
Conference Proceedings: National Forum on Workforce Development in the Marine Industry

Compiled by Anna Naylor | September 29, 2017

Panel One: P/K – 12 Education | Moderated by Dr. Sherry Scully

Panelists:

1. Sandra Mackenzie, Deputy Minister of Education and Early Childhood Development, NS
2. Dr. Tamara Franz-Odendaal, NSERC Chair for Women in Science and Engineering - Atlantic Region, and Professor of Biology, MSVU

Question 1: Research has shown that awareness and interest are strongly linked to career intention. What do you believe is the role of our public education system in building awareness and interest in marine-oriented careers, and what is the best mechanism to do this?

Key Messages:

Within the public education system, it is very important that a hands-on, critical thinking, and interactive learning style is prominent in the classroom. Teaching subjects such as a coding is a great example of this learning style. It was noted that students in middle school (grade 7-grade 9) are underprepared in the areas of math and science. An emphasis needs to be placed on building the capability of students in both math and science to ensure the students have a better foundation when entering high school. Additionally, it is important that elementary school teachers start building this foundation too.

It was discussed that it is critical that families, and those individuals important to children, also have knowledge and awareness of the marine industry. It is important to provide tools and resources to these individuals to create an understanding of various careers and career pathways to ensure they have the ability to have meaningful and in-depth conversations about careers and career development with youth. It is also necessary to develop (inside and outside of the school system), other skills required to excel in the workplace. This would include interviewing skills, networking skills, communication skills, etc.

Question 2: We are regularly hearing that young people are entering careers or post-secondary education without the foundation skills needed to successfully transition – especially in STEM skills. How can you account for these perceived gaps, and what can be done to close these gaps?

Key Messages:

There needs to be more of a focus on the development of soft skills (i.e. writing and communication) within the school system. These skills are equally important for students to be able to succeed. Math, Stats and Science are considered the most desirable skills for the work place, however, only about half (of Nova Scotia Students) study academic math. This number needs to be at 100%. A misconception appears to exist that construction and skilled trade workers do not need math – this is simply not the case. To fix these discrepancies, the NS teachers need stronger capabilities in math. Additionally, the connection between parents and teachers should be improved to further encourage students to take math and to properly inform students of its use.

We need to ensure that students are aware of the career requirements and have the subjects, skills, and marks needed for their desired career before they leave the school system. Otherwise, if they need to go back to upgrade, it costs time and money for the student, system and country. A better support system for teachers should be provided within the school to ensure that teachers are able to deliver these programs and work with all students to the level needed to succeed.

Question 3: Research has also shown the powerful link between experiential and work-integrated learning and competency development – however most of these experiences don't occur until post-secondary. What can we do to create more of these opportunities with younger students, and what are the obstacles?

Key Messages:

More programs that provide experiential and work-integrated learning are needed outside of the school system. There are some programs currently achieving this such as Digital Nova Scotia who run camps for kids, Ocean camps through NSCC and Irving, robotics, Techsploration, Skills NS and Skills Canada. Businesses also have a role to play as they can help create space for students, connect them with the business community, and help expand entrepreneurship. As a starting point, there needs to be a better connection between the local business community and the schools. BC has an event in which sectors come together to create career zones to provide exposure to students. This is a great model to follow in the Maritimes. It is important to know what motivates the students, what they are interested in, and what they want to know.

Question 5: The marine industry continues to be a male-dominated industry. What is being done to engage more females in the industry, and what continue to pose hurdles to more diversity?

Key Messages:

The purpose of the Wise Atlantic program is to inspire females into STEM Based careers. When the females in the program were asked why they came, the most re-occurring response was they knew someone in a STEM based career. The issue relates to reaching females who don't have a family member, close friend, or someone they look up to who is in a STEM Career. An area to focus on would be the re-branding of STEM careers. STEM career branding needs to be more diverse in terms of audience and should target parents. Parents can help to shift the mindsets that females are capable and supported to do STEM based careers. When talking about STEM, it is important to speak to the lifestyle and provide real-life examples of current individuals who have a career and a family. True Calling based out of BC is an excellent role model with their initiative of short videos to bring parents and children closer to local business and entrepreneurs.

