



**Morning Plenary | Laying the foundation: Apprenticeship and the skilled trades today | Wednesday, November 5, 2014 | 9:15-10:45am**

***Leaders in workplace readiness share their perspectives on the state of the sector***

*Facilitator: Jennifer Lewington, Freelance Journalist*

*Pat Blackwood, Ontario College of Trades*

*Serge Buy, National Association of Career Colleges*

*Sarah Watts-Rynard, Canadian Apprenticeship Forum*

Please see video



**1A | 21st century toolkit | Wednesday, November 5, 2014 | 11am-12pm**  
***Innovations in teaching technology: Changing the ways apprentices learn***

*Facilitator: Laurel Schollen, Fleming College*

*Doug Daniels, Mohawk College*

*Christopher Hahn, Algonquin College*

*Tina Reed, Contact North*

**Laurel Schollen: What's happening in your institution regarding learning technology and apprenticeship?**

*Doug Daniels:* In 2012, the iPad Project put an iPad into the hands of every student in the co-op apprenticeship program at Mohawk College. It took a year to get the faculty on board. Faculty taught using the iPad with all content on Desire2Learn; everything was online and accessible 24/7. I was able to test students using the device; students sat beside each other and took different tests. I implemented the "flipped classroom."

**Laurel Schollen: How do you approach the people who are not engaged, getting others to do their homework?**

*Doug Daniels:* The lab requirement was really important. If the student doesn't do the work at home, the student will fail in the lab portion.

*Laurel Schollen:* Assigning mentors can be very important especially to motivate students who might not be engaged in the theoretical content of the course.

*Christopher Hahn:* Algonquin College is moving forward with e-texts although we haven't delved into them very far with apprenticeship programs. There are benefits to this technology but also some challenges. There is training required for e-texts for instructors and students. We also utilize gooseneck cameras, and we recently purchased a virtual welder. Sometimes we only think of technology as integrating the internet, however, we use other technologies as well.

**Comment from audience: E-texts are not always available or often only from the big publishers.**

*Christopher Hahn:* The solution is to charge a fee for all learning resources (paper or e-text). There are also open source resources. There are also economies of scale, savings in streamlining resources and collaborative e-texts.

**Laurel Schollen: You touched on simulations, flipped classrooms, blended classrooms. What other tools are you using to support students?**

*Tina Reed:* There are pockets of innovation across Canada. There is the extreme, utilizing POV glasses as well as optimizing existing technologies that are available but perhaps currently underutilized. Gamification is also an important element to engage the new demographic.



*Christopher Hahn:* The Canadian Apprenticeship Forum did a study on the impact of technology on apprenticeship. At the end of the day, people want certification. The most important question is how can technology move people to that goal?

**Laurel Schollen: POV glasses is one thing, what else helps to demonstrate learning outcomes?**

*Tina Reed:* We need investment in the technology that currently exists. This starts by identifying the gap and determining what technologies would work best in filling the gap. An important question is how do we adapt existing technology and how do we assess it?

**Laurel Schollen: Are there specific programs or approaches in supporting faculty using technology?**

*Christopher Hahn:* Algonquin had a training/development program for integrating technology for hybrid learning. Online instruction and resources must be dynamic and interesting. This requires spending time and money. Algonquin is focusing on a sample of courses; what works, what doesn't, working with the faculty in those courses. It's a struggle and it's a long road.

*Tina Reed:* It's important to utilize and share resources. Durham College and Sault College recognize the training need in remote communities. This is being addressed through a mix of online and hands-on learning. Innovative partnerships can address the needs of remote communities. How can we develop partnerships to tap into the technology, share it and assess it?

**Laurel Schollen: How does Contact North prepare faculty?**

*Tina Reed:* We prepare faculty through a mandated training component. A weakness of the training program is that the instructor often teaches very soon after the conclusion of the training session. The instructor doesn't have the opportunity to fully utilize the training and there isn't much of an opportunity to build a high level of engagement.

**Laurel Schollen: Can we equate the simulated training with "real" training?**

*Christopher Hahn:* Yes. A good training person can be effective through simulated training. The skills/curriculum standards can also be fast-tracked to recognize this training. The tool exists as do articulation agreements between schools, however they are underutilized because they require stakeholders to collaborate.

*Tina Reed:* We have a very fragmented system. Something as simple as tracking competencies and skills can be very difficult to navigate.

*Doug Daniels:* Monitoring and tracking competencies is a very important aspect. Are employers tracking these competencies adequately?

**Comment from audience: Fast-tracking might undermine the process of embodied learning.**

*Tina Reed:* Do the four years served result in the same outcomes for all people? No. There are better ways to capture competencies/outcomes than time spent in a particular program.



**1B | Young apprentices: In their own words | Wednesday, November 5, 2014 | 11am-12pm**

***Insights on the decision, the journey and the job***

*Facilitator: Ann Buller, Centennial College*

*Mary Bastien, St. Clair College*

*Steve Hepton, Ontario/Red Seal–certified carpenter*

*Brandon Murch, The Prune/Stratford Chefs School*

**Ann Buller: Today's session is a chance to listen to the voice and heart of the trades. Centennial College does a lot of work to get people to seriously consider the trades and bring their passion and character to the trades. Can you describe your pathway into the skilled trades?**

*Brandon Murch:* I'm currently a cook. I started in grade 9. I was lucky enough to have exposure to four trades in high school. I fell in love with working with my hands and found it broke the monotony of school work. I had to beg my guidance counsellor to let me do a trade because I had good marks. I ended up getting my Red Seal, and now I'm going to study in France.

*Mary Bastien:* I'm currently in a plumbing program. I had high grades in high school and went to university, but it wasn't for me. I like working with my hands, for example around the house. I made a list of trades and researched them, and that is how I found about the plumbing program. I'm the only girl in my program. I find that the stereotypes about women in the trades are more prominent outside of the college than within. My experience has been good, and I'm going to do an apprenticeship.

*Steve Hepton:* My high school offered a high-skills major program. You go to school, then you go to a construction site to build a house. I remained in residential and commercial building. I'm also going to teach level one apprentices at Fanshawe College.

**Ann Buller: You all mentioned some obstacles, like being pushed into going to university. Can you speak more about that?**

*Mary Bastien:* I think college is seen as lesser than university, but it definitely isn't. Dropping out of university is also hard because you are viewed as a failure, and deciding what you want to do instead is hard. It's hard to do what you want to do instead of what people think you should do.

*Steve Hepton:* I did an additional two-year program at Fanshawe to get an extra credential. I also found my apprenticeship through going to college.

*Brandon Murch:* I find a big obstacle is the linearity of the whole process. Even finding information about the process is really hard. A website laying out the whole process would be really useful. In the culinary industry people move between restaurants a lot. It's hard to find employment, and restaurants want you to stay a while, so they don't have a lot of openings. Also understanding the different bodies involved (like the Ministry of Training, Colleges, and Universities, and the Ontario College of Trades) is difficult.

*Steve Hepton:* Even booking my test was hard. There were different bodies involved and they did not talk to each other and couldn't work out their different timelines.



*Mary Bastien:* Finding someone to take you on as an apprentice is difficult. Teachers have told me that people will go out to Fort McMurray and then find that another group of apprentices got there before them and there aren't any openings. Also, getting an apprenticeship with a lot of exposure to all aspects of the trade is even more difficult.

**Ann Buller:** We are touching on a lot of good themes, like streamlining the process, and making a good system that works. How did your parents respond to you wanting to be an apprentice?

*Steve Hepton:* My parents were pushing me to go into construction; they were behind me the whole way and helped me pick my courses.

*Brandon Murch:* I actually had the opposite experience. My parents were behind the guidance counselor, and had an idea that trades are inferior.

*Mary Bastien:* For me it was half and half. My mom was really into it, but my dad wasn't. He just didn't get it, and thought it was for boys.

**Ann Buller:** Steve, you said you are starting a business. We need more entrepreneurs. Tell us about that.

*Steve Hepton:* The College of Trades (COT) is trying to weed out unregulated trades. I'm already registered with the COT. Unregulated workers put a bad name on the industry.

**Ann Buller:** Are there gaps in your training around the skills you will need to run a business?

*Steve Hepton:* My two year program at Fanshawe taught me to manage on-site activity. London has a business centre that will teach you how to write a business plan. They help people to go out on their own.

**Ann Buller:** Is there a myth about the trades that you would like to smash?

*Mary Bastien:* People think of the trades as dirty work, but that is not the case in a lot of options. People think that it's only for strong people, but it's not.

**Ann Buller:** There is this old stereotype that it's only about the brawn and not about the brain, but it isn't. There isn't anything you do in your program that doesn't involve thinking.

*Steve Hepton:* There is a lot of math involved.

*Mary Bastien:* You are using critical thinking skills constantly. For example you are constantly measuring to get things exact.

*Brandon Murch:* Cooking is a lot harder than you would think. You're spending 12 hours a day in a hot kitchen. There is a myth that it is easy, but it isn't. People should test it out first to see what it's like.

