Be very clear in the conditions and procedures about dedicated studio space, student/instructor ratios, etc., in order to keep facilities, etc. from being eroded. | 0 | 0 |

Topic: Professionals in Teaching

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Some faculty should be involved in practice in order to bridge | 1 | 0 |
| Involve professionals. Students need to have exposure to practicing professionals in instruction in order to enhance understanding or architecture design and its breadth and increase links between schools and profession. | 23 | 0 |
| Emphasise the importance of professionals in education and the academic involvement in continuing education of professionals in order to ensure meaningful partnership. | 1 | 0 |

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| The complete education of an architect is a partnership of the schools and the profession in order to establish relationships between SPCs and internship and lifelong learning. | 16 | 0 |
| Schools should be involved in continued learning for professionals and interns in order to enhance connectivity between schools and practice. | 4 | 4 |
| Demonstrate an enhanced understanding of the process of professional practice in order to bridge the divide between the academy and practice. | 2 | 0 |

Topic: Restructure SPC Evaluation

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Issues of the future of practice and innovation should find themselves in the conditions (e.g. as 3.1(f)) in order to better prepare students for the future change. | 7 | 3 |
| Reframe the “perspectives” section of conditions so that reflect aspirations or architecture as profession and discipline in order to make SPCs more holistic and integrated. | 4 | 0 |
| The SPCs should be reviewed and prioritized with respect to a national competency standard in order to ensure consistency and promote a continuum between education and internship processes. | 2 | 5 |
| Reduce the number of SPCs and update / revise to ensure continued relevance | 0 | 4 |
| Evaluation criteria should be developed for all SPCs to ensure consistency | 1 | 0 |
| Reducing the criteria to 6 (or 8) areas of achievements and 3 general essential qualities of any architectural project in order to help heterogeneous review teams implement comprehensive quality reports | 7 | 7 |
| Review and condense student performance criteria in order to encourage holistic view of instruction and its deliverables. | 10 | 0 |
| SPCs should be two tiered to differentiate between large conceptual skills in contrast to objective detailed criteria in order to stress integrative and systems thinking. | 1 | 1 |
| Certain wording for currently SPCs be improved to better reflect the title / theme (e.g. “Leadership and Advocacy” addresses primarily collaboration), in order to clarify evaluation criteria. | 1 | 0 |

Topic: Comprehensive Design

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Comprehensive design is more a practice of integrative and synthetic thinking rather than a checklist of specific SPCs. Specific SPCs should appear within a broad list of sources in a curriculum. Both should be “detached.” | 20 | 0 |
| Articulate how the comprehensive project is reflective of all the other student performance criteria in order to give greater definition to what we believe is the “core” SPC that should be common to all Canadian Schools of Architecture / Architecture Programs. | 3 | 0 |
| Comprehensive design. Develop the learning objectives, consider schools diversity, with regard to how the achieve these objectives, in order to demonstrate a consistent Canadian baseline that V.T can apply. | 3 | 1 |

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Demonstrate a framework understanding of each of the component parts as well as the assembly of the whole for comprehensive design in order to prepare graduates to engage and participate in practice base process. | 2 | 0 |
| Project database. Excellent examples of comprehensive studios (possibly with national prizes and awards), demonstration of diverse identities, in order to develop the learning objectives of comprehensive design. | 4 | 11 |

Topic: Accreditation Precedents

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Use some aspects of recent NAAB review as a precedent in relation to: decreasing # of SPCs / review /update; lengthen term of accreditation; use of templates; support reciprocity; digital submissions. | 8 | 0 |
| Schools report annually diagnostic metrics (finances, demographics) in order to monitor the health of programs to give early warning of issues and problems (see NAAB) | 3 | 1 |

Topic: Opportunity for Specialization

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| CACB should recognize specialization in addition to broad professional education in order to respond to changing structures and practices in the field. | 8 | 7 |

Topic: Aligning Competency Standards

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| Relationship between accreditation and licensure criteria. Alignment with the core competencies required for professional licensure in order to structure the roles/ responsibility of the path to licensure. | 1 | 0 |
| A national competency standard be established in order to bring consistency to 1) Accreditation, 2) CES Certification, 3) BEFA Registration, 4) IAP (interns), 5)EXAC | 7 | 16 |
| Reaffirm existing quant. Assessment of foreign degrees (current, CES) in order to keep process efficient. | 2 | 0 |
| Consider adding portfolio as qualitative element, complementary to CES in order to streamline and increase quality. | 5 | 0 |

Topic: SPC Tweaks

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| SPC: Ability to use the processes and technologies of architectural production. | 1 | 1 |
| Condition 12 much be met (as a whole) in order to provide connectivity between the subset criteria. | 11 | 1 |
| Strengthen sustainable best practices in the SPCs in order to respond to changing environmental imperatives. | 4 | 6 |
| Incorporate craft/ tectonics / building industry knowledge in the SPCs in order to educate stronger designers. | 16 | 0 |

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| SPC: Strengthen collaboration in the SPCs in order to respond to realities of working in the 21 st century. | 3 | 1 |
| Awareness of circumstances of practice outside of Canada so that our graduates will work outside of Canada or on projects outside of Canada. | 2 | 9 |
| Introduce an SPC on “inter-disciplinarity” and “social skills” in order to align with changing trends in professional practices // talking with others. | 5 | 2 |
| Conditions need more emphasis on leadership and stewardship in order to create broad based leadership skills to compliment technical competency. | 2 | 0 |

Topic: Change Management

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| If a school has undergone major program changes, then that school should go through a non-stigmatized, shorter evaluation time in order to identify problems before they become serious. | 0 | 16 |

Section 4: Internship

Context - The internship program has been considered a key part of the development of a registered architect. It represents the link between education and licensure. As such, educators, regulators and practitioners all have a role to fulfill in order to make it a successful and consistent program for all partners. The intern is central to this mandate.

Questions for Discussion:

- 4.1 How can internship become a better experience for both practitioners and interns and what incentives could be introduced?
- 4.2 Who would better administer the internship program to ensure a consistent level of experience – either the regulators/CACB/Schools?
- 4.3 How can we provide a more comprehensive support system for mentors and supervising architects to ensure that they fulfil their role?
- 4.4 How much structure and regulation should be introduced into the program and at what level?
- 4.5 How much should the internship program complement the schools to ensure that the minimum competency standard for architects is achieved?
- 4.6 How often should the internship program be reviewed and updated to reflect current trends and practices.

The notes emerging from these discussions can be found in Appendix D: Theme 4 – Table Notes of this report starting on page 54.

Best Thinking - Internship

“Best thinking” put forward by each of the table groups was brought forward to the plenary, and similar ideas were grouped together. Through an iterative, and somewhat messy, process the groups identified themes that captured each grouping of ideas. These themes have been included as the titles above each of the tables below. The tables include all of the different ideas brought forward by the table groups, including some duplicates and similar ideas.

Topic: Philosophical Statements / Principles

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Ongoing collaboration is required between all parties in order to facilitate a better transition for interns. | 0 | 0 |
| Architects need to raise the bar in order to save the profession. | 5 | 0 |
| “Internship” starts on the first day of school in order to instil a professional mindset and create a professional culture. | 7 | 1 |
| Internship is an idea – not a catalogue of hours and tasks in order to foster quality of experience. | 0 | 0 |
| Opportunities be established to introduce students to practice earlier in their education in order to expand their understanding of what practice is. | 2 | 0 |
| We need to create real dialogue between the intern / mentor / supervisor in order to add value and meaning to the internship experience. | 6 | 0 |
| Administration of the internship program needs to stay with the regulators in order to adjust to the reality of different markets and local conditions | 3 | 2 |

Topic: Recognizing Experience Before Graduation

| Best Thinking | Likes | Dislikes |
|---|-------|----------|
| Work experience gain while a student be credited towards IAP in order to give more opportunity for students / interns to gain experience and to encourage working in the field. | 0 | 0 |
| Serious consideration be given to accepting and logging some experience prior to graduation to encourage exposure to the profession and expediting completion of the IAP | 14 | 4 |
| Some internship hours should be accumulated during graduate programs in order to enhance the internship experience requirements. | 1 | 0 |
| We need to integrate / harmonize academic and IAP work experience requirements and reporting mechanisms in order to acknowledge a single, unified, collegial PROFESSIONAL CULTURE | 0 | 0 |
| All universities embedding co-op programs in order to gain experience. | 9 | 4 |

Topic: Communication and Mentorship Before Graduation

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Students are encouraged to seek and establish a mentoring relationship with a practitioner in order to expand their understanding of what practice is. | 11 | 2 |
| Regulators speak with students in order to convey the value and relevancy of licensure. | 1 | 0 |
| Every jurisdiction implement an intern entry program in order to ease the transition into and clarify expectations of internship. | 6 | 1 |

Topic: IAP Flexibility

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Change the IAP logbook to be performance based measurement and verification instead of prescriptive in order to simplify and make more relevant the reporting of experience. | 10 | 0 |
| Regulators consider additional modes of acquiring / assessing the necessary competencies of practice in order to give potential access to non-traditional work environments currently not accepted by the IAP (i.e. Teaching faculty, government employees, etc.). | 5 | 0 |
| Allow flexibility in logged hours in related disciplines in order to acknowledge different experience. | 3 | 6 |
| More flexibility is required in IAP requirements in order to accommodate varying situations. | 0 | 0 |
| Some flexibility should be given in logged hours in order to recognize experience outside licencing jurisdictions. | 3 | 0 |
| Postgraduate classes in select subjects as substitute for logged work experience in order to provide flexibility in how to meet the minimum requirements. | 1 | 0 |
| Specialization be incorporated as part of the IAP in order to recognize that the exams are the equalizer. | 4 | 0 |
| Allow interns to log hours online in order to inform supervisors and mentors of activity logged in a timely manner. | 4 | 1 |

Topic: IAP Requirements

| Best Thinking | Likes | Dislikes | Comments |
|--|-------|----------|------------------------------|
| Schools offer courses during internship in order to strengthen ties between school and profession. | 1 | 2 | Moved from "IAP Flexibility" |
| Professional practice courses be integrated into the IAP in order to enhance learning with regards to professional practice to the intern. | 12 | 0 | Moved from "Other" |
| Training modules be implemented at a national level throughout the internship in order to enhance and augment the intern experience. | 6 | 0 | Moved from "IAP Flexibility" |
| Interns should be required to complete continuing education during internship in order to instil sense of professionalism and community. | 2 | 12 | Moved from "Other" category |

Topic: EXAC

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| Interviews take place pre EXAC in order to validate the quality of the logbook / experience. | 4 | 12 |
| Interns should have an option of exam or competency based portfolio review and defense in order to bring the assessment options in line with architectural education. (Interns would be able to choose between 2 tracks) | 0 | 16 |
| The EXAC be broken into several mandatory sections corresponding to the training modules (as an alternative way to prove competency). | 2 | 8 |

Topic: Intern Issues

| Best Thinking | Likes | Dislikes | Comments |
|---|-------|----------|---|
| All interns must be properly compensated in order to place value on our future architects. | 5 | 0 | |
| The architects acts and codes of ethics should include text that defines the roles and responsibilities of mentors and supervising architects in order to express / emphasize the fact that the profession values internship. | 5 | 7 | The "dislikes" in this instance may be lately focused on the unwillingness to open up the Act – given the length of time and amount of energy this would require. |
| Our best thinking suggest that we find a national mechanism to reward timely completion of the IAP process in order to stimulate the profession. | 1 | 7 | |
| Develop a social contract between employer and intern in order to clarify expectations and reinforce accountability. | 4 | 9 | |
| The roles and responsibilities of both mentors and supervising architects must be clearly DEFINED in order to protect the quality of the internship experience. | 6 | 0 | |
| There should be a national organization representing interns in order to give validation and identity to interns. | 8 | 1 | |
| A national internship support program is required in order to provide equal access to resources for interns across the country. | 1 | 0 | |

| Best Thinking | Likes | Dislikes | Comments |
|---|-------|----------|---|
| National support should include development of courses that are available to all interns (e.g. national admission course) | 1 | 0 | |
| Interns should have a voting seat on council (regulator), in order to give interns a voice. | 19 | 4 | Some participants commented that "voting" seat is problematic because it requires changing regulation. Others commented that some jurisdictions already have non-voting interns representatives on counsel. |

Topic: Supporting Mentors and Supervising Architects

| Best Thinking | Likes | Dislikes | |
|--|-------|----------|---|
| We need to recognize and reward the contributions of mentors and supervising architects in order to reinforce / celebrate internship as a professional culture. | 8 | 1 | |
| Incentives need to be developed for mentors in order to encourage greater participation and an enhanced commitment among practitioners as mentors and supervisors. | 3 | 1 | |
| Provide support, recognition and incentive for employers and mentors (i.e. continuing education, training) | 3 | 0 | |
| Mentorship training be provided for both employing mentors and advising mentors in order to improve the intern and mentor experience. | 11 | 0 | |
| The profession develop a national mandatory (?) CE module for supervising architects and mentors in order to enhance the quality of the internship experience. | 13 | 2 | Some indicated an unwillingness to make this mandatory. |
| Mentors and supervising architects need / deserve training to help improve the quality of the process. | 1 | 0 | |
| Provide support for mentors in order to ensure value and consistency in the experience. | 0 | 0 | |
| Mentorship be supported with buddy system in order to provide relevant IAP support at an early stage. | 3 | 1 | |
| Each regulator provide the 6-month periodic assessment form in order to communicate progress to each stakeholder (i.e. regulator, mentor, supervisor) in order to facilitate a clear path. | 4 | 2 | |

Topic: Periodic Review of the IAP

| Best Thinking | Likes | Dislikes |
|--|-------|----------|
| IAP to be reviewed every 8-10 years in order to keep current with the changing profession. | 4 | 0 |
| A consistent, annual review of IAP in order to ensure value is being provided. | 0 | 9 |
| Mentor program be re-evaluated / reinstated periodically in order to enhance the quality of internship experience. | 1 | 0 |

| | | |
|---|---|---|
| The IAP needs to expand the language and criteria addressing the roles and responsibilities of all parties in order to develop clarity and a shared sense of values / intentions. | 4 | 0 |
| We develop a national program of data collection about interns and newly licensed registered architects in order to assist us in the periodic review of the IAP process and success of certain initiatives. | 6 | 1 |

Topic: Other

| Best Thinking | Likes | Dislikes |
|--|--------------|-----------------|
| Graduated licensing be implemented in order to acknowledge each state of progression and accomplishment. | 3 | 26 |
| Schools provide courses on business, leadership, political/cultural involvement and media in order to better prepare architects to compete in the complexities of the global market. | 4 | 2 |

Closing Remarks and Next Steps

Branko Kolarevic and Ivan Martinovic closed the conference by thanking participants for their time and energy. They thanked the Conference Organizing Committee and CACB board members for their work in organizing the conference. They committed to sharing the results of the conference with participants and providing a summary of the findings to the CACB for consideration of next steps.

