



# 2021

## Supporting Student Choice

Successes and challenges in recruiting teachers to support student choice in pursuing a career in skilled trades and technologies



Leadership & System Excellence

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# Executive Summary



In support of Alberta Education’s business plan, the College of Alberta School Superintendents (CASS) undertook a needs assessment during the 2020/21 school year to identify positive practices in place and challenges faced in recruiting teachers to support student choice to pursue a career in skilled trades and technologies.

Significant findings point to inequities across the province in terms of student access to programming, the ability to recruit qualified teachers and instructors, and the lack of facilities, equipment, and resources.

Many school authorities have turned to partnerships with industry, their community, and post-secondary institutions to enhance

programming in these areas. However, challenges exist in ensuring sustainability.

As regular classroom teachers were attributed as “most responsible” for the delivery of trades and technologies programming, a call to action by the 63 school authorities, who participated in this study, is to assist teachers build curriculum connections and undertake professional learning on the various career pathways and trade opportunities. Equally important is a call to demonstrate value for the trades and design a collaboratively built provincial framework leading to greater equity. Based on the findings, teachers are keen to support student choice but need the right supports and resources to make trades a profession of interest and passion among students.

# The Challenge



## Supporting Student Choice

One of the loudest ticking time bombs in Canada is its aging demographic. By the end of the decade, the Royal Bank of Canada<sup>1</sup> estimates one in four Canadians will have left the workforce hitting their senior years – a 17 per cent increase from the year 2020. Coupled with a current youth unemployment rate of 15.9<sup>2</sup>, a retiring workforce presents a great opportunity to inspire students to pursue a career in skilled trades and technologies.

Considerable research has been conducted to encourage youth to enter a trade profession and despite many career awareness initiatives to promote interest in this area, challenges remain.

Commissioned by the Canadian Apprenticeship Forum in 2018, the research report, “Youth Skilled Trades Employment Strategy,” outlines that most students simply haven’t had exposure to skilled trade professions, and have no understanding of apprenticeship education or labour market opportunities. Accessibility, too, was mentioned, with some students identifying their high school had little to no trades programming. Other concerns relate to the stigma attached to the trades. “Youth said their teachers, parents, grandparents, friends, peers, and society discouraged them from pursuing skilled trades careers,” especially new Canadians, whose families moved to Canada to provide their children with more opportunities to pursue professional occupations and a desk



job. Other barriers mentioned were the cost of training, equipment, and transportation, the lack of role models, and too few job placements.

In Alberta, the picture is not much different. Recurring themes, outlined in the Government of Alberta’s 2020 final report “Skills for Jobs Task Force,” pinpoint to students’ lack of awareness of the educational pathways and nature of career opportunities in the trades. The report also cited the persistence of a “significant stigma” with skilled trade professions and apprenticeship education. Drawing on feedback from focus groups, industry round tables and workbook engagements, and an online survey of

Albertans, the task force concluded, “Our primary school system (K through 12) is largely independent of our post-secondary system. Further, the principle academic focus of the system is on preparing students for a single pathway – university.”

Despite these challenges, pathways to the trades are evolving through programs such as Dual Credit and RAP, while organizations like CAREERS The Next Generation, Career Transitions, and Women in Trades are enabling greater access to information, internships, and industry partners.

Looking inside Alberta’s K-12 system, “Is teacher recruitment a barrier to supporting student choice to enter the trades?”

# Action & Methodology

## Needs Assessment on Teacher Recruitment

Since 2019, a key outcome in Alberta Education business plan has been “to increase opportunities for hands-on learning experiences in apprenticeship, trades, and vocational education.” In support, CASS undertook a needs assessment to identify positive practices in place and challenges faced in recruiting teachers to support student choice to pursue a career in skilled trades and technologies. Participants invited to engage in the study

were 42 public school authorities, 17 separate, four francophone, 12 charter schools, four First Nations education authorities, and in collaboration with the Association of Independent Schools & Colleges in Alberta, four independent schools.

