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Ready for the Future? Alberta Grade 12 Students' Perceptions of Essential Conditions for Career Success

Research Report

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Table of Contents

Abstract

This study examines how Alberta students experience career education and what they identify as most influential in supporting informed and confident career decision-making. Drawing on the College of Alberta School Superintendents (CASS, 2022) Trades, Apprenticeship, and Vocational Education (TAVE) Strategic Framework, the study conceptualizes career thinking across three interconnected dimensions: *Exploring*, *Engaging*, and *Experiencing*. Using a qualitative descriptive design, data were collected through an online survey administered to Grade 12 students across Alberta between November and December 2025. This report focuses on the analysis of the English survey responses, while a separate report has been prepared for the French-language results. The survey instrument included closed- and open-ended questions aligned to the research questions. Qualitative responses were analyzed using thematic analysis to identify patterns in students' perceptions of key influences, supports, barriers, and experiential learning opportunities. Findings indicate that career awareness is shaped primarily through relational influences. Family members, teachers, and school counsellors were identified as central to early career thinking. Although many students reported that school programming was helpful, their responses revealed uneven access to guidance, limited clarity regarding pathways, and insufficient real-world learning opportunities. Experiential learning, including work experience, dual credit, campus visits, and conversations with trusted adults, emerged as a critical driver of confidence and preparedness. However, access to these high-impact experiences was inconsistent. Students emphasized the need for clear information, individualized guidance, time for exploration, and respectful positioning of trades and apprenticeship pathways. Overall, the findings highlight that effective career education is relationally grounded, experientially rich, and equitably accessible, offering system-level insights to strengthen career development across Alberta.

Keywords: career education, career decision-making, student voice, trades and apprenticeship, vocational education, experiential learning, career readiness, secondary education, system education leadership, Alberta

Introduction

Across Alberta, students are making increasingly complex decisions about their future pathways in a rapidly changing labour market. As demand for skilled workers in trades, technologies, and vocational fields grows, ensuring that students are well supported in exploring, engaging with, and experiencing a broad range of career options has become a critical priority for schools, school authorities, and the provincial education system. Career education plays a central role in helping students develop awareness of available pathways, align their interests and strengths with future opportunities, and build confidence in their post-secondary and workforce decisions.

Despite ongoing investments in career education programming, there remains a need for deeper insight into how students experience these supports and what conditions they perceive as most influential in shaping successful career decision-making. Student voice is essential for understanding not only when and how career thinking begins but also which school-based experiences meaningfully contribute to confidence, clarity, and readiness for transition beyond high school.

This study was designed to explore student perspectives and provide evidence-informed insights to guide future system planning. Guided by the Trades, Apprenticeship, and Vocational Education (TAVE) Strategic Framework (College of Alberta School Superintendents [CASS], 2022), this study examines career thinking across three interconnected dimensions: *Exploring*, *Engaging*, and *Experiencing*. Together, these dimensions offer a comprehensive lens for understanding how students develop career awareness, interact with school programming and supports, and benefit from hands-on learning experiences.

Drawing on the perspectives of Grade 12 students from across Alberta, this study focuses on understanding how students perceive their readiness for career decision-making and what conditions they identify as most supportive. Specifically, the study seeks to address the following research questions:

1. *Exploring Career Thinking*: What factors most influence students' initial career awareness, including when students first begin seriously considering future career pathways and how confident they feel in understanding the range of available options?
2. *Engaging in Career Thinking*: What essential conditions do students perceive as supporting the alignment of their personal interests and strengths with future career pathways in trades and vocational education, including the role of school programming, supports, and identified barriers?
3. *Experiencing Career Thinking*: How do students describe the impact of hands-on learning experiences, such as Career and Technology Foundations (CTF), Career and Technology Studies (CTS), Registered Apprenticeship Program (RAP), job shadowing, and dual credit on their confidence in making informed

career decisions, and what improvements do they suggest for strengthening school-based career education?

By explicitly exploring these questions, this study provides the findings intended to inform school authorities and system education leaders as they continue to strengthen access to high-quality, equitable, and effective career education opportunities that support students in making informed, confident, and meaningful career decisions.

Literature Scan

With an emphasis on North American contexts, this literature scan explores promising practices that support high school students' career decision-making. First, a brief look at career development theory offers context. The next section provides an overview of recent research on school-based career education and strategies, followed by a discussion of facilitators of trades and technologies pathways. The literature scan concludes with recommendations for school-authority-level structures and supports.

Career Development Theory

Green initiatives, artificial intelligence, and digitalization are reshaping the world of work, bringing changes to the required skills and training and eliminating, creating, and shifting occupations (Organisation for Economic Co-operation and Development [OECD], 2023; Yang et al., 2023). Given the increasingly complex labour market, career interventions have also evolved, moving towards career counselling and away from a narrow focus on occupational matching (Wang et al., 2024). In a review of the high school career intervention literature from 2014 to 2024, Wang et al. (2024) identified career construction theory (48%) and social cognitive career theory (12%) as the two most prevalent theoretical frameworks used by researchers.

Career Construction Theory

Career construction theory views the individual as actively engaged in the developmental process of formulating an identity and career (Savickas, 2013). Career construction and life design approaches are responsive to the unstable realities of the postmodern era; the dynamic and nonlinear nature of individual lives and career pathways demands adaptability (Savickas, 2013; Savickas et al., 2009). To address this complexity, Savickas et al. (2009) argued, "We should envision 'life trajectories' in which individuals progressively design and build their own lives, including their work careers" (p. 241). As adolescents face societal pressures related to life transitions, they construct meaning-laden personal narratives that guide career decision-making (Savickas, 2013). Rather than a one-time decision, career development is an ongoing process of navigating life transitions that is impacted by inevitable shifts in health, work, and relationships (Savickas et al., 2009). Career construction and life design approaches embrace the nonlinearity of contemporary career planning and empower individuals by recognizing their agency in decision-making as their self-concepts are enacted (Savickas, 2013; Savickas et al., 2009).

Social Cognitive Career Theory

Social cognitive career theory explains the development of an individual's scholastic and career behaviour, including their interests, achievement, and perseverance (Lent & Brown, 1996). In line with Bandura's social cognitive theory, personal, environmental, and behavioural factors intersect and influence one another to shape behaviour. Three related variables impact career decision-making: self-

efficacy beliefs, outcome expectations, and personal goals. *Self-efficacy beliefs* are developed through feedback from personal achievements, observational learning, social persuasion, and physiological responses. Achievements typically enhance self-efficacy beliefs, whereas adverse outcomes lower them. Secondary to self-efficacy beliefs, *outcome expectations*, or beliefs about the anticipated results of engaging in specific behaviours, also influence career decision-making. Finally, *personal goals* also guide career decision-making behaviours. This model accounts for internal, external, and behavioural impacts on career development, including social and academic drivers (Lent & Brown, 1996).

Quality of Research Evidence

Scholars have identified challenges with the volume and quality of the high school career education literature (Covacevich, Mann, Besa, et al., 2021; Covacevich, Mann, Santos, & Champaud, 2021; de Vries et al., 2024; Marciniak et al., 2022; Wang et al., 2024). Specific critiques included the fracture of evidence across varied research disciplines, a tendency to broadly study interventions in amalgamation, and an overreliance on grey literature (Covacevich, Mann, Besa, et al., 2021; de Vries et al., 2024). Without a robust evidence base, determining best practices is challenging.

Thus, in addition to exploring peer-reviewed publications, this literature scan draws on the OECD's (2021) Career Readiness project, which explored the long-term impacts of career development for teenagers to inform school guidance practices. As part of the OECD project, Covacevich, Mann, Santos, and Champaud (2021) analyzed 10 longitudinal data sets from eight countries, including Canada. The analyses addressed three long-term outcomes: career satisfaction, income level for those with full-time employment, and likelihood of not being in education, employment, or training (NEET). In addition, the OECD (2025) reported on youth career development data from its Programme for International Student Assessment (PISA); covering 2000 to 2022, this high volume of comparative data represented youth from more than 80 countries. Findings from the Career Readiness project complement the peer-reviewed literature to contextualize the available evidence.

Researchers have identified some positive outcomes for career-related interventions with adolescent populations (Dodd et al., 2022; Marciniak et al., 2022; Wang et al., 2024). In a review of 25 studies, Wang et al. (2024) found that the most prevalent high school career interventions included group career counselling (48%), workshops (20%), and career courses (16%), with topics covering knowledge of oneself, career information, and decision-making. Interventions showed generally positive outcomes for career adaptability, career decision-making, career identity, career exploration, self-efficacy, and outcome expectations. However, only two studies in this review included follow-up, and they failed to demonstrate sustained positive impacts. Dodd et al. (2022) designed a career readiness measure and then assessed the impact of 15 career guidance activities on secondary school students in England. The career guidance activities addressed accessing post-secondary information and visits, work experience and workplace visits, integrated career education, and career

advisor meetings, among others. Higher levels of participation in career guidance activities were positively associated with career readiness, according to both self-report and school-reported data. The lack of data disaggregation renders it impossible to tease out the impacts of individual career guidance activities, echoing Covacevich, Mann, Besa, et al.'s (2021) critique of career education research.

Several studies have also explored factors that differentially impact career education or preparedness in adolescents (de Vries et al., 2024; Marciniak et al., 2022). In a systematic review of literature, Slaten, Lee, et al. (2024) explored the role of school counsellors in delivering classroom-based interventions for kindergarten to Grade 12 students, finding only three studies focused on career interventions. In addition to the structure and content of interventions, the crucial role of staff training and qualifications in delivering effective interventions must be considered (Witko et al., 2006). Moreover, additional research is needed to explore impact factors and substantiate long-term outcomes (Covacevich, Mann, Besa, et al., 2021; Covacevich, Mann, Santos, & Champaud, 2021; de Vries et al., 2024; Dodd et al., 2022; Marciniak et al., 2022; Wang et al., 2024).