**Ann Buller:** Seeing the choices you've made and the passion you have, what is your dream job?

*Brandon Murch:* I would love to open a restaurant in the country. This is something I am passionate about. I would look at that and be happy about it, even if there isn't as much money in it.



*Mary Bastien:* I'm not sure yet. For example I'm not sure if I would prefer to work in a unionized or nonunionized workplace. But I'm definitely going into this trade, especially considering the upcoming skills gap.

*Steve Hepton:* My dream would be owning my own company and supervising people. I've always done well in school and I'm really interested in teaching, so maybe I would work the summers and teach during the year.

**Question from audience: The three of you are role models and you are breaking stereotypes. You are very committed and passionate. How would you change the view that if someone has good grades they have to take the university route?**

*Steve Hepton:* It would help to let students see people who have gone this route, maybe through their guidance counsellors. It would help to have people who have done apprenticeships speak with the students and higher-ups at high schools.

*Mary Bastien:* A lot of schools are focusing on technology, but the skilled trades are still there and are needed so that should also be discussed.

**Question from audience: Would you recommend a two-year college program before doing an apprenticeship or would you recommend going directly out of grade 12?**

*Steve Hepton:* From my own experience of doing postsecondary education, I would go to college first. You're just putting your career on hold for one or two years. Get that credential, and then go into the apprenticeship.

*Mary Bastien:* I have more knowledge since doing some university but in the end it's really up to the individual. If you know what you want to do, go for it. But if you have the time I would agree with getting the extra credential before doing your apprenticeship.

*Steve Hepton:* For me in a non-compulsory trade, doing one year of work really helped me know more before starting the trade. I knew more about the job, and experienced less culture shock when starting.

**Question from audience: Would it be value added to include entrepreneurship training in an apprenticeship?**

*Steve Hepton:* It would be too much to handle. You have so much to focus on when doing an apprenticeship. I would say focus on your trade and get that in order, then start thinking about the business side.

*Brandon Murch:* I agree. Get your technical skills down first. But maybe an introduction to basic business concepts would be useful for some people.

*Mary Bastien:* It might be helpful as an option but it might not be useful for everyone's career aspirations.



**Question from audience: Would you talk more about that year in high school where you were exposed to four trades? Can you also talk about how you identify as a tradesperson in your life?**

*Brandon Murch:* In the high school program you did a unit on the basic principles of each trade, enough to get your feet wet.

*Mary Bastien:* In terms of identifying as a tradesperson, I'm confident and proud of it. I definitely wear it with pride. Sometimes people are a bit surprised or they don't expect it when they first meet me, but then they are really supportive and congratulate me.

*Steve Hepton:* I'm doing well, especially in comparison to others at my age. I don't get looked down on as a tradesperson. I'm the one my friends go to for fix-ups in their house.

**Question from audience: Are there any women in your classes?**

*Brandon Murch:* It's very minimal. I would be interested to see if the number of women in my trade has increased with the push from government. About a third of the apprentices were women at my workplace.

*Steve Hepton:* There are only a couple females in my program and no women in my apprenticeship. I'm not sure why, maybe it's the stereotypes. In the design aspect of building there are more women, so women are entering the industry but not so much the hands-on part.

**Question from audience: Brandon, you hinted at the fact that you had trouble finding an employer. What is your pitch for finding an employer?**

*Brandon Murch:* In the culinary industry you essentially work for free at first. I've done it a few times. You have to show them you are a good worker and get in that way.

**Question from audience: What skills did you lack when doing your apprenticeship?**

*Steve Hepton:* For me it was to try to learn everything. I'd advise staying with the same employer and try to touch on as many aspects of construction as possible. I've seen people only do one thing and really struggle, especially when it comes to the exam.

*Brandon Murch:* I would second that. Moving around to different restaurants would help expose you to different people and styles, and you learn a lot that makes you a more knowledgeable chef.

**Question from audience: Brandon, can you expand on the conditions of your apprenticeship?**

*Brandon Murch:* My apprenticeship was structured into working blocks. You go to school, find employment for eight months and apply the skills that you learned.

*Steve Hepton:* The two-year program I took wasn't an apprenticeship, it was just postsecondary education. My apprenticeship was three terms. My entire first year of the apprenticeship was granted as I did the high school program and had two years of postsecondary education.



**Question from audience: If you could design a program for youth who are in high school, would kind of program or services and support would you provide?**

*Steve Hepton:* I'd go with the high-skills program I did in high school (my school was the only high school in London to offer it). There are only a few programs like this in Ontario. It would be good to have more, or at least to increase awareness of the current programs.

*Brandon Murch:* A German-style program where half of your week is not in school would give high school students exposure to trades and let them get their feet wet.

*Mary Bastien:* Maybe you could have trades people come in to the high school or even before high school to speak about their careers, so kids are aware of the trades from a young age and they see those options. This would be especially helpful for trades that people don't know much about.

**Question from audience: When was that moment when you realized, this is the thing for me?**

*Steve Hepton:* Since I was a little kid playing with Lego. When I was ten I was making tree forts. When I was around 10 or so I really knew I liked building.

**Question from audience: We know that only 50% of apprentices complete. Why do you think that is?**

*Brandon Murch:* For the culinary industry is it non-compulsory so a lot of my peers didn't see a reason for doing the Red Seal. However, the \$2,000 was a big incentive.

*Steve Hepton:* I was working with a union, and there were a lot of lay-offs after I entered, so I know people dropped out just because the work wasn't there.

**Question from audience: Do you think the supports are there for young people to access apprentices?**

*Brandon Murch:* Once you hear about them they are really good. You can get \$4,000 for completing your trade, which offsets a lot of the costs.

*Steve Hepton:* There is also an incentive where you get a \$400 interest-free loan to pay for tools.

*Mary Bastien:* There are lots of grants available in my program. We had someone from the apprenticeship office come to the college to talk about what is available. There are a lot of posters around the college to let you know there is money out there.

**Question from audience: Who helped you most along the way?**

*Brandon Murch:* Mentors from the school and apprenticeship helped me navigate the system. Even looking online it's difficult to navigate this.

*Mary Bastien:* People in my family supported me a lot, and the college is very helpful.

*Steve Hepton:* Fanshawe College was helpful in connecting me with people to talk about the apprenticeships.



**Lunch keynote | Bryan Baeumler, Leave it to Bryan | Wednesday, November 5, 2014 | 12-1:30pm**

Please see video



**2A | Inside job: Employer training | Wednesday, November 5, 2014 | 1:30-2:45pm**

***Employer training: What do they think they're doing?***

*Facilitator: John MacLaughlin, Essential Skills Ontario*

*Sarah Ayres Steinberg, Center for American Progress*

*Rachel Pineault, Detour Gold*

*Tracey Shepherd, Ontario Refrigeration & Air Conditioning Contractors Association (ORAC) and UA Local 787 | Joint Training and Apprenticeship Committee (JTAC)*

**John MacLaughlin: Can you describe some important lessons from the U.S in terms of apprenticeship?**

*Sarah Ayres Steinberg:* South Carolina launched an apprenticeship program and expanded the number of employers offering apprenticeships by 600%. This started with the projected skills needs in the state and the case was made that apprenticeships were an underutilized tool. The state legislature passed a tax credit and created Apprenticeship Carolina, which acts as a marketer and intermediary between the colleges, employers, government, etc. They now have apprenticeships in other sectors like health care and IT.

*Tracey Shepherd:* I think there's more of a skills mismatch rather than skills gap. We're seeing a lack of skilled applicants, not a lack of applicants.

**John MacLaughlin: As an employer Rachel, what do you think about the skills gap?**

*Rachel Pineault:* We focus on getting ahead of any gap. We have mass exodus of experience and education coming up the pipeline, if you look solely at the apprenticeships and the trades. We go into the schools quite early, talking about working with us as a career. We're very socially responsible, very environmentally responsible. Is there a skills gap? Yes. We should be elevating the jobs, careers and positions of tradespeople and apprentices.

**John MacLaughlin: When it comes to workplace training, Canada and Ontario lag behind international counterparts. How do we get more employer based training and is it important?**

*Tracey Shepherd:* Being a part of the union, everyone needs to be registered. Contractors know that this is how they need to move forward.

*Sarah Ayres Steinberg:* Getting employers on board is a challenge. If buying talent doesn't work, the atmosphere is ripe for apprenticeship. There is a need to focus on marketing apprenticeships and helping employers set up programs.

One piece of advice to make systems more functional is to have a strong intermediary that serves to connect the employer with the other stakeholders. The intermediary reaches out to businesses, maps out the skills that businesses need, connects with the technical college to write the standards, helps employers recruit and fills out the paperwork. By doing this, intermediaries make the process very easy for the employer. Anytime you can make a process easier for a student to get through to an employer, the system will work better. The earlier you can connect the student to an employer, the more success.



*Tracey Shepherd:* I have one piece of advice: financial incentive. It's natural attrition. Employers realize that they need to recoup what they're losing. The pending retirements of some of us is the change agent.

**John MacLaughlin: Do you see skills from the younger generation?**

*Tracey Shepherd:* There's a commitment gap and a development gap. Employers are afraid that if they develop the talent, there is poaching. This notion of poaching is a reason not to invest in people.