As part of the needs assessment, a brief review was undertaken to identify existing research or data sets that would help frame the picture of recruitment practices in Alberta and across Canada. The scope of the review included:



- Effective recruitment strategies of trades teachers and journeyman instructors;
- Trades teacher training requirements; and
- Current successes and challenges with Alberta’s career awareness programs.

presentation, CAREERS The Next Generation’s key initiatives were showcased, including its efforts to strengthen community connections, shorten lag times between student applications and confirmed internships, and increase student internship opportunities.

Following the review, a series of virtual meetings were held with education system leaders across the province to promote participation in a needs assessment survey related to supporting student choice in pursuing a career in skilled trades and technologies. As part of the

On April 20, 2021, CASS released its “Supporting Student Choice in Pursuing a Career in Skilled Trades and Technologies Needs Assessment Field Survey,” with 63 school authorities completing the survey by May 28, 2021.

## 2020

## 2021

**Project Approval**  
Needs assessment on recruiting teachers to support student choice in trades approved.

**Next Generation**  
CASS/CAREERS establish organizational contributions to support Alberta Education’s business plan.

**Research Review**  
Review of current research and evidence of successes undertaken.

**Zone Presentations**  
CASS/CAREERS promote participation in needs assessment with system leaders across Alberta.

**Needs Assessment**  
Supporting Student Choice in Pursuing a Career in Skilled Trades & Technologies Survey released.

**Final Report**  
Finding of needs assessment submitted June 30, 2021, to Alberta Education.

September

November

January

March

May

July

# Related Research

## Findings



In reviewing literature for this needs assessment, it became apparent that there is minimal research related to recruiting teachers to support student choice to pursue a career in skilled trades and technologies. Similarly, the effectiveness of most current career programming in Alberta has been weighed by outcome

markers, rather than research dedicated to evaluating program performance. Sources investigated in exploring the topic included: Alberta Education’s Teacher and Leadership Certification branch, the Alberta 2013-2015 Provincial Dual Credit Strategy and Dual Credit – Subcommittee Reports, Career and Technology Studies (CTS) Bridge-to-Teacher Certification program,

Registered Apprenticeship Program (RAP), Alberta Teachers’ Association, ALIS, CAREERS The Next Generation, The Skills for Jobs Task Force, The National Centre for Education, Indigenous Skills and Employment Training Program, and The Canadian Association of School System Administrators. A cursory web search of Canadian research also was undertaken. Significant findings are as follows:



## What are the successes and challenges in recruiting teachers to support student choice in pursuing a career in skilled trades and technologies?



