

Bill 288, Building Opportunities in the Skilled Trades Act, 2021

Written submission by:
The Ontario Council of Technology Education
414 Golf Club Road
Hannon, Ontario, Canada L0R 1P0

Executive Summary of Key Recommendations:

This paper discusses the education perspective on the skilled trades shortage in Ontario and the significant need for change in the education system to address the systemic barriers preventing youth from pursuing skilled trades and technology careers. The key to encouraging more youth to enter the skilled trades is early exposure to Technological Education and skilled trades and technology through an education system that emphasizes the importance of the trades to students, parents, and the community. To make the systemic change required to address the skilled trades shortage, the Ministry of Labour, Training and Skills Development needs to:

1. Be vocal about the need for quality Technological Education programming in our schools, more skilled-trades qualified teachers, more up-to-date technology and facilities, revised Ontario curriculum that places emphasis on skilled trades and Technological Education, a Technological Education compulsory credit in high school and increased funding going directly to secondary school Technological Education facilities, tools and equipment.
2. Leverage provincial, national and global employers, unions and associations to educate our education system and the community about the skills needed and the opportunities in skilled trades and apprenticeship for students. OCTE is ready to assist in creating these partnerships between large companies and organizations and their local school boards in specific regions of need to work with schools to provide future apprentices.
3. Advocate for the Government of Ontario to make substantial Investments in high school Technological Education programs, including the tools, equipment, facilities and

programming.

4. Re-assess the efficacy of OYAP and School College Work Initiative Dual Credit/ Accelerated OYAP programs that the Ministry of Labour, Training and Skills Development currently funds to determine if the impact of this funding is generating the desired results.
5. Put a program in place that allows secondary schools to apply and become Training Delivery Agents (TDA) for Level 1 Apprenticeship (without the need for college oversight) if they meet the programming, facilities and teaching requirements. This would increase access for students interested in a career in the trades to develop the knowledge and experience to participate and be successful in a co-op and future apprenticeship placement.

Background

The Ontario Council for Technology Education (OCTE) is a provincial organization that represents, supports and advocates for Technological Education elementary and secondary school programs, teachers and students to ensure that the needs of the local, national and global communities are reflected. We comprise approximately 1700 educators from 67 of the 72 publicly funded Ontario school boards both the English and French.

Introduction

The Ontario Council for Technology Education (OCTE) appreciates this opportunity to submit a written response regarding Bill 288 and to address questions that we as an organization, have

devoted years of work to addressing the issues and barriers to students pursuing careers in skilled trades and apprenticeship. This organization represents the education perspective and we recognize the significant need to engage business, industry and community organizations as advocates to achieve systemic change in the education system. OCTE is here to leverage our partnerships and our school boards to have the impact required to make these changes, to value skilled trades and apprenticeship for all students and to create a better future for Ontario.

Skilled Trades in Education

The key to encouraging more youth to enter the skilled trades is early exposure to Technological Education and skilled trades through an education system that emphasizes the importance of the trades to students, parents, and the community. Skilled Trades and Technology Education need to be integrated throughout the curriculum, kindergarten to grade 12. Students also need teachers who have completed their apprenticeship and worked in the trade so students have role models and aspire to follow in their footsteps.

Exposing Students to Technology and Hands-On Experiential Learning Kindergarten to Grade 12

- Currently elementary students often have very little exposure to the technology components of Ontario's Science and Technology curriculum (often just referred to as Science). Little emphasis is placed on these technology components by a majority of elementary teachers as they lack the experience and confidence to offer these hands-on opportunities for students;
- The Ministry of Education needs to update the curriculum to include very explicit

emphasis on this learning;

- Some elementary initiatives, such as Skills Ontario Competitions and VEX Robotics, work well to engage students in technology and lead to more students taking Technological Education courses in secondary school, although these experiences are highly dependent on school board support and champion teachers to deliver the programming;
- Kindergarten - Grade 12 students need teacher role models who have skilled trades and apprenticeship experience and an understanding of business and industry to provide these skills, to encourage them to enter the skilled trades and provide education focused on the skills that students need to be successful in the jobs of the future.