*Sarah Ayres Steinberg:* Employers invest about half as much in training than they did 10 years ago. Poaching is a concern. Why would I want to go to another company when this company has invested so much in me? By sponsoring apprenticeships, investing in people, employees are more committed. Retention increases. Also assuming that an employer isn't recouping their investment, retention agreements can also play a role.

**An exploration of quality and standards**

*Facilitator: Josh Hjartarson, Ontario Chamber of Commerce*

*Erin Johnston, Industry Training Authority*

*Joseph S. Mancinelli, Labourers' International Union of North America (LIUNA)*

*Raymond Massey, Alberta Apprenticeship and Industry Training Board*

*David H. Tsubouchi, Ontario College of Trades*

**Josh Hjartarson: Why do we need regulation in the skilled trades? In a context where youth unemployment, barriers to entry, and mobility are concerns, what is the business case for regulation?**

*David H. Tsubouchi:* We can agree that excessive regulation is bad, but we need some regulation. We can't do this kind of work without some regulation. When the College of Trades inherited all the regulation from the Ministry of Training, Colleges, and Universities there was a difference between regulation for trades and for apprentices. I'm a fan of a balanced regulatory arena, something that protects the public and the employee.

*Joseph S. Mancinelli:* There is a danger of overregulation. Public safety is important, but regulation can prohibit people who have been working in an industry for years.

**Josh Hjartarson: What best practices can you offer?**

*Raymond Massey:* Overregulation is an issue, but we also hear that employers want to know that the people they hire have standards and quality skills. So some regulation is needed, but overregulation is a danger. What we've done in Alberta is introduce a prior learning assessment and structures that allow mobility between trades. We have trades-to-degree programs where the student gets advanced standing in a degree program. We've allowed for that laddering and mobility, and this is one of the best practices I would recommend.

*Erin Johnston:* British Columbia has the benefit of going from a regulated to deregulated model. Currently in British Columbia there are associations by trade. Most trades have some form of regulation though their own association. The Industry Training Authority (ITA) issues the certificates but has no input into regulation of the trades. When we look at data from before and after deregulation, rate of accidents decreased after deregulation. Safety is still protected. We saw safety improve after deregulation. In terms of investing in training, it's a topic across the country. Regulation could be a barrier to entry. We are really trying to get more young people into trades, so introducing compulsory trades would actually be a barrier to entry. Research has shown that introducing more compulsory trades isn't linked to higher quality.

**Question from audience: A problem is people want a liberal market economy, but on the other hand we have a skills mismatch. Is it a problem to do with apprentices per se, or to do with the definition of occupations?**

*Joseph S. Mancinelli:* We are advocating for having a broader range of trades. Why not have a lot of different skills that are regulated?



**Comment from audience: I'm not in favor of skill sets because I think it leads to fragmentation. In Australia we use the term "occupational streams." I'm an advocate for families of related occupations, for example training people for 'care work.' If we have a broader understanding of what an occupation is that could help with addressing the skills gap.**

*Raymond Massey:* In Alberta we believe in broad-based training. We need to prepare people for tomorrow.

*David H. Tsubouchi:* The definition of scope we inherited from the Ministry of Training Colleges and Universities is messy, and based on training manuals. We need to look at how we can simplify the apprenticeship process. We need a road that gives apprentices assistance along the way. We need to work with the colleges, unions, and businesses. I think this is really important. Only 20% of businesses who could take on apprentices do so. We need to work with businesses. The College of Trades has agreed to work with the Ontario Chamber of Commerce.

**Josh Hjartarson: You raise a good point. One of the profound issues in Canada is that employers view the labour market as a public good that the government provides. The Chamber of Commerce is looking at this, and is trying to look at this more as a collective good rather than a public good. Where do you see your organization's role, and what steps you are taking specifically to skill-up the workforce?**

*David H. Tsubouchi:* We have created a lot of alliances. There are a lot of things we need to overcome to get people to value the trades. Skilled trades are a form of higher education. We need to get people to value them. We are working with various groups to promote validation of the trades, and to bring a formality to them.

*Erin Johnston:* In May of this year the Government of British Columbia released the Skills for Jobs Blueprint. The ITA was tasked with realigning training for demand. We set up Sector Advisory Groups for developing training delivery models and policy recommendations in 10 sectors. British Columbia used to have Apprenticeship Field Advisors. They were cut but are being reinstated with the focus of looking specifically at completion. Current work is focusing on completion and youth, starting in kindergarten with "Maker Days." This is one way to show teachers how they can bring skilled trades into the classroom. We are creating a simple guide for parents, guidance counsellors and students to show them the pathway to an apprenticeship.

*Joseph S. Mancinelli:* This is by far one of the most important issues our organization faces. We are trying to get high schools to promote trades but it's an uphill battle. One thing we have done that has been successful is reaching out to the Armed Forces through an initiative called "Helmets to Hardhats," which appeals to the culture of discipline within the Armed Forces. However there is still more work to be done.

**Question from audience: There are upcoming changes in the way the Atlantic provinces will be handling their issues as they are moving towards harmonization. Does harmonization work for Canada? How would this work in other parts of Canada? How would it affect employers?**

*Raymond Massey:* That is quite an onion you brought up. There are a lot of layers. At first, harmonization seems like a good idea but there are a lot of issues associated with it. However, it's possible to do similar



things. For example, establishing a common language for block training and the hours associated with training. This is particularly a problem in the classroom portion of training. Another challenge is that a large portion of training funding is from the provinces. If this is about labor mobility, what are we going to do to make that happen?

*David H. Tsubouchi:* I agree. There are things we are work on. A challenge is harmonizing the hour requirements. This needs regulatory change, and it can't be done overnight. Common language is something we are working on.

*Joseph S. Mancinelli:* Our organization has been successful in creating the Red Seal nationwide, so we have some standardization. The federal government was at one point involved in training programs. Now it is at the provincial level. This is the time that support for training and standards is needed at the federal level.

*Erin Johnston:* We support harmonization. However, the challenge is where there are compulsory trades, harmonization really limits mobility because British Columbia doesn't have compulsory training. This makes it hard for tradespeople in British Columbia to move.

**Josh Hjartarson: So we all agree that harmonization is good, and that we need to work on it. Can you give any advice as we rethink the Ontario model and the need to get more people into the skilled trades? What have you learned through your work?**

*Erin Johnston:* We need harmonization and consistent guidelines across the country. Having 13 jurisdictions under the Canadian Council of Directors of Apprenticeship and the Red Seal is too complicated.

*Joseph S. Mancinelli:* We need to differentiate skills, and regulations should take this into account. Grandfathering is also an issue. For example in construction, people have been working for years and still have challenges getting certified. How do we grandfather them in? Enforcement needs to be fair and take into account past practice.

*Raymond Massey:* Alberta is facing some labor challenges. We need to collaborate internationally to increase labor mobility and we need to reduce the barriers and push apprentices past the first year of training (after year 1 there is an 80% completion rate). We are engaged with industry to get them to invest in human resources (entry level particularly). We need to change the mindset of people to get them to look at apprenticeship as an investment rather than a cost.

*David H. Tsubouchi:* Colleges are important partners in the assessment piece. Enforcement officers are trained, knowledgeable and experienced in the trades. We don't want to sanction.



**3A | Skill testing question: What (skills), when and why? | Thursday, November 5, 2014 | 3-4pm**  
***Exploring the necessary skills for success in the workplace***

*Facilitator: Alastair Davis, Habitat for Humanity Niagara*

*Robert I. Lerman, Urban Institute & American University*

*Anthony Mann, Education and Employers Taskforce (UK)*

*Gail Smyth, Skills Canada – Ontario*

*Robert I. Lerman:* The first thing we need to grapple with is what we mean by skills. Employability skills? How do skills work? There isn't a sense of whether it's skills that develop over time or expertise that develops over time. At the world at large, there is still a very strong orientation toward the academic only approach to skill development.

**What do employers really need now and going into the future?**

*Robert I. Lerman:* They want someone to show up on time. They want occupational skills for tasks. They would like to see someone grow with the business, yet on the other hand, practical experience is still critical.

*Anthony Mann:* There is a growing gap between employers and education. Youth unemployment is an issue: The ratio between the unemployment rate of young people and the unemployment rate of older people. There is a youth penalty emerging. Young people have never been more qualified. Employers are turning away, choosing to hire older workers. This speaks to questions around a skills mismatch. The labour market is getting more and more complex. When you're a young person, you're making investment decisions in time, training, education. If you're going to make an investment decision you need good information. Do we equip young people to be able to navigate a global economy? The labour market has changed and education needs to catch up. The world economy no longer pays people for what they know but what they can do with what they know. This is what employers are looking for and this speaks to an applied style of learning.

*Gail Smyth:* I think employers are looking for employees who are willing to learn and who have a positive attitude.

*Robert I. Lerman:* The apprenticeship way of thinking is much different than the academic way of thinking. Completing an apprenticeship conveys a sense of pride and contribution to a community. As we're thinking about apprenticeship remember the youth development angle, the pride angle.