### Recruitment of Trades Teachers & Instructors

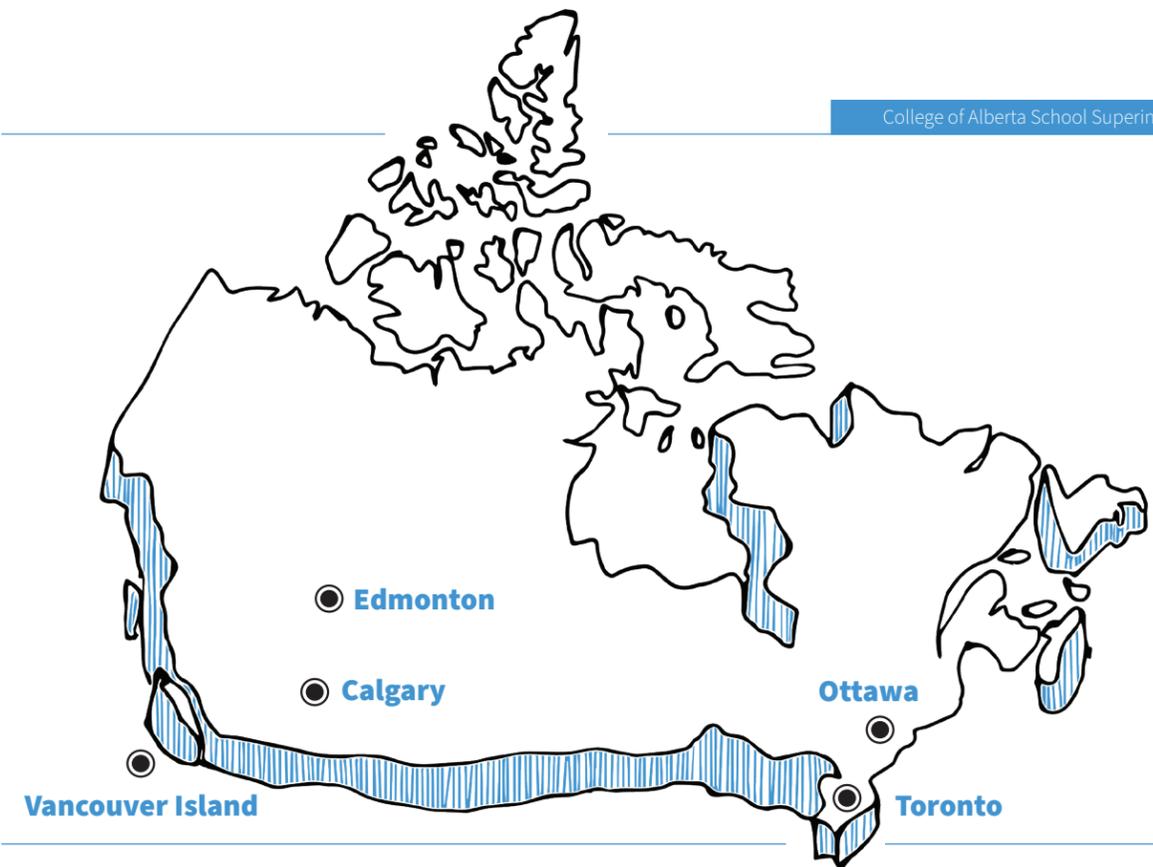
- A 2018

Vancouver Island University study on “The Recruitment of Trades Instructors: Current Practices and Challenges” reported most job recruitment practices focused on job

search websites, newspaper advertisements, social media, and employment agencies. However; more successful practices relied on building connections with respective trade industries, leading to the identification of qualified applicants.

- Major recruitment barriers

cited in the study were competitive compensation packages, guaranteed employment, industry demand for workers, less desired rural postings, lack of administrative skills, and the age and disposition of trades persons transitioning to work with students from K to 12.



### Certification

- In Alberta, a Bachelor of Education is required to teach a trade or technology.
- The CTS Bridge-to-Teacher Certification program provides an opportunity for schools to apply for \$50,000 to sponsor a journey person, health care professional, or information technologist to complete a teacher preparation program.
- As school authorities do not identify trades positions in the Teacher Workforce Information System, the number of trades teachers is unknown.



### Career Programming

- Alberta’s Dual Credit strategy

has led to 19 post-secondary institutions offering dual-credit programming on a wide range of fields and subjects.

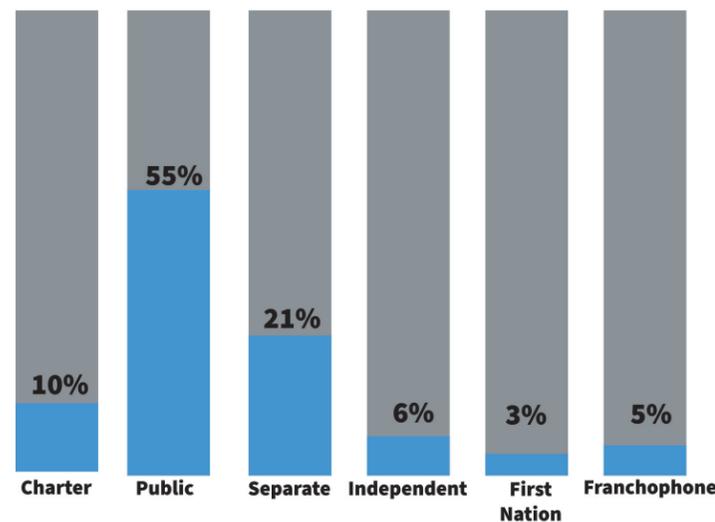
- In 2017, an evaluation of Alberta’s dual credit strategy was undertaken by the province. The study revealed a strong commitment by secondary, post-secondary, and business/industry partners in making student transitions to post-secondary study and the work place a more seamless process.
- Significant fiscal challenges outlined in the study pertain to coordination, curriculum mapping and planning, and the costs associated with the establishment of partnership agreements. The cost of tuition also was noted as a challenge.
- Program evaluations for CTS