Professional Development and Skills Upgrading for Teachers

More teenagers would consider the trades as a first choice if the following changes were implemented:

- Elementary Teachers:
 - Providing training to elementary teachers to increase their comfort level with hand tools and equipment and related projects to deliver more technology education learning activities to students,
 - Providing up-to-date safety resources, including videos, to support use of tools and equipment.
- Secondary Teachers:
 - Continuing support for teachers delivering Level 1 apprenticeship curriculum in Technological Education courses,
 - Ongoing trades related professional development to keep teachers up-to-date with current equipment, technology, and skills to prepare students for careers of

the future.

Suggested Changes in Current Specialized Programming in Secondary Schools

Ontario Youth Apprenticeship Program (OYAP)

The Ontario Youth Apprenticeship Program (OYAP) continues to be a central program to encourage youth to pursue the skilled trades, with the investment of \$15 million in 2020 - 2021, an increase of \$2.3 million this school year. In 2019 - 2020, over 15,000 students completed OYAP placements. There are several ways that Technological Education can support OYAP, and a few key recommendations as follows to enhance programming:

- Make the explicit connection between OYAP and Technological Education courses to increase the skills and qualifications of students completing co-operative education placements in apprenticeable occupations,
- Provide concentrated OYAP secondary school programs that offer the Level 1 apprenticeship curriculum in Technological Education courses. Secondary school students then complete Co-operative Education credits with skills to offer in their work placements,
- Hire Co-operative Education teachers with Technological Education qualifications to support these OYAP students, to create more industry/education connections, and more co-op student opportunities with a relationship between teacher and business that students do have the skills to be successful.

Specialist High Skills Major Programs (SHSM):

The Ministry of Education has committed \$42.4 million in dedicated funding for SHSM programs which support approximately 54,000 students in 2,294 programs, in 700 schools. This represents 16% of all grade 11 and 12 students across the province. SHSM programs honour all pathways and can enable students to see a path directly into apprenticeship as a first career choice and acquiring the skills they need to successfully complete apprenticeships. SHSM program planning, development and delivery actively create more connections between large associations and schools that can connect teachers and students with local apprenticeship opportunities. Both OYAP and SHSM programs promote partnerships with associations that can provide opportunities to hire directly out of high school (i.e. Canadian Tooling and Machining Association, Ontario General Contractors' Association, CWB Welding Foundation).

Dual Credit Programs:

The School College Work Initiative supports approximately 23,000 students to take dual credit high school and college programming, with just under 85% of students falling into the identified primary target group of at-risk students. In 2019 - 2020, \$2.3 million dollars of the provincial investment in dual credits went unspent due to under enrolment of students in programs and the complexity of running these courses that significantly focus on Technological Education programming. The funding is substantial, yet provides benefit to a limited group of students and often takes students out of high school Technological Education classrooms to experience college programming.

In previous years, students had the ability to take their Level 1 Apprenticeship training in high school and could be granted level 1 in rigorous programs if they demonstrated the

competencies required. This was removed when SCWI dual credits were introduced. Students were very successful going from high school directly into apprenticeship. Now there is the additional step of attending the college to participate and many pre-apprenticeship programs are presented as the answer for apprenticeship training.

High schools are able to apply for College Oversight in order to offer and grant Level 1 Apprenticeships to students, although this requires sign-off by the local college/organization who is the Training Delivery Agent, which is a significant barrier.

Addressing the Stigma

The stigma towards skilled trades careers and Technological Education is a systemic issue that is engrained in much of the education system, policies and historical community perspectives in terms of the value of one education experience and career path over another. Addressing the stigma that our community associates with pursuing an apprenticeship requires both advocacy to support skilled trades and apprenticeship, and also educating our students, parents, education colleagues and community on the value of the skilled trades. Its essential that everyone has accurate information in terms of the prosperity a career in the trades can offer to the students with the appropriate skills, interests and knowledge.