School-Based Career Education and Strategies

In this section, evidence related to career education and other strategies relevant to school-based delivery is described. The findings are grouped into four subsections: exploring career pathways and information, engaging with career education and reflection activities, career conversations and social support, and career information resources.

Exploring Career Pathways and Information

Exploration can refer to activities that prompt exposure and awareness of career pathways (CASS, 2022; OECD, 2021). This section addresses on-campus activities, including career education and reflection, career conversations, and information resources such as career speakers and career fairs. Across sources, Canadian youth generally reported interest in a narrow selection of career fields (Bloxom et al., 2008; Heymann et al., 2022; OECD, 2025). Using 2022 PISA data, the OECD (2025) found that more than two-thirds of Canadian 15-year-olds expected to work in a professional field, and 50% of females and 44% of males in OECD countries anticipated working in one of the 10 most popular careers. However, two smaller studies reported a notable interest in the skilled trades among Grade 12 students, capturing 12.4% and 9.4% of student responses (Bloxom et al., 2008; Heymann et al., 2022). Given the general convergence of students' career aspirations, school staff need strong helping skills to support and not discourage students as they navigate potential pathways. Yet one study found that, despite this evident need, a startling majority of Alberta teachers and guidance counsellors (75 out of 77) lacked formal education in career development or counselling (Witko et al., 2006).

Career Education and Reflection Activities

The literature addressed activities that fall within the scope of Alberta's Career and Life Management course, which is required to earn a high school diploma in the province (Alberta Education, 2004). The OECD (2021) found that application and interview skills development activities had robust enough evidence to be considered one of 11 career readiness indicators. In contrast, school-based career reflection activities, namely, career surveys and career classes, were described as promising but lacked sufficient evidence to be classed as a career readiness indicator. Examining Canadian longitudinal data, Covacevich, Mann, Besa, et al. (2021) and Covacevich, Mann, Santos, and Champaud (2021) found some evidence of positive outcomes: At 25 years old, Canadians who had engaged in career reflection activities by age 15 were 3–4 percentage points less likely to have NEET status compared to those who did not partake in them. Furthermore, Canadian students who received instruction in career classes on how to locate occupational information by age 15 had a 4% higher income at 30 years old compared to peers who did not receive this instruction. However, some negative outcomes in two other countries and a lack of evidence from prior working papers led the authors to caution against drawing broad conclusions about the intervention impacts. More research is needed on career courses and reflection activities (Covacevich, Mann, Santos, & Champaud, 2021; OECD, 2021).

Two studies addressed Alberta students' perceptions of career education coursework. Bloxom et al. (2008) found that, although Grade 12 students in Alberta rated the Career and Life Management course the highest among a list of career planning supports, it was still considered only "somewhat helpful." Students ranked the Career and Technology Studies course sixth. Welde et al. (2015) used data from 170 evaluation surveys to explore Alberta Grade 10–12 students' responses to curricula-integrated career education projects implemented by preservice teachers from 2009 to 2014. Most respondents agreed that the projects helped them develop self-understanding (56.5%, $n = 96$), enhanced career exposure (61.8%, $n = 105$), fostered excitement about life opportunities (61.2%, $n = 104$), and prompted a desire to explore other careers (61.2%, $n = 100$). The highest rated projects incorporated self-understanding activities and career research and planning. Although more research is needed, Welde et al. recommended integrated career education to bolster under-resourced school guidance departments.

Career Conversations and Social Support

According to the OECD (2021), career conversations with family, friends, and school staff are a career readiness indicator. Marciniak et al. (2022) used the broader term *social support*, addressing the affective and strategic dimensions of support.

Role of Family and Peers. Across studies, students described relational influences on career exploration and discernment, particularly family but also peers (Bloxom et al., 2008; de Vries et al., 2024; Goegan et al., 2022; Heymann et al., 2022; OECD, 2021, 2025). Parents were frequently cited as the most impactful relational support (Bloxom et al., 2008; Heymann et al., 2022), but some studies highlighted the

constraining influence of parental pressure (de Vries et al., 2024; Goegan et al., 2022). This finding is supported by 2022 PISA data, which revealed that a third of students reported familial pressure to pursue a particular trajectory after school, with "one in ten say[ing] that they feel this pressure very strongly" (OECD, 2025, p. 48). Heymann et al. (2022) found that, in Nova Scotia, students in Grade 7 reported higher reliance on familial support when considering career goals than did students in Grades 9 and 12. Female students (46.7%) were more likely than male students (38.6%) to rate familial support with career goals as important. In comparison to support from peers, parents' roles were viewed as pressuring, and impacts varied across the grades.

Role of School Staff. Students also referenced the role of guidance counsellors and teachers in career planning (Bloxom et al., 2008; Goegan et al., 2022; Heymann et al., 2022; OECD, 2025). In one study, only 5.8% of 131 Alberta students in Grade 12 identified the guidance counsellor as the most approachable person to help with career decisions (Bloxom et al., 2008), whereas in another study 23.2% of 164 Grade 12 students in Nova Scotia identified the counsellor as a top-four resource (Heymann et al., 2022). Heymann et al. (2022) found that female students (16.4%) reported enlisting counsellor support for career exploration more frequently than male students did (8.3%). Bloxom et al. (2008) found that only a small percentage of Alberta Grade 12 students identified individual career counselling (5.5%, n = 14) as a career planning need, yet students rated career counselling as the second most helpful career planning support, with career planning workshops ranking 11th. In fact, all 18 career planning supports included in the survey received low ratings from students and were considered only "somewhat helpful." Bloxom et al. contextualized these low ratings with reference to prior research that identified obstacles to counsellors providing career guidance, including insufficient training and time (Witko et al., 2006). These findings are limited by the studies' small samples of Grade 12 students, a population that may feel pressure related to transitions following high school. Notably, Canadian data revealed a significant relationship between speaking to a guidance counsellor about career plans by age 15 and both NEET status and full-time earnings: Those who spoke to a counsellor were 3 percentage points less likely to be NEET at 25 years old and had a 3% greater annual income at 30 years old than their nonparticipating peers did (Covacevich, Mann, Santos & Champaud, 2021). Notably, 2022 PISA data revealed that the percentage of Canadian students who had interacted with a career advisor fell below the OECD average (OECD, 2025). Despite the supportive evidence for career counselling (Covacevich, Mann, Santos, & Champaud, 2021; Wang et al., 2024), the lack of information about the quality of counselling received by students makes it difficult to assess students' perceptions of the support.

Career Information Resources

Industry and Post-secondary Information. Information-sharing strategies were also referenced in the literature (Bloxom et al., 2008; Covacevich, Mann, Santos, & Champaud, 2021; Heymann et al., 2022; Kashefpakdel & Percy, 2017; OECD, 2021; Slaten, Wadley, et al., 2024). The OECD (2021) identified interactions with career speakers or job fairs as another indicator in the Career Readiness project. Similarly,

Kashefpakdel and Percy (2017) used British longitudinal data to analyze relationships between school-based career talk exposure and full-time employment income levels at 26 years old. They found a significant relationship between hearing from external career speakers in school at age 14–15 and future wages, with each talk linked to a 0.8% income boost. Weaker associations were found for those exposed to external career speakers at age 15–16. The volume of career talks was also meaningful, particularly at higher numbers (15 or more), along with student perceptions of their value (Kashefpakdel & Percy, 2017). According to Bloxom et al. (2008), Alberta Grade 12 students indicated that their greatest career planning need was post-secondary information (27.6%, *n* = 70), followed by career information (19.7%, *n* = 50), with labour market information in fourth. However, they also described labour market expectations as a notable influence on their career decisions (20.1%, *n* = 51). One study found that almost a quarter of Grade 12 students in Atlantic Canada valued school-based career days (Heymann et al., 2022), while an earlier study indicated that the Alberta Grade 12 students rated career fairs ninth most favourably for career planning (Bloxom et al., 2008). Another study referenced partnerships with the community as a source of career exploration as well as funding, helping address the needs of schools serving student populations in low socioeconomic areas (Slaten, Wadley, et al., 2024). Although the advantages of industry and post-secondary interactions are evident, Canadian students fell below the OECD average in terms of students who reported making a worksite visit, job shadowing, or attending a career fair, according to 2022 PISA reporting (OECD, 2025).

Internet Resources. Students reported relying on written materials, internet resources, and websites such as myBlueprint to gather career information (Bloxom et al., 2008; Heymann et al., 2022; OECD, 2025). For instance, in Nova Scotia, 21.8% of Grade 9 and 15.2% of Grade 12 student respondents reported using myBlueprint for career exploration (Heymann et al., 2022). The same study found that the most prevalent resource for career exploration was the internet (40.8% of Grade 9 students and 42.7% of Grade 12 students). Social media was also a prevalent resource (25.2% of Grade 9 students and 20.1% of Grade 12 students). Bolstering these findings, both 2018 and 2022 PISA data revealed online research as attracting the highest levels of student use for finding career information (OECD, 2025). Consistent with broader evidence, students reported relying on online research and social media, even when reputable school-based resources were available (Heymann et al., 2022; OECD, 2025).