Bridge-to-Teacher Certification and RAP are not available.

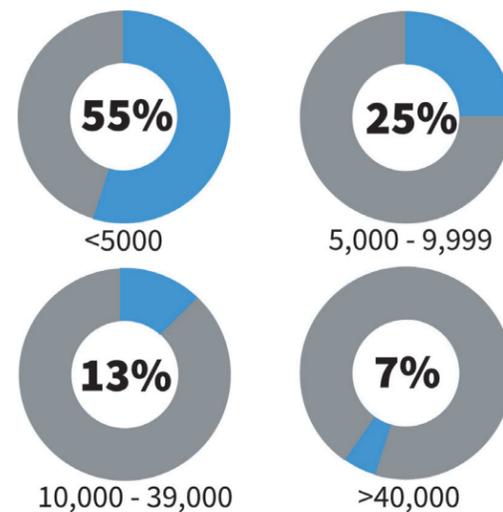
- In 2020, CAREERS The Next Generation facilitated 853 paid placements in a trade, involving 482 employers and 354 schools.
- Since 1997, CAREERS has placed over 30,176 students in a trades opportunity.
- CAREERS is developing an interactive online platform that will connect schools, teachers, students, employers, and parents, while helping to reduce paperwork, eliminate the duplication of efforts, and bring a new automated component designed to reduce the time to match student applications to open employer opportunities.