Panel Two: Apprenticeship | Moderated by Olaf Neilsen, Chair Trades Development & Special Projects, Camosun College

Panelists:

1. Sarah Watts-Rynard, Executive Director, Canadian Apprenticeship Forum
2. Dan Southern, Manager of Talent Management, Seaspan
3. Dr. Lucy Kanary, Dean of Trades And Technology Programs, NSCC
4. Marjorie Davison, Chair of the Canadian Council of the Directors of Apprenticeship, CCDA
5. Tim Edwards, Executive Director, Nova Scotia Boat Builders Association
6. Rod Bianchini, Industry Training Authority-British Columbia

Question 1: Can you describe how apprenticeship differs from other post-secondary education programs and how this benefits the industry? Does this continue to be the right model for this industry?

Key Messages:

In terms of boat building, these apprenticeships are vital. They provide a hands-on learning experience on the shop floor and facilitate the introduction of the students to the community. It is important that students are aware that apprenticeships are a post-secondary option, and should not be a last resort as a career option. Apprenticeships need to be viewed as an acceptable first choice for a very progressive career. In BC, there is a program where there are about 15 managing advisors in the field. This provides a lot of transferability and demonstrates the diversity within the marine industry.

Question 2: Youth do not necessarily see the marine industry has having career opportunities apart from fishing and careers in the navy. What can we do, or what is being done to raise the awareness of the excellent career opportunities in the marine industry among youth?

- a) How can we as an industry ensure young people in schools have the guidance and information needed to make the correct post-secondary education choices that will open career doors for them in the marine industry?

Key Messages:

Digital literacy is a good starting point to raise awareness of career opportunities in the marine industry with youth. The most effective way to communicate with youth, is to use methods they are using – Facebook, twitter, Instagram, short videos, etc. This communication must start at a young age, with exposure to the workplace to allow youth to discover the atmosphere, experience the noise, the environment, and the equipment. The responsibility of communicating these messages shouldn't only belong to the education system. Everyone within the community has a responsibility to teach, educate, and share the important history of the ocean. It needs to happen at all levels, to ensure the stigma around this industry can evolve to a positive narrative. Students need to know that they have not failed if they do not attend university.

The Nova Scotia Construction Sector Council has a great program; a very hands-on, interactive career fair for trades within Construction. This framework should be applied to a marine related career trade show. In BC, through ITA, there is a Maker Day event for students, that engage in design thinking and hands on trades activities. This is another notable example of exposing youth to trades.

Question four: What do you feel is at the root of many employers not engaging with apprenticeship training? What can be done to encourage more employers to provide apprenticeship training opportunities, and to support apprentices in completing their programs?

Key Messages:

Employers face a lot of challenges, and need support to be able to train apprentices. For it to be the most impactful for both parties (employer and apprenticeship) there needs to be more support, collective agreement with unions, understanding the value of apprenticeships, better knowledge and awareness of the system, and harmonized training and apprenticeship training across the county. Larger companies, such as Seaspan, need to be champions and provide the support to the apprentices. The apprentices need to be encouraged throughout their apprenticeships through increasing the amount of responsibility as the internship progresses. Also, there needs to be an awareness of the challenge of traditional block training and ways the apprentice training can be more continuous.

Question 5: What do you feel prevents many apprentices from achieving trade certification? Are we as an industry providing the ongoing training needed for our apprentices to learn their full scope of trade?

Key Messages:

From an employers' perspective, there is a lot of pressure on managers and there exists a lot of training issues. A large amount of time, money, and support needs to be invested. For apprentices, it can be expensive to do block training as they are required to take a large amount of time off work without pay to complete their schooling. Therefore, some choose to stay at their current level. Another major factor is job security. As an apprentice moves up and acquires the Red Seal, the apprentice loses seniority at the current level. Therefore, the apprentice can transition from being one of the last to be laid off, to one of the first.