At dinner following the conference, delegates listened to architecture critic Lisa Rochon give the closing keynote on the role of architecture in society and the importance of shaping future architects to take on this role.

Appendix A: Theme 1 – Table Notes

Note: Spaces in the text represent different contributing table groups, which are found here in no particular order.

Question 1.1: How was architecture taught, acquired or learned in the past? What is similar and what is different today?

- 100 years ago, most architects didn't go to school
- Not changed – studio remains the most valued and the most important class
- Laptop computer replaced the drafting table
- The way in which the studio operates, however, has changed fundamentally; studio as a research lab emerging
- Changes in representation techniques: 2-point and 3-point perspectives are no longer done by hand; hatching no longer done by hand
- One constant historically was the small size of the studio in schools in North America – and that is seen as very important (thanks to accreditation)
- Sustainability has emerged as an important subject to be taught in schools
- Now, roughly one in four full-time faculty are practicing architects; professors are expected to engage in research and scholarly work
- Portfolio was historically used to enter the school and enter the profession
- It is more difficult now to enter an architecture school than in the past
- More international applicants now than in the past
- Students now travel (abroad) much more than in the past
- Diversity in how subjects are taught in different schools, informed by research interests of the faculty
- Distance learning present in other faculties, but not in architecture – how to do it in studio
- We moved from a prescriptive model to performance-based model of educational standards
- Skills – from hand drawing to computer-based drawing
- All professional programs in Canada are now masters-level
- We now prepare students for global practice, i.e. we no longer expect our graduates to remain in Canada or North America
- Thesis project as a capstone project is now questioned
- There is a need for more to be learned, but university administration does not support longer degrees (issue of resources)
- 1.2 forces or influences: introduction of computers; difference in skills between principals and young employees
- There is an expectation of specialization – and the number of specializations has increased
- There is a greater need for managing different skill sets
- Different modes of delivery now (such as P3)
- Different relationships between the architects and the clients are emerging
- Now greater involvement of lawyers
- Shrinking number of medium-sized firms in building industry; firms are either large or small; proportion of architects working for large firms is increasing
- Need for mentoring of students by professionals (UBC an example)
- Internship formalized in 1970s as a way to complement what graduates learned in schools
- Some practical experience was deemed necessary for graduates of schools
- Exams were introduced around the same time
- Full registration reciprocity introduced only seven years ago
- Back in 1950s graduates were expected to enter practice, but about half of graduates now don't end up in practice as licenced professional architects

- Schools have changed, but accreditation has not changed
- More and more students are entering research (post-professional) programs – for the benefit of the society
- Gender shift in the student body: in some schools now 70% of students are women; only 14% of registered architects in BC are women; 21% in Quebec

- What is referred to as the past? What do we want to consider the past?
- Architectural education or the learning is kind of a guild model. It still is present internship and in the studio.
- Lots to learn
- What is different: the scale of our problems and architecture is part of this in a big way.
- We are going more towards problem solving at a large scale.
- It would be interesting to look at different way of examining hands on and coop learning.
- The importance of mentorship and should it be re-evaluated?
- Acceleration of changes: the technological knowledge is squeezing out design teaching
- But acceleration of change might also be a constant in architectural education (consistency of design) and it might be more a matter of learning to be adaptable, to be critical leaders and thinkers: architecture is synthetic
- Research and design research in the field of architecture is therefore quite important for teaching / acquiring / learning architecture
- The constellation of things that we are aware of has enlarged considerably

- Idea of a profession is relatively new – it started with apprenticeship – so the idea of schools is new. Society has accepted the idea of architecture, are we sure how we can work with other disciplines collaboratively?
- Further engagement in other disciplines, while maintaining the role of architect as central to the process.
- We have narrowed our view rather than expanded it.
- After education, graduates are not prepared to practice right away. We are trying to teach too much professional content in the schools rather than embracing the whole discipline.
- The Internship period has been too long – how can we help interns get licensed earlier.
- The European model is that graduates become architects immediately.
- Schools need to keep track of where students go and when they get licensed. They do, especially for accreditation. This completes the loop.
- Past and future – previously clients paid for good design. In the P3 landscape, the architect is not the top person – the RFP is not mandating that there is good design. The missing link is the longevity of the profession and good design. Design is not respected. We are not conveying the value of architecture – what difference does it make? The profession may shrink.
- Currently school is teaching us about architecture rather than being an architect.
- The question of the difference between the discipline of architecture and the profession of architecture.
- What is the link between schools and practice and how can we support this issue? Recommendation for accreditation – how can we bring issues of practice into education earlier in the 4 to 6 years?

- Radical shift in how students learn; they don't read...
- Schools are recent things - notion that you learn principals before doing is a relatively new thing.
- Studio culture is even more recent. Traditional studio in danger because of costs and technology. (Pressure to teach using more economical processes, like classroom lectures - Accreditation offers some protection.) (Difficult to tweet a crit.) Studio culture is drastically different than it used to be - computers have replaced drawing tables...
- Used to learn how to put a building together by observing/working with traditional draftsman. They no longer exist.

- Historical context: graduates used to be interviewed by the profession, often with bias and unfair scrutiny. This was eventually changed to focus on the syllabus and school delivery. Canada has developed its own unique models, relying less and less on US/other accreditation models. The US's system provides more avenues for licensure, whereas Canada relies on school accreditation to measure license standards.
- Fundamentals remain the same: training imaginative people.
- The role of technology has increased and introduced a bias in the relation of architecture with the body and with the environment – Building which is still our core business (that hasn't changed)
- The small practices can't afford the technology students work with
- Computer prevents students from developing their problem-solving skills/they don't have to engage anymore
- Increasing degree of specialization
- Keep connected to the physicality of what we do!! Working for people.

- Fundamentals of how to communicate by drawing is being lost...it's not innate.
- Used to do prerequisite freehand classes.
- Entrance portfolios – some do interviews;
- Not existing in Montreal
- Inconsistent – not required at U of Montreal?
- Increase of digital
- Schools used to look like offices & now reverse...
- Students were employable with draughting staff
- Then became “CADD jockeys” and computer literate...stronger than architects
- But now w/ B/W the students may know computer, but don't know how to build in detail.
- Collaboration regiment is higher now
- Stronger leadership required for practitioners and students
- Fragmentation hasn't helped
- Soft skills need to be focused on also – not just design or technical skills
- Loss of practicing architects in schools is huge! They were the mentor & teacher
- In '74 design was a solitary endeavour, but not anymore. “Lead designers” still only spend less than 10% of their time designing
- Design studio remains high focus of time and perceived value in school. This said:
 - Students more organized and disciplined and realize that there are other courses that also need to be focused on. But are less mature
 - Students value grades for undergrads to get into Masters students. Portfolios lose some importance. Care about everything vs. just design studio.
 - Funding at schools has reduced ability to bring in practicing architects into schools, which squeezes faculty ability to practice (as they have to teach).
- Before – 100% students booked to be registered
- Now – only 50% become registered.
- Schools encourage other paths
- Therefore connection of students and practice / profession is even less
- Perceived less opportunity in traditional practice
- This dilutes the public offering of our best and brightest
- Engineering and Medical schools are taught by registered Engineers and Doctors
- Skills training vs. critical thinking – take this with soft skills training/development
- Before 5% women; 20 years ago 50% women; now over 75% women in school
- Before schools had more experienced teachers, but less so now
- Thesis has been reduced in grandeur and scope
- CEGEP program offers better base building block to take on 3 year Master's program
- The importance of context (in everything) is lost

- What is the minimum/basic knowledge required for graduates/students to learn? The understanding of this is being lost.
 - Young people are less mature---“me focused”
 - Young have complementary skills that are different than registered/old people. (One isn’t better than the other – they are just different.)
 - Basics should be taught first, then specialize and advance components
 - Grads are not as dedicated to being registered
 - Value of being registered decreasing
 - Almost a perceived higher purpose to work outside the profession
 - Change in studio culture – unexpected impact of integration and digitization is now most people work in isolation and not in school where real learning happens peer-to-peer
 - Less engagement of team on a project
 - A plan is an idea frozen in time. Pressing “print” seems somehow “final”
 - Mobility of students with computers – other students can’t see where they are at with their work/exploration/research...it’s not on their draughting table.
 - Practitioner educator – influence and impact and effect on student outcomes
 - Leadership – soft skills / design / tech.
 - Studio culture changes.
-
- Design by hand and very limited use of technology. The grey hairs talk about setsquares and pencil drawings and understanding line weights.

Question 1.2: What forces or influences are changing the practice of architecture? Both from the concept of architecture as discipline or architecture as profession?

- With new delivery models we might have the impression that the discipline is changing but the critical thinking, which is at the core of the discipline, is not. However, there must be an awareness of the realities of practice.
 - Accelerated changes in the delivery models (mainly tools)
-
- Climate change and global warming – and other changes in the environment and sustainability
 - Different emerging procurement methods – and other changes in the business climate
 - Changes in the scale of practice – the large and the small
 - Persistent idea in the schools about the small or mid-size practice
 - Architecture as generalist – suggestion that this still needs to be the basic model.
 - Tension between innovation and risk-aversion – especially on the part of clients
 - Risk transfer onto the profession and integrated forms of practice
 - Technological changes – changes in the flow of information in the production of building.
 - Issues around social equity.
 - Loss of leadership in the profession and the development of new professions.
 - Globalisation of architectural practice – what about architecture as a carrier of cultural identity?
-
- How does legislation affect and effect the profession. Is legislation serving us or protecting us? Legislation protects the public.
 - People such as artists are influencing the design – the marketers are taking a role and responsibility for design. Promoting what we do is very important. Are those who have the money the designers?
 - We need to take a more proactive role.
 - Competition is creating a stress. Architects are competitive – is the competition for interns unreasonable? This may be a generational issue – everyone kept to himself or herself. This is a hindrance. The younger

- architects are communicating more and are more collaboratively. This could be strengthened in the schools and accreditation.
- What recommendation can be made to help the partnerships between schools and practitioners? We need to have suggestions of how to make this collaboration work. How can we come up with tangible models for collaborations?
 - Technology (digital) - has impacted design (destroyed architecture as a craft, sense of materiality) and commoditized architecture.
 - Globalization - some positive (e.g. things happening in 3rd world from a US office). Some negative (e.g. Loss of understanding of local issues/sensitivities).
 - Procurement of services/project delivery - driven by how much risk one is willing to take; fee driven process means less tolerance/time for nurturing interns.
 - Sustainability - expectations of users and society in general.
 - Specialization - technology has gotten complex. Has led to dilution of role of architect and architecture; (loss of master builder role) less prestige.
 - Intensification of extremes between small and large firms (disappearance of mid-sized firms). Large firms can afford the new digital technologies.
 - Lack of engagement of architects in the political/cultural/social environment (must master digital technologies to survive).
 - Expectations of speed (instant results); notion that everything is disposable.
 - Everyone can create a building now... In isolation of real context - culturally, historically.
 - Important things about architecture are difficult to communicate in the current technological environment.
-
- Free trade pressure as initial force of influence to accreditation that now morphed into globalisation.
 - External forces, such as online tools and the market, pose a risk of rendering the profession extinct. Globalization and technology have transformed the themes and approaches to education and practice.
 - The public recognizes the discipline of architecture, but may not truly comprehend the scope of the profession. Alternatively, clients are hiring engineers and technicians, and then asking architects to pretty up the end results, if needed. Is this an issue of communication?
 - The public does not directly use or need an architect, and often can't afford one. Whereas, doctors are used to heal, lawyers to resolve disputes, engineers and contractors to build.
 - (Comment) There's architecture, and there's the practice of architecture - they are very different.
 - In terms of political support, the public will fail us... And the profession is also self-defeating, if it is ignoring political and societal changes and expectations.
 - Architecture will always be needed, but the number of architects that are needed will decrease as specialization progresses. A number of processes are now shifting to engineering or other professions.
-
- Technical tools – should schools teach it or not? (e.g. resist pressure from the profession / standardization does new tool help to make better architecture? Teaching?) Would be like teaching students to play alone.
 - Importance of face-to-face interactions that are still very present in education, are they in practice?
 - Technical Skills vs. Critical Skills | Medicine vs. Architecture
-
- “3 Silos”
 - Instant gratification re: practice of architecture “a force”?
 - Pressure on funding for universities
 - High expectations on part of students
 - Regulators – broadening their experience? Mentoring process.
 - Do you want technicians or broad thinkers? Broad spectrum of knowledge acquisition
 - New technologies influencing nature / practice of profession
 - Profession: More time for innovation / research / design with fabrication. “This is a new chapter”

- Legal definition of authorship
- Accelerating the “product” which is the CD
- Lack of development as to what the project is- or front
- Inability to integrate “tech V” grant into M/Arch program and observation that these are some of strongest Architecture students
- Professional experience – interns in CA + CD – is constant challenge to satisfy pre-requirements.

- What is the definition of the practice and discipline is different CA depending on which side you are on – academic is more pure but there is major differences in meaning that may well be the foundation of the misunderstandings
- The profession is the end user of the academic production
- Learning and adapting to the environment or where you find yourself - is the profession devalued because of globalisation encroachment, technology, rural/urban, and economy and where is the learning
- There is a desire in society especially in Europe for architecture and the built environment
- Work with profession to tailor courses to provide the skills needed in an ever changing world

Question 1.3: What forces or influences are changing the landscape of higher education in Canada and how might that influence the education of architects?