Advocacy in the education system is required to address the prolonged stigma that is associated with skilled trades and technology. Following are specific related issues for your consideration:

Revise the Elementary and Secondary Technological Education Curriculum

- The Ontario curriculum is out of date, having last been updated in 2008. Ontario's

Elementary Science and Technology curriculum places little emphasis on the technology component, and is often just called “Science”. Inconsistency exists in introducing students to hand tools, technology projects and other skills development that build interest in future Technological Education courses,

- Currently the Ministry of Education is in the process of updating the curriculum for these courses. These revisions need to value technology and Technological Education, emphasize to students and parents the importance of this learning and related career opportunities.

Make a credit in Technological Education a requirement for Graduation

- Currently Technological Education and Business Studies are the only two subjects that are not compulsory credits to earn the Ontario Secondary School Diploma - Students are able to complete secondary school having never taken a Technological Education course, students who might thrive there could never have been exposed to these experiences,
- It's a clear message to students, parents, teachers, principals and the community that Technological Education and therefore skilled trades and technology are less important than the Arts, Physical Education, French, Science and all other required subjects,

Educating Students, Parents, the Education System and the Community on the Skilled Trades

Because of the lack of educators with a skilled trades and apprenticeship background, the education system largely does not understand this pathway and these future careers, and the skills required for apprenticeship. With this lack of understanding of the career opportunities, we have a society that largely does not place value in the role that skilled trades and apprenticeship

plays in our prosperity.

Education is required through multiple means, including accurate information and an understanding for students, parents, guidance counsellors, teachers, administrators, with the help of provincial companies, unions and employers sharing information on careers in skilled trades.

Professional Development for Principals, Guidance Counselors and Teachers

As previously mentioned in response to the stigma associated with skilled trades and apprenticeship, it is critical to provide professional development opportunities to build an understanding of skilled trades and technology in our school system through leadership, counsellors and other teachers who lack this background.

Professional development and education on skilled trades and apprenticeship will ensure that:

- Guidance counsellors have all of the information required to successfully counsel students to pursue the apprenticeship pathway.
- All staff and teachers in the education system have the knowledge to support student learning and skill development required for the skilled trades.
- Principals will have the knowledge to properly support Technological Education programming through funding, health and safety practices, facilities and staffing to ensure programs are maintained and expanded

How can we improve pathways into the skilled trades?

Improving pathways for students in the skilled trades will take a dedicated effort by industry and education, both at the local and at the Ministry of Labour, Training and Skills Development and the Ministry of Education to create an education and apprenticeship system that meets the needs of our students and our economy.

There needs to be a direct investment into skilled trades and technology education at the secondary school level, including facilities, tools and equipment and a curriculum that emphasizes its importance. Lastly, we need professional development opportunities for teachers, guidance counsellors and principals that increases their support for skilled trades and technology and explicitly focuses on how to develop and support these programs in our schools.

Building Industry and Education Partnerships

Our education system needs business and industry to engage in order to ensure that students are developing the skills, knowledge and experience required to be successful in current and future careers. Industry/ education partnerships allow teachers to:

- Understand the skills and competencies that students need to successfully pursue skilled trades and apprenticeship careers,
- Develop up-to-date programming based on industry standards,
- Obtain local labour market information to advocate for expanding programming according to the local demand for apprenticeships in specific program areas,
- Provide co-op and other experiential opportunities allowing employers to hire students directly out of high school,
- Bring more industry and skilled trades role models into our schools so that our students can see examples of the prosperous careers they provide.

Students need to understand that the skilled trades lead to many future careers, including

management, entrepreneurship, teaching, business and other elements of the industry. Increasing industry and education partnerships can also lead to more industry sponsorship and funding support for specific programs that meet and train students for specific in-demand careers. Working together to create the pipeline of talent will also give employers confidence to hire students into apprenticeships directly out of high school, based on up-to-date, skills-focused programs that have been informed by industry need.

Investment In and Emphasis on Technological Education

Currently there is no dedicated Ministry of Education funding that supports Technological Education programming and the purchase of industry standard tools and equipment that allows specialized skilled trades programming in secondary school. The Ministry of Labour, Training and Skills Development funding for both OYAP and Dual Credit programming is not allowed to be used for the purchase of tools and equipment in high school classrooms. Without reliable funding for secondary school Technological Education programs, teachers cannot provide the most up-to-date, relevant, skills-based programming required to prepare students to pursue apprenticeship directly out of high school. Many communities are reliant on colleges who have the required industry-standard tools and equipment to train future apprentices, raising the average age of apprentices to be older by the time postsecondary education is completed and graduates are able to find apprenticeship sponsors.