In Switzerland, the apprenticeship completion rate is 91%. Apprenticeship is widely respected. Sixty-one percent of apprentices did apprentice at the company where they now work. Cultures are different in different workplaces. It's important to give young people time to try out places.

*Anthony Mann:* There is a consistent weakness in students' math and English skills. The students that are encouraged to go into apprenticeship are encouraged because they do have weakness in math and English and maybe lack the maturity to show up on time.

A positive cultural attitude about the trades starts in elementary school and starts at home.



**3B | Apprentices without borders: Improving mobility | Thursday, November 5, 2014 | 3-4pm**  
***Breaking down the walls for greater mobility and coordination between provinces***

*Facilitator: Jay Peterson, Ontario Sheet Metal Workers' & Roofers' Conference*

*Catherine Scott, Employment and Social Development Canada*

*Christopher Smillie, Canada's Building Trades Unions*

*Serge Viola, Purolator Inc*

**Jay Peterson: Let's start with some opening comments. What brings you here?**

*Serge Viola:* Purolator has 13,000 employees. What I am responsible for covers all of the licensed trades (quite a big group). We are having difficulty in recruitment, so mobility is an important issue to us.

*Christopher Smillie:* Canada's Building Trades Unions represents all skilled trades folks on the unionized side. From a national perspective, training, apprenticeship and mobility are linked. It's about training labour at the right time and with the right skills. In 'the role of the regulators' session I asked a question about a harmonized national system because that could certainly make our jobs easier. What I'm going to talk about today is the need for flexibility. We are looking for a system that is flexible and mobile so we can fulfill our contractual agreements with employers.

*Catherine Scott:* My responsibilities at Employment and Social Development Canada involve working with our partnerships in implementation of Chapter 7 (of the Ontario College of Trades and Apprenticeship Act). We worked with provinces and territories to coordinate the Red Seal program. I think the issues of mobility and harmonization of the system are the biggest questions stakeholders have brought to the table.

**Jay Peterson: We have a lot of experience and perspective here. I want to expand upon why mobility is important.**

*Serge Viola:* Let me step back. Today we work with a lot of technology. It is getting harder to hire skilled workers. The more standardization we can have would help workers be more mobile.

*Christopher Smillie:* Construction workers are mobile. Their work is temporary and tenuous (you are essentially working yourself out of a job). Why is mobility in apprenticeship important? Because the workforce is mobile. For example, a carpenter in New Brunswick in the second year of their apprenticeship training gets a job in Alberta and they are seven months in. They get a letter saying when their in-class training is. They would need to quit their job and return to New Brunswick to do the in-class training. Why can't we have a system where they can take that training in Alberta? Apprentices should be able to take the courses where they are, because the learners are mobile. The issue is the delivery of the in-class portion. It needs to be mobile and flexible.

*Catherine Scott:* I mentioned that we managed the implementation of the Red Seal program which covers 57 trades. It has been going on for almost 60 years, and was based on recognition that mobility is an issue. The Red Seal introduced pan-Canadian exams. There are broader challenges now where apprentices are doing their work portion in other provinces. There is still a great variation and difference between the



provinces. We talked with the provinces and territories. We were also approached by industry who said this is a big issue. The Canadian Council of Directors of Apprenticeship began a project where they picked 10 Red Seal trades and looked where they could do a better job at aligning. They asked questions like: Can we agree on hours? The names? The sequencing of in-class training? (This is one of the greatest challenges). Now we are looking at what the impacts would be if we implemented this. There is a demand for standardization, in part because this would give a greater degree of certainty to employers.

**Jay Peterson: How do we move this agenda forward, and who should be in that room, maybe regarding some of the trades that aren't compulsory?**

*Catherine Scott:* There is recognition that we need all the players in the room and consultations are needed. A broad array of stakeholders is engaged in this process.

*Serge Viola:* Employers need to be a part of that conversation.

*Christopher Smillie:* At the end of the day it's about the political will to move these things forward. The provinces need to speak to the federal government. Colleges also need to be at the table. At the end of the day a few things could be done easily to improve the system. In a trip with Jason Kenny to Europe we saw a few things Canada could easily implement. In Germany journey people are not the only ones doing the training. Federally funded trainers are also on site. Are we making sure we are transferring knowledge appropriately from masters to apprentices? This has to do with the mobility piece as these trainers would have to have knowledge of the skills required across jurisdictions.

**Jay Peterson: How can colleges and universities get involved?**

*Christopher Smillie:* Pre-apprenticeships programs aren't necessarily linked to the apprenticeship program. In a perfect world no one would be taken in if they weren't guaranteed a job at the end. In Germany there aren't any programs without an employer at the end saying, "yes, I want to hire you." So if there were employers involved in these pre-apprenticeship programs that would be an improvement. These pre-apprenticeship programs aren't linked to employers. We need a stronger connection to industry and it should relate to future local demand in order to be most effective.

*Serge Viola:* Purolator is working on developing a program with a college to hire graduates from a trucking program.

**Comment from audience: Regarding mobility, regulation can be a barrier. However data show there are economic and socioeconomic barriers associated with moving for a job opportunity.**

*Christopher Smillie:* Before you become an employee of a construction company, relocation is currently on you. You have to travel there yourself. The construction industry is pushing for a tax credit and incentives to help people get to where the work is. When we are thinking about industries that are important to the development of our country, we have to make it easier for people get to work.



**Question from audience: Metrolinx is an example of a community benefits agreement where the contractor will have access to local apprentices. The idea is that we are using public dollars for public good. Is that a way we should go?**

*Catherine Scott:* The federal government is doing things around using procurement budgets for public good. Bidders on federal contracts have to agree to hire apprentices to do that work. Currently we are doing work to better understand what the hiring practices are of the contractors who bid on federal procurements. We are trying to answer the question: Can we use our procurement practices as tools to support apprentices?

**Comment from audience: A hurdle for the mobility project will be the funding. The provinces are funding the seats and are mad that they are funding a student that is going to work elsewhere.**

*Catherine Scott:* Funding is devolved by the federal government to the provinces through Labour Market Development Agreements. My sense is that is that the provinces will have to show outcomes and results in order to continue to receive federal funding.

**Comment from audience: Let's be frank, the programs are about 85% harmonized already. I believe that all the provinces are committed to apprenticeship mobility.**

*Serge Viola:* Some 40% of our trades group is retiring so apprenticeship success is very important. Having the opportunity to move people around the country to train other people is imperative to us.

*Catherine Scott:* I think this is an important file. Right now there is a lot of political attention on this issue.



**Morning keynote | Robert Watt, RJW-Gem Campbell Stonemasons Inc | Thursday, November 6, 2014 | 9:05-10am**

Please see video



#### **4A | Partnerships: Earning while learning | Thursday, November 6, 2014 | 10-11am**

##### ***Effective strategies between the workplace and postsecondary education***

*Facilitator: Ryan Whibbs, George Brown College*

*Barbara Endel, Jobs for the Future*

*Mike Ouellette, Valiant Machine & Tool Inc.*

*Barbara Endel:* Nearly half of the workforce in the U.S. has some sort of deficiency around literacy or numeracy. This deficiency is being called our silent crises. I-BEST, the Integrated Basic Education and Skills Training Program, is a model for academically underprepared adults. The model co-enrolls students who gain foundational skills while completing job training. Through this integrated career pathway, students move more quickly through their studies and training. The data show that 40% are getting a credential.

*Mike Ouellette:* Valiant Machine and Tool Inc. provides a rapid training session for incoming employees that is 46 weeks long. These employees often come from high school or are underemployed in the community. Three weeks of training takes place in the classroom. There is mutual respect between the trainers and the students. This generation of people is different. They're impatient, hungry for knowledge and excited to learn new things. This learning builds their confidence.

We teach safety and technical math in the classroom. We also teach some communication skills. We teach blueprint reading and mathematical formulas. What's unique about this program is that we run it like a job. These employees are trained for 40 hours per week. They get paid \$12/hr to start, they get benefits and they have a pension.

Not everyone needs to go to university or should go to university. There are a lot of people out there who don't want to go to university but have a lot of talent. I have young single moms who are operating computerized machines after 6 months. I'm trying very hard to bring women into the trades.

##### **Ryan Whibbs: What motivated you?**

*Barbara Endel:* There aren't that many models that bring students' skills up to par in a contextualized environment. Contextualized instruction is very important. We provided a lot of professional development to instructors. We even brought in real practitioners who had gone through the model. We use team teaching and initially had instructors who weren't happy about having another teacher in the room. Over time, the instructors have found team teaching to be effective and enjoyable. Team teaching has really made a big difference.

##### **Ryan Whibbs: Mike, how did the program go from conception to implementation?**

*Mike Ouellette:* We knew that we were going to be losing people to retirement. We needed to find a way to fast-track unskilled workers into skilled workers, people who could operate the equipment properly.

##### **Ryan Whibbs: What are three key tools required to build effective collaborations?**

*Mike Ouellette:* Focus, discipline, mutual respect.



*Barbara Endel:* Being open to innovation, a belief in students that need skill building and a culture of continuous improvement.