Panel 3: Post Secondary | Moderated by Cal Gosse, Senior Location Manager, IBM

Panelists:

1. Keith Brown, Former Vice President International and Aboriginal Affairs and Purdy Crawford Chair In Aboriginal Business Studies
2. Jon Mikkelsen, Director Naval Architecture and Marine Engineering, University Of British Columbia
3. Don Bureaux, President, NSCC
4. Catherine Dutton, Head, School of Maritime Studies - Marine Institute
5. Sara Filbee, Assistant Deputy Minister, Service Canada, Atlantic Region, which is part of Employment and Social Development Canada.
6. Allan Campbell, Manager of Customized Training, Holland College, PEI

Question 1: Like most industries, the marine industry across virtually all sectors is facing significant labour challenges which can restrict both productivity and growth. What can and should be the role of PSE in promoting the marine industry as a career path?

Key Messages:

There is a collective responsibility for everyone (universities, colleges, parents, public) to be well informed about the marine industry. We need to not only promote career opportunities, but also the culture, the connections, and the communities involved. It takes many levels (government, education, industry) to make these changes. We need to be aware that the traditional industry may not be traditional any more and, thus, the way it is thought about must also change.

Question 2: In terms of collaborative partnerships in workforce development, how is the federal government working with provincial partners to ensure effective development of labour market programs, including youth engagement and engagement of under-represented workers?

Key Messages:

Representation of First Nations is almost non-existent within textbooks for the school system. The first textbook that was created was on indigenous business and it was distributed across Canada. It was a tremendous success. If this was done for a topic such as fisheries, it could be just as successful. In general, inclusion and a diverse message is key in any area.

Question 3: What potential exists for industry and post-secondary collaborations to create flexible, innovative scheduling, on-line and classroom (blended) learning, and other ways to develop workforce STEM and technical competencies.

Key Messages:

Although not a direct player, government will play a significant role due to its relations with partners, investments in industry, and post secondary education. Policy makers, consultants, etc., come from diverse backgrounds, thus, proper collaboration is key.

Question 4: What do you feel are the biggest challenges for recruiting young people (including under-represented workers) to work in the marine industry? What has your experience been in ensuring that Indigenous learners see themselves in programming? Is the current national curriculum inclusive for Indigenous learners?

Key Messages:

The foundation and infrastructure of post-secondary institutions are still very traditional; however, students are not. There are new challenges that the current students are facing and new reasons for attending post secondary institutions. This includes aging parents, changing careers, students with families, and those going to university for the first time after years of experience in the workforce. The Governance structure is still very traditional and can be restrictive with traditional needs and qualifications. Experience needs to count; lessons and skills need to be transferable. Rules should be guidelines in some cases with qualified individuals who are just not qualified in the traditional way.

Colleges and universities are also slower to adapt to modern technology. Post Secondary institutions need to communicate with students the way students communicate with each other. Additionally, the focus needs to be directed to the requirements of the students, and offer training to those who are looking to further their career while also working fulltime. This means different training over the weekends, evenings, etc. Customized training needs to be a priority.

Question 5: Building from existing research and from this forum, how can we collectively establish an ongoing medium to ensure gaps between current training programs and evolving industry needs are minimized.

Key Messages:

Collaboration is key. Canada has a small population; thus, it is important to use the strengths of the entire population. The expertise of individuals should be shared, support each other and engage with the industry. The current issues should be identified and a search for mentors should occur. Mentors do not have to be within the industry either. There are plenty of other role models that these students require. These individuals should be engaged.

Panel 4: Industry | Moderated by Jim Hanlon, CEP, COVE/IORE

Panelists:

1. Mark Taylor, Shipbuilding and Strategy Manager, Jedi NB
2. Joe Hood, Software Product Manager, GeoSpectrum
3. Captain J.K. Wilson, Canadian Navy
4. Owen Fitzgerald, Director of Industry and Government Engagement, MEBO
5. Mark Jollymore, Ceo, Amirix/Vemco

Question 1: In any industry that experiences periods of growth and 'boom', there often occur workforce challenges relating to meeting capacity needs (i.e. numbers) and capability requirements (expertise). Which of these two issues is most pressing to you currently, and how do you balance those two things among your new-to-role and experienced workers? What would help you most in addressing these gaps?