- Universities have particular metric with which they evaluate research
- Is architecture research a peculiar animal? Professors are evaluated by universities metric (prof are evaluated by university peers review)
- The granting bodies are not really design oriented
- Schools are hiring in relations to these matrix
- Hiring more PHD: means that you have to go through a long education process and therefore less time for practice
- Research is part of the professors tasks and it varies (research groups, solo research, research within practice)
- Sometime Schools of architecture has less control on what research can be recognize within the institutional context
- The pressure of acquiring funding (public and private) through is research is also a factor.
- Why aren't the school asking for specific parameters?
- Is that research disseminated?
- What is changing right now is the expectation of the institutions and the profile of the tenured professors.
- Are PhDs well prepared to teach studio?
- Research is disseminated towards practitioners and moves into teaching
- Is research bent towards the market?
- What research is being funded? (some is very academic, some is very much related to construction)
- What actually get done as research?
- The example of the CAST lab is in a way ideal
- Building expertise through research
- The business model makes it difficult for practitioners to research.
- Research as opening contributing to the thinking process
- Is cross-pollination happening in universities? (It is also a drive in universities)
- Is it happening yet in the schools?
- Global awareness (sustainability and culture) through research (or higher education)
- Immediate access to information (web)

- Global practice
- Information technology

- Professional ethics and accountability: can they be made portable skills?
- Diversity of the student body; relationship between the school and the territory
- Increased complexity of the practice in terms of business
- Greatly decreased government funding for higher education.
- Decreased financial accessibility for students
- Pressure from institutions to normalize
- Pressure for research from faculty – peels some areas of knowledge away from the profession; hiring of people with PhDs

- Are we refusing to take on the more specialized area of the field? We should be open to take on the broader roles to create a relationship with a client. We should be willing to put the package together for our clients.
- Internship is rigorous enough, maybe continuing education to offer new courses for interns, students and practitioners.
- Professors are 40 percent teaching, 40 percent research and 20 percent service; their contracts are as professors. The partnerships for research are important – between practice and research. MITAC is a great program for research partnerships.
- The firms do not care about the 40 percent of research. What is the advantage for the profession? This is about training students also.

- Societal forces, reflected as political and financial pressures on universities, and down to schools.
- Funding drying up, more emphasis on metrics and quantitative results (medicine and engineering seen as money-makers for universities), scientific and technical systems seen as a solution to all problems (where results are measurable).
- For interns, disconnect between school as an idea and the practice as an execution of those ideas.
- Students' desire/interest that the schools maintain the notion of the capital "A" architect, but the master/builder model is now out-dated, education and practice use (should use) the collaboration model.
- Graduates experience a loss of resources and support when entering an internship full of demands. Employers are often looking primarily for the specialist tools (CNC, 3D modeling).
- Education suffers from false dichotomy, is architecture either idea or practice; it should be both.
- Is specialization going to hurt the school program? Marketable skills can get graduates through the door, and then provide the opportunity to demonstrate and explore other architectural skills. Firms cannot afford people who cannot provide a useful skill. Schools are teaching students to be the designer, the "A"rchitect - but the workplace provides other options and preferences to specialize and collaborate.
- (Comment) Schools have invented their own knowledge rather than inviting existing modes of knowledge to contribute.
- Introduction of on-line component in all aspects of education. Did the cell phone change the way people talk on phones? No, but it changed people's attitudes about phone calls, and we now carry devices that are barely used for phone calls. Delivery method changes the content.
- Inroads from other professions even at university level, other professions offering design-related courses.
- Common ground for architectural education is not well defined, and sometimes not even welcomed.

- Every project is a new building system
- Cost value issues of staff hired in the offices
- Issue of devaluation of the profession by the society
- Tangible education shouldn't be bared only by the schools or by the offices
- We've lost the role of leaders of culture in Canada
- We're losing that position of designers of a better built environment

- Funding models and funding in general for projects
- Regulators: reluctance on part of practitioners to allow intern to CA

- Regulators: restrict flow of practitioners 20 – 25 years has backfired i.e. smaller playing field? (Subject of great debate) i.e. did this work or not?
- Proposition: When there's a neater alignment between the profession and the education i.e. self-regulation – versus regulation and when the “gate keeping” comes into place.
- Introduction of fabrication technologies may lead to changing the way we think architecture
- Refer to Timberlake lecture – analyse a building that is already built – start from the end
- Managing information (all info is there, exists but we have to sort it out and organize the info) – Google factor.
- Education is an instrument to get a goal. The status of the school has verified and is now more “monetized” by the university as funding is reduced then research can play a bigger role in an attempt to stave off cuts to program and space. Schools are being pressured to hire PHD/Doctorate people and not sessional architects to teach a particular course.
- What role does specialization play in the mobility of students to find what they want from education?

Question 1.4: What are the global expectations for the education of professional architects, especially in the context of rapidly changing circumstances?

- Enabling the mobility of graduates and professionals.
- “Re-wiring of the brain”
- There is a variety of skills and they are broad
- Learning how to find out what ones do not know
- There needs to be a move towards more uniformity of regulations around licensure nationally and internationally
- Bologna Accord; all graduate programs to be taught in English
- Discussion about ExAc vs. NCARB exams;
- Systems in Europe – liability, insurance, leadership etc. – are very different from North America.
- Co-op programs can provide the diversity and integration that will be required
- It is important for architects to promote themselves.
- We think it is important for schools to require/offer more content in business and finance. It is also important to make sure internship gives interns the opportunity to learn more about business.
- The curriculum is so tight - where can we add more courses?
- Universities are under pressure to graduate students faster.
- Profile of the mentor should be more defined – so that the intern can get a better experience – a better education about the work of the profession.
- It is important to learn by seeing, learn by hearing and we learn most by doing – that is why internship is so important.
- Where does co-op happen in the curriculum? Early years or later in the degree.
- The cost of bringing practitioners into the schools is very daunting. Schools should and do, promote a sense of professionalism.
- What is the advantage of research for the profession? The research is shifting to other profession? Both Building Science and social issues of research. The profession is demanding more research from the architect.
- Communication should be better – between schools and practice for research.
- Demographic studies – we may need to ask more about outsourcing. The age of architects currently in the profession – 50+.

- Are we educating the world – are students wanting to be educated in Canada from all over the world? We must be doing something correct. But on the other side, Canada does not appreciate architecture very much – does not value architects very much.
- Standards taught that are applicable to the world economy – establish an expertise – the curriculum needs to internationalize. The universities have licensed architects from other places in the world. The student then can have a globalized outlook.
- Practice is different now – models for practice are different – from other countries.
- Is there an incentive to remain in Canada? This may be economy driven.
- There is a certain amount of knowledge that is brought to the students from other countries – and/but the students that are able to travel and also practice other countries is very valuable. This percolates to practice – this helps students learn more.
- The ability to give students an international experience is vital to education and should be required for accreditation.

- Global exchange is being facilitated (legitimized); need to acknowledge competencies of global architects. Continuing challenge.

- Global: General of international? Broad searching common fields for architectural education in Canada and other countries (e.g. Canberra). Canadian issue is maintaining an identity
- Training to be sensitive to other cultures; to build networks; to adjust/understand different contexts even in Canada
- At the end architects are involved in the process of building
- What would be the global statement of the mission of Canadian Architectural schools?
- Narrow down a definition → Architectural Policy

- Diversity of student body (20% abroad, 50% first generation)
- Prepping students for a host of professions and life in all different places
- Access to info re: Internet... Therefore, host of information presentations (i.e. plurality of influences)
- Is the education and practice in line with global experience
- Collaboration in education is an opportunity to understand other sensibilities. Therefore, the “differences” become part of discourse
- Globally looking for leadership by architecture prof to address “health” in most wholesome definition of word
- Ability to understand context and place
- Globalization: urbanisation of planet = economic proposition and role of architects in this. Therefore, core values of discipline and its relationship to “other” /curriculum to take it on
- What are the roles we think architects are going to play? (i.e. host of professions)
- Challenge: student of varying aspirations and how you treat them
- Perception of architects within the larger global positioning of relevancy
- Regulatory perspective: Global student “don’t fit mould” of Canadian (i.e. expectation of portability of the profession)
- Disconnect between schools and profession and regulatory function.

- Curiosity, passion, motivation of future architects
- Education of professional architects must make them clearly aware that they will be working in a trans-disciplinary environment (engineers, designers, contractors, etc.)
- Education of future architects must take into account that design process and the practice of architecture is not done in silos
- To better position itself, the profession must be able to respond to needs of industry that is changing rapidly
- Integration of Foreign Trained Architects (FTA). Con Ed. To better integrate FTA to Canadian context

Question 1.5: How are changing funding models for both practices and academia similar? How are they different? How do they affect outcomes?

Education:

- Research funding is at the forefront
- Architecture schools in engineering: greater pressure to get research funding
- Private funding goes to engineering schools, not to architecture
- Government funding is cut ... huge impacts on “design” faculties
- Foreign students may be “interesting” because they pay more tuition fees
- CRSH funding (grant) for Coop at Dalhousie (with other universities)
- One-on-one teaching in studios is it the best way of teaching design and of being profitable (\$\$ and learning)
- Coop program is wonderful. It also has subsidies for the firms that employed students ... but schools go all year round (3 semesters) (which is demanding on the Schools and teachers)

Practices:

- Commissions (private or public) are clients driven
- Process and/or product productions
- Large firms (vs. small firms): they foray everything in institutional work ... productivity is so high ... less time to mentor interns: the transition is too small between finishing school & “being employable”
- Some big firms are “lead” by accountants ... all members of the firm have to be productive on “day one”
- Onerous R&D process for small firms
- It is sad: the loss of small-medium firms (that are generalists; creativity driven)
- What do we [architects] want to be?
- On the P3 (with so big demands) ... as the death of traditional procurement / delivery ... and architects are lower in the decision-making scale

- Collaboration between small firms and universities:
- Share in research, etc.
- Diversity happening in the schools that could be shared / developed with firms

- The model of architect as generalist (design studio, design thinking, critical thinking, entrepreneurship) is being used now in other fields (business) ... why are architects not benefiting from their own model ... How to evaluate what we [architects] do?
- We need a better body of theory to support practice: we are theory weak (in terms of practice, or theory applied to practice: (e.g. analysis and innovation).
- Measurement of: building performance, success, etc.
- Funding: Reevaluate the measure of success in architecture (architects should lead ... when it comes to evaluate an urban environment, etc.)
- Architecture as “applied cultural field” ... we should take advantage of that.
- On the possibility / importance of the portfolio (for a school, a firm, a student) ... imagine what we do in a slightly different way (including successes and failures)

- Almost completely dissimilar
- Common business models are encroaching on both
- Big parts of practice funded by the public purse
- Schools are being pushed to be more entrepreneurial
- Both have moved from labour-intensive to capital-intensive
- Universities are not nimble compared to firms.

- Both are expected to do more with less; Practices are forced to out-source components of work - have renderings (CD) in China to reduce costs.
- Procurement models are getting increasingly challenging.
- Funding models for education puts enormous pressure on schools and universities. Makes it hard to fail people.
- Funding models for universities have brought more researchers and less practitioners in the teaching staff
- But the practitioners as educators bring in a lot and can contribute broadly to the education of architects
- Governments projects are fragmenting roles of the architect: designer | manager | builder
- We're not sure of the QUESTION but what we would hope:
 - Increase funding of research projects done in collaboration between schools and private practice
 - More funding available for development of practices and innovation
 - Stronger partnership with business to allow technical mission of architects (Education) Prof. org | Gov't | Industry)
- Financial pressure from external sources on schools but they have more applications than seats but they don't pay their way need support of program dollars and many classes are multi discipline to help offset the continual pressure for space.

Question 1.6: What are the core tenants of architecture that are common to educators, regulators and practitioners?

- The synthetic aspect of architecture: it is quite different from experimental methodical science which can be quite reducing
- The notion of contamination is synonymous to inclusivity.
- Core mission of architects: working for the civilization (and not even for architecture)
- Ethics are a very important core tenant: and the regulators are there to protect the public
- Cross-pollination is also a core tenant
- Is lifelong learning a shared tenant? It could be or become
- Adaptive and critical thinking is also a core tenant

Analysis and innovation

- Critical thinkers and generalists (not instrumentalists or technicians)
- Social equity (engaging history, theory, etc.)
- Intended consequences vs. unintended consequences vs. Imagined consequences ...
- Define ourselves by core necessary competencies (to defend the profession vs. architect ACT) ... and then we can think of alternate paths ...
- Architect ACT includes public safety (what is safety?) ... Should expand to Public Benefit (beauty, contribution to the environment, culturally-sound, etc.) and Assessing buildings and urban environments (the consequences of what has been done: quality, performance)
- Competencies? No, rather performances of: architects, profession, buildings, environment, etc.

Design?

- Not possible in a University setting to be entirely instrumental
- Protection of the public – the public interest; responsible engagement with public values
- Questions in some of the position papers about missing skillsets
- Design and assembly of buildings? Leading the process.

A General Discussion to commence our discussions:

- An important part of the discussion is to realize that while there are a lot of changes underway today at a faster pace, there is also the need to recognize that the role of the Architect and the profession has not changed.
- The role of the Architect today is to protect the public in health, safety and welfare issues. These were core tenants of what an Architect was expected to do in the past decades in Canada. These core roles were perceived and understood to be the job of the Architect. Today there are other professions and groups that have arisen to perform some of these tasks. Architects are now seen as only providing “added value” to a product
- Architectural education also needs to recognize that students can fail and that failure is an important aspect to recognize for its benefit as a learning experience. The student needs to be evaluated honestly before he/she is allowed to proceed to the next level.
- The overall challenge of the process is to ensure that the student is equipped to do the job but also to ensure that they are competent.
- We accept the proposition that there is a range of ‘common’ accepted tenants to the three separate groups of educators, regulators and practitioners.
- We recognize that the current emphasis on averting risk causes us to avoid taking risk and developing the position of disengagement from the real world to avoid the ‘risk’ of being practitioners in an increasingly litigious society.
- Risk management really means that in order to do ‘good work’ (and to also to teach the client and the project team to do good work) means the need to recognize that everyone will do their best to be professional in their work and to recognize also that mistakes will occur. The important responsibility then is to learn how to fix these problems as they arise and to ensure the final product is complete, satisfies the client’s needs and is really good architecture
- We seem to be targeting our education to serve the big (Architect) picture of what architecture is in the urban centres and ignores that the country is also composed of hundreds of smaller rural units. Urban scale is different than rural environments but is of equal importance in the national perspectives. There are no longer 40-acre farms, just as there are fewer and fewer small architectural practices that are viable and sustainable.
- What are the core tenants of the three groups? We discussed :
 1. We want competencies to be evaluated and determined as a minimum standard for an Architect to be both a protector of the public (the regulator) and able to succeed as a practicing Architect.
 2. We want Architects to be competent in order that they can make a living and are seen by the public has been ‘valued’ This will translate into the profession being sustainable.
 3. We want Architects to be appreciated by the public and trusted by the public. However that is a two way street and trust is created by being competent and of value to the public.
 4. There is a true regard for the built environment in all three realms. This is at odds with current society where the funding of governments as directed by the public focuses on other parts of our life- health, infrastructure, and the sciences. Our emphasis is to promote the value of design and convey that need for good design to the public.
 5. We suffer from a desire to be world class and be at the centre of the world. Yet we are really needed to be spiritually related to the overall world to be truly world class. The understanding of what is “good” architecture needs to be better defined, so that the schools can focus on core tenants that will provide the education needed to equip architects to be successful.
 6. The importance of being engaged in the future of the profession and the need therefore to provide regular oversight, review and testing of the focus of the education of the Architect.
- Is there a Hippocratic oath of architecture? “Do no harm” this is self-regulation. The self-regulating professions have this responsibility. Health, safety and welfare of the public (NCARB)
- They are defined by the regulation in practice, but accepted by the educators; core tenant is to meet the basic societal needs.