**Ryan Whibbs: What are some barriers to innovation when it comes to collaboration like this?**

*Barbara Endel:* People are busy and they think that what they're doing right now is adequate. How do we systemically transform underprepared learners in a timely way? There are 93 million people in the U.S. with sub-par literacy and numeracy skills.

*Mike Ouellette:* The biggest challenge is fast-tracking the apprenticeship program. Young people are very impatient and willing to learn in a shorter time frame than previous generations. It would be ideal to shorten the apprenticeship length to three years of compressed training. We need skilled tradespeople today, not 10 years from now. The 18 hours per week that students spend studying in colleges should be 40 hours per week. We need to convince the government that we can do apprenticeship in three years. Because the nature of the work has changed due to technological advances, the training time should be shorter.

*Barbara Endel:* The biggest challenge is students who drop out from apprenticeships. It's a challenge to determine what people need and at what time, in order to retain them.

**Ryan Whibbs: What is the financial sustainability of these programs?**

*Barbara Endel:* I wish we had Bill and Melinda Gates funding in perpetuity but we don't so we're using a braided funding toolkit. We're doing an assessment of all of the streams of funding that are available. People are already putting money into programs, so we hope to re-allocate existing funding. Micro grants to colleges are also effective as evidenced in the state of Illinois.

*Mike Ouellette:* It's a simple formula. It really doesn't cost that much to train people. It costs \$50,000 to train people for 46 weeks. We're trying to turn this training program into a trade school. We're looking at how to offset the cost. Partnerships between industry and schools are key. Industry can support training centres by sending their extra work to these programs.

**Ryan Whibbs: How do we ensure that students aren't feeling overwhelmed during a compressed program and that quality isn't compromised?**

*Barbara Endel:* In the I-BEST program, students don't have a full course load. We find that by giving a proper load at the beginning, we're able to keep the student over the long term.



**4B | Women in the trades | Thursday, November 6, 2014 | 10-11am**

***Knocking down walls***

*Facilitator: Terry Weymouth, Chrysler Canada*

*Nan Armour, Hypatia Association*

*Tammy Evans, Canadian Association of Women in Construction*

*Alex Johnston, Catalyst Canada*


**Terry Weymouth: Why are there so few women in skilled trades?**

*Alex Johnston:* It's a common issue in any sector where there is an underrepresentation of women. Women aren't choosing the sector to begin with. I see three reasons. There is a lack of mentoring. There are feelings of being an outsider. There are also unclear evaluation and advancement criteria (the unwritten rules can be as significant as written rules).

*Nan Armour:* I started asking these questions in the 1960s and 1970s. The answers are first of all very complex. The major challenges of women are always tied up with the systemic barriers they face. Let's make it clear, the women are just fine, it's the systematic barriers that are the problem (such as gender roles stereotyping, and notions of some work being suitable for women, and some not.) We are talking about major systemic and cultural shifts. We need to look at attitudes about the work of women, and examine the culture that goes on in training institutions and workplaces to make them encouraging for women to come in and stay. It's not easy, there is no quick fix. I applaud the employers in this room that have women in their workplaces and are attempting to address these issues.

*Tammy Evans:* These issues start in grade school through gendered play that reflects ideas of appropriate gender roles. At the Canadian Association of Women in Construction we are working on changing the language of how we speak about the trades, and removing the gendered language to talk directly about the skills. Technology has advanced far faster than our perceptions of what is 'girls' work' and what is 'boy's work.' We are trying to start at elementary school and change the language. This is a global trend of genderizing roles in society. Construction is one area we have to pay attention to, but it's everywhere.

*Alex Johnston:* Our organization does research to understand the systemic barriers and address them. There are some examples of companies working to address these issues. For example, an executive at Shell introduced an initiative to increase the representation of women in one of their trades to 30% and they are currently leading in the representation of women in that trade. The idea behind the initiative was to focus on talent, not gender. Support from company's leadership is important too. For example, the global CEO for Alcoa (a materials manufacturer) set goals and targets around the representation of women in their organization, and tied these goals to executive compensation (10% of salary was tied to reaching the goals). Another strategy is to put women in leadership roles where they are traditionally underrepresented, as a way to shake things up. Actions like these are needed in order to have a culture change. In the end we want to make sure we are capitalizing on the right talent.



*Nan Armour:* We are able to bring to the table the voices of women. We talk to a lot of women; we hear about why they went into the trades why they didn't, and why they left. That information is important. And we can bring it to the conversation and to employers. We also talk to employers and we can hear their concerns and help them address gender inequity issues in their workplaces.

*Tammy Evans:* I'll talk a bit about the challenges I faced in my own career as a tradesperson. I started in construction when I was 14, operating a one-ton digger. That was my entry point into a world I would never leave. I'm a 'dirt lawyer' now, construction lawyer. I had a general contracting firm in Ontario before continuing in law. A challenge back when I was in Montreal is there was too much work. Because there was such a need for work the gender issue didn't exist. But when I came to Ontario the whole world changed. There were fewer women in construction in Ontario. Almost no women were actually 'on the tools.' In Ontario it was a challenge being a 5' 2" young woman trying to tell these big beefy guys what to do. I had to be quite assertive at times. For example, I got fed up with the girly pictures in the trailers. I told the foremen it needed to change, and the next day I gave them some boy pictures. It takes a little bit of making people uncomfortable to create change. This makes people pay attention. That is what CAWC is trying to do. We are also trying to make sure the employers are engaged. We work with them to make their own action plan that recommends to the industry measurable steps they can take to improve.

**Terry Weymouth: What are some strategies you use to attract women to the trades?**

*Nan Armour:* There is no quick fix. One program we have is called Women Unlimited. It's in its 10th year. We've had almost 500 women go through the program. Each year a group of women comes in and we work with them through their decision making about what trade they want to go into, and we work with employers to get them into an apprenticeship. We also work with the employers around workplace equity. We have a formal contract with the community college. The first part of the program is crucial. In particular the recruitment of the women is a very important part for us because we don't want to set them up for failure. We want to make sure they have thought things through and know this is what they want to do, as well as have the requirements to enter community college system. We are very intentional about going to where the women are, in the community center, the laundromats, the daycares. Our average participant is in her 30s. Most are single mothers. Most have work experience, usually in low-paid clerical or service jobs, and they are looking for something else but they can't afford to leave their job to go train. We work with the folks doing social assistance and employment insurance to make sure the women get all the paper work done and have things like child care covered. We are also very intentional about diversity within our group. From 40-50% of our participants are ethnically diverse. If needed, the women can do a preparatory program before going to the college. When they finish the preparatory program they are guaranteed a seat with the college (even if the program is full), which is a very important piece of our agreement with the college. With this program we have doubled the enrollment of women in the trades program at the college.



**Terry Weymouth: What are your thoughts on the idea of the “pinking the trades”?**

*Nan Armour:* “Pinking the trades” is a marketing strategy, not a recruitment strategy. It is a strategy to sell stuff, it doesn’t encourage and retain women in the trades.

*Alex Johnston:* I don’t like the term at all. However, we do talk with organizations about making sure at every level there are strategies for recruitment. Internalized notions around gender and race stereotypes play out all the time. I think ‘pinking the trades’ diminishes the role of women in the trades.

*Nan Armour:* Many have a good understanding of the challenges and the strategies but we have trouble putting these strategies into place. It is challenging to walk the talk. Partnership has helped our organization walk the talk. We work closely with employers. Meaningful collaboration can help to develop effective strategies.

*Tammy Evans:* There is a difference between selling products and getting women into the trades. “Pinking the trades” works against women and what we are trying to do, which is neutralizing the trades and the language. It’s ok to have products for women, it doesn’t matter what women wear on the job, it is about getting the job done. We need to be careful and mindful about this. Yesterday I was presented with a pink metal rose, but why does it have to be pink? It does not need to be pink to make it more appealing to the female its being given to. We have to pause and think about these things. I’m not a professional skilled trades woman, I’m a professional skilled trades person.

**Comment from audience: There is discussion about schools not being aware of the gender issues in the trades. When I was learning to use power tools I found them so heavy and found it intimidating. Then I found out about a company in the states that makes tools for women.**

*Tammy Evans:* There are companies that make smaller tools. It has nothing to do with gender it has to do with the tools. The technology has changed and improved over time, so now there are different sizes of tool.

*Alex Johnston:* For me the point about tools isn’t necessarily about the tool, it’s about making an inclusive workplace. It’s about seeing yourself fully reflected in the workplace. For example I just discovered that until recently there were no pilot uniforms designed to fit women, but the pilots didn’t feel comfortable saying anything about it. I find that inclusive leaders have a similar characteristic: they speak out when they see something uncomfortable.

**Question from audience: I wanted to touch on your idea of women in leadership roles. Is it a bit contradictory focusing on getting women into leadership, but not about on the tools on the site?**

*Alex Johnston:* There are barriers on the ground where women feel like they don’t belong or are not reflected in the workplace. We need to have women represented so they can see trades as a viable option, so both men and women can access these good jobs, and 50% of the talent pool is not excluded.