Engaging in Career Thinking

Engagement with career thinking can be linked to youths' career decision-making and readiness (Goegan et al., 2022; Marciniak et al., 2022; OECD, 2021). The OECD's (2021) Career Readiness project provided evidence to support four impactful facets of contemplating the future: the identification of a potential occupational pathway, ambition related to professional or supervisory roles, consistency between career and education plans, and a belief that education poses value to future work. The latter suggests that students' school engagement may relate to career readiness, but an analysis of data from Canadian students revealed that social, academic, and

intellectual engagement generally declined towards Grade 12 (Willms et al., 2009). According to 2022 PISA data, Canadian students were above the OECD average in agreeing with statements related to concerns about preparedness to transition out of school, lack of knowledge of potential pathway options, worries about financial support to achieve their pathway goals, misalignment between school learning and life preparation, and perception of school as a poor use of time (OECD, 2025). Additionally, while Canadian students were below the OECD average in feeling adequately prepared for post-school transitions, they were above average in agreeing that school enhanced their confidence to make decisions and that they had developed knowledge, skills, or both that would be useful in a workplace. Thus, students' career mindsets and school engagement levels may warrant further attention to design impactful career development supports.

Recently, researchers have drawn on self-determination theory and social cognitive career theory to explain students' career decision-making or readiness. Goegan et al. (2022) coded responses from Alberta Grade 12 students about their plans following high school, determining which causality orientation from self-determination theory the responses reflected. Responses often fell under multiple orientations. Of the 217 responses, 81.5% aligned with a *controlled orientation* motivated by external constraints, 57.6% with an *autonomy orientation* focused on personal interest, and 10.6% with an *impersonal orientation* marked by a perceived lack of personal control. For the controlled orientation, Goegan et al. identified four thematic influences: "competence, relationships, external factors, and future considerations" (p. 404). Informed by social cognitive career theory, Marciniak et al. (2022) developed a career preparedness framework based on a thorough review of the peer-reviewed literature for adolescent populations. Based on this review, they referred to career preparedness as "the attitudes, knowledge, competencies and behaviors necessary to deal with expected and unexpected work- or career-related transitions and changes" (Marciniak et al., 2022, p. 22). They suggested that two domains (career attitudes, knowledge and competencies) interact to influence career-related behaviours. As well, they pointed to the impact of outcome feedback (i.e., successes and failures) and personal factors (i.e., individual characteristics, family background) as other influencers. Goegan et al. and Marciniak et al. further highlight the potential influences of student mindsets and academic self-efficacy on career readiness and choices, which is within the realm of influence for educators.

Equity Considerations

Related to career thinking, the literature spotlights the need for supportive and engaging career supports that equitably address the needs of historically underserved populations (Keele et al., 2020; Marciniak et al., 2022; OECD, 2025; Slaten, Wadley, et al., 2024). In one study, Canadian students with low socioeconomic status (SES) reported lower levels of school engagement than those with high SES did (Willms et al., 2009). Students' plans for post-secondary education are largely shaped by their social background rather than their achievement levels, resulting in what is referred to as the "aspiration gap" (OECD, 2025). Canadian students with lower SES

are 18.6 percentage points less likely to expect to accomplish tertiary education and less likely to engage in career development activities compared with their higher SES peers. Similarly, Goegan et al. (2021) found that Alberta students without post-secondary plans provided more responses related to external factors and fewer references to supportive relationships and future considerations.

The evidence suggests that equity is an important consideration when designing responsive career development supports. Both one-to-one support and broader school approaches can be appropriate to meet students' diverse needs (de Vries et al., 2024; Keele et al., 2020; Marciniak et al., 2022; Slaten, Wadley, et al., 2024; Welde et al., 2015). Some research has addressed the relational skills of school staff as a facilitator or barrier to student engagement and empowerment with career supports (de Vries et al., 2024; Slaten, Wadley, et al., 2024). To support varying student needs, Wang et al. (2024) suggested a continuum of supports for high school youth. At the universal level, they suggested that all students could benefit from high-quality career curriculum with further group and individualized counselling determined by student needs. Individualized support has been recommended to address students' personal career needs (Bloxom et al., 2008; de Vries et al., 2024; Keele et al., 2020; Marciniak et al., 2022; Wang et al., 2024) and to tailor interventions to specific populations (e.g., historically underserved, culturally and linguistically diverse; Keele et al., 2020; Taylor, Hamm, & Raykov, 2015). Slaten, Wadley, et al. (2024) focused on the practices of U.S. educators in low socioeconomic areas with exemplary results in terms of career and post-secondary transitions. Although the findings are limited in their generalizability, these educators described systemic school-based approaches to fostering student success, including high expectations, strength-based staff attitudes, responsive student engagement interventions, tailored career and post-secondary planning, varied career development activities, collaboration among staff with specific duties, a shared whole-school vision, and strong community involvement. In sum, whole-school approaches and a well-structured continuum of supports offer promising considerations to meet the career development needs of all students.

Experiencing Career Possibilities

Experiences can refer to work-integrated learning and off-campus education opportunities that impact high school students' career decisions (CASS, 2022). Schools may enlist off-campus learning strategies to foster student exploration of the world of work and post-secondary possibilities (de Vries et al., 2022; Dodd et al., 2022; Keele et al., 2020; Marciniak et al., 2022; Slaten, Wadley, et al., 2024). As framed by this literature scan, the OECD (2021) identified four career readiness indicators related to experiencing career possibilities: part-time employment, volunteer activities, workplace visits or job shadowing, and occupationally focused short programs. Relevant to the United States, Canada, and Australia, occupationally focused short programs occur within the context of the high school curriculum, exposing students to particular occupations or career fields (Covacevich, Mann, Santos, & Champaud, 2021). Though positive, the evidence for work placements or internships was not

sufficient for it to be classified as an indicator in the OECD (2021) Career Readiness project.

In an analysis of U.S. longitudinal outcomes, Plasman and Thompson (2023) found around 6% higher early career earnings for those who participated in work-based learning in high school compared to nonparticipants and a 7% advantage when comparing similar student profiles. Among work-based learning types, job shadowing had the most robust positive associations with higher income. However, the evidence for job shadowing is limited by self-reporting and the datedness of the data (OECD, 2021; Plasman & Thompson, 2023).

Research has also highlighted Canadian students' experiences with off-campus education. According to the OECD (2025), 15-year-olds in Canada infrequently reported participating in career development experiences that are well associated with employment attainment. The percentage of Canadian students who had participated in an internship by age 15 fell below the OECD average (OECD, 2025). Identifying work experience as a career planning need (11.0%, $n = 28$), Alberta Grade 12 students rated it more favourably than job shadowing (Bloxom et al., 2008). In Nova Scotia, 45.0% of Grade 9 student respondents listed visiting workplaces as a top four career exploration resource compared with 34.8% of Grade 12 students, who rated post-secondary campus visits slightly higher (37.2%; Heymann et al., 2022). Some evidence above suggests that Canadian students have fairly positive views of off-campus learning, but whether opportunity of access is a barrier remains unclear.

Facilitators of Trades and Technologies Pathways

Vocational Education

Among OECD countries, Canadian students have low rates of vocational education at the high school level because this type of training is typically completed in post-secondary studies (OECD, 2023). Alberta's vocational education approach can be described as *linked* rather than *tracked*: Most students pursue a high school diploma, course sequences allow for bridging to pursue varied post-secondary pathways, and academic and vocational learning overlap through initiatives such as dual credit (Taylor, 2019). In tracked systems, such as those in Germany, students are positioned on vocational or university trajectories at an early age (Deissinger, 2015; Haasler, 2020). These divergent trajectories and their intersections with the labour market restrain career pathways and can reinforce generational socioeconomic differences (Haasler, 2020). In Germany, vocational education spans a wide variety of occupational options, but in Canada, apprenticeship focuses on skilled trades (Wright et al., 2020).

In terms of vocational education strategies, scholars have addressed pressures related to academization and digitalization in preparing students for future labour demands (Deissinger, 2015; Haasler, 2020; Herdman et al., 2024; Yang et al., 2023). Vocational education and training pathways are increasingly desired by German youth who have higher academic credentials, increasing competition and pushing students

with lower achievement levels into lower-quality and lower-paying occupations (Deissinger, 2015; Haasler, 2020). Researchers have emphasized the inherent risks of apprenticeship and career and technical education (CTE) models that underemphasize academic and broader skill development (e.g., problem-solving, socioemotional skills), as labour market demands may require graduates to pursue further post-secondary education (Ecton & Dougherty, 2023; Herdman et al., 2024; Kim et al., 2021).

In Germany's dual vocational education and training model, government and employers share costs, and industry partners must meet regulatory requirements related to training. Industry benefits from the opportunities to recruit, screen, and acquire apprentices paid at lower rates than those of fully qualified employees (Haasler, 2020). Although the model has attracted international interest, transferring it to other places poses challenges (Deissinger, 2015). Barriers to replication include Germany's unique sociocultural context, the need for favorable labour market conditions, and unemployment among graduates seeking an apprenticeship, especially individuals from historically underserved backgrounds (Deissinger, 2015; Haasler, 2020). Deissinger (2015) suggested countries explore locally relevant vocational education approaches that can lead to sustained career opportunities and success.

Persistence and Attrition in Apprenticeship Pathways

Several studies included data on factors related to persistence and attrition within skilled trades careers after high school (Lehman & Taylor, 2015; Taylor, Hamm, & Raykov, 2015; Taylor, Lehmann, & Raykov, 2015). Lehmann and Taylor (2015) found that a strong majority of young people who took part in a high school apprenticeship identified family as highly influential on their decision to participate. Parental modelling, exposure to hands-on learning, and farming experiences shaped students' choices (Lehmann & Taylor, 2015; Taylor, Hamm, & Raykov, 2015; Taylor, Lehmann, & Raykov, 2015). In addition, Taylor, Lehmann, and Raykov (2015) explored the perceptions of 25 apprentices in Alberta and Ontario who had left their initial trade. Around half pursued post-secondary education, nine explored other trades, five entered other workforce roles, and one was unemployed. Decisions to leave their initial trades were influenced by their outlook and values, career and occupational knowledge, apprenticeship support levels, labour market opportunities, network reach, and challenges within the workplace.