The lack of emphasis on skilled trades and technology in the curriculum and the education systems, and lack of funding support requires school boards, secondary schools, and corporate sponsors to advocate for the maintenance and expansion of Technological Education programming. Without local school board and teacher champions and funding, school boards and principals often choose not to run these programs, to close Technological Education

classrooms and facilities, and/or to not include new facilities in new school buildings.

These outcomes are amplified by a Technological Education teacher shortage due to the two-year teachers college program and other barriers. Therefore, despite the substantial business and industry need for more students pursuing the skilled trades and apprenticeship, the reality is that some school boards are closing these shops and reducing the programming for students.

Key Recommendations to the Ministry of Labour, Training and Skills Development (MLTSD):

There are many ways that MLTSD through Skilled Trades Ontario can be a critical partner in supporting the Ministry of Education in making the change that is needed in the education system to ensure the future pipeline of talent by increasing skilled trades and apprenticeship opportunities for Ontario's elementary and secondary students. Following are our key recommendations with specific actions the MLTSD can take to address the issues.

Advocacy

The Ministry of Labour, Training and Skills Development needs to be vocally support the need for:

- Quality Technological Education programming in our schools,
- More teachers with skilled trades and apprenticeship backgrounds as role models for our students and providing these teachers with the equal opportunity to pursue leadership positions,
- More up-to-date technology and facilities that will train the students they need to pursue

an apprenticeship directly out of high school,

- New Ontario curriculum that places emphasis on Skilled Trades and Technology education, and elementary exposure to hands-on technology,
- A Technological Education compulsory credit in high school that is a graduation requirement for students,
- Increased funding to school boards to directly support elementary and secondary Technological Education.

We need the government to make decisions based on what is best for students, business, industry, our economy and our future. Identifying Technological Education as a key priority to increase the pipeline of talent we need for future prosperity.

Education

It is clear that despite the efforts of the Ministries and educators, there is still a need for education and awareness about skilled trades and apprenticeship. In our experience, when successful business and industry leaders speak about future careers and provide advice to students and the parents and educators that support them, they are much more likely to impact students' future career decisions. A College of Trades would be an important resource for the education system to educate our schools and the community about:

- Skills, knowledge and experience that students require to be successful in the skilled trades, the career opportunities they offer and how important they are in our economy. Also, students need a realistic picture of the skilled trades that is not just simply marketing, but real information about what it takes to be successful in various industries.
- Local labour market data, the sectors of growth in Ontario and specific careers that are in demand (for example a few years ago our Ministry of Education SHSM team

determined that Manufacturing was dead in Ontario and therefore they would not approve anymore SHSM Manufacturing programs for school boards, until they were actually presented with the data).

- Career pathways in apprenticeship and skilled trades to establish all of the ways that students who start in a skilled trade may continue in multiple occupations, whether that be entrepreneurship, teaching, management, and other leadership occupations or the variety of job sites, specialized skill development and money-making potential available to skilled trades people.

There is no greater time than the present that we need decision makers in place that understand these issues, and that have enough influence to make real change.

Program Support

It is necessary for the Government of Ontario to make substantial Investments in secondary school Technological Education programming, including the tools, equipment, facilities and programming required for students to successfully transition to apprenticeships directly out of high school.

There is a need to assess the efficacy of the programs that the Ministry of Labour, Training and Skills Development currently funds in actually recruiting new apprentices directly out of high school and changes that can have a direct impact on this efficacy.

In terms of the Ontario Youth Apprenticeship Program (OYAP), it can be very successful in giving students the opportunity to begin their apprenticeship while in high school. However, making explicit connections to Technological Education courses and technical skill development in combination with co-operative education would significantly better prepare students for their apprenticeship and demonstrate to business and industry that students are very capable of these careers directly out of high school. **School boards should be able to apply for**

concentrated/ accelerated OYAP programs in high schools that include Technological Education courses as a required part of the package and funding that can support upgrades of facilities, tools and equipment to specifically provide Level 1 Apprenticeship programming. This would allow schools without the Technological Education courses to continue with the regular co-op model and therefore not disadvantage students, but allow for the expansion of specialized apprenticeship programming.