**5A | Apprenticeship completion: Benefit or barrier? | Thursday, November 6, 2014 | 11:15am-12:15pm**  
***Examining apprentice completion rates and the consequences for students and employers***

*Facilitator: Errington Charlton, Ontario Ministry of Training, Colleges and Universities*

*Stewart Kallio, Kallio Consulting & Literacy Northwest*

*Harry Krashinsky, University of Toronto*

*Christine Laporte, Statistics Canada*

*Stewart Kallio:* My work relates to trying to help under-represented groups get into trades. We are doing action research around apprenticeship, specifically related to literacy.

*Harry Krashinsky:* I've come to apprenticeship from an academic standpoint. I try to determine the economic returns of apprenticeship. I've looked completion using census data.

*Christine Laporte:* I work at Statistics Canada. I've written papers on completion, as well as the earnings of those who complete and those who don't complete. We also study different labour market transitions and mobility.

**Errington Charlton: Is there a common definition of apprenticeship completion?**

*Christine Laporte:* At Statistics Canada we use two datasets. One is the National Apprenticeship Survey. This survey asks questions about completion, in this case defined either as finishing or as getting certification. The other dataset we use is the Registered Apprenticeship Information System, which has a definition of completion focusing more on obtaining the certification.

*Harry Krashinsky:* The question is an administration one. Another source is the census, which collects data on the highest level of education completed. The question then is what to do with people who have completed multiple programs and how to rank them. There is a lot of ambiguity there.

**Errington Charlton: What do we know about people who complete? What are some factors that influence this?**

*Stewart Kallio:* I work with people who don't complete. What we learned about them is not a surprise. Many of these people have worked as trades people for years and now want qualification because employers often want the Certificate of Qualification (CFQ), even for voluntary trades. It is especially hard for older people who have been out of school for a while to pass the exam. Access is also an issue especially in rural communities. In northern Ontario most activity is in the bigger centers. Some barriers people face include challenges with literacy skills. The specialized language used on the exams can be a barrier especially for foreign trained workers.

*Harry Krashinsky:* Stewart's points are correct. Also part of the problem with assessing these issues is the lack of standardized trials. From an academic standpoint this is the best way to determine the factors



influencing completion. We are still trying to figure these things “known unknowns.” This is may be where the next step has to go.

**Errington Charlton: To give some context in terms of completion, what do we know and why is it important?**

*Christine Laporte:* I did a paper on factors correlated with completion. It’s important to stress that correlation does not mean causation. In my paper we controlled for various factors. The factors we found that positively correlated with completion include: being married; age (being older); having fewer child; not being Aboriginal; not being a minority; not having a disability; having previously obtained a university degree; your duration into the program (the further in you are the more likely you are to complete; residing in Newfoundland (Ontario had the lowest likelihood of completion); size of firm (medium sized has the highest likelihood of completing); and the presence of a journey person during the apprenticeship. This is based on data from 2007. We talk about pushing youth into apprentices, but when you look at the data there are people of all ages (in our data the average age is 33), and higher age is correlated with completion.

**Errington Charlton: What are some of the implications and benefits of completion? What does completion offer?**

*Harry Krashinsky:* My most recent work is with the 2006 census. Its education measure isn’t perfect but this dataset is attractive to researchers because of the large sample size allowing you to look at subpopulations. For apprenticeships, we narrowed down on apprentice completers. People who completed had much better economic outcomes, particularly for male apprentices who were on par with people who completed a college program. The outcomes for male apprentices were just below males who had completed university. Sometimes it’s higher, but on average their outcomes are just below. These are raw findings, not causation. For example we don’t know why the outcomes for males are so good. To address the causal question we need trials. From the census data we see a different picture for women. We saw that women’s outcomes are worse or on par with women who only completed high school, and are below women who completed college. We need to figure out why.

**Errington Charlton: We haven’t really talked about completion rate. I think that will help give the discussion a more specific focus. What information do we have at any level? How do we measure it and what are the issues around getting a completion rate?**

*Christine Laporte:* It is complicated because apprenticeships are dynamic processes and are different from other post-secondary education programs, making completion rates hard to calculate. I’ve seen a lot of calculations. In the literature people have looked for many methods. Different methods will give you different numbers. It’s hard to get good data and calculations for this.



**Question from audience: Regarding Harry's findings on outcomes of apprenticeship completers, did it take into account unionized versus nonunionized workers? That would have implications.**

*Harry Krashinsky:* Yes it does. Unionization is not in the census, but a proxy you can use is to control by occupation or industry, but it is not perfect. There is still an impact of completing (for males). There is a benefit there regardless of what we see in the data, there is variation across the occupations, but completion still has better outcomes for males.

**Question from audience: Stewart, to what extent was the literacy intervention successful? What considerations did you make?**

*Stewart Kallio:* We work particularly in communities west of Thunder Bay. These are small (2000-3000 residents) communities. Relationships and social networks became important when doing interventions in small communities. Our intervention was an essential skills assessment. We work with people to do the assessment, and then set out a training plan focusing on elements of the exam they are weak in, to help them better prepare for the exam. We had some success, but the program didn't run long enough to see all the results.

**Question from audience: Harry, did you look at the differences between male and female dominated trades?**

*Harry Krashinsky:* There are strong differences across genders in occupational choice. This poses a bit of a conundrum. Is training for men and women different? Or are they selecting into different occupations? The comparison between male and female dominated occupations (even with the large sample size) was hard to make. I know this is an unsatisfactory answer. To offer a gut reaction, I think it is likely the occupation selection, but without a formal investigation it is just a finding and a correlation.

**Question from audience: This is a question for Stewart. In the Ministry of Education we have developed a skills passport which brings together resources for people to build skills and work habits. My understanding of barriers to passing exams is lack of reading and numeracy skills. In your case studies was it primarily literacy? Or was it other areas?**

*Stewart Kallio:* It was primarily literacy, but we know there are other parts of the exam that are challenges. There are real questions in my mind and the literature about the quality of the exam. For example, the College of Nurses does an annual review of their exams, but I haven't seen that process here. You need to know you are asking the right questions to measure the skills you want to measure. Those are big issues, but not something we can address in the literacy program.



**Comment from audience: We do update those exams every four years, using item and data analysis. We look at every question. We also have a robust complaint process, and look at each question with subject matter experts. We also know about exam anxiety but I don't know how to deal with that.**

*Stewart Kallio:* I appreciate your comments. I think it's important to look at alternative ways to assess these skills. So that's good to hear.

**5B | Lessons from abroad: Das deutsche modell | Thursday, November 6, 2014 | 11:15am-12:15pm**  
**Can Germany and Austria's apprenticeship models be transplanted to Canada?**

*Facilitator: Ken Doyle, Polytechnics Canada*

*Barbara Hemkes, Federal Institute for Vocational Training and Education (Germany)*

*Thomas Mayr, ibw Austria*

*Matthias Oschinski, Ontario Ministry of Finance*

**Ken Doyle: Please give us an overview of your country's higher education system and how apprenticeship fits in.**

*Barbara Hemkes:* Thanks for the invitation. In some ways, the discussions at this conference are similar to the discussions in Germany. There are three pillars that support apprenticeship in Germany:

1. The duality of school and company based training. Two-thirds of apprenticeship training is in the workplace and one-third is in school. Apprentices spend 3-4 days in the workplace, and 1-2 days in school.
2. Regulated occupations. There are approximately 350 state recognized occupations. There are many standards and regulations, which are valid throughout the entire country.
3. Cooperation of social partners. There's really a sense of institutionalized partnerships between corporations and regulators. The regulators recognize what occupations are needed and what should be updated. Regulators and corporations are a part of the whole process. This is a part of co-determination.

*Thomas Mayr:* The Austrian system is similar to the German model however there are some important differences. The Institut für Bildungsforschung der Wirtschaft (ibw) is a private institute that's affiliated with the employers' economic chamber. The economic chamber is the main body governing the apprenticeship model. The employers are responsible for the entire administration. This is delegated by the government. The chamber acts as the contact for companies, it organizes the exams and it awards the credential. Together with the trade unions, the chamber negotiates the curriculum and content of the apprenticeship programs. There are approximately 200 professions which range from typical trades to more clerical work. These professions span the entire economy.

A very important element of the Austrian apprenticeship system is that companies feel a strong sense of ownership over apprenticeship training. A sense of ownership is the most crucial element of the Austrian context. The trade unions also play a very important role.

In Austria, we do not consider apprenticeship as a part of the higher education system. The typical starting age of an apprenticeship is 16.5 years. Despite the different models, I find that the same issues surrounding apprenticeship are discussed in Austria and in Canada. I am convinced that it's absolutely crucial to have intermediary bodies. It's impossible to manage an apprenticeship system like a college or university. Governance is a very important issue. The first question should be: How do we make apprenticeship worthwhile for companies? What kind of support mechanisms need to be in place in order to create a business case for companies?