Broader economic and local labour market factors can relate to differential expectations and outcomes for apprentices (Lehmann et al., 2015). Apprentices in Alberta who took advantage of boom conditions in the oil sands described burgeoning training and financial opportunities, whereas Ontario apprentices cited difficulties such as poor compensation, unemployment, and frequent job changes (Lehmann et al., 2015; Wright et al., 2020). Obtaining stable, well-paid quality mentorship opportunities within a positive work environment was a challenge, particularly in the hairstylist and automotive trades (Lehmann et al., 2015; Taylor, Hamm, & Raykov, 2015; Taylor, Lehmann, & Raykov, 2015; Wright et al., 2020). In addition, supportive

mentors were identified as facilitative of positive experiences, whereas unsupportive work environments left negative impressions (Lehmann & Taylor, 2015; Lehmann et al., 2015; Taylor, Hamm, & Raykov, 2015; Taylor, Lehmann, & Raykov, 2015). Malette et al. (2024) studied Canadian students' decisions to transfer to an apprenticeship and out of post-secondary education. With shifts between trades and post-secondary pathways, their findings highlighted the impact of family, economic, and work environment factors on Canadian apprentices, but this research is limited by an overreliance on one data set.

Career and Technical Education

Given equity concerns, some envision optimal CTE programs as fusing authentic vocational exploration and knowledge with academic instruction to mitigate foreclosures on post–high school pathways (Deissinger, 2015; Ecton & Dougherty, 2023; Haasler, 2020; Herdman et al., 2024; Kim et al., 2021; Taylor, 2019). As part of the OECD Career Readiness project, Herdman et al. (2024) highlighted innovative career pathways in five countries, including the United States and Canada. They defined career pathways as programs integrated into upper secondary education that typically centred on a general occupational field; favoured work-based and collaborative, project-based pedagogies; often took a few years to complete; and led to general high school qualifications and preparation for post-secondary education, vocational training, or the workforce. In the United States, CTE takes various forms, including CTE programs in comprehensive high schools, career academies, vocational schools, centralized technical centres, and work-based learning (Kim et al., 2021). CTE programs are taught in conjunction with academic courses and across multiple occupational fields, including technology and trades. In Canada, innovative CTE programs include regional dual credit across 40 fields in British Columbia and provincial initiatives across 75 fields in Nova Scotia that combine engaging pedagogies to promote student engagement with vocational offerings to prepare students for university, trades, or the workforce (Herdman et al., 2024).

Related to dual credit, a systematic review and meta-analysis found promising associations with post-secondary outcomes, such as early persistence, achievement, and completion (Schaller et al., 2025). Although not exhaustive, some research has found positive CTE outcomes for students' academic and employment success (Ecton & Dougherty, 2023; Kim et al., 2021; Plasman & Thompson, 2023). Research has found positive outcomes for CTE taken at later high school grades, clearly focused career pathways, harmonies with academic curriculum, and student learning communities (e.g., career academies). Access to CTE programs for historically underserved populations and insufficient program funding were evident barriers. With attention to quality, rigour, and support, CTE programs support students' career and academic success (Kim et al., 2021).

Conclusions: School Authority Structures and Supports

With reference to the Career Readiness project (OECD, 2021), this literature scan has highlighted promising evidence for school-based practices to foster adolescent career development in Alberta, such as application and interview-based activities; career conversations; career talks and job fairs; work-based learning, particularly job shadowing; part-time employment; volunteer activities; occupational short programs; dual credit; and CTE programs. The findings are limited by the quality and quantity of peer-reviewed evidence; specifically, many studies were limited by sample sizes that challenge generalizability and a reliance on self-reporting methods. More research is needed to determine long-term outcomes and impact factors and to pinpoint effective career development and readiness interventions (Covacevich, Mann, Besa, et al., 2021; Covacevich, Mann, Santos, & Champaud, 2021; de Vries et al., 2024; Dodd et al., 2022; Marciniak et al., 2022; Wang et al., 2024).

The findings prompt several considerations for system education leaders. A prior literature scan identified the key roles of system education leaders in building coherence and capacity within school authorities (CASS, 2024). Impactful leadership strategies related to *coherence* include visioning direction, clarity of process, resource alignment, and accountability structures (Brandon, 2019; CASS, 2024; Fullan & Quinn, 2016; Leithwood & McCullough, 2021). Building *capacity* can include attending to quality school leadership and professional learning structures (CASS, 2024; Friesen et al., 2023). Resources and professional learning were identified as barriers to effective career development activities, guidance counselling, and CTE programs (Kim et al., 2021; Slaten, Wadley, et al., 2024; Witko et al., 2006). Notably, this literature scan spotlighted the facilitative and constraining influences of parents on career decision-making (Bloxom et al., 2008; CASS, 2022; de Vries et al., 2024; Goegan et al., 2022; Heymann et al., 2022; Lehmann & Taylor, 2015; OECD, 2021, 2025; Taylor, Hamm, & Raykov, 2015; Taylor, Lehmann, & Raykov, 2015). As well, Canadian students described alarmingly narrow occupational goals and problematic levels of school engagement while also falling below the OECD average in accessing career development and counsellor supports (Bloxom et al., 2008; Heymann et al., 2022; OECD, 2025; Willms et al., 2009). From an equity standpoint, these findings draw attention to the role of students' self-efficacy, career mindsets, and social backgrounds in shaping their career readiness and outcomes (Goegan et al., 2022; Lent & Brown, 1996; Marciniak et al., 2022; OECD, 2021, 2025).

Research suggests that engaging, high-quality academic instruction, including supports for historically underserved populations, is a crucial component of effective and equitable CTE (Deissinger, 2015; Ecton & Dougherty, 2023; Haasler, 2020; Herdman et al., 2024; Kim et al., 2021; Taylor, 2019). In addition, strong industry partnerships can be advantageous in supporting work-based learning (Haasler, 2020; Kim et al., 2021; Slaten, Wadley, et al., 2024). At the school level, these findings suggest that adolescent career development may benefit from holistic attention to student engagement, high-quality instruction, broad career exploration opportunities, and a continuum of supports that meets the needs of all learners (Dodd et al., 2022; Keele et

al., 2020; Kim et al., 2021; Marciniak et al., 2022; Slaten, Wadley, et al., 2024; Wang et al., 2024). To build coherence and capacity, system education leaders can foster a clear vision and expectations for effective career development and instruction, define processes related to the training and allocation of guidance and off-campus education coordinators, provide effective professional learning to educators supporting adolescent career development, and maintain accountability in school resource alignment (Brandon, 2019; CASS, 2024; Fullan & Quinn, 2016; Leithwood & McCullough, 2021).

Methodology

Research Design

This study used a qualitative descriptive methodology to examine Alberta students' perceptions of the essential conditions that support successful career decision-making. As described by Creswell and Poth (2018), qualitative description is well suited to educational research that seeks to provide a clear and practice-relevant summary of participants' experiences using language that remains close to their own accounts. The approach emphasizes straightforward descriptions of phenomena while maintaining strong connections to the data. Descriptive quantitative information may also be incorporated to provide contextual information that supports and situates qualitative findings. Overall, qualitative descriptive approaches aim to generate findings that remain grounded in participants' perspectives while offering insights that are accessible and useful for informing practice, policy, and system-level decision-making.

The study was guided by the TAVE Strategic Framework (CASS, 2022), which conceptualizes career thinking across three dimensions: *Exploring*, *Engaging*, and *Experiencing*. These dimensions provided a coherent structure for examining students' career awareness, engagement with supports and programming, and the influence of hands-on learning experiences on career confidence.

Participants and Sampling

Participation in the survey was voluntary. All Alberta school authorities were invited to participate and could choose whether to promote and administer the survey with their Grade 12 students. To support consistent and informed administration across jurisdictions, a dedicated information webpage related to the study and hosted by CASS, was developed for system education leaders. The webpage provided an overview of the study purpose, survey timelines, and guidance related to local administration, communication, and student participation. It also included direct access to the survey and supporting materials, including the student assent form. The survey and accompanying materials were also available in French.

Grade 12 students were invited to participate through their schools and could choose whether to complete the survey based on an informed student assent process. The assent form clearly outlined the purpose of the study, what participation involved, confidentiality measures, and students' rights, including the option to withdraw at any time without consequence.

Grade 12 students were selected as the focus of the study because they are at a key transition point in their educational journeys and are often actively engaged in decisions related to post-secondary education, training, or entry into the workforce. Their perspectives provide valuable insight into both earlier career exploration experiences and the conditions that support confident and informed career decision-

making.

As of December 2025, 83,431 Grade 12 students were enrolled in Alberta schools (Government of Alberta, 2026, Table 1). A total of 5,452 students responded to the online survey, with 5,236 completing the English version and 216 completing the French version. This report focused only on the English survey responses. Although the achieved sample of 5,452 respondents comprises only a portion of the total Grade 12 enrollment in Alberta, it provides a statistically rigorous, representative sample size sufficient to ensure the reliability and validity of the thematic analysis.

Data Collection

All school authorities in Alberta were invited to participate in this study from November 18 – December 18, 2025. Data were collected through an online survey administered via Google Forms. The survey included both closed-ended questions to gather descriptive baseline information (e.g., timing of career awareness and perceived confidence) and open-ended questions to capture students' perspectives on influences, supports, barriers, and experiences related to career education. The survey questions were explicitly aligned to the study's research questions and the three dimensions of the TAVE Strategic Framework (CASS, 2022).