- Building for people is our core business
- But not only that – Global performance of the built environment
- But schools can't pretend to be a working office environment and graduate students that completely know how to put buildings together!

- Act of building – is what is common – research is in University
- Quality of Architecture as “raison d'être” of education, reg., practice, goal
- Public interest: Understand needs of society to better answer them a concern for educators / regulators and practitioners
- Promotion of EXCELLENCE in architecture: Excellence in build environment (quality of buildings/ infrastructure and promotion of the role of an architect in this society)
- Anticipate changes in society
- Leadership in society (visionary/thinker) Should help the architect to take a role
- Continuing education – Life-long learning

- Teach with all students in the room – collaboration but schools are supposed to teach individuals and administration have difficulty with studio space.
- Sustainability and ethic of the profession as schools sometimes teach in a vacuum with no outside support either by administration who may block any conversation with the outside world.

Appendix B: Theme 2 – Table Notes

Note: Spaces in the text represent different contributing table groups, which are found here in no particular order.

Question 2.1: What are the opportunities that should be provided to students and interns in order to enhance their learning environments? What is the potential for improvement with respect to said environments?

- What are the things that students lack in schools? What do interns lack in firms?
- Co-op great for going back and forth between schools and firms; it is difficult, however, to arrange for co-op placements; co-op helps manage expectations of what practice entails
- Exposure to practice essential before graduation
- If we are to have a national co-op program, there would be a crisis that we would not be able to create opportunities for placement
- Experience of building at full-scale valuable; not all students, however, are interested in having an experience of building at full-scale
- Loss of peer group from school leads to a sense of isolation
- Need skills that make students more hireable; knowing the (digital) tools helps with finding a job; will be useful to take classes that are business-oriented; being familiar with real-world issues, such as contract negotiation, accessibility, building code, bylaws (zoning, etc.).
- Pro-practice class should not be a “fluff” class
- Curricula are boxed tightly and it is difficult to provide room for elective courses that enable students to create individualized learning programs
- IAP mentor's role is not explained properly to interns or mentors, and it is difficult to establish proper relationships. The fact that mentor could not be from within the same firm creates distance between the intern and the mentor. Develop mentorship programs (like at UBC) where students are matched with mentors – and that could lead to IAP mentor relationship
- Need for regulators to manage IAP mentor-intern relationships

- Possibly subsidize IAP program and potential placement – examine economic models – remove the risk of hiring
- Regulators could provide incentives to firms to hire interns and participate in the IAP program.
- Difference in internship experiences related to the scale of work that is done; small firms do houses, whereby large firms do a greater variety of projects
- UBC has an advisory board of 40 architects that advise the school; meet monthly
- Internship needs structure, such as monthly meetings, webinars.
- Exams: interns create their own study groups – should be structured; regulators should organize seminars, classes.

- More formal contract between the role of the intern and the mentor. Interns become orphaned.
- Possibly courses to support interns.
- What is another path that could equate to internship – because a graduate does not have access to internship? Not replacing internship in employment but allowing alternatives to gaining experience.

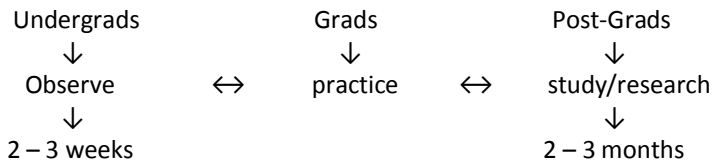
- Big difference between students and interns. And two groups of students - undergrads and masters. Masters students and interns closer in terms of focused aspirations. Some undergrads know they will not be going on. Typically, Masters students will enter internship.
- Students are charges of the schools; interns are the charges of the practices (and Regulators).
- Students don't necessarily know where they will be ending up if they stay in Canada - they have 11 options.
- Co-op programs allow students to continue (and finish) with an awareness of what practice is about.
- Not necessarily a difference in the quality of internship between big and small firms. Pigeonholing occurs in both.
- Choose-your-own-adventure-lifestyle prevails. Results in lowered ratio of students who follow through.
- Increasing student mobility is time intensive for programs to confirm compatibility of undergraduate program with the Master's program.
- Need to prepare architects to educate in their workplace. Start in schools by having older and younger classes work together. Bring practitioners into the schools.
- Use professional practice part of curriculum to advance students' knowledge of practice (e.g. ethics)
- Introduce students early to the notion of the Regulator.
- Think of internship as a learning experience versus just gaining experience. (Learning a task, in addition to doing it.) Encourage students to research and write white papers on topics that interest them. Results in greater efficiency; they are encouraged to finish assigned tasks so they can get on to what interests them more. Shift the language first, and then support the shift.
- Should review of a graduate's portfolio replace examination?
- Current system makes it the student's responsibility to ensure he/she gets appropriate experience. Make it Employer's obligation?
- Make it the obligation of all licensed architects to mentor. (It takes a village to raise a child.)

- Discussion on graduated licensing and if it can remove some pressures from internship and practice.
- Co-op programs are good model to provide opportunities to cross-pollinate.

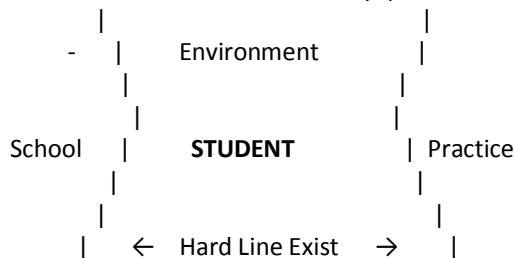
- Mentorship – start earlier in school with one (or two). Encourage the value in school. Don't wait until graduation and internship to get one.
- Intern courses are a good thing prior to registration
- Tie schools into internship...maybe part / or all the way through to licensing
- Should some things be taught only in school (or practice) and not in the other? What components can be moved over to "the other side"?
- Are there areas where educators / practitioners could be more involved?
- Start interns at the back of the process (C.A.) and then bring them forward to S.D. so they understand

context and consequence of decisions and design.

- We spend time with accreditation of schools
- What about firms? No level of scrutiny evolved for mentors or firms. C.O.P. – enhanced
- Baseline education like Doctors or Engineers (everyone is a Civil Engineer) then moves to specialty later and can only practice in their specialty.
- Licensing restrictions have to somehow be respected with specialties



- Value of undergrad experience in firms where they treat the firm as a classroom and get invited to observe vs. do work
- How can a student graduate with a degree in architecture without stepping into an architectural office?
- Bring the office into the school or vice versa
- What’s the incentive for our firms to “teach” interns at huge cost (relative) to larger firms that may pigeon hole them?
- Every profession has an obligation to the next generation of professionals
- Co-op is a 12 month X 3 year program – a school looking to change is a huge deal
- Change from B. Arch – M. Arch programs shifted focus from practice to research
- Look at it non-linear way: put student in centre



- Student environment – physical and intellectual
 - Intern environment – office and site – office and organizations
 - These divisions have existed for a long time. Divisions / barriers are asking wrong questions
 - Need for greater integration not silos, which don’t help.
 - If education left you ready to write your licensure exam earlier in education phase...closer to practice
 - Value of construction and site visits --- prior to graduation value of
 - “Intern” is okay, but “architect” is more descriptive to public
 - Clarity required
 - “I’ve done my time, therefore I want my title”
- Co-op programs
 - Exposure to the profession during Master program is crucial
 - Comprehensive design / studio: teach studios inviting practitioners; 1 semester with practitioners

Question 2.2: How can we define the respective roles of schools and practices in the education and preparation of future architects?

- Complementary relationship between theoretical (understanding of core issues) and experiential learning

- Firms hire interns for different reasons – sometimes from technical programs and sometimes from accredited schools with the critical thinking emphasis. What does this mean for the interns and their further careers? If you are technically strong – can you advance in the firm? How can we teach leadership skills?
- Can we define leadership skills? Schools can teach the “perspective” and firms can better teach the technical things. Leadership is about collaborative skills. We need to teach architects to be leaders in terms of collaborative skills. Emphasize more collaborative skills in school and in internship. Foster the skills to learn complexities of the process and the integration of the processes of collaboration.
- In internship interns learn self-confidence.
- Continue links from school to practice with both schools and practice advising interns – like the British system. Shared space and agency (overlap between). Extended Coordinating role.

- Is this current or future thinking?
- Split between education and practice
- School: design thinking, process, big ideas; not so much about the tactical issues of everyday practice. If successful, this allows the practice to train in the detailed issues.
- Shortfall in terms of: students with no practical experience (co-op) have a difficult time making the transition into practice. A little bit more real-world stuff in schools would be useful.
- Schools will always pushback that they can’t simulate the professional experience
- Schools can’t keep adding the new without losing something. Puts everyone into a bind.
- Most students will not hold the role of designer – yet we train them all as that.
- Interns say they come out of school with the expectation that they will be designers – then they get stuck doing door details!
- Design at the front end of the process....
- Need to learn to design in a fundamental way then add technical components.
- Who are “we?”
- School: introduce and frame the general knowledge and give the opportunity to specialize during internship
- Problem with the student who does not know what blueskin is....
- Offer opportunities and impart information... but it comes back when you are doing it.
- Need more communication between school and firms – what happens in courses?
- The specifics of how to use components – like blueskin – need to be considered in schools but “taught” in the practice.
- Profession failing by not taking students to the site.
- Businesses need to remember that interns are still in their education and they have a duty to educate the interns.
- There are a lot of stresses on the firms right now....
- Leaders who can’t be snowed.
- BUDGETS
- Key: understanding what the future will be, but what will it be? Globalization, and sustainability
- R. Banham said: Architects should ditch ... and ride the surfboard of technology
- Architects have always wanting to be part of the future but in the same time reticent to be so
- How much of the education should be about making people sceptical and how much should it be about making them effective
- Location of the second thought
- Be the master of our own destiny is more important than mastering technology
- Exclusive scope of practice will be eliminated our training is too general
- The schools have to teach people how to think (plus a certain amount of skills)
- Practices teach them to practical side of things
- How do we educate for ten years from now?

- The process is too linear, sideways thinking
- Coop as a reciprocal culture
- Coop program is a better system as it integrates students into practice right away (but you need a solid university coop administrative organisation); it becomes a culture, no downside to coop. It allows graduates to slip into practice seamlessly
- One downside: getting a cad-monkey job
- Coop: two cultures that co-exist. The students come back to school with a fresh perspective.
- Or should we go back to the apprentice model?
- For the employer it is a short-term commitment?
- You have to ensure a normalisation relationship “offices-coop-students”

- Students somewhere in their trajectories need to go somewhere else and do something else.
- Schools and practices have to prepare students to make decisions, and no one institution can be expected to deliver everything.

- The role and position of “comprehensive studio”
- The role of the university on teaching how to think is crucial: learning to address a problem from the start is part of the role of a university (problem solving)
- The role of the school is two-part: teach how to think and give the students something tangible to go out with and to walk with confidence in an office.
- It is the way architects think that distinguish them from everybody
- Problem solving is also the skill of the engineers
- What will the future be? The coop system gives you a much more immediate answer to which skills set are needed.
- The technical skill set are acquired relatively quickly, but critical thinking is key (a global comprehension of your role, of the big picture, integrative approach versus being a cad monkey)
- University have to give basic skill set and a basic understanding of the language of the context.
- Balance is essential

- Transcend the knowledge into wisdom, complexity, comprehension of the big picture
- System thinking...
- Cultivating leadership and political astuteness
- Building profile (market position and so on)
- Establish a world view and having a strong self-view
- Way more of our students/graduates have to get into trouble early – take risk
- The interns are not asking enough questions

- How schools hire? Who are the professors today? The University have drifted in a far too much academic discourse. The academy is developing an overly theoretical framework
- Clinical practitioner are important
- What is the responsibility of the practice for training the interns (rather than let them work from their mistakes)? Friday pm debriefing around a beer. Easier in larger firm.
- Leadership in a team has to be earned, how do intern earn it: young architects come on site and feel the pressure of having to demonstrate their know how (it is generally received as arrogance)
- The practice has to help the interns to understand the trades.
- Practitioners have to mentor intern outside of the firm and inside the firm. Learning to share with the interns: and learning from them as well.
- How can we help the smaller firms to facilitate the internships and also diminish the turnover?
- A variety of experience is important to get
- Connection to the trades are important in the education of an architect, working WITH the trades – know

- what it is like to be on the other side (enhancing mutual respect)
- Expectation and reality, building up judgment both in schools and in practice
- Research can enhance a thesis base system at master level making it less self-referential: integrating a laboratory can facilitate the completion of a thesis and help up the acquisition of a skill set and expertise.
- Continuous education
- Creating links between universities and practice

- Consequences of moving from B.Arch. to M.Arch.: more demands scholastically, practitioners less part of education. Schools under pressure when trying to maintain studio ratios. Schools role hindered by external pressures (universities and M.Arch. requirements).
- Practice role hindered by external pressure from clients, lawmakers and economic cycles.
- Accreditation already defines the role for schools, in simplest terms. No need to redefine this approach (opinion).
- Need to emphasize that two components want the same result.
- There is more head butting than partnership between schools and practice, no interest in overlap (examples from BC and Manitoba, two different approached in engaging practice in delivering education: BC trying to be inclusive, in Manitoba practice excluded by choice?).
- Grey zone between education and practice should be more of “commons” than a no-man’s-land. Not a joint connection (fence, pre-determined border), more of a connective tissue that bridges two areas. No definite line, ever-adjusting target (?)