*Matthias Oschinski:* There are a lot of differences between the Ontario and German apprenticeship models. Why are we talking about vocational training when we talk about higher education? This is not the way that it's understood in Europe. Every country at the moment is looking to Germany, before we do that, we have to ask ourselves why we would want to do this? If Ontario wants to be a leader, Ontario should find its own way. To do this, it's important to determine the apprenticeship goal. Do we want to tackle youth unemployment? Do we have skill shortages? In what way should we find a Canadian way of achieving our goals?

*Barbara Hemkes:* A number of years ago the number of occupations in Germany decreased from 500 to 350. There was a lot of merging, and the need to create occupations that covered a broader range of competencies.

**Question from audience: Is it the case that a tradesperson is a respected accomplished person in Europe?**

*Thomas Mayr:* Until 20-30 years ago, your observation would have been 100% true. In the last few years, we've seen an increase in higher education. This has been an OECD and European Union priority. We see problems of attractiveness and image for vocational education and training (VET); 40% of the population goes into VET. We hope that creating equivalent levels in the academic and skilled trades streams will help with the reputation and image issues.

*Matthias Oschinski:* One of the distinctions between employers in Europe and Canada is the sense of ownership of education. People believe that the state is responsible for education in Canada. Lifelong learning and skills upgrading in the workplace can be included in the apprenticeship model. We should keep employers in the mindset that employees who are upgrading their skills are necessary.

*Barbara Hemkes:* It is really rooted in the mindset of the Germans that a university education means a better life. The average income of university graduates is higher than those coming out of VET. The average unemployment rate is lower than the people coming out of VET. Some types of academic careers do not pay well while some of VET is highly profitable (mechanics, specialized IT). VET has a lower status in liberal market economies than in developed welfare states. There is a question of how to create lifelong learning.

**Ken Doyle: What training does the Maistre need?**

*Thomas Mayr:* In Austria, this is typically a credential after having worked for some years; it's a license to open a business. The qualification is awarded by the economic chambers. People have to show that they can run a company. They must have an idea of management, cost accounting, legal issues and how to train other people. It's a way of proving to the authorities that they have the credentials.

*Barbara Hemkes:* In Germany, the maistre qualification is quite hard to get. It requires working and going to school. At the end, there is an examination. This guarantees quality and what Thomas calls ownership of the craft.



**Question from audience: Discuss the major VET challenges in Austria and Germany.**

*Thomas Mayr:* What we lack in Austria is a lack of understanding that this system shouldn't be taken for granted. Our higher education system is very university-focused. In addition, 27% of people leaving mandatory school can't read and write properly. It's increasingly difficult to find the right people in skilled trades.

*Barbara Hemkes:* There's a big mismatch problem: The companies don't find the right apprentices and the young people don't find the right companies. There are also image issues. Young women are asking to be hairdressers but we don't need more hairdressers. We need IT specialists. Bringing women into VET is a challenge. Women are more interested in going to university.

We also have to cope with quality problems. We have high standards but implementing these standards isn't easy. In small enterprises, there is a challenge in guaranteeing the highest quality. There is also the issue of prior learning recognition. For immigrants, especially, we need better mechanisms to recognize prior learning.

We see all of the deficits of young people. Yes there are some deficits but there are also some values and benefits. Focusing on the potentials is a shift in thinking that we have to realize.

**Ken Doyle: Are there any issues between urban and rural in the training of apprentices?**

*Thomas Mayr:* In rural areas, there is a higher attraction to VET.

Poaching is not an issue in Austria. If you have 40% of people in VET and 80-90% of big companies providing training, there is a business case. It is possible to recuperate the costs.

*Matthias Oschinski:* Canadian employers bring up the excuse of poaching [for not providing apprenticeships]. This type of thinking suffers from "short termism." In continental Europe, there are a lot of family run businesses that look at the longer term. Poaching is very short term thinking. A lack of training is a reason why people aren't happy in some work places. Training may help to retain people. Retention agreements can help to mitigate the risk of poaching and provide the employer with some security.

*Barbara Hemkes:* About 22% of all companies provide apprenticeship. About 70% of apprentices can remain in the company where they apprentice and 30% still need to look for employment afterwards. We have a dropout rate of 20% and most dropouts take place within the first year. Providing companies and apprentices with support is a challenge.

**Ken Doyle: What is the one tangible way to improve the Canadian system?**

*Thomas Mayr:* Consolidation.

*Matthias Oschinski:* Create a framework for more cooperation.

*Barbara Hemkes:* Continue with the models that bring together school-based education with practical work, and perhaps standardized occupations.



**6A | Partnerships: It takes a village | Thursday, November 6, 2014 | 1:30-2:45pm**

***Teaming up to address workforce demands***


*Facilitator: Kelly Hoey, Halton Industry Education Council  
Karen Charnow Lior, Toronto Workforce Innovation Group  
Andreas Thurner, Blum Inc.  
Julia Wagg, Hydro Ottawa*

**Kelly Hoey: We are going to talk about the ingredients of good partnerships. We need to talk about partnership and how it can move the agenda to help people find their way into the skilled trades.**

*Andreas Thurner:* I came to the U.S. 20 years ago, and it didn't take me a long time to realize there was a skills gap in our workforce. So Blum Inc. started a program based on what we were doing overseas. We realized there is a different culture so we couldn't just replicate a program from abroad. When doing a partnership it should be with companies in similar trades. Also you need leadership behind it and a long term plan (5, 10, 15 years). So we partnered with similar companies, and called the program Apprenticeship 2000. The discussion between different companies at the beginning was very difficult. Blum in Europe is known for having a very strong apprenticeship program so this helped. We worked with the local community college, and we bought technology for the community college with other companies. For the training and education we focused on what skills students need, and it was mostly math and science. We recruited students by taking them to the factory so they could see what manufacturing is like. We also make it a requirement that when they come to the plant their parents also come. This really changed the parents' minds and awareness about the jobs that are available in manufacturing. After the open house the kids come for an orientation, and they get to work on a small project. They do an aptitude test and an application test to get into the college system. The next step is a six-week internship. We've had about 800 people. It has had a big impact on the community, and the schools love it because we are taking care of something that there isn't funding for anymore. After the internship, the students can get hired and they start with basic training. The soft skills and communication skills are also very important. Currently we have five different trades available at Blum, and seven in total in the partnership.

*Karen Charnow Lior:* I'm going to start with some context about myself and why skilled trades are important to me. I went to York University for a Master of Arts degree, and then I got a job at a provincial women's organization. The Toronto Workforce Innovation group began as a partnership between industry and labour. We conduct and disseminate research on our local economy. We are funded primarily by government, and we have to deliver our annual report and six partnerships, but are expected to do more partnerships in addition to that. We present usable and accessible labour market information to our stakeholders.

*Julia Wagg:* Hydro Ottawa has three lines of business: energy, green energy, and conservation. We have an aging workforce. We have five trades. The strategic imperative for us is the need for apprenticeships. Workers are going to retire, and we can't replace that bulk of experience. Partnerships are used to drive organizational effectiveness. Partnerships are mutually beneficial. . A challenge from a human resources perspective is that we need to reach students at every single juncture of the educational pathway. We are able to leverage our retirees to deliver the training programs. Partnerships with colleges (Algonquin



College) also help us navigate areas we don't know, like policy and curriculum. Partnerships help create cost efficiencies in recruitment. For the programs like co-ops and internships, we save a lot of time and resources on recruitment and training. There is a real business case for this partnership. We also have a program about showing school-age kids the careers options available in energy. We are working with Carleton University on smart grid technology. Another initiative we have is Start24 at the University of Ottawa, a competition where we give students 24 hours to develop solutions to real-world challenges. On the community side, we partner with Power of Trades and get foreign trained individuals to meet with our apprentices to see how they could skill-up in Canada.

**Question from audience: What are the keys to successful partnerships?**

*Karen Charnow Lior:* The pillars are very similar. Our DNA is partnerships, but it's also the way we are most effective. We need to be strategic and skillful, and partner with large initiatives where our skills and expertise can make a difference. For example, we try to partner with academics because it helps us get our work out there. We work with The City of Toronto and with employer associations. When developing a partnership, the questions of who pays and who benefits as well as sustainability are big for us.

*Andreas Thurner:* The key is to not lose sight of your goal over the years. Also everyone has to bring something to the table. Industry should also communicate with the colleges about changes in technology. It's a lot of work; you have to find the time.

**Kelly Hoey: There is a lot going on, and a lot for stakeholders to know about. What is the best way to recruit people/participants into your partnerships?**

*Julia Wagg:* Having a strong brand has been really helpful to us. Our program with Algonquin College has high demand, and it is a testament to the value of having an employer-educational partnership and the benefits it brings to the school and the students.


*Karen Charnow Lior:* For us the service providers do recruitment of participants. We can help by using our available network. For example, mental health was an issue among a service provider's clients, so we partnered with the Centre for Addiction and Mental Health to deliver 12 workshops to 800 people about how professional service providers can work with clients living with mental health issues.

**Question from audience: What do you do when your partners change?**

*Andreas Thurner:* We recently had two companies move. We have put together a little package for companies that would like to do the program. When we start with a new company we gauge the commitment of the company and then it's not hard from there.