Data Analysis

Qualitative data from the open-ended survey responses were analyzed using thematic analysis, following Braun and Clarke's (2006) six-phase approach. This process involved familiarization with the data, systematic coding, development and review of themes, and refinement of theme definitions. Themes were developed to reflect patterns in students' experiences and perceptions across the *Exploring*, *Engaging*, and *Experiencing* dimensions of career thinking.

Data organization, coding, and analysis were supported by ChatGPT. All interpretive decisions, theme development, and synthesis were undertaken by the research team. To support rigour, the analysis remained grounded in students' language, with illustrative quotations used to substantiate findings. Attention was given to variation across school contexts and geographic settings where evident in the data.

Use of Generative Artificial Intelligence and Transparency

Given the scale of participation in this study (n = 5,236) and the volume of qualitative responses generated through open-ended survey questions, generative artificial intelligence (AI) was used to support aspects of data organization and drafting. Specifically, ChatGPT (OpenAI, 2026) was utilized as a research support tool to assist with preliminary clustering of qualitative responses, organization of thematic patterns, and refinement of academic language in early drafts of the study.

The research team retained full responsibility for all methodological, analytic,

and interpretive decisions. AI outputs were treated as provisional and exploratory. All coding, theme development, thematic naming, cross-theme synthesis, and alignment with the TAVE Strategic Framework (CASS, 2022) were conducted and validated by the research team. Interpretations were grounded in the original student responses and reviewed iteratively to ensure fidelity to participants' language and meaning. No findings, quotations, or conclusions were generated independently by AI without researcher verification.

Generative AI was not used to fabricate data, generate survey responses, conduct independent analysis, or determine study conclusions. Rather, it functioned as a productivity and language-support tool to assist in managing large volumes of qualitative text and enhancing clarity of reporting. All final content reflects the scholarly judgment, ethical responsibility, and analytic authority of the CASS research team. The inclusion of this statement reflects a commitment to methodological transparency and responsible integration of emerging technologies in educational research.

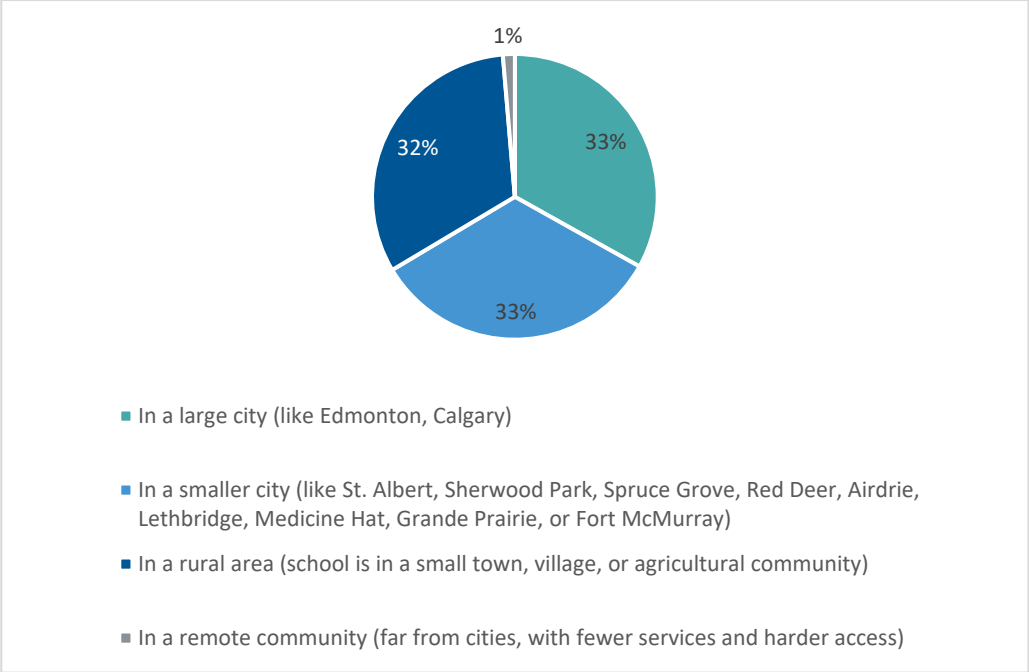
Findings

About the Respondents

At the conclusion of the data collection period, 5,236 students had participated in the English survey. The majority of respondents (94%) indicated that they were enrolled in Grade 12. The sample also included a small number of adult learners who identified as upgrading students, as well as some Grade 11 students enrolled in Grade 12 courses. Respondents ranged in age from 16 to 21 years. The majority (74%) reported being 17 years old, followed by 12.4% who were 18 years old, 8.9% who were 16 years old, and 3.5% who were 19 years old. The remaining respondents (1.2%) reported being 20 or 21 years old. As shown in Figure 1, the distribution of respondents' schools represents a broad cross-section of school authorities across Alberta.

Figure 1

Percentage of Areas Where Respondents' Schools Are Located

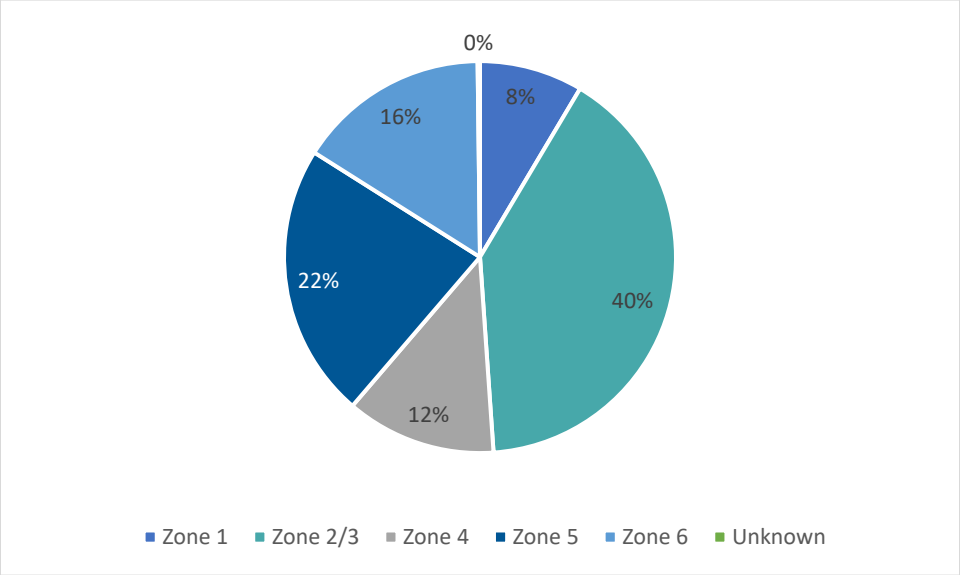


Respondents were asked to identify the area of Alberta that best described the location of their school based on CASS zone (see Figure 2). It is acknowledged that Grade 12 students, and in some cases teachers, may not be familiar with their assigned CASS zone. To support accurate reporting, the dedicated study website encouraged system education leaders to communicate the relevant CASS zone number to school administrators and designated school leads responsible for survey administration.

Despite these supports, some variability in the accuracy of zone identification may remain and should be considered when interpreting results by geographic area.

Figure 2

Percentage of Participation by CASS Zone



Exploring Career Thinking

The majority of respondents reported that they began thinking seriously about their future after high school in Grade 11 (28.4%), followed by Grade 10 (25.2%). Smaller proportions indicated Grade 12 (13.5%) or Grade 9 (13.1%) as the point at which they began considering their post-high school plans. Fewer respondents reported beginning this process in Grades 7 or 8 (8.6%) or before Grade 7 (6.9%). A small proportion of respondents (4.4%) indicated that they had not yet begun thinking seriously about their future after high school.

Respondents were asked to identify the supports that influenced their thinking about future careers or post-secondary pathways. These supports were organized into four categories: personal influences, school-based career supports, career learning opportunities, and media and digital resources.

Respondents identified a wide range of supports influencing their career thinking, reflecting both personal and school-based contexts. Personal influences (Figure 3) were the most prominent, with family (91%) and friends (62%) cited most frequently, followed by coaches or mentors (24%) and Elders (15%). Within school-based supports, teachers played a central role (69%), with over half of respondents also identifying school counselors or career advisors (52%). Participation in CTS courses (20%), one-on-one career planning (14%), collegiate or career pathway

programs (9%), career planning workshops (6%), and CTF courses (5%) further contributed to students' career thinking (see Figure 4).