- Skills – missing body of research and practitioners in schools
- Instead of building barriers, we should work on the passages
- Schools: inform at the whole “parcours” to become a practitioner
- Regulators: value practitioners that engage in teaching and mentoring; acknowledge untraditional practices; like lawyers and their “articling” year.
- Practitioner: engage and invest in training future architects

- Role of school: “imagination & experience” open doors to students to learn a way of thinking exposure employable.
- Role of practice: Provide hands on experience practical applicable design school mentorship within the office environment – make time – and external mentor program
- Put “language” around the practitioner being educators – don’t rely on assumptions that firms do this automatically

- Offices have an important role to play: Integration of knowledge into practice.
- Seamless continuing education
- Integration model
- Both have the role of educating future architects. Each of them have to be aware of the responsibility of preparing future architects

- Canadian problem NOT local
- Move responsibility to national level – consistent issues
- Need better connections between all groups: regulators / practitioners / academics / interns
- Very complex profession: hard to define exact skills of architecture – unique combination of technical and soft skills
- Has to be ownership of what will be shared
- Need to demystify and simplify the process for students and interns
- Support firms and architects to be mentors and monitor – connect local architects to schools
- Roles of mentors unclear
- Con Ed – training of trainers

- Need to nurture students not put up barriers – “last one standing”
- Recognize this is done mostly by volunteers – support is critical

Question 2.3: How could the teaching of the necessary skills and competencies be shared between both bodies? Can the transition between the two be improved?

- Sharing of teaching to be revisited and re-evaluated from both sides. We need champions on both sides to get things started. Identify key persons on each side with mandate to make things happen.
- Open up supervisory role to include some portion of time working with a construction company or technician
- Some schools are doing this – Disconnect between profession and education – no teaching about business and running a practice
- Mentor should play a bigger role. Also role is tough to emerge
- Lack of transition between the two
- The “chop” is what many people rely on
- Offices can be very open about their decision process but not about the business
- Have practitioners come to schools to lecture
- Have co-op programs in every school?
- Schools to have students get access to construction sites
- Profession has to be more “pro-education” and “pro-educating / investing” in interns / students. Becomes a way for firms to attract good students
- Should the architectural regulation include language about educating interns through transition?
- Should interns start being required to get construction education points?
- Internship experience – meet, sign book, leave – that’s not a helpful internship experience
- All agreed schools are doing a good job teaching design
- Necessary Skills: contract admin / business planning / work plans for projects
- It’s the link between school and licensure that’s the weak point
- Forge a link between regulators and educators to close gap between the two

- First, define what are necessary skills
- Need to mix practitioners and academics more
- What kind of skills do we need? – Design the way of making projects
- What is role of architect – different skills required for different roles i.e. CA, design and listening skills (soft skills) appreciation of learning – continual learning -- curious
- Understanding of complexity of profession
- Value what each brings
- Students unaware of skills & competencies that are required
- Demystify the process for students
- Teamwork – individuals vs. team – how do you grade students? – Collaborative profession
- Skills at difficult scales are different
- Not software experts
- Oral exams
- Missing aspects of coordination & trust
- How to deal with complexity
- Business of architecture
- Can the practice handle the interns?
- Competencies of firm to train
- Enhance roles and responsibilities of mentoring and supervising architects

- Engagement in process – how to increase this
- Mentors not defined – administrative role not teaching
- Co-op studios connect group together
- School → Intern ← Practices
- Process of design → this is core skill
- Collaboration between training and design
- Overlapping positions
- Constraints of time on mentorship
- Want to versus have to → provide value to the process
- How to engage more people
- Internship and mentorship costs money → lower fees
- Role of architect is wide from government to private
- Administration versus education
- Build barriers not nurture
- More architects in a variety of professions
- Preparation for exams
- How to share → 1st point talk to each other; then determine who is best to do the work; assign responsibilities; monitor results
- Grass root support for exams
- Changing roles
- Design a system → recognition of volunteers
- Professionals versus volunteers → cost involved
- Enforcement versus support
- Skills...how do we evaluate them?
 - Design process
 - Building construction
 - Business plan
 - History
 - Complexity – collaborative ways of working / teamwork
 - Understanding roles of the architect
 - Listening and communicating
 - Curiosity / open mindedness
 - Questioning
 - Create at different scales
- Each body needs to value what the other brings / teamwork
- Laisser savoir et faire connaitre rapidement *Le cheminement requis pour devenir architecte université – stage – exac
- How to bridge the missing link? Mentors that are practicing teachers; co-op programs
- Make sure that firms who receive interns are aware of their responsibility in teaching: mentors and supervising architects get them more engaged
- The skills are acquired through experience more than through teaching
- Encourage professionals to mentor & teach
- Value the engagement
- Sharing responsibility of skills and competency development
- Universities and regulators could partner in giving courses during internship before taking exac
- Put up national study pools / groups for preparation of exac or help demo it
- Sharing means interacting – making connections
- E.g. local practitioners volunteering on design panels recognize them! Instead of “starchitects”
- Couldn’t the regulators act as training partners for interns? Nurturing environment?
- Have more volunteers and support them.

- Mentorship programs – invite practitioners into the schools to work with students
- The school can be a conduit for the profession to access other areas and disciplines in the school to further a practices expertise especially in getting work.
- Long distance learning opportunities (AIA/RAIC etc.) Engage interns in process as both alumni and teaching such as the 10 x 20 x 20 program in Winnipeg that happens twice a year and attracts up to 400 people and is cooperation between graduate/interns and the association
- What are the incentives for students to engage in the registration process? Register students as pre-interns and give them real time experiences in the work area.

Question 2.4: What means/tools/metrics will encourage partnerships between schools and practices? How should they be revisited or re-evaluated so that they are flexible enough to adapt to changes and emergent issues?

- From interns' survey:
 - Coop programs, no plug-and-play
 - Firms should be evaluated for their mentorship of interns, for the learning environment they offer (or not)
 - Firms could be given continuing education credits
 - More practitioners involved in programs (lectures, con-ed)
 - Mentorship by an architect as soon as a student enters the Master's program and for the whole internship
- Public lectures (web-based), shared workshops (on theory, practice, and skills)
- What are the realms of expertise that we can share (assuming that education starts on the 1st day of studio until the end of practice)?
- **Encourage Mutual relationships:** with industries, with non-profit organizations: have to have value for schools (learning objectives, etc.) and be beneficial on a large scale (that is not however "research instrumentalized") ... the benefit of design
 - Science-research credits or tax-refunds (for firms) to "fund" activities (courses, workshops, etc.)
 - **Collaborative networks** (with other schools, with industries): what is its "front porch" or its interface (or liaison-person) ... with research initiatives coming from any part ... and win-win situation (beneficial for both) in terms of outcomes and \$\$\$
 - **Schools could become entrepreneurs like practices.** Emergent issues are brought on the forefront ... awareness and cross-references with industries/non-profit ... we can "fail" (ref. Timberlake) in the academy
 - **Upper-level coop** (that implies a coop office that takes care of a lot a things for firms, and a students' review of their experience, and an incentive for firms to be part of that "educational" structure): **practice/education (~ medicine)**
 - How to offer the quality of the coop program, in firms, after the coop is over?
- **Licensure upon graduation** ... is that a viable option? On the wide-range of realms/domains that architecture can embrace ...
- **Collaboration** ...



- **“Up-mentoring”** (interns teaching firms: digital tools)
- Sharing of resources, both human and physical (school shops, fab-lab) and spaces
- How to get architects back to schools, to work?
- Research done in Schools should be better known by firms, better communicated to firms
- Schools should keep in touch with their graduates
- Practitioners as thesis advisors ...
- Regulator/advocate

PART ONE: GENERAL DISCUSSION

- The Universities need to be the leader for the profession when students come on work terms or seek employment upon graduation. Students should bring tools to advance firm practice.
- Schools need to be research driven which suggests that there needs to be a better integration of the practitioners into the curriculum. The curriculum needs to change then, to match the time availability of the practitioners in the workshops or to provide other roles or activities to perform the function that the outside practitioner needs to bring to the education of students.
- Free standing graduate degree programs in architecture needs the three year of the master’s program to pick up the entire needs of meeting the CES, and to become current in very short period of time. The bachelor/master programs have more years to develop tools and then skills in the process.
- Concept of the school doing research into ideas, say housing forms, and doing a design and research project that fits a need that is identified in the community. This is applied research with a possible funding partner.
- Research teams in semester 6 start to focus on topics that are real within the community. The work of the studios needs to drive and find focus from these notes.
- Idea of having a student to follow a senior of a firm (“shadow”). The idea is to have time available to have a student follow them for a week of activities in order to learn the actual workload of the profession.
- Timing of program components: There is a need to understand what are the issues related to the need to understand when something is appropriate to learn and this relates to timing. It is understanding when skills are needed and when it is appropriate for them to be brought into the program.
- Idea of having firms enter the school once a year to see what the firms are doing and what the work experience of practice at a firm looks like, and to build a bridge to the firms.
- Idea of juniors and seniors mixing during the final year and then learning as a mentor/student and being forced to be a teacher. Mentoring is a teaching tool that allows juniors to learn and develop but teaches the senior to also learn. Maybe teaching to the freshman class as an idea.
- The intern program needs to know how the student should be equipped and be able to enter the work stream at an appropriate level to their interest and skills.
- The student and master model of studios is out dated in many aspects. The University setting is a broader and more complex experience now and new metrics are needed to develop the ability to measure completion of these metrics
- The idea of a charrette with a master practitioner to introduce them to a real studio experience (i.e. real work experience in a condensed time frame). Sort of like the ‘master chef’ reality TV shows. These could become modules in a university program. Hard to fund and maintain.
- There is a need to have the schools (different faculties) in different fields truly work and see the interaction needed to do a meaningful and exciting project in the real work.
- There needs to be different ways to have a student recognize ‘success’ and what is a meaningful reason to be an Architect. There are really many forms of practice upon graduation and these need to be understood and promoted as viable career options.
- The idea of film school is sequential between routine tasks and the glamorous role of being the film producer.
- Schools are not willing to hold a student- or fail them-in order to assure or measure them that they will succeed. System encourages a level of mediocrity.

MORE FOCUSED DISCUSSION ON THE TOPIC

- Need first to establish a reciprocal relationship to both give and receive in the process.
- The gap between the academy and the profession can actually be considered 'constructive'.
- We have two categories of exchange: first in the school and second in the office.
- Schools: they need to create more workshops, charrettes- special practitioner based modules- that will be condensed and be focussed and intense in time.
- Organizing multi-year research projects on real topics to build up a real knowledge on a real problem (say housing that is transformational.)
- Grad students should learn 'mentoring' and that would get them better in the future to be mentors. Real learning.
- Tools in the office: input from the firms to Universities- consultation for research topics that can be done in schools.
- Shadow program for practitioners/students for real time periods.
- Events need to be scheduled regularly between firms: "open doors" to schools and to promote the concept and realities of practice. No commitment to hire them as it is really just meant to focus on a 'meet and greet' and to build friendship.
- Award practitioners Con Ed points for doing the mentoring and working with students.
- Find a way to showcase different models of practice: Scare effect of what the real world is about.

- Need more input from the profession itself into the curriculum (opinion).

- Regulators should include reviewers / critics and mentorship to count for continuing education hours in order to maximise involvement of practitioners in the education of future architects
- Improve the proportion of architects that teach architecture mean: professional regulator to include a member category for professors
- Using school place for professional events
- Sessions / get-togethers between professional organisation and schools
- Review the model of admission to the profession
- 1) Title be granted at the end of school 2) Right to practice after internship integrated model
- Encourage creation of Co-op program
- Internship to start during education program
- That interns be accepted as members in the profession (member category)
- Make students more aware of issues related to practice (connection)

- Instigate a mentorship program at an earlier stage by co-ordination of the students' progress through the course of their studies.
- Invite the regulators to participate earlier in the program and explain what they do and the responsibilities and practices that are expected by the public under the licence to practice architecture.

Question 2.5: How can schools and regulators cooperate in research, continuing education, etc. in order to be mutually beneficial and foster an appropriate architectural approach for today and tomorrow?

- In Europe, the connection as in the RIBA model of education, then internship and then return to school to finish.
- Would we consider a model where internship was integrated within schools? Graduates could move directly from school to the profession. This would take a greater partnership between schools and the profession – to integrate education and practice is must more complex. Now you can only enter internship after receiving and M.Arch. Average length of internship in BC is over seven years. Interns think there is

- no advantage to getting licensure. NCARBs were an impediment to licensure. The advantages of Co-op.
- Firms are reluctant to take on interns for internship – especially when the internship takes a long time – or the economics are too difficult.
 - Quality of internship – you get more out of internship at the end of your education.
 - Think about internship in more diverse ways – in business, in government, such as discussing fees or taking them to a construction site. The supervisor should be an employing mentor.
 - Benefits to the firm are a preview of the student before you hire them when they graduate.
 - How do we motivate the interns to get licensed?
 - Should we accredit firms for internship – can we better educate firms on how to be better mentors? Could mentors get Continuing Education hours for mentoring? There is no accountability for mentors in the internship process. If you add more bureaucracy to mentorship firms will refuse to mentor interns.
 - Through the ExAc Exam, we should talk about ways to increase the quality of internship.
 - Continuing Education interns also – offer courses.
 - We should bring knowledge of the market to the University. It is more appropriate to teach the issues of business and finance in internship.
 - If you want to set up your own practice - this is what you do. This could be a continuing education focus.
 - We need to find a way to recognize quality internship.
 - Schools could have a revenue stream from continuing education.
 - Firms could visit schools to have a dialogue with students about what they can expect with internship.
 - Interns are a bit apathetic – how to get them more interested.
 - The profession should encourage activities that are altruist such as Migrating Landscapes, or Architects without Borders or design/build projects.
 - Who should be the ones to accredit internship – it should be the regulators – as the mentor now needs to be approved through the regulators.
 - MITAC's – partnership between professors, a firm and a student.
 - How can firms be encouraged to partner with schools for research projects – what are the incentives to make this happen?
 - Two cultures of research?
- We need to continue discussion; schools, regulators, practice (create a permanent forum), at the same time realizing that there are regional differences.
- Synergies between practice and academics to develop research projects that help develop money for schools and to obtain research dollars. The problem is that schools view research projects in the long term in finding money and hiring/ developing students to undertake the work while practices want immediate answers to justify work or client.
 - Research project being framed around an educational project as part of the program. Can research be done for credit of individual student or does it become teamwork?
 - Firms can employ/pay for students who do research at schools during the learning process. May make student employable a useful to firms having developed an expertise in certain areas.
 - Schools can do contract research on behalf of the profession such as in the social and sustainability areas. They may help to provide support to firms in areas of materials and construction methods that are new ideas in defending “alternate solutions” under parts of the codes.
 - There is an obvious role for schools to develop continuing education courses that can be cost shared in the development and in the revenue from the practitioners taking them.
 - There are only 200 to 300 graduates a year and about half register and schools need to track the why. How to engage the graduates who do not embark on the internship process

Appendix C: Theme 3 – Table Notes

Note: Spaces in the text represent different contributing table groups, which are found here in no particular order.