# Needs Assessment Findings

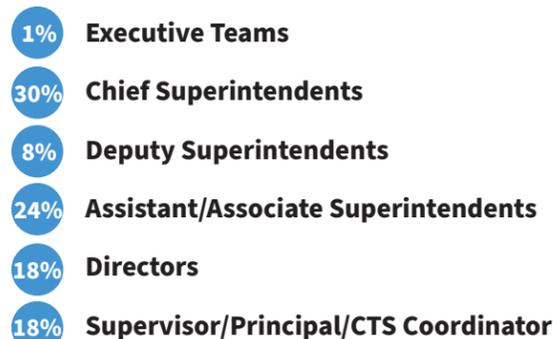
## School Authorities - 63 Participants



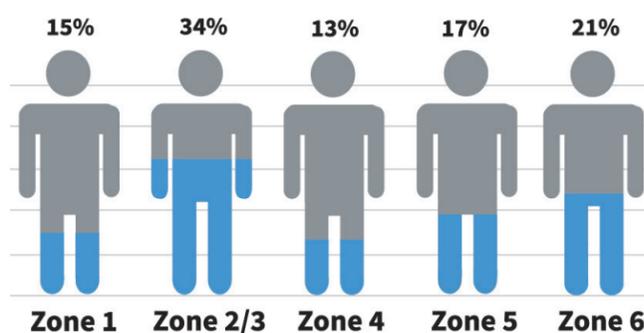
## Size of School Authority Represented



## Role

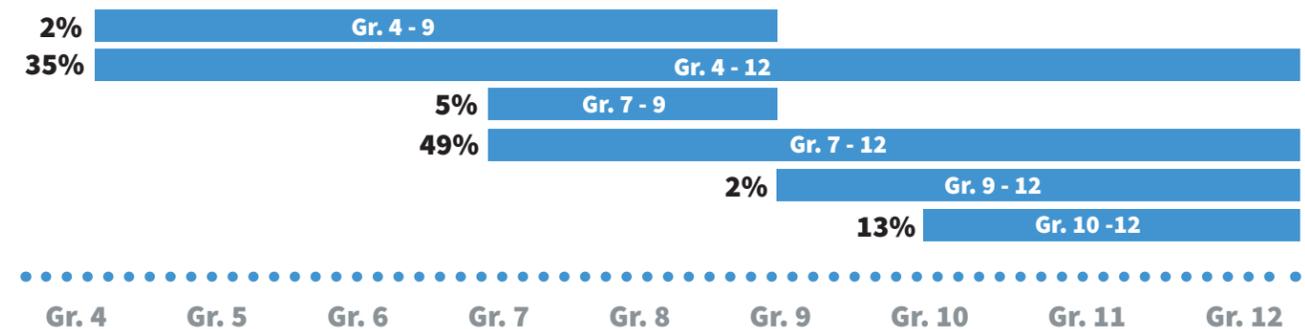


## Zone Representation



At what grade level do you offer information about skilled trades and technologies? Who is responsible for teaching these subjects?

## Grade Levels



## Teaching Responsibilities



### Gr. 4 - 6

In Gr. 4 to 6, the majority of school authorities cited regular classroom teachers as responsible for introducing information on skilled trades and technologies. Teachers were noted as piquing student interest through career practitioners, guest speakers, and option or Career and Technology Foundations (CTF) teachers better versed in a particular field.

### Gr. 7 - 9

At the 7 to 9 grade level, a blend of professionals are involved in promoting specific trade areas. While regular classroom teachers were identified as the most responsible, a few school authorities



under 5,000 students employ a CTF teacher, career counsellor, or journey person. Those authorities greater than 5,000 recount having access to trades teachers or journey persons specializing in areas such as construction and foods.



### Gr. 10 - 12

Regular classroom teachers, Career and Technologies Studies (CTS) teachers, journey persons, off-campus coordinators, and guidance counselors all share the responsibility for creating excitement and awareness about the wide range of trades and technologies. Some authorities noted they enroll students in applicable post-secondary dual credit programs when they lack the facilities or expertise in a specific field.

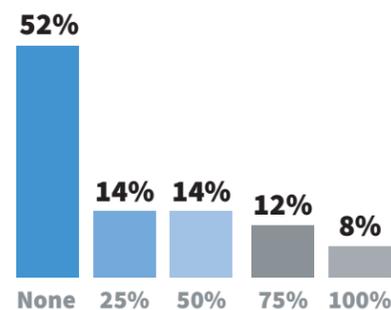
# Findings: Programming



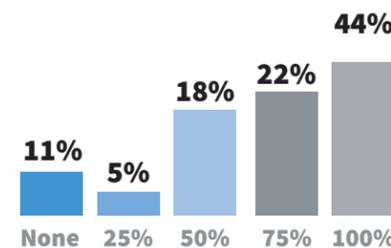
What percentage of schools in your school authority offer programming in trades and technologies? What type of programming?

## Program Offering

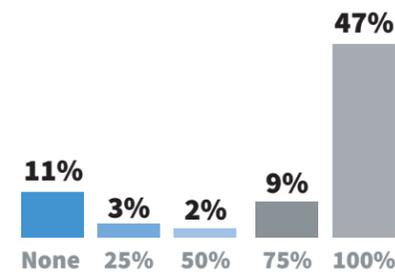
### Gr. 4 - 6



### Gr. 7 - 9



### Gr. 10 - 12



## Programming Type



### Gr. 4 - 6

While a large number of school authorities indicated their schools offered no direct, hands-on trades

programming for students in Gr. 4 to 6, many teachers were noted as engaging students in career exploration and the introducing of related soft skills such as teamwork and problem-solving. Embedding technology within regular

classroom activities through iPads and laptop applications, too, is a regular practice. A smaller number of participants identified the offering of CTF courses, mobile trades labs, and design challenges.