Figure 3

Personal Influences

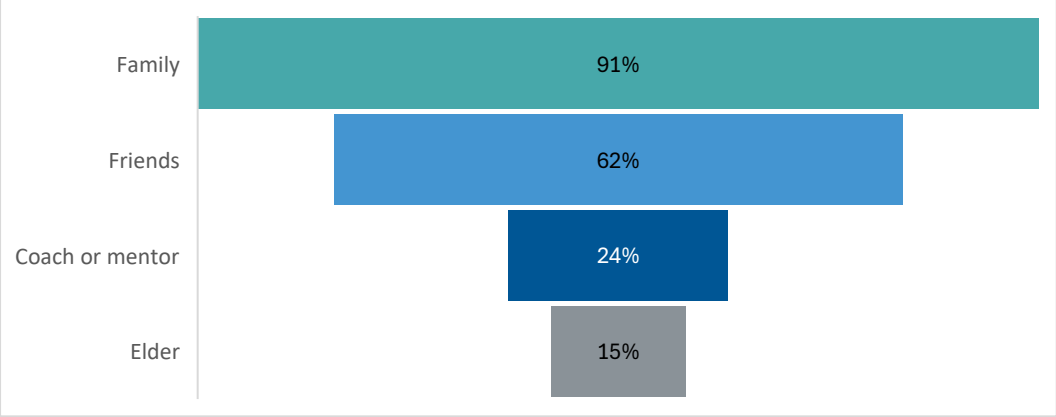
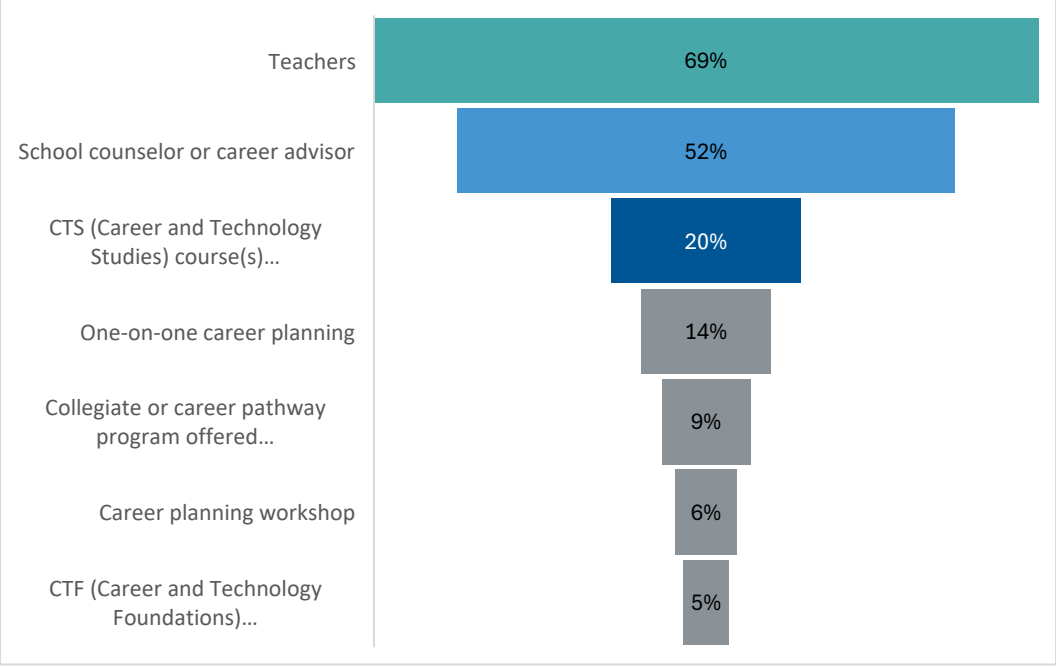


Figure 4

School Career Support



Experiential career learning opportunities also supported students' thinking about future pathways. As shown in Figure 5, post-secondary campus visits or open houses (53%) and career presentations or guest speakers (39%) were the most

commonly reported experiences, followed by career exploration days or field trips (38%), off-campus programs (22%), dual credit programs (20%), and trade exploration events, camps, or workshops (12%). In addition, as Figure 6 illustrates, media and digital resources played a significant role, with social media platforms (70%) and career websites such as ALIS (56%) widely used, alongside career quizzes or self-assessment tools (34%).

Figure 5

Career Learning Opportunities

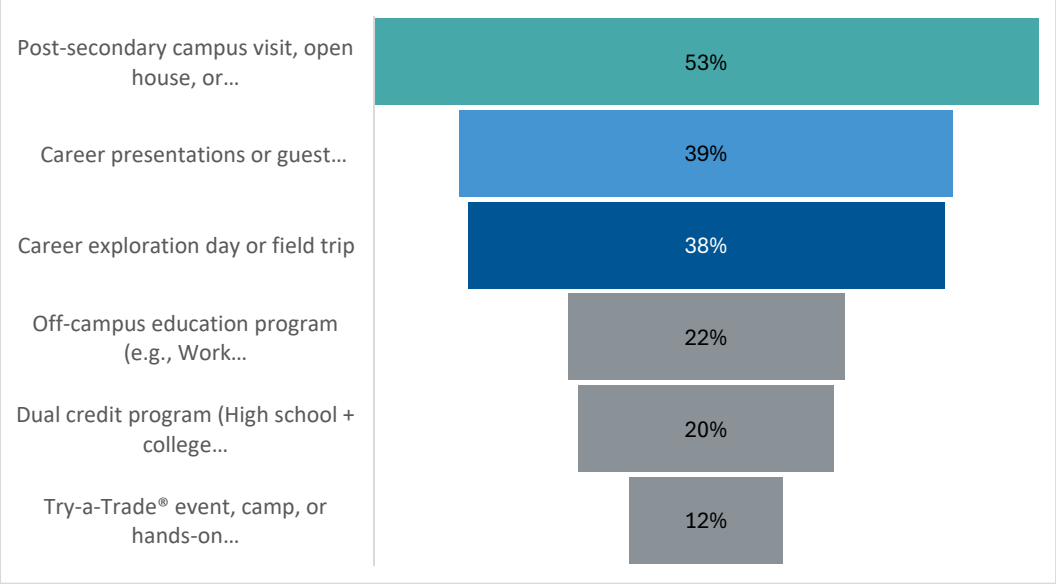
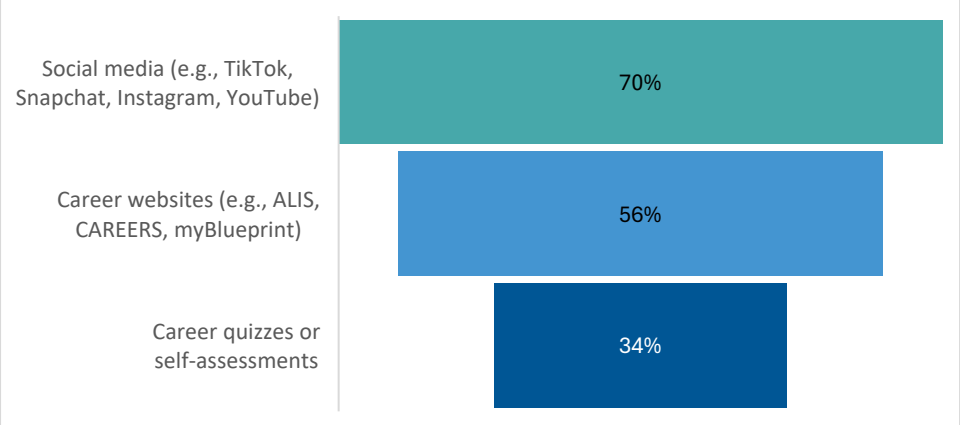


Figure 6

Media and Digital Resources



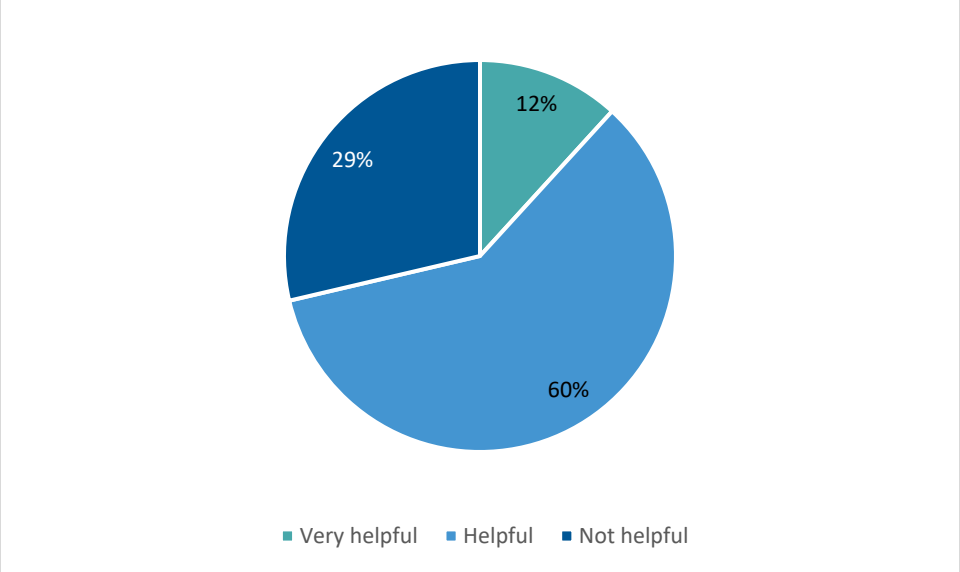
Overall, the data highlighted that students' career thinking is shaped through a combination of developmental timing, strong personal relationships, structured school supports, experiential learning opportunities, and digital resources. This underscores the importance of a coordinated, multilayered approach to career education that engages families, schools, and community partners while leveraging experiential and digital tools, particularly during the critical transition years of Grades 10 and 11.

Engaging in Career Thinking

A total of 60% of respondents indicated that their school programming was helpful in supporting them to identify and work toward meaningful career goals, with 12% reporting that it was very helpful. In contrast, 29% of respondents indicated that school programming was not helpful in this regard. (See Figure 7.)