Question 3.1: Broad education including liberal arts remains important for the education of a professional; how can we maintain this foundation while emphasizing specialized knowledge?

- The distinction between general and professional studies must be maintained – and there must be room for electives.
- There is a need for efficiency in the delivery of courses.
- Keep the existing balance (no more than 60 percent in professional studies).

- Consider a core of certification with diversity that happens in electives – or other aspects of the curriculum. Possibility comprehensive design is the common core of curriculum.

- We have to understand where we come from where we are and where we are going.
- Understanding of the liberal arts is very important
- It is very important to know what you don't know and where to find it and if you are not exposed to liberal arts you have a lesser awareness of what you do not know
- Architectural education right now is broader than only focused on specific architectural courses.
- Teaching liberal art in architecture schools help developing a common language
- But then you do not get the breath or the depth from other points of view
- There is also a problem in defining what is a liberal art course and not
- Further on in practice, you get involved with a variety of situations where a liberal arts education is essential (the architect needing to coordinate, synthesis and so on)
- Liberal arts education is attained in different ways from one school to another: in CEGEP (Quebec), in an undergrad program where there is only a master degree offered a school
- A variety of delivery option is useful
- There is no necessity to emphasize more specialized knowledge, even though it is a common complaint
- Internship is meant to develop specialized knowledge
- Architecture education is complex because the figure of architecture is complex, therefore a general formation is necessary - then two types of formations (green techno and computer techno) are requiring a lot of time. Equilibrium between specialization and general education is fundamental. The professional practice should only be introduced in school.

- To what extent can specialization be the domain of internship or practice? Where you end up may not expose you to what you need.
- Could be specialization in terms of technical knowledge or roles
- Not enough knowledge of the whole profession to know
- Graduates should be advocates for the whole profession not just a specialization
- Electives; specializations after a core
- Is there a place for continuing education within the academy? Graduate Professional Diplomas. Apply to internship process.

- Architectural Education, while based on the liberal arts, is really about the ability to develop what is now known and professed as critical design thinking. The ability to synthesize; to develop the ability to have a disciplined mode of inquiry, concept development, and understand the history of architecture in a constructive fashion.
- There was a general agreement that schools need to be able to differentiate themselves according to their world view of education and their ability to create design thinking with a particular emphasis or terms of

reference. Accreditation should not attempt to make all the schools the same; rather it is to ensure that the output from the program should meet certain standards and not merely focus on how that is attained.

- Not only the years at schools define what should be expected before and after university i.e. increase in sustainability has resulted in dropping history
- There's no place for more specialized courses in the university courses
- 40% of teaching has to be liberal arts in the first years: we should look into expanding them over the other years of the curriculum – but make sure SPCs can be overall evaluated
- 2 types of programs before getting into master
- Consider a broader definition of liberal arts and include sustainability into

- Stewardship of the environment
- Format of accreditation
- Two headed horse
 - Licensure
 - Discipline of Architecture
- Does the current accreditation process cause all schools to be alike and does it take in to account variations in schools ability to deliver specialist skills and training, what about the culture piece of the institution an should it be included in the accreditation process
- How does the cycle of change effect and how often should it be conducted.

Question 3.2: The Accreditation process, instituted in Canada in 1991, has seen an evolutionary change in Architectural education in Canada. Is the overall model still sound and of value?

- Principle of accreditation is supported. Accreditation is seen as valuable. A longer term of accreditation is a possibility (8 years as proposed), with a closer scrutiny of annual reports.
- It is hard to understand the structure of the school because our programs are quite different. Context counts the most. Clarification of Nomenclature. Especially the nomenclature in administration – clear distinction of who is responsible for the accreditation – stress the diagram as a easily understandable graphic. Possibly comparison with all schools. Also more clarification of degree nomenclature.
- Is the model fragile – Address the subjectivity of the process.
- Diversity, adaptability, fragility, identity
- Recognizing the identity and strengths of each school - strengthening the identity of each school rather than the autonomy. But this should not come at cost of basic skills and understanding of core knowledge base.
- Super fragile models – it is important to spend time in the school to really understand. If the team is too small there is less opportunity for thorough evaluation. More voices, greater chance for a thorough look at the school – getting the perspective right.
- Some things should be considered objectively others taken more subjectively. We should ask if pedagogical approach matches the outcomes of the SPCs. Example is comprehensive design in one project for in several.
- More expansive guidelines for comprehensive design.
- We should share the best – or level of comparison to help evaluate SPCs such as Comprehensive design. The teams should look at a database of base-line projects from across Canada – as a comparison.
- We do not advocate a revolution – it needs to be an evolution. Possibly a base line for some courses.
- Evaluate the other related fields – beyond the pure architect (politics, PMT, building science, real estate) and how the program accommodates students interested in other tracks.

- Judging from the interns coming in the offices there has not been a change before and after education.
- The profession still interests bright kids (and we are glad about that)
- The regulators get a lot of complaints about the interns not being as well prepared as previously
- But the intern seems to be more broadly prepared.
- We see accreditation as too big a thing. It is a mechanism. Before accreditation each candidate was certificate separately by the regulators then with free trade agreement accreditation we went to accreditation = streamline.
- For the schools it is both a constraint and very helpful in the relationship with the general administration of the universities, and also to reflect upon your school (an x-ray).
- It seems to be used by the profession as a stick, but has to be fairly used, and in the same time it is not the ultimate key to excellence in education
- There is also a new complexity in architectural education and to some extent accreditation help maintain common grounds
- Should the professional exam be broader?
- Most agree that the overall model is still sound and of value.
- Accreditation and internship are related to one another.
- It is a kind of peer review, which is a normal process
- A presentation or presentations by the school at the beginning of the visit would be useful
- There is such a difference between visits that you have to make sure that overlooked elements do not get unattended. Annual reports are quite important and periodic observation visits could be useful, during final critics for instance. And in a digital world the work and the school statistics could be communicated on these annual visits.
- All the conditions should be re-examined to see what you need and what you need to review. Per example, a digital library could be an alternative to a physical one.
- The model of the audit could be revisited, so that it becomes more of a dialog.

- Sounds like it wants to change radically
- Self-review is critical. No issue with accreditation and the team comes in to help
- Composition of the team is critical
- Make the current process better
- Might consider something that brings people to visiting reviews
- Ongoing evaluation

- We agree that the process of accreditation of the Canadian schools is still valid but the model needs updating and refinement.

- We shouldn't get rid of it all because some things have to be fixed / Keep some consistency
- But the conversation between schools and regulators have to be maintained
- Team preparation and metrics understanding should be improved (like NAAB)
- Conditions OK versus procedures to be improved
- We still need to carry on accreditation program and process
- We need to keep communication canal opened between schools and regulators
- We should improve the procedures

- The accreditation by the profession is of value to the schools and helps them in their own processes in relation to other faculties
- Absolutely necessary and is a desire of the profession
- Issues – the curricula is reactive to SPCs and if SPCs increase then courses are modified and enlarged to match which is costly and takes time
- SPCs what is missing and what is emphasised and are we liable to see SPCs that are the “flavour of the month”

- SPCs have not been reviewed in 12 years and should be reviewed on a more regular basis. Specialisation – new courses as approved as opposed to core areas that would allow the school to select courses to fill out the range of offers to students.
- Comprehensive design is taught in teams as opposed to individually and maybe harder to evaluate

Question 3.3: Graduates educated outside of the CACB and NAAB accreditation process continue to be evaluated according to the Canadian Educational Standard (CES). Should this process be reconsidered in light of accreditation?

- Noted the difference between the quantitative vs. qualitative assessment. There is efficiency in assessing the degrees quantitatively. If there were to be a qualitative component, it would be portfolio based.
- If a school has gone through major changes – then that school should go through a non-stigmatized shorter evaluation time. More response from CACB when a major program change has been made.
- Right now 3 processes: from an accredited school, then BEFA are accredited from the same criteria than the schools, then CES.
- The measure of quality (vs. competency) remains a concern in CES.
- You might want to review this process to ensure consistency between the 3 processes.
- In theory the standards are the same but we should have a Canadian and CES competency standard.
- It seems unfair to have an outcomes based for some input but not for others.
- Expand reciprocity beyond CACB and NAAB
- Continue the CES process
- Something should be done about the non-professional programs – these are valuable but there is no pathway.
- The group decided not to discuss this topic as it is very controversial and probably is not really the central focus of accreditation discussions of this conference.
- What would the alternatives be?
- CACB could consider the value of foreign programs
- Small pool of people who are available to the team and the need to expand the pool of to increase available visiting team members. With a need to have bi-lingual members and women in light of the stats.
- Team training is essential and the submissions should be done digitally. Allow team members to review items prior to visit and use visit to review items that are unclear rather than the whole range.

Question 3.4: The current Conditions for Accreditation reflect a number of input parameters (such as institutional structure, budgets, space needs, staffing, etc.) that reflect typical structure of architectural education at the time the Conditions were written. Given the broader mandate of the conference to examine the evolving needs of and pressures on architectural education, what changes should be considered to the Conditions?

- Physical space essential; hybrid physical (face-to-face) and online interaction possible. Online instruction of

- studio would be difficult to achieve.
- Students need to have exposure to practicing professionals in instruction.
- Be very clear and strengthen – dedicated space criteria, student/instructor ratios, delivery methods.
- One student with one desk may be an old paradigm – now think about group settings for collaboration.
- Articulate studio based education for Provosts and Presidents.
- In a positive way it can help resources
- The five perspectives could be re-considered. It is a long and demanding part of the report. Their importance seems to be too relative for the amount of work required.
- Some value and prioritization should be given to the five perspectives; their importance is not equal. “Must meet” should be identified and as well as a required number of met conditions.
- Where does digital fabrication equipment fit?
- We learn in so many different ways now. How does technology affect this? Can you work remotely?
- Number of students in a section
- Does every student need a dedicated space? How are space needs changing?
- It was generally agreed that these conditions are likely needed to focus and define the accreditation review process and is valuable. However, the type and emphasis of many of them need to be reviewed and put into proper perspective.
- ** The program intends to support the schools in their mission
- No problem with the conditions; problem with the procedures
- Like HAAB, the conditions are measured by metrics as early warning indicators of upcoming difficulties schools will encounter
- This is examined by HAAB annually, not by a team, on an annual report
- Look into that possibility
- International observers have been part of some teams (requirement of the Canberra accord) that seems to make it overly large
- Schools that get a clean bill of health should have terms up to eight years with maybe an interim report submitted and the end of four without a visit.
- The size of the team should be reviewed and reduced as well as the time on site as these leads to extra expenses for the schools. Teams need to be balanced (2 CCUSA, 2 CALA, 1 student (non-voting))

Question 3.5: Similarly, the Student Performance Criteria (SPC) identify expected levels of ability and knowledge on the part of graduates ready to enter internship. What changes should be considered making these Criteria (simplification, condensing, clarifications, additions) to reflect evolving expectations of interns and changes in the profession?

- Reframe the perspectives section of the conditions so they reflect aspirations of the architecture as a profession and a discipline
- Consider moving some SPCs into perspectives section
- Comprehensive design. Should it be one project – the teams expect this. How can the schools demonstrate acceptable outcomes in one project – or in several projects? Bringing the team together to accomplish this becomes tricky. Possibly much of the report could be accomplished before the team in on site – then it is more a checking the report

- Reduce the number of SPC – more valuable ones – to keep the teams from picking at details. 6 criteria. Comprehensive integration is the most important – building systems should not be separate but instead integrated into the CB project.
- Thinking should be more (for the larger criteria): integrative thinking, systems thinking, professional judgment, collaborative thinking, leadership skills, etc.
- Possibly changing criteria to more valuable and less valuable criteria – two tiers – with different values.
- Collaboration (working in teams), leadership and soft skills are more important – think about criteria for this.

- Condition 12 has to be met and the number of SPC met should be defined and some specific SPC should be met
- Comprehensive design should be met and it should be better and fairly defined
- Comprehensive has a meaning: it has to be demonstrated in one project
- In this context, an assessment of the individual team members in a studio project is important (co-authorship of a project demonstrating attaining comprehensive design)
- Comprehensive design is often not met
- In professional practice we do not actually do comprehensive design by ourselves
- It is also difficult to judge if such a criteria is attained
- Comprehensive design is quite broad you need to limit the scope of such a studio and such a criteria
- We have to keep in mind that schools are not a mini version of practice
- Understanding the relative weight of the criteria, accessibility for instance is often not met and ...

- Found them to be quite useful and not too onerous.
- Some are significantly more important than others.
- More collaborative work; sustainability; these should be increased and strengthened.
- Energy modeling
- Balance of credits?
- Synthesis of knowledge
- Ability to use the processes and technologies of architectural production
- Professionals could share some of these SPCs
- Tectonic craft

- Again the group generally endorsed these principles and feels that the SPC need to be reduced, sometimes revised and reviewed for their relevance. The overall statement from the group is that “The complete education of an architect is the result of the total partnership between the profession and the academy.”

- Some SPCs need editing – leadership and advocacy i.e. comprehensive design
- Are we more looking backward than forward?
- Analysis
- Innovation
- Overall they reflect a pretty traditional view of the profession
- Can we imagine a completely different system?
- Consider continual evaluation?