### Gr. 7 - 9

Courses related to CTF and CTS serve as the foundation for inciting interest, exploration, and skill development in trades and technology careers at the 7 to 9 grade level. Courses most frequently named were industrial arts, foods, woodworking, photography, design studies, robotics, coding, and computer programming. Partnerships with organizations like CAREERS The Next Generation or activities such as Skills Canada and Take Your Child to Work offer additional exposure for students. One of the most telling comments as to programming offerings at these grades was summed up in the comment, "The diversity of delivery is very much school and resource dependent, and often varies from school to school."



### Gr. 10 - 12

The introduction of job shadowing and Alberta's Registered Apprenticeship Program, Green Certificate, Work Experience, and Dual Credit programming complement CTS from Gr. 10 to 12. The range of courses expands exponentially to include mechanics, fabrication, engineering, welding, instrumentation, carpentry, agriculture, health sciences,

cosmetology, culinary arts, 3D printing, media design, and others of interest to students. Several participants expressed gratitude for the apprenticeships and dual credit agreements established with industry partners and post-secondary institutions. A few rural authorities expressed concern with the loss of provincial resources, which for their schools were the primary means of providing trade programming.

# Findings: Resource Allocation

## Resource Allocation

Economies of scale, location, and school composition play large factors in determining the flexibility and resource allocation of teaching time directed to trades and technology programming. Responses varied greatly, with a wide gap between those able to afford no Full-Time Equivalent (FTE), a “triad of loosely connected teachers,”

or 0.35 principal time, to larger school authorities whose schools are able to employ 0.5 FTE, 1 or more FTE for off-campus coordinators, CTS teachers, or journey persons.

Many school authorities stated their schools were responsible for FTE designations and dependent on the number of students registering for courses, which can vary each semester. Others identified

district oversight, with one or more centralized positions coordinating trades and off-campus programming for multiple schools, or a satellite school housing all specialized programming.

Changes to Alberta’s funding framework will see the loss of dual-credit programming in some districts, due to the inability to create revenue through credit generation.



How are teaching resources allocated to support career exploration in skilled trades and technologies? Does your school authority have a relationship with a partner agency, a post-secondary or non-profit that encourages students to pursue a career in the trades?

## Partners

School authorities have pursued a wide-variety of partnerships with trades industries, non-profits, and post-secondary institutions to increase access

and awareness to trades and technologies. Outside of formal agreements made to access dual-credit programming, apprenticeships, and work experience programs, partners contribute to classroom

learnings through guest presentations, experiential lessons, career fairs, and job shadowing. Some authorities noted partner participation in parent information nights. Partners identified include:

## Partners Identified

### Partner Agencies

- Alberta Apprenticeship and Industry (GOA)
- Alberta Public Service – Internships
- Calgary Zoo
- Cam Clarke Ford

- Canadian Agricultural Partnership (GOC/GOA)
- City of Calgary
- CO-OP
- Coventry Homes
- Greater Parkland Chamber of Commerce

- Kingsmith Homes
- McKee Homes
- Skills Canada Alberta
- Teatro (Foods)
- Tolko (Forestry)

### Post-Secondary

- Athabasca University
- Ambrose University
- Bow Valley College
- Concordia University
- Grande Prairie Regional College
- Keyano College

- Lethbridge College
- Lakeland College
- McEwan University
- Medicine Hat College
- Mount Royal University
- NAIT
- NorQuest College
- Northern Lakes College

- Olds College
- Portage College
- Prairie College
- Red Deer College
- SAIT
- University of Alberta
- University of Calgary
- University of Lethbridge

### Non-Profit

- CAREERS The Next Generation
- Career Transitions
- Enriched Academy

- Education Matters
- Ever Active Schools
- Junior Achievement
- Junior Forest Rangers
- Lesser Slave Forest

- Education Society
- The Educational Partnership Foundation
- Women in Trades
- Work Wild



Yes, our school authority has a relationship with a partner agency, post-secondary, or non-profit.



No, our school authority does not have a relationship with a partner agency, post-secondary, or non-profit.