Figure 7

School Programming Impact on Career Goals



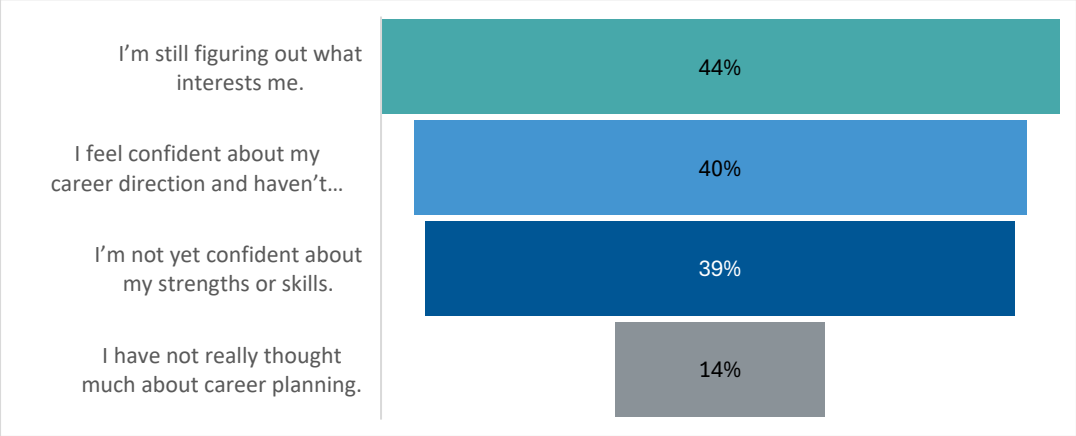
Note. Percentages have been rounded to the nearest whole number.

Respondents were asked to identify any challenges they experienced while planning their career pathways during high school. Responses were organized into four categories: interest and self-awareness, access to information and support, learning opportunities, and personal and life challenges.

Challenges related to interest and self-awareness (Figure 8) were prominent, with 44% of respondents indicating they were still figuring out their interests and 39% reporting uncertainty about their strengths or skills. A significant number of students (40%) reported confidence in their career direction, while 14% reported limited thought about career planning.

Figure 8

Interest and Self-Awareness



Note: Second data line (40%) is the percentage of students that indicated: I feel confident about my career direction and haven't faced any challenges so far.

Barriers associated with access to information and support were also evident. More than two-thirds of respondents (68%) reported uncertainty about available programs or career options, and nearly half (46%) indicated they had not received sufficient guidance or support (see Figure 9). Challenges related to learning opportunities further constrained career thinking, with 63% reporting limited access to real-world or work-related experiences, 46% indicating few career-focused courses, and 39% reporting limited exposure to career-related opportunities such as guest speakers or planning tools (see Figure 10).

Figure 9

Access to Information and Support

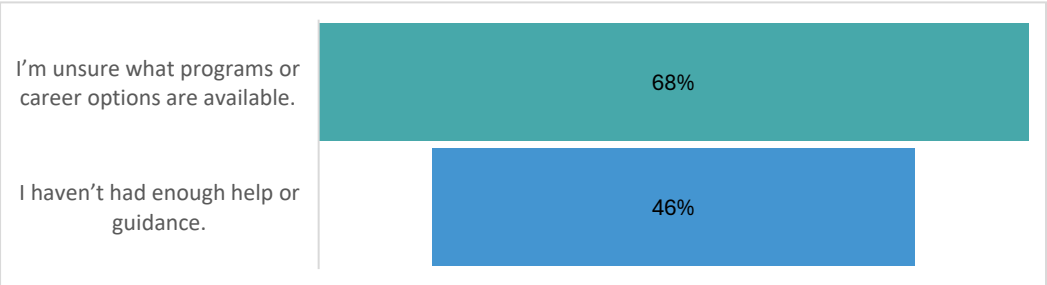
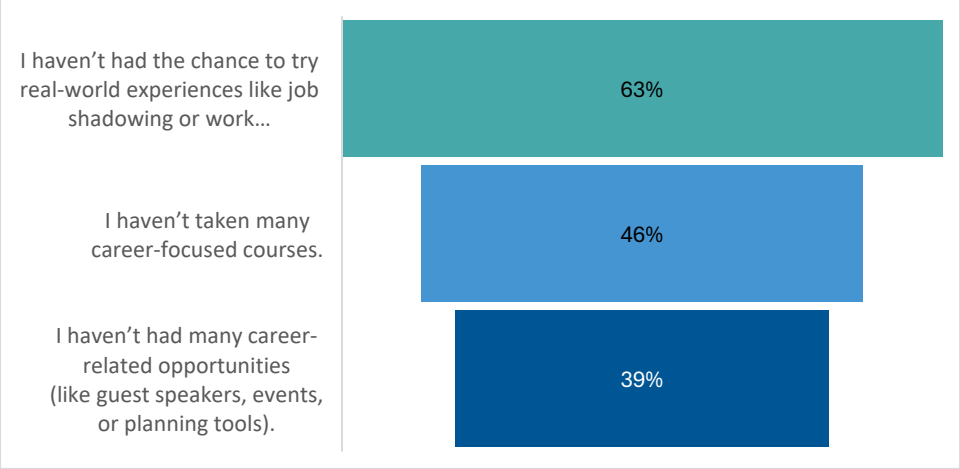


Figure 10

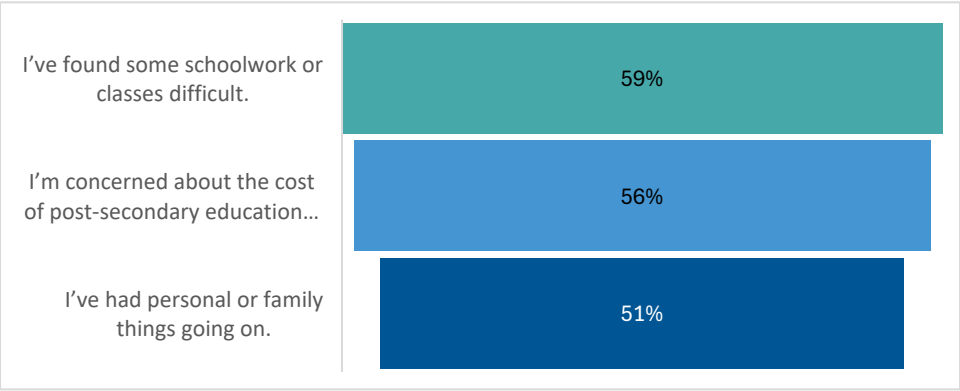
Learning Opportunities



As well, personal and life challenges played a significant role in shaping the respondents' engagement in career thinking. Over half of respondents reported that academic demands (59%), concerns about the cost of post-secondary education (56%), and personal or family circumstances (51%) affected their ability to plan for future careers (see Figure 11).

Figure 11

Personal and Life Challenges



Collectively, these findings highlight that, while school programming can positively support career development, students' engagement in career thinking is shaped by intersecting factors related to self-awareness, access to information, experiential learning, and broader personal and contextual challenges.

Experiencing Career Thinking

Respondents were asked to rate how helpful career-related learning experiences made them feel more confident in their career decisions. As shown in Table 1, the findings indicate that the respondents' confidence is most strongly influenced by relational, experiential, and post-secondary–connected learning experiences. Conversations with teachers, school counsellors, or career advisors emerged as the most impactful support, with nearly three-quarters of respondents (73%) indicating these conversations were helpful or very helpful, and only a small proportion (14%) reporting that they did not have access to such interactions. Similarly, post-secondary presentations and on-site visits were widely valued, with 64% of respondents reporting these experiences as helpful or very helpful.

Experiential learning opportunities also played a significant role in supporting career confidence. Work experience was identified as particularly influential, with 51% of respondents indicating it was helpful or very helpful; however, a substantial proportion (39%) reported that they did not have access to this experience. Career fairs or events (58% helpful or very helpful) and guest speakers (48% helpful or very helpful) further contributed to students' career decision-making, though access to these opportunities was not universal.

Course-based career learning showed mixed results. High school CTS courses were perceived as beneficial by a majority of respondents (63% helpful or very helpful), whereas junior high options and the CALM course were more frequently rated as not helpful or only moderately helpful. Structured pathway programs, including the RAP, dual credit courses, job shadowing, and trade exploration events, were reported as helpful by those who participated; however, between 59% and 69% of respondents indicated that they did not have access to these experiences, pointing to significant gaps in availability.

Overall, the data suggest that career confidence is most effectively supported through meaningful relationships, real-world experiences, and direct exposure to post-secondary pathways. At the same time, the high proportion of students reporting limited access to several high-impact career learning opportunities highlights persistent equity and access challenges within career education programming.

Table 1

Perceived Impact of Career Learning Experiences on Career Decision Confidence

Descriptors	Very Helpful (%)	Helpful (%)	Not Helpful (%)	I did not have these experiences (%)
Junior high options	5%	33%	45%	16%
High school CTS courses	14%	49%	20%	17%
CALM course	12%	44%	39%	6%
Registered Apprenticeship Program (RAP)	7%	13%	11%	69%
Dual credit course(s)	10%	20%	11%	59%
Job shadow or workplace tour	13%	19%	8%	60%
Work experience	22%	29%	10%	39%
Career fairs or events	16%	42%	16%	26%
Trade exploration events or camps	6%	14%	12%	68%
Guest speakers	10%	38%	22%	30%
Conversations with teachers, counsellors or career advisors about career pathways	26%	47%	14%	14%
Post-secondary presentations and/or on-site visits	21%	43%	14%	22%
Career planning tools (e.g., myBlueprint, Xello, ALIS.ca)	14%	37%	22%	26%

In an open-ended question, respondents were invited to identify other experiences that helped them feel more confident about their career decisions. Most of the respondents did not add additional relevant comments, but among those that did (n = 649), their comments were categorized into six types of experiences that helped them feel more confident about their career decisions:

1. *Real people + real talk (authentic insider information)*: Respondents repeatedly said that talking to people already doing the job (family, neighbours, alumni, mentors, coaches, employers, professors, "people in trades," "real police officers") made things feel real and helped them understand day-to-day work, prerequisites, and whether they actually fit.

2. *Hands-on exposure (seeing it / doing it)*: Job shadowing, internships, dual credit, CTS options (mechanics, welding, cosmetology, psychology, accounting), paid placements, "take your kid to work day," fire cadets, green certificate, Junior Forest Rangers, and workplace learning were described as confidence-builders because they let students try the environment and "open my eyes."