- Course outline satisfies the SPCs and should be listed on the bottom of each outline to indicate which SPC they satisfy

Question 3.6: As a result of discussions at the conference, recommendations will be made to the CACB regarding the proposed changes to the procedures for achieving and maintaining accreditation. How might the CACB revise the Procedures to improve the effectiveness and efficiency of the process and consistency of its outcomes?

- Make course materials and student work digitally accessible prior to the visit.

- Levels of achievement – that could be evaluated through less number of areas of achievement.
- Familiarity, ethical approaches,
- As a way to evaluate ethics – for example. “Soundness of the project”
- Demonstrating identity is important with first impressions
- Demonstrate the identity through how the logic of the whole curriculum works together.

- Training of the team could help consistency
- Team should review the material digitally before the visit
- A number of the elements could be examined continuously in preparation of a visit
- Clarify what needs to be done on site to focus on the work
- Exit meeting to the entire school could be eliminated to limit tension and confusion.

- Lengthening of time
- Should the team sit in on final reviews? Perhaps as part of ongoing accreditation? Local

- There was general agreement that the system is good but it needs to be changed to reduce the impact of the process on the Universities yet maintain the benefits of internal quality control that results from the process occurring. Possible 8-year terms (drop dead) with some sort of periodic review to maintain that accreditation is needed.

- Conditions are okay with the schools, a change on those has incredible impact
- Process is onerous – longer term; shorten the visits
- Not really helping the schools except for accreditation, how could it really help schools – claim budgets from universities
- Again look into NAB monitoring / put on advisory boards.
 1. Collect students work into portfolios: 10-15 the worst / the medium / the best under different aspects not course / course not only design
 2. Team visit: the school exposes its overall strategy and presents the portfolios
 3. Schools can constantly have this documentation at hand through their students / always be ready instead of taking a complete year to prepare.

- The APR format is too long and includes school history and mission statements that require constant upgrading.
- Look at review process that NAAB went through and the outcomes and adopt the outcomes relevant to CACB
- Have five team members but only three visits the school with the other acting as review members of the digitally submitted documents Team visiting (1 CALA, 1 CCUSA and 1 student non-voting)
- Build a larger pool of visiting team members with a more robust training system and consider team members from other countries, as the Canadian pool of volunteers is small. Need to have a responsive appeal process so that when things go wrong they can be dealt with expeditiously.
- Change the report process as some items that were “not met” have to be reported on each year for the full term and the school gets no feedback.

- How do we get practitioners in schools and are they competent to teach. It was said that 2/3 of adjunct professors are members of the associations.
- Should involve the profession in the “learning culture” of the program and develop a method of demonstrating this involvement as part of the report by any means the school decides therefore not prescribed.

Appendix D: Theme 4 – Table Notes

Note: Spaces in the text represent different contributing table groups, which are found here in no particular order.

Question 4.1: How can internship become a better experience for both practitioners and interns and what incentives could be introduced?

- Some ability to provide feedback from interns exists. Some better feedback mechanism would be preferable. National data would indicate how often, and what type of issues, should be addressed. Issues such as age, years of interns.
- Maximum years as interns? What is the carrot to move from internship to full membership? Too many sticks – more punishment than reward.
- Not all mentors and employers are acting in the best interest of the interns. Feedback mechanism to a regulator may be required. Intern needs to take more / some responsibility for the breadth of the internship and satisfaction of the requirements.
- Accrediting employers? Document that outlines the respective responsibilities may be required. Financial or Con Ed incentive?

- Mobility is important for interns; regional differences should accommodate that.
- Create a national intern organisation. Intern to have a voice with advocacy ability.
- Interns to be on every council; this is in progress already. Is voting ability important?
- Introduce “buddy system” for interns, either with fellow intern or recently licensed architect who is familiar with process and issues, in addition to traditional mentor.
- Expand hours that can be logged and where they can be gained (related fields, school work, business-related).
- Graduated licensing system could solve a lot of internship issues; put less pressure on level of competency to be achieved before licensing (Opinion, lot of discussion and disagreements).

- For practitioners: ConEd hours should be recognized to practitioners who are acting as mentors or employers of Interns.
- For Interns: Allow interns on council with right to vote
- Having an IAP based on Performance rather than on quantity of hours. How could we have better Architects coming out of the Program? Quality of hours is more important than quantity.
- Purpose of IAP is to prepare to practice knowing that it is a lifelong learning profession.
- Role of employer should be realigned to insist on the importance to demonstrate interns Professional Judgment and Ethics.
- Employers and profession should encourage interns to participate to Regulators activities, meetings, conferences, con Ed, etc.
- Inform, publish good employers registry. Let interns know the good employers. The good internship experience. Interns network.
- Most of all: instead of controlling afterwards, associations should inform and sensitize interns and employers very early in the process. An information session should be held annually by regulators to remind all stakeholders of crucial role the Internship has for the public and the profession. Approval of

internship project should be done more rigorously.

- Co-op program helps provide a better experience for students to transition to interns

Question 4.2: Who would better administer the internship program to ensure a consistent level of experience – either the regulators/CACB/Schools?

- In ON, interns were being 'dumped' by schools in the gap between the silos of school and practice. No voice. IAP requires much detail that should be happening in schools.
- Q is not complete/accurate. Regulator can't be considered distinct from practitioners.
- Internship is the origin of the professional education. Schools evolved after.
- In Netherlands, interns work 4 days, go to school 1 day.
- Intern perspective - govern nationally, provide support. Referred to OAA admissions course... Registrar noted that it is distinct from ExAC.
- Continuity is needed and essential.
- Administration of the program (not legislation) is the issue for interns.
- Language is NOT an issue.
- Profession needs to take responsibility.
- Make attendance at support programs mandatory.
- Better collaboration between schools and regulators.
- Online education is good but has limitations.

KEY POINTS

- Administration of the program needs to stay with Regulators.
- Better collaboration between schools and regulators.
- Need national program that provides support, and solves challenges.
- Profession needs to take greater responsibility. Incentives need to be developed to assist with burden.

- Keep it at provincial level, but include interns and schools.
- Create a permanent national committee for co-ordination, again with interns' and schools' participation.
- Ease of access to information is important, information to be co-ordinated to facilitate mobility between provinces.

- COOP program is the only way where a school could somewhat administer the IAP. Other than that, regulators are better suited for the task.
- Schools shall have a role in setting up interns with mentors or firms.
- Regulators shall better follow up the quality of internship.

Question 4.3: Can we provide a more comprehensive support system for mentors and supervising architects to ensure that they fulfil their role?

- Collaborative zone – a guide of one page to outline responsibilities to both parties – from a national body, not provincial regulator. Con Ed session module (national, core hour) for mentors to prepare to insure consistency.

- Need to develop incentives for mentors to take on role - reduced licensing or CoP costs?
- Provide mentor training/orientation
- Allow grads to call themselves architects? To allow process to be extended. No. (Attending intern likes term 'intern')

- Give interns choice of writing exams or going through a competency-based process.
- Strongly support ExAC system over NCARB.
- Encourage interns to seek opportunities on their own (particularly in rural areas).

- When an employer hires an intern, is it understood that there is a social contract between the employer and intern? What are its terms? Should it be more formal?
- Employers have a professional duty to train interns appropriately.
- Incentives cannot be monetary (cannot solve an issue with money); better if it's tagged to pride and prestige (especially amongst peers)
- Recognition towards employers and mentors
- Interns ask, what is the benefit to me to go beyond internship?
- What is the value of licensure?
- Lack of commitment from employers (lack of benefits, respect, remuneration, hours, not always paying for fees or courses, long hours of sometimes monotonous work)
- Lack of commitment from interns (lack of respect, flight versus fight, high expectations without earning it reluctance to "pay their dues", reluctance to take responsibility)
- Superior and Mentor advocacy is low
- In the UK – 3 level RIBA system is seen as good because everyone knows what is expected of their roles (employers, schools and interns); connection with the school throughout internship
- Earlier exposure to practice as well as mentors in school is highly desirable by schools, students and regulators
- Develop a shadowing concept – students following the life of a project – with no direct involvement
- Evaluation tools of Supervisors and Mentors is beneficial if taken as a way to help the Supervisor and Mentor get better at their role; include a sharing of best practices
- Good mentors should act like good employers - interview mentees, discuss expectations, outcomes, progress reviews, establish targets and goals etc.
- Change terminology to emphasize true role? "Mentoring Employer" vs. Supervisor; "Advising Mentor" vs. Mentor
- System requires more accountability (not less) in a way that supports Mentors
- There is a severe lack of appreciation of what a mentor is and their immense value to Interns as well as professionals; need to have more than 1 mentor outside of school or work
- CALA task force reviewing employer/mentor scope of roles?
- Interns upset/indignant/question being told they have to undergo further training and coursework post-graduation from a professional degree to both get a job but also be registered
- Training – make it a module of the provincial conferences and a discussion point at annual general meetings
- Incentives for employers
- Tools for employers, mentors and interns
- Quality Maintenance for all
- Performance Measurement and Verification for all
- Continuing Education for interns like done in B.C. is good – that should be national
- Support of Intern's special projects that promote architecture (help them understand where/how to access grants and funding for their projects)
- Undertake a national survey of salaries on a regular basis
- Undertake a national survey of employers (from an intern's perspective); transparent evaluation of firms
- Log book – rework the book (improve spreadsheet functions); bad to summarize experience by quantifying hours – do it by performance of demonstrated ability/experience
- Employer and Mentor sign-off and comment boxes are too small; need to develop a more robust rubric to help the employer and mentor to fill out the form more completely and in a way that comprehensively describes the scope/breadth/depth of development and understanding (not necessarily harder or in a way that takes up more time).

- System need to work equally in good and bad economic times as well as in large and small regional markets
- Do we need an Oral Review if the role of the Supervisor/Mentor is more robust? What is that tipping point? Can we target it?
- The word "Intern" is bad. EIT (Engineer in Training) or Articling Student is better.
- Provide syllabus for employers and support it.
- Mentors and architects: allow Con Ed hours, meeting, and better liaison with admission committees.
- Professional associations to organize matchmaking sessions between potential supervising architects and potential interns.
- Book of best experiences, award for good mentors.
- Have a "hand over" from student life to intern life to help transition and quality of mentoring / supervising
- Co-op programs are successfully monitored. Why not monitor mentors in a similar manner
- Mentors are "safe guarding" persons experience
- There should be uniformity across the schools to create equality among the graduates. (i.e. co-op embedded in education)
- Whole relationship is reliant on good will and you can't regulate it
- Give ability to do online reporting and that this notifies mentor and supervising architect that intern has logged hours.

Question 4.4: How much structure and regulation should be introduced into the program and at what level?

- Structure should be clear from the beginning. Difference in mentoring role vs. supervising architect role. Should the mentor be maintained through the entire internship? Cooperation with university and membership.
- Need more 'organic' structure and regulation in IAP, with flexibility.
- Support more important than structure.
- Difficult to impose structure on practitioners who are essentially volunteering in the program. Same with accountability.
- Competency based IAP instead of too much prescriptive.
- Develop standardized admission program based on CHOP, module courses (lawyers and accountants seem to have something in place)
- That could lead to have an ExAC break into pieces according to each module.
- There's only so much regulation you can impose on architects
- As a self-regulated profession there are avenues for accountability
- Associations "nurture" the interns more
- Education: "professional practice course" include overview of internship process in your province
- A faculty member is designated as "an IAP director"
- Mentorship role should be that oversight for interns
- Each association to give each intern a mentor and supervising architect 6 month summary and recommendations

Question 4.5: How much should the internship program complement the schools to ensure that the minimum competency standard for architects is achieved?

- More architects on faculty in programs would help. Some flexibility to allow faculty (and others) alternative routes to licence may help. Or a two steam - architect / practicing architect may be considered with various issues which this may pose.
- Internship **complements (?)** schools ... what does that mean really?
- Initiating relationships between schools and firms from day one in schools
- Some interns preparing for ExAc go back to schools to take courses
- Minimum competency standards have to be **defined**, and then work our way backwards to internship, to partnership, to schools
- **Partnership** between schools and regulators
- Coop program or "modèles semblables" ... as part of internship (logging hours while in schools, from day one) ... obligation to work in an office (or domaines semblables) while schools
- Should we tackle the "**Licensing upon graduation**" thing? Or **Title upon graduation**?
- Internship = logging hours _ should it rather be a more sensible experience? How?
- Math vs. quality
- In solely logging hours: there is no process of fermentation ... duration ... increment
- Licensing exams should/could include "**interviews**", prior to taking exams
- Code issues + construction details ...
- **Our profession is "going down", it is not "good enough"**: we have to instil a **professional culture** from day one ... what does it mean to be a **professional**?
- Schools make clear that students enter a professional program, with professional attitude, with **checkpoints/milestones** on the way (e.g. work experience at specific moments)
- We want architects to be everywhere ... to spread like a **virus** ... then should they have to log all the internship hours?
- Logging hours systems is a joke ... but interns study well (know how to study!!!) to pass the ExAc ...
- In school (example from Syllabus): How do we connect professional experience with **design / design thinking**?
- Strong criteria about what an architect/supervisor should be doing? What a mentor should be doing?
- Interns go back to schools to talk to students
- Discretionary hours (should come back in the "log book")

- Internship starts when entering school
- The cloud of the profession (the sense of the profession) has to start from the beginning: architects are professionals – part of society – it has to be instilled early on.
- Schools and internship are coming together: culture of professionalism starts right now
- How much complement? A lot of integration from the first day... early contacts between profession/regulators and schools.
- Part of a community of professionals
- Internship is an idea, not logging hours
- Schools should value the internship process, and recognize the logged hours

- Question should be reorganized: How much should the schools compliment the IAP to ensure that the minimum competency standard is achieved?
- Support notion of national databank.
- Some integration between school and practice would be beneficial.

- Courses by regulators overlap with what was taught at school (Opinion). Was not necessarily bad, as it provided a different view on things.
- IAP shall ensure interns get exposure to the practice. Show them professional judgment. Learn where their knowledge and skills evolved. KNOW YOUR BOUNDARIES and act according to your evolution and improvement.
- IAP is not an end but a way to facilitate access to profession during which there is direct supervision of practice before taking full responsibility.
- Related to the ability have options so that there's a better way to ensure minimum competency other than minimum time in an office as an intern
- Some of experience you can get at an educational institution (e.g. OBC courses) and log those hours toward internship hours. These would be more pragmatic courses.
- Consider associations logging global hours in non-code related experience: i.e. SD, DD, (greater than or equal to) 50% CD & CA can be logged anywhere in world.