Key Messages:

Firstly, the most pressing issue of the two is capable thinking. The absence of capable thinking limits, or eliminates, the ability to meet capacity needs. It is important to hire people that are believed to have the desire and ability to move up in the company. Secondly, it is essential to recognize the needs of the

industry. Once the needs of the industry are identified the workforce must try to appropriately respond. Lastly, there is an overall necessity in the industry to attract the right workers.

Question 2: The efforts to develop a workforce in any industry can be expensive and time-consuming. To what extent is skills development the obligation of the individual worker, the government, and the industry players themselves?

Key Messages:

The responsibility of developing the workforce is the responsibility of the individual worker, the government, and the industry players. Partnerships and collaborations between the individual worker, government, and industry players are very important. The efforts to develop the workforce must be aligned between these three players. The training must be brought to the workforce. Additionally, training and entrepreneurship should be incorporated together.

Question 3: The marine industry broadly is still an industry that is lagging in terms of diversity. We know that the impact of being more inclusive can be profound. Can you speak to the impact of diversity, and also identify key gaps that currently exist or persist in achieving greater participation of under-represented workers in the shipbuilding and marine industries?

Key Messages:

The industry must be involved as a partner along the whole process to inform the population of the industry needs, in reference to required skills. The process of ensuring the required skills are identified is initiated in the education of careers and career pathways. A societal commitment to resources and time to educate people is necessary for the inclusion and diversification of the workforce. There are some programs that are addressing the issues, such as Irving and NSCC - a partnership that began in September (2017) with 18 students. Additionally, the different needs of the diverse individuals must be understood. Frequently, leaders in the industry are experienced engineers, which does not always result in the most qualified people in a leadership position. Thus, it is necessary to have experienced leaders in a leadership position

Furthermore, security clearance can be an issue for international/immigrant workers. This is an issue associated with work involving the government and should be analyzed to create a simpler and more streamlined process.

Question 4: What role should the private sector play to ensure meaningful and realistic participation for Indigenous people, and other under-represented workers, and businesses?

Key Messages:

The private sector must work with Indigenous people and other under-represented workers and not against them. The partnerships are key to success in ensuring meaningful and realistic participation for these groups of people. The private sector must not assume what the needs of these groups of people are but must ask. Asking allows these people to be heard and help impact the work environment.

Question 5: Talent management is about more than just attracting good talent – it's about retaining them, and developing them. What are you doing to attract/recruit/develop and retain good talent? What would you like to see the colleges/universities or private training providers doing differently to support you in this?

Key Messages:

The marketing strategy currently used in the industry incorporates attraction, benefits, future opportunities, and collaborative workplaces. This includes ensuring that, with proved good performance, an employee has the opportunity to evolve and move up in the company. Additionally, it is necessary to create various means of progressing in the company. Moving up in the company does not have to result in a management position. An employee moving up in a company should also have the ability to end in a non-managerial position. Attracting people to the company has a correlation to competitive pay. It may be necessary to invest in the employee to ensure the employee feels valued and, thus, has a desire to stay.

The recruitment of new graduates is often difficult for companies because the new graduates often do not interview well. To remedy this issue soft skills and interview skills must be taught to university students. The incoming workforce does not necessarily want to work the traditional office working hours of 9-5, as it does not work with the personal commitments. New flexible workplaces allow people to organize their job and personal lives to optimize their ability to work. This work environment focuses on encouraging the employees to be outcome driven.

Question 6: When you look at competitors internationally, or at analogous industries, what best practices are you seeing with regards to workforce development?

Key Messages:

The United Kingdom and Germany currently have apprenticeship models that work very well. Norway also has excellent diversification to ensure that when a company hires the company gets the best of the best. Many countries have education subsidy programs. Canada should follow the example provided by these countries and subsidise education.