Dual credit programming takes our students out of high school programs into colleges to take Technological Education courses. There is no funding to support facilities in high schools that have the ability to encourage substantially more students to consider apprenticeship and college. This further establishes colleges to be the owners of apprenticeship training and decreases the number of students who are prepared to directly enter apprenticeships prior to college pre-apprenticeship or other post-secondary programming.

Prior to the introduction of Dual Credits through the School College Work Initiatives, high schools had the ability to teach and successfully grant Level 1 apprenticeships to students. It was a very successful model that allowed students to complete apprenticeships directly out of high school without further post-secondary education. **Allowing high schools to apply and become Training Delivery Agents (TDA) for Level 1 Apprenticeship will allow students interested in a trade to develop the knowledge and experience to participate and be successful in a co-op and future apprenticeship placement. The Ministry of Labour, Training and Skills Development should have the decision-making power to award the TDA status of high schools, without the need for college oversight should the programs and facilities meet all of the required standards.** This is especially important where transportation to a college is not reasonable. Often students do not fit the Accelerated OYAP or Dual Credit models. Many students are not given the opportunity to pursue a skilled trade in

high school because of these limitations.

The Ministry of Labour, Training and Skills Development provides substantial funding to specific programming and partner organizations that can have an impact on students pursuing apprenticeship. However, **there is a need to re-examine this programing, their efficacy in encouraging students to pursue apprenticeship and retention in the program versus an investment directly into Technological Education facilities and programming in high school.**

Industry and Education Partnerships

Finally, our education system needs industry and education partnerships to ensure that students are developing the skills, knowledge and experience required to be successful in current and future careers. **The Ministry of Labour, Training and Skills Development can support these partnerships by connecting large companies and organizations with a significant stake in future apprentices (i.e. unions, contractor associations, national and global companies) with their local school boards in specific areas of need.** OCTE can help to facilitate these partnerships that can make a substantial difference in local communities, supporting schools to:

- Understand the skills and competencies that students need to successfully pursue skilled trades and apprenticeship careers,
- Develop up-to-date programming based on industry standards,
- Obtain local labour market information to advocate for expanding programming according to the local demand for apprenticeships in specific program areas,
- Provide co-op and other experiential opportunities allowing employers to hire students directly out of high school,
- Bring more industry skilled trades role models into our schools so that our students can see examples of the prosperous careers they provide.

Developing a pipeline of future talent for skilled trades and apprenticeship requires significant partnerships and systemic change in the education system that each day establishes for our youth and community what is truly important to be successful in this world. OCTE is here to leverage our partnerships and our school boards to have the impact required to make these changes, to value skilled trades and apprenticeship for all students and to create a better future for Ontario.



Ontario Council for Technology Education (OCTE)

Chris Tucker, Chair
Christine German, Manager of Growth
& Innovation



OCTE is the Provincial Association Representing:

- Educators delivering K-8 Science and Technology and Grade 9-12 10 curriculum areas, such as
 - Construction Technology
 - Manufacturing Technology
 - Transportation Technology
 - Technological Design
 - Hairstyling and Aesthetics
 - Hospitality & Tourism

**Approximately 50% of our secondary teachers are
skilled trades professionals**

Engagement in OCTE

- **Reach of 4500** members, teachers, board leads, industry partners
- **68 of 72 school boards** are affiliated with OCTE
- Regular Meetings engage **65-80 Board Leads**
- Survey Response Rates: **35% - 60%** of all Secondary Technological Education Teachers

OCTE's Work

- Education & Professional Development
- Teaching resources, safety documents/videos
- Conferences and webinars
- Advocacy to Support Technological Education and key issues (i.e. curriculum and policy, teacher qualifications)
- Promoting Skilled Trades and Technology

**OCTE Safety Resources are Often Referenced by
Third Parties and Governing Organizations**

OCTE and Ministry of Education

- Strong existing relationship between OCTE and the Ministry through curriculum, policy and programming
- No mandate from the Ministry for school boards to accommodate and support Technological Education
- Compulsory Technological Education needs to be mandated - Direct impact on youth pursuing the skilled trades