*Julia Wagg:* We prepare for and anticipate that partners will change. We put governance structures in place. We also had to internally create a very clear story and narrative about the partnership, and have a clear business case for it.

*Karen Charnow Lior:* For me it's more about balancing old and new partners. We want to build initiatives that are sustainable. You need to be clear about the purpose and guidelines for each initiative. You



should also try to avoid process overload, like having too many meetings, etc. where the outcomes are small in comparison to the process.

**Question from audience: Do you have any lessons you can offer?**

*Karen Charnow Lior:* One of our biggest challenges is that we are quite involved in the supply side, but we need to think about more partnerships with the demand side. An example is the Hospitality Training Centre in Toronto. They deliver training in the hotel, the employers are at the table and the training focuses on skills sector specific. There is an 85-90% employment rate. We need to think about the demand side and how to attach people to jobs.

**Kelly Hoey: Is there an 'ideal formula' for partnerships?**

*Andreas Thurner:* You have to understand that from day one it is a lot of work. For us there was a lot of resistance at the beginning from the education sector about the approach. For me it was one of the surprises, but we persisted because we were confident it would work and it did.

*Julia Wagg:* You need to be flexible. The system needs to be less obtuse. We experienced a misfit between our sector and the system. A problem with these partnerships is you can become very complacent once your program fits within the regulatory structure. You need to keep working and address challenges. We are constantly questioning how we can do things better, and are challenging norms. You also have to access workforce data to drive and anticipate need.

**Question from audience: The Boys and Girls club has a partnership to build awareness about the skilled trades. I'm interested in knowing more about corporate responsibilities around community building.**

*Julia Wagg:* It often comes down to dollars. It's important to align your ask to the employer's business. Strategic alignment has to happen. The organization has to align with the corporate need. Constant negotiation should happen, and it's all about strategic aligning.

*Karen Charnow Lior:* Creating employment can be a form of corporate social responsibility. An example is the community benefits agreement at the Eglinton crosstown (Metrolinx). The employer shouldn't look at the partnership only as a recruitment process, but as gaining access to people, including apprentices, who are ready to work.

**Question from audience: Andreas, how did you approach the school boards?**

*Andreas Thurner:* At beginning it wouldn't work by just directly going to the school boards. Now it is different, there is such a need for skills that the schools understand the importance of the partnership. We realized that we had to get kids in science and math classes earlier. Once we started working with one school it was amazing how fast other schools starting jumping on it.

*Julia Wagg:* Our co-op program is high demand as we target schools directly. At the elementary schools it wasn't hard to get employees to be ambassadors in the classroom to get awareness of our organization out there, and now the demand comes naturally.



**Question for audience: What about building partnerships in small to medium enterprise communities?**

*Karen Charnow Lior:* One idea would be to do a consortium of employers.

*Julia Wagg:* Partnerships are scalable. You need to understand and work with the local context and community.



**6B | Building communities: Stories from Aboriginal apprenticeship | Thursday, November 6, 2014 | 1:30-2:45pm**

***Putting the skilled trades to work for Aboriginal apprentices***

*Facilitator: John Wabb, Canadian Union of Skilled Workers*

*Brandi Jonathan, Grand River Employment and Training*

*Kelly J. Lendsay, Aboriginal Human Resource Council*

*Kim Radbourne, Sibi Employment and Training Initiative*

Today we're meeting on the traditional territory of the Mississauga First Nation.

*Kim Radbourne:* I am a non-aboriginal, anti-colonial activist, living up the coast of the James Bay on native land. My husband and children are Cree. The Sibi Employment and Training Initiative was created to maximize employment and is based on self-regulation. We created a database that now includes 1,800 people. We provide information and assistance regarding employment. At Lower Mattagami we focus on apprenticeship. At peak, we had 80 apprentices. We have 75 right now. Since 2010, we have had 8 apprenticeship completions.

*Brandi Jonathan:* In the last 5-6 years, Grand River Employment and Training has focused on apprenticeship. I personally never had the opportunity to be exposed to apprenticeship. I'm a hands-on learner and I believe that Aboriginals are hands-on learners because historically that's how we've learned. There are 25,000 Six Nations people. About 46% are under the age of 25. Our mandate is to get people interested in apprenticeship, to create partnerships and viable employment opportunities.

*Kelly J. Lendsay:* The Aboriginal Human Resource Council was formed in 1998. We look at things through an employer lens. We've developed an inclusion continuum for employers. Employers can benchmark themselves through diagnostic tools. The purpose of this is build inclusive workplace strategies.

**John Wabb: What are the challenges of apprenticeship in aboriginal communities?**

*Kim Radbourne:* There are challenges to developing apprenticeships in aboriginal communities: Our communities are unique. There are commonalities but different groups. The commonality is how we are still living in a colonized system on reserves. In terms of access, we receive federal programs on reserves and not provincial programs. Provincial apprenticeship programs are not funded in native communities because these communities are federally funded. Finding pathways to work from remote areas, transportation, awareness on how we're funded (federally), and literacy are challenges. Everywhere in Canada, except for reserves, communities are funded by three different sectors (college, school board, community). We don't have literacy funding because of the federal/provincial dichotomy.

*Brandi Jonathan:* I have an issue with bringing immigrants into Canada to fill the skills gap. I work in a community with young and motivated people. We should invest in the people in our own backyard.



*Kelly J. Lendsay:* There are three challenges:

1. Supply: Capacity building, partnership abilities and acumen. There is so much to absorb to mobilize labour markets.
2. Employers: Awakening employers to see Aboriginals as a work force. We were talking about the foreign workers program. This is a systemic problem. Statistics Canada doesn't count the unemployment rates on reserves. If they did, the unemployment rate would be higher than 6% and we wouldn't be able to use the foreign workers program. We need to include these statistics.
3. Employers see the Aboriginal system as very fragmented and they find it difficult to engage with us.

**John Wabb: What have you been successful at?**

*Kim Radbourne:* We did training in groups of 5-6 people. Training is more successful when you have a group of people going into a company so that they can support each other rather than an individual going in alone.

*Brandi Jonathan:* Our apprenticeship program has expanded. There are three mentors. The role of the mentors is to provide continual support to the apprentices. The Work Ready Aboriginal People Partnership program works to understand the needs on both sides (the First Nation community and industry). Of the 42 people that went through that program, half are registered and working in more sustainable careers than before.

We also must make sure that students have the pre-requisites for programs. Our students are graduating from high school without the employment-ready skills. This requires our resources to focus on one specific area when that should already be looked after by the education system.

*Kelly J. Lendsay:* Every province today has an Aboriginal apprenticeship strategy (there were none in 2001). Recruitment from reserves is very important.

*Kim Radbourne:* Having passion for our jobs is important for community buy-in. People are always surprised that our database is up to date. We're a close community. We have forums where we talk about lessons learned for our family members who are left behind during camp life.

*Brandi Jonathan:* Continuous communication with employers is important. It took a little while for me to buy-in. We're some of the biggest skeptics; we want to see that employers are doing what they say they're going to do. The unknown is scary.

**John Wabb: Can you talk more about the work ready apprenticeship program?**

*Brandi Jonathan:* This program started as a result of industry seeking out an Aboriginal partner that wanted to replicate a program that had shown success in Toronto. This program takes into account culture, transportation, understanding what the trade is and getting industry certification (WHIMIS). I can see this program eventually going Ontario-wide if not Canada-wide. It can be adapted and it has the ability to be successful.



*Kelly J. Lendsay:* The challenge for a lot of partners is a lack of trust. Better matching and better mentorship are necessary. How do you give every person a mentor?

Aboriginals are economically attractive as their GDP is only increasing. The trend line is going up. Aboriginals are facing challenges in that they can't even hire their own people; they don't have the education or mentorship.

*Kim Radbourne:* Our responsibility is to support the contractor and our community. We're an intermediary, being very actively involved. We've created a process that we all agreed on. The partnerships and successes came from the beginning.

Pre-apprentice programs at colleges are not that successful. If they're not producing results, we shouldn't fund them. Our successes are from union training. The unions do a better job with some of the programs out there right now. Our Aboriginal people are the answer to the skills gap in this country.

*Brandi Jonathan:* A good partnership is reciprocal. Exchanging information is important so that I understand employer needs. I need to know from employers if someone hasn't been successful, why that is, and I need an honest explanation. Liaising is an extremely important part of a successful partnership. Technology does impose new issues. We need the employer to work with us.

*Kelly J. Lendsay:* Shared values are very important with partnerships. The majority of partnerships fail. Writing down real mechanisms, practices and strategies fosters success.

Unions could be successful in setting targets, timelines and outcomes for Aboriginal participation in the skilled trades.

*Brandi Jonathan:* I would have been an automotive tradesperson if I had that information when I was younger.



**Closing plenary | The trades: A great choice for someone else's kids? | Thursday, November 6, 2014 |**

**3-4:15pm**

**A reputation renovation?**

*Facilitator: Harvey P. Weingarten, Higher Education Quality Council of Ontario*

*Linda Franklin, Colleges Ontario*

*Annie Kidder, People for Education*

*Sean Reid, Progressive Contractors Association of Canada*

Please see video