## Barriers to Partnerships

The type, nature, and sustainability of partnerships appears to be dependent on the size and location of the school authority. Smaller

rural authorities noted they cannot afford to dedicate the huge amount of time required to establish partnerships for a small number of students whose interest may change from year-to-year, while others

stated they are not in proximity of post-secondary institutions. Some authorities noted that dual-credit offerings have proven to be very expensive for parents in their communities.

# Findings: Teacher Recruitment



Does the recruitment of teachers impact student career exploration of skilled trades and technologies?

**81%**  
Yes, the recruitment of teachers impacts student career exploration of skilled trades and technologies.

**19%**  
No, the recruitment of teachers does not impact student career exploration of skilled trades and technologies.

## Teacher Recruitment

The majority of participants agree that programming is enhanced when teachers have a strong background in a trade or a journey ticket, citing teacher recruitment as an ongoing challenge. In small, rural, or independent school authorities, participants describe a need to hire for the core subjects first, then tailor option programming around student and teacher interests. In remote communities, specialists are



simply not available. Urban boards also noted ongoing difficulties, outlining they have had to pause programming when a trades specialist moves on, retires, or takes a leave of absence. For language schools, finding trades people who can deliver programming in a second language is preferred, but an unrealistic expectation. Alberta's CTS Bridge-to-Teacher Certification program is appreciated but referred to as "a lengthy journey" often taking two years from initiation.



What promising practices has your school authority utilized in recruiting teachers in the areas of skill trades and technologies?

## Promising Practices

By far, teaming teachers up with industry and community partners, and post-secondary institutions to facilitate job-shadowing, work experience, RAP, or dual credit programming was deemed the most promising practice, albeit a time consuming venture.

Significant promotion of the CTS Bridge-to-Teacher Certification program in some school authorities has led to several support staff stepping forward to enter the program.

Compensating past trade experience during the recruitment process, too, has been met with success.

School authorities which have built a network with industry have had Red Seal and journey persons reach out to them about becoming a trades teacher.

Posting positions nation-wide has resulted in more qualified applicants than just advertising locally, but is seen as a costly venture.



What challenges has your school authority encountered in recruiting teachers in the areas of skilled trades and technologies?

## Recruitment Challenges

Job security, personal safety, liability if a student is injured, and the appropriate skill set and knowledge-base all contribute to teachers being hesitant to take on a teaching assignment in a skilled trade. In recruiting journey persons to teach, comparable salaries, industry demand or downturn, extended educational requirements,

and job security were noted as barriers. Synchronicity between both trades and teaching institutions, with an endgame of having individuals exit their post-secondary training with a journey certificate and a teaching degree, was noted by some participants as "a game changer" in increasing the number of trades teachers.

# Findings

## Ongoing Challenges



What challenges exist in your school authority in supporting students whose preferred choice is a skilled trade or technology?

### Ongoing Challenges



#### Funding

Alberta's funding framework endeavors to create equity of learning opportunity for all students in the province. However, rural school authorities with declining enrolments report prioritizing funds for trades focused education as a challenge. Many authorities are turning to partnerships to expand their program offerings, but the long-term sustainability is questioned in terms of the costs associated with entering

into formal agreements, coordination, and transportation for students to attend off-site campuses.



#### Recruitment of Skilled Instructors

Although the majority of school authorities rely on regular classroom teachers to pique interest and a passion in the trades, teacher understanding of course requirements for apprenticeships and post-secondary trades is limited. The comment, "there is only so much time in a day for teachers



#### Location & Placements

As stated many times already, the location of the school authority often depicts its

program offerings in trades and technologies. Those in close proximity to an urban centre have less difficulties attracting qualified teachers and instructors, finding industry placements, and directing students to near by post-secondary institutions. Those in rural settings, which often are smaller in size, outline difficulties in recruitment, partnerships, and accessibility. Creating equity among school authorities is one of the biggest challenges to be addressed in supporting students to pursue a trades profession.

to build their knowledge base in all subject areas," sums up most participant's sentiments. The rate of teachers retiring, moving location, or going on medical leaves also plays a large factor in teacher retention and creates ongoing challenges in finding suitable candidates to fulfill trade roles.