Disconnect between Intent and Impact

Email Popovic, Milka Mary - Rm:

Science and Technology Grade 1

Email Popovic, Milka Mary - Rm:

Social Studies Grade 1

Email Popovic, Milka Mary - Rm:

Health Grade 1

Email Popovic, Milka Mary - Rm:

Physical Education Grade 1

Email Popovic, Milka Mary - Rm:

Dance Grade 1

Email Popovic, Milka Mary - Rm:

Drama Grade 1

Email Popovic, Milka Mary - Rm:

Music Grade 1

Email Popovic, Milka Mary - Rm:

Visual Arts Grade 1

Email Popovic, Milka Mary - Rm:

Students must earn the following compulsory credits to obtain the Ontario Secondary School Diploma:

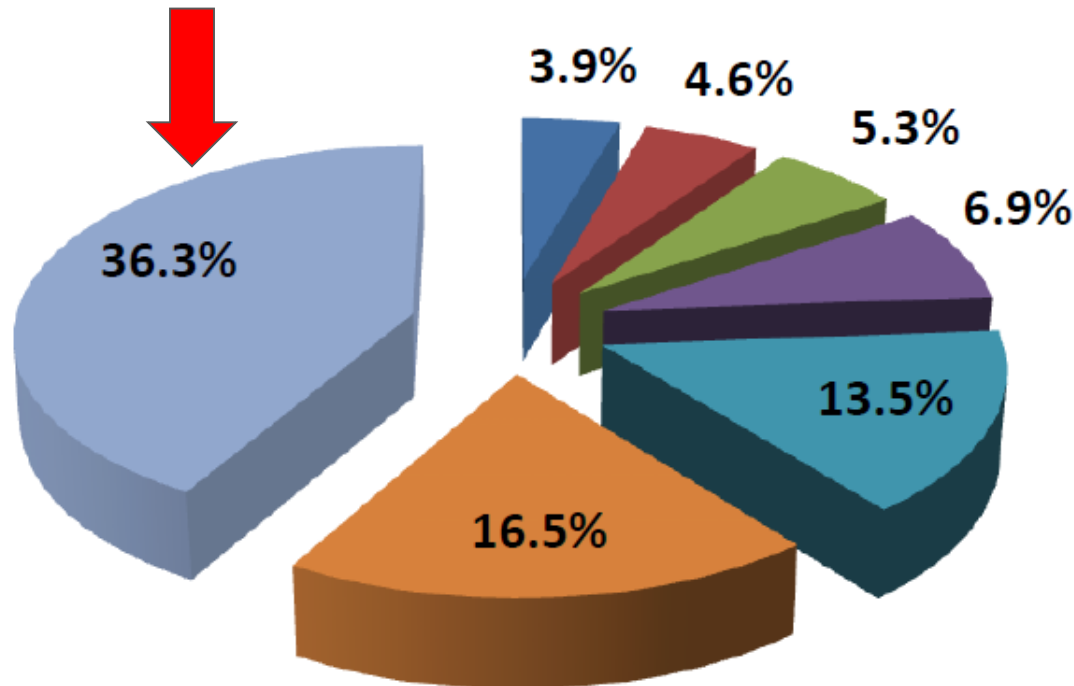
4	credits in English (1 credit per grade)*
3	credits in mathematics (1 credit in Grade 11 or 12)
2	credits in science
1	credit in Canadian history
1	credit in Canadian geography
1	credit in the arts
1	credit in health and physical education
1	credit in French as a second language
0.5	credit in career studies
0.5	credit in civics



ONTARIO COUNCIL
FOR TECHNOLOGY
EDUCATION

No Dedicated Ministry Funding for Technological Education

Top Key Issue for Technological Education Teachers:
Funding for Equipment & Consumables



Engaging Education in Bill 288

- Allow secondary schools to apply for Training Delivery Agent status for specific trades, teachers and facilities assessed for approval WITHOUT College Oversight
- Reserve a seat on the Board of Directors for Skilled Trades Ontario for the Chair of OCTE