Question 4.6: How often should the internship program be reviewed and updated to reflect current trends and practices.

- Last time, within a 6-year period, the program should be updated more frequently.
- Licencing jurisdictions and categories all have influences.
- Candidates need to submit logs in a timely fashion to insure there is minimum of eligibility.
- Changing too often may affect some interns, especially if it becomes more restrictive.
- Reciprocity with NCARB with some conditions. NCARB generally (i.e. With BEFA equivalent) is more restrictive.
- 5 years, or as required, generally would be a good time.
- Should be reviewed and updated as necessary on an ongoing basis.
- Internship Task Force doing this. Basic requirements to change not too often: 5 to 7 years.
- Annual review only to keep track of changes that need to be implemented.
- Permanent committee shall exist.
- Each proponent should be surveyed every 5 years.
- Revision of IAP every 5 years.
- There's a task force that looks at internship but there is no mandated time to renew and update
- Maybe this should be done regularly say 6 – 8 years
- NCARB reviews the program every 3 years as part of the review of interns experience
- But how do you put a time frame on evaluating the "think no" part of internship...Therefore 8 – 10 year review captures block issues of internship not granular issues
- I.E. what program is comprised of can be dynamic reviewed and tweaked more often than overarching goals of internship
- Specialization should be recognized as part of internship min. hours and that the exams are "the equalizer" and validates the experience recorded.

Appendix E: Conference Agenda

CANADIAN ARCHITECTURAL CERTIFICATION BOARD 2014 CONFERENCE – EDUCATING FUTURE ARCHITECTS CONFERENCE PROGRAM

Location: Manoir St-Sauveur, 246 Chemin du Lac-Millette, St-Sauveur, Québec

Conference Objective

The objective of the conference is to engage the key partners involved in the education, training and development of Canadian architects in a dialogue on the future of architectural education and internship in Canada. The conference will influence:

- future changes to the Conditions and Procedures for Accreditation, and
- future changes to the Internship Program and process of becoming an architect in Canada.

The Conference results will be transmitted to the CACB and CALA and CCUSA for consideration and decision.

THURSDAY, SEPTEMBER 25TH, 2014

15:00 **Registration Opens**

18:00 **Welcome Cocktail** **Hotel Bar**

•

- 19:00 **2014 CACB Conference Opening Dinner and Plenary** **Room: Matterhorn**
- Welcome and Opening Remarks Branko Kolarevic, CACB President
 - Keynote Speaker James Timberlake, FAIA
-

FRIDAY, SEPTEMBER 26TH, 2014

07:30 **Breakfast** **Room: Hotel Dining Room**

08:30 **Opening Remarks** **Room: Aspen**

- **CALA Welcome** Nathalie Dion, President OAQ
- **CCUSA Welcome** Annmarie Adams CCUSA Chair
- **Opening Remarks** Ivan Martinovic, Conference Chair
- **Review of Agenda, Approach and Introductions** Alain Rabeau, Moderator

09:15 **Orientation to Conference Theme 1** **Room: Aspen**

- Brief presentation on theme 1 papers Kendra Shank-Smith

Working Session **Rooms: Aspen & Chamonix**
THEME 1: CHANGING CONTEXT OF ARCHITECTURE PRACTICE AND EDUCATION

In order to guide us in a process that is aimed to help envision a future state of architectural education, research and practice, we need to first understand the context from which we have come. What was architecture in the past? What is it today? In other words, what have we achieved? Where are we going? As a profession, have we been reactive or

are we leading the evolution of these changes? Why? Can we achieve a common definition of architecture that can be agreed to by practitioners, regulators and educators? Looking into the future of architecture, how will this evolve?

Discussion Questions:

- 1.1 *How was architecture taught, acquired or learned in the past? What is similar and what is different today?*
- 1.2 *What forces or influences are changing the practice of architecture? Both from the concept of architecture as discipline or architecture as profession.*
- 1.3 *What forces or influences are changing the landscape of higher education in Canada and how might that influence the education of architects?*
- 1.4 *What are the global expectations for the education of professional architects, especially in the context of rapidly changing circumstances?*
- 1.5 *How are changing funding models for both practices and academia similar? How are they different? How do they affect outcomes?*
- 1.6 *What are the core tenants of architecture that are common to educators, regulators and practitioners?*

11:40 **Report on the Morning's Discussions**.....**Room: Aspen**

12:30 **Lunch****Hotel Dining Room**

13:30 **Orientation to Conference Theme 2****Room: Aspen**
• Brief presentation on theme 2 papers Myriam Blais

Working Session **Rooms: Aspen / Chamonix**
THEME 2: SCHOOLS AND FIRMS AS EDUCATIONAL PARTNERS.

With change being inevitable, collaboration and partnership play an important role for architecture. We must be prepared to explore new modes of cooperation between schools and practices if we are to improve performance, quality, and maintain excellence in education and practice of architecture.

Discussion Questions:

- 2.1 *What are the opportunities that should be provided to students and interns in order to enhance their learning environments? What is the potential for improvement with respect to said environments?*
- 2.2 *How can we define the respective roles of schools and practices in the education and preparation of future architects?*
- 2.3 *How could the teaching of the necessary skills and competencies be shared between both bodies? Can the transition between the two be improved?*
- 2.4 *What means/tools/metrics will encourage partnerships between schools and practices? How should they be revisited or re-evaluated so that they are flexible enough to adapt to changes and emergent issues?*
- 2.5 *How can schools and regulators cooperate in research, continuing education, etc. in order to be mutually beneficial and foster an appropriate architectural approach for today and tomorrow?*

16:00 **Report on the Afternoon's Discussions****Room: Aspen**

16:50 **Closing Remarks for Day 1**

Evening **Open – Dinner is on your own**

SATURDAY, SEPTEMBER 27TH, 2015

07:30 **Breakfast****Room: Hotel Dining Room**

08:30 **Opening Remarks and Announcements****Room: Matterhorn**

08:45 **Orientation to Conference Theme 3 and 4****Room: Matterhorn**
• Brief presentation on theme 3 papers Colin Ripley
• Brief presentation on theme 4 papers Dave Edwards

Conference attendees are separated into two streams with approximately half working on the topic of Accreditation, and the other half on the topic of Internship.

09:30 **Concurrent Working Sessions**

Theme 3 – Accreditation..... Room: Matterhorn

Theme 4 – Internship.....Room: Chamonix

THEME 3: ACCREDITATION

One of the outcomes of this conference will be a series of recommendations on changes to the conditions of and procedures for accreditation. In light of our discussions yesterday, how would we go forward with a more robust process for accreditation that reflects the needs of the profession in the coming years?

Discussion Questions:

- 3.1 *Broad education including liberal arts remains important for the education of a professional; how can we maintain this foundation while emphasizing specialized knowledge?*
- 3.2 *The Accreditation process, instituted in Canada in 1991, has seen an evolutionary change in Architectural education in Canada. Is the overall model still sound and of value? What are the alternatives?*
- 3.3 *Graduates educated outside of the CACB and NAAB accreditation process continue to be evaluated according to the Canadian Educational Standard (CES). Should this process be reconsidered in light of accreditation? Why? Why Not?*
- 3.4 *The current Conditions for Accreditation reflect a number of input parameters (such as institutional structure, budgets, space needs, staffing, etc.) that reflect typical structure of architectural education at the time the Conditions were written. Given the broader mandate of the conference to examine the evolving needs of and pressures on architectural education, what changes should be considered to the Conditions?*
- 3.5 *Similarly, the Student Performance Criteria (SPC) identify expected levels of ability and knowledge on the part of graduates ready to enter internship. What changes should be considered making these Criteria (simplification, condensing, clarifications, additions) to reflect evolving expectations of interns and changes in the profession?*
- 3.6 *As a result of discussions at the conference, recommendations will be made to the CACB regarding the proposed changes to the procedures for achieving and maintaining accreditation. How might the CACB revise the Procedures to improve the effectiveness and efficiency of the process and consistency of its outcomes?*

THEME 4: INTERNSHIP

The internship program has been considered a key part of the development of a registered architect. It represents the link between education and licensure. As such, educators, regulators and practitioners all have a role to fulfill in order to make it a successful and consistent program for all partners. The intern is central to this mandate.

Discussion Questions:

- 4.1 *How can internship become a better experience for both practitioners and interns and what incentives could be introduced?*
- 4.2 *Who would better administer the internship program to ensure a consistent level of experience – either the regulators/CACB/Schools?*
- 4.3 *How can we provide a more comprehensive support system for mentors and supervising architects to ensure that they fulfil their role?*
- 4.4 *How much structure and regulation should be introduced into the program and at what level?*
- 4.5 *How much should the internship program complement the schools to ensure that the minimum competency standard for architects is achieved?*
- 4.6 *How often should the internship program be reviewed and updated to reflect current trends and practices.*

12:00 Lunch

- 13:00 **Concurrent Working Sessions Continue**
Theme 3 – Accreditation.....Room: Matterhorn
Theme 4 – Internship.....Room: Chamonix
- 15:30 BreakRoom: Matterhorn
- 15:45 **Reporting on Discussions Regarding AccreditationRoom: Matterhorn**
Reporting on Discussion Regarding Internship
Plenary Discussion on Insights from the Accreditation and Internship Report
- 16:45 **2014 Conference – Educating Future Architect – Next Steps..... Ivan Martinovic, Conference Chair**
- 16:55 **2014 Conference – Educating Future Architects – Closing Remarks Branko Kolarevic, CACB President**
- 19:00 **2014 Conference – Closing DinnerRoom: Matterhorn**
- Keynote Speaker Lisa Rochon, Senior Fellow at the University of Toronto's Global Cities Institute

Appendix F: List of Delegates

CANADIAN ARCHITECTURAL CERTIFICATION BOARD AND ORGANIZING COMMITTEE (CACB-OC)

CONSEIL CANADIEN DE CERTIFICATION EN ARCHITECTURE ET LE COMITÉ ORGANISATEUR (CCCA-CO)

| | | |
|-------------------|------------------|---------------------|
| Branko Kolarevic | Ivan Martinovic | David Craddock |
| Sean F. Rodrigues | Odile Roy | Jean-Pierre Dumont |
| Thérèse LeBlanc | Janna Levitt | David Edwards |
| Colin Ripley | Ted Maciurzynski | Kendra Schank Smith |
| Anne Cormier | Myriam Blais OC | |

CANADIAN ARCHITECTURAL LICENSING AUTHORITIES (CALA)/

REGROUPEMENT DES ORDRES DES ARCHITECTES DU CANADA(ROAC)

| | | |
|-----------------|------------------|-----------------|
| Vince Barter | Kristi Doyle | Judy Pestrak |
| Bill Birdsell | Toon Dreessen | David Rich |
| Paul Blackwood | Bernard Flaman | Gordon Richards |
| Paul Blaser | Lynda Hayward | Ben Russo |
| Malcolm Boyd | Mona Jahedi | John Stephenson |
| Alec Brown | Scott Kemp | Ralph Stern |
| Nedra Brown | Rodney Kirkwood | Donald Sterritt |
| Mark Chambers | Ron LeLievre | Silva Stojak |
| Bill Chandler | Lee McCormick | Dale Taylor |
| Karen Chantler | Casey McGannon | Maude Theriault |
| Darryl Condon | Rémi Morency | Spyro Trifos |
| Margo Dauphinee | Michelle Morrell | Janelle Unrau |
| Don Davidson | Shawn Moscovitch | Lyle Weibe |
| Dave Dewling | Denis Nadeau | Kent Woloschuk |
| Nathalie Dion | Róisín O'Neill | |

CANADIAN COUNCIL OF UNIVERSITY SCHOOLS OF ARCHITECTURE (CCUSA)/

CONSEIL CANADIEN DES ÉCOLES UNIVERSITAIRES D'ARCHITECTURE (CCÉUA)

| | | |
|--------------------|-----------------|-----------------------|
| Annmarie Adams | David Covo | Christopher Macdonald |
| Ila Berman | François Dufaux | GianPiero Moretti |
| Marc Boutin | Lucie Fontein | Nicholas Roquet |
| Diogo Burnay | Terri Fuglem | Val Rynnimeri |
| Ted Cavanaugh | Terrance Galvin | Brian Robert Sinclair |
| Yvan Cazabon | Patrick Harrop | Richard M.Sommer |
| Jean-Pierre Chupin | Greg Johnson | |
| John Cirka | Robert Levit | |

CALA-CCUSA/ROAC-CCÉUA

Jonathan Bisson
Erin Corcoran
George Cotaras
Michael Cox
Shelly Craig
Heather Dubbeldam

Frederic Dubé
Maxime Frappier
Eric Gauthier
Karl Gustavson
Gilles Prudhomme
Barbara Ross

Barry Sampson
Peter Sampson

**CANADIAN ARCHITECTIURAL STUDENT ASSOCIATION (CASA0/
ASSOCIATION CANADIENNE DES ÉTUDIANT(E)S EN ARCHITECTURE (ACEA)**

Alexandre Hamlyn
Naveed Khan

Rachelle Lemieux

INTERNS/STAGIAIRES

Afsaneh Asayesh
Ksenia Eic

Beth MacLeod
Brad Pickard

**THE EXAMINATION FOR ARCHITECTS IN CANADA COMMITTEE (CEXAC)
COMITÉ DE L'EXAMEN DES ARCHITECTES AU CANADA (CEXAC)**

James Wagner

NATIONAL ARCHITECTURAL ACCREDITING BOARD (NAAB)

Shannon B. Kraus
Patricia Kucker

NATIONAL COUNCIL OF ARCHITECTURAL REGISTRATION BOARDS (NCARB)

Kristine Harding

KEYNOTE SPEAKERS/ ALLOCUTION LIMINAIRES

Lisa Rochon
James Timberlake

CONFERENCE MODERATOR/MODÉRATEUR DE LA CONFÉRENCE: Groupe Intersol

Kirsten Brouse
Alain Rabeau

CACB STAFF/ PERSONNEL DU CCCA

Angélique Desjardins
Mourad Mohand-Said