#### Student Choice

Student interest in skilled trades and technologies is crippled by many competing factors.

The exploration of trades and career pathways differs from school to school and classroom to classroom. Students face mounting pressures from family, friends, and peers to pursue academic studies. Costs associated with equipment, travel, and tuition often are out of their reach. The disposition and confidence to leave the security of their school, too, enters into the picture. For school authorities, student interest translates into the number of dollars made available for trades programming, shifting from year to year. Another factor that weighs in at the high school level are students who must prioritize their course load and choose courses required for their diploma, rather than career exploration.



#### Facilities & Equipment

Adequate facilities and the cost to purchase or maintain furniture and equipment related to trades programming is of concern to many participants. For technologies, it was cited that it "often comes down to having the ability to support the growing demand on infrastructure, already stressed by regular classroom instruction and the digitization of society." With limited capital dollars available each year, a provincial solution was deemed prudent, whether it be a regional approach, online, or targeted funding.

# Calls to Action

## Resource Requirements

### Curriculum Connections

Although the current provincial online resources for Career and Technology Foundations and Career and Technology Studies have been well developed, clearly-defined career curriculum connections with relevant age-appropriate resources would expand career exploration from K to 12. As many teachers build out

year-long learning plans, an in-depth knowledge of course materials would build stronger connections to curriculum, real world skill sets, and trade professions.

### Professional Learning

Provincial-coordinated Professional Learning (PL), aimed at building teachers' knowledge and understanding of the various career pathways, trade opportunities, and

skilled trades and technologies is critical in removing the stigma that a career in the trades is less respectable than an occupation requiring a university degree. Coordinated and accessible information about trades, dual-credit and apprenticeship opportunities, industry partners, and scholarships would assist teachers in promoting the trades as a professionally rewarding career.



Describe what resources are required for teachers to enhance students' interest in choosing pathways in the skilled trades and technologies.



labour markets trends would build teacher confidence, and strengthen students' career exploration and interest.

### Demonstrated Value

From the ministry, to the district and school offices, a commitment and demonstrated value for

### Provincial Framework

Access to infrastructure, resources, and industry partners is inequitable across the province. A provincial framework is required to assist school authorities in supporting teachers in the delivery of skilled trades and technologies programming.



## Calls To Action From the Field

In recognition that all educators, and system and provincial leaders, share the

responsibility for supporting students in their career exploration, participants were asked to identify specific actions the field should

employ by school authority, CASS, and Alberta Education. Common themes that emerged were:

### By School Authority

1. Commit to elevating the perception of trades among teachers, students, and parents.
2. Designate funding for teachers to attend PL on skilled trades & technologies.
3. Help reduce barriers by identifying red tape in current programming offerings, i.e. dual credit, bridging program.
4. Work with CASS, government, and industry partners to develop a provincial framework that would provide equitable access to skilled trades and technologies programming.

### By CASS

1. Work with the Alberta Regional Professional Development Consortia to provide PL for teachers on skilled trades career curriculum connections and age-appropriate resources.
2. Work with school authorities, government, and industry partners to develop a provincial framework that would provide equitable access to skilled trades and technologies programming.
3. Identify and share skilled trades and technology resources and Alberta school authority stories of practice.

### By Alberta Education

1. Elevate the value of skilled trades programs through a provincial campaign.
2. Consult school authorities to remove red tape associated with skilled trades and technologies programming.
3. Provide incentives to attract industry partners and skilled trades people to the education profession.
4. Work with school authorities, CASS, and industry partners to develop a provincial framework that would provide equitable access to skilled trades and technologies programming.

## In Conclusion

Although the needs assessment identified teacher

recruitment as an ongoing challenge, school authorities would be better positioned to support students in

pursuing a career in trades or technologies by establishing educational partnerships within a provincial framework.



Leadership & System Excellence

The College of Alberta School Superintendents expresses its sincere thanks to CASS Zones for engaging in a presentation on this study and to the 63 member school authorities who participated in the study's survey. Their insight, wisdom, and rich feedback shaped the valuable findings of this report.

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