3. *Campus visits and programs (post-secondary proximity)*: Open houses, tours, post-secondary, advisor meetings, summer research programs, and conferences helped students picture life after high school, "made me realize I could do more … and it might be fun," and ask specific questions.

4. *Online/media pathways (YouTube/TikTok/social media/Google/Reddit/AI)*: Many students credited the internet for introducing "niche career options," giving tutorials (e.g., animation), and providing job reality-checks. A few explicitly said AI/ChatGPT was "more helpful … than anyone," while others framed it as a way to "search on the web" and self-direct.

5. *Confidence through success or failure in courses*: Some students said doing well in core classes (Biology, Chemistry, Math 31, AP exams) showed them what they are good at; others said doing poorly (e.g., "not being good at math") pushed them away from certain paths. Several described discovering interests through option courses (drama/film/music/psychology/business).

6. F*amily support (practical + emotional)*: A lot of students described parents as the main guidance system by touring worksites, explaining jobs, helping with applications, reducing stress, and doing the "research." Many were explicit that family helped more than school.

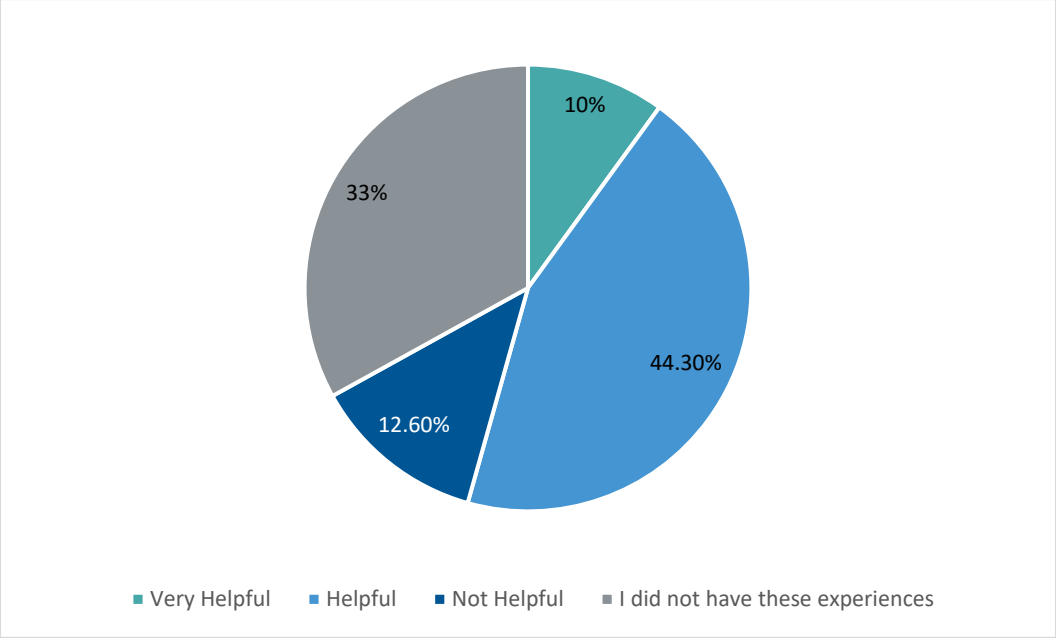
Alongside these comments, respondents surfaced friction points in their own words: wanting more guest speakers and field trips, more "outside the box" careers, clearer pathways (especially into medicine), more one-on-one advising, help navigating confusing post-secondary websites, and more equitable access (e.g., international students who "can't work" or try RAP, students who need time to catch up, students balancing heavy work hours). A few responses were clearly off-topic or

satirical, but even those often carried an underlying message of disengagement, stress, or not feeling supported.

Respondents were asked to indicate the extent to which participation in workplace learning or career pathway programs contributed to their preparedness for life after high school. Overall, as illustrated in Figure 12, 54.3% of respondents reported that these experiences were helpful or very helpful. In contrast, 12.6% indicated that such experiences were not helpful, while 33.0% reported that they did not participate in workplace learning or career pathway programs.

Figure 12

Perceived Extent to Which Workplace Learning and Career Pathway Programs Support Post-High School Readiness



Respondents were asked to rate the extent to which various conditions were essential in helping them feel successful when making decisions about their future careers. Across all conditions, responses indicate that students place a high value on relational support, individualized guidance, and structured opportunities for exploration.

Overall, a clear majority of respondents rated each condition as either helpful or very helpful, suggesting that these elements play a significant role in supporting students' confidence and success in career decision-making. In particular, feeling supported by teachers, counsellors, or other trusted adults emerged as a critical condition, with approximately 90% of respondents indicating it was helpful or very helpful. Similarly, access to one-on-one career guidance was highly valued, with nearly 86% of students rating this condition as helpful or very helpful. Respondents also

emphasized the importance of having dedicated time within the school day to explore career options, with close to 87% indicating this condition supported their career decision-making (see Table 2).

Taken together, the findings underscore the importance of intentional, relationship-based career supports embedded within the school experience, particularly those that provide individualized guidance and protected time for exploration. These conditions appear to be foundational in helping students navigate complex career decisions and feel more prepared for future pathways.

Table 2

Perceived Helpfulness of Essential Conditions for Career Decision-Making

Descriptors	Very Helpful	Helpful	Not Helpful
	%	%	%
Feeling supported by teachers, counselors, or mentors	41%	49%	10%
Having access to one-on-one career guidance	37%	49%	14%
Being given time in school to explore career options	43%	44%	13%
Using a career planning tool provided by my school	21%	50%	29%
Taking part in hands-on or real-world learning experiences	53%	37%	10%
Seeing clear connections between school and real-world careers	43%	43%	14%
Feeling confident in my skills and abilities	55%	38%	7%
Being encouraged to explore different career pathways	35%	51%	15%
Getting clear information about career pathways	49%	41%	10%
Having access to role models	39%	46%	15%
Listening to guest speakers from different careers	25%	51%	24%

Respondents were invited to identify another type of condition that they believe is essential for helping them feel successful when making decisions about their future career. While many respondents indicated that no additional conditions came to mind, those who did respond offered candid and highly practical reflections. Their responses provide insight into the lived realities shaping career decision-making,

highlighting unmet needs related to experience, support, clarity, and confidence. Collectively, these comments deepen understanding of the conditions students believe are necessary to navigate career decisions with greater certainty and agency.

Respondents (n = 674) said they still need:

1. *More real experience; hands-on, not just talk*: Respondents kept coming back to the same idea: they need to actually try it. They asked for job shadowing, volunteering, internships, "real-world experience/work experience," and chances to "test the waters" before committing time and money. Many of them basically said, "You can't know until you're doing it."

2. *Clear, simple, honest information*: Many respondents said they feel more successful when they have straightforward information: what courses are needed, what the pathway looks like, what the day-to-day job is actually like, pay/hours, pros/cons, and what to expect in post-secondary programs. They want people to be honest about the "sucky parts" (student loans, long hours, GPA cut-offs) without crushing them.

3. *Money stress is a major barrier*: Finances showed up constantly: cost of college, student loans, scholarships, tuition, debt, "not losing piles of money," "can I make more than the poverty line." Respondents asked for real explanations of how to afford post-secondary studies, different loan options, and financial planning (even basics like taxes). Some expressed deep distrust and fear about debt and job availability.

4. *Support that feels human, not generic*: Many respondents asked for someone they can talk to one-on-one and more than once, someone who listens, cares, and does not judge. They described wanting a counsellor/mentor/adult who isn't "busy," is not pushy, and does not just schedule classes to graduate but helps them build a plan that fits their goals. Several credited family or Elders, while others said school support is missing or uneven.

5. *Less pressure, less stress, more time*: Respondents repeatedly described being overwhelmed by heavy course loads, diplomas, constant deadlines, working part-time jobs, and the pressure of making "big decisions" while still young. They asked for less pressure, more time to explore, and recognition that it's okay not to know yet and that a gap year or changing your mind should not feel like failure.

6. *More options, especially for students outside the "standard" pathways*: Respondents asked for a wider variety of pathways beyond the usual "engineer/doctor/military/law," including arts/creative industries and non-trades academic options, plus better access to required courses in rural contexts ("not being forced into online classes"). Some said their school pushes one route too hard or does not offer courses aligned with their interests (e.g., psychology).

7. *Mental health and feeling safe matters*: Some students were direct: “it’s hard to plan a future when you’re struggling.” They asked for better mental health support, a judgment-free environment, encouragement instead of condescension. A few talked about bullying, burnout, loneliness, and needing stability before they can even think about careers.

8. *Belief, purpose, and values*: A smaller but strong set of responses emphasized purpose and values; service, meaning, faith/prayer, and alignment with core values. Others framed this as mindset, motivation, confidence, and self-belief: “if you don’t believe in yourself, what’s the point?”

The final question of the survey invited respondents to identify what their school could do to make career education more helpful, particularly for students considering trades, technology, or apprenticeship pathways. While some respondents indicated that nothing further was needed, many offered candid reflections grounded in their lived school experiences. Collectively, these responses illuminate how students understand effective career education, not as abstract information, but as practical, relational, and grounded in real-world exposure. The following themes reflect the most consistent ideas raised by respondents (n = 4,703):

1. *More hands-on, real-world experience*: Respondents overwhelmingly emphasized that career education must move beyond talking about careers to actually experiencing them. Job shadowing, work placements, shop time, internships, and opportunities to try tasks associated with a career were repeatedly described as essential. Respondents explained that it is difficult to know whether a pathway is right without seeing the work up close:

    - “You don’t really know if you like a career until you actually do it.”
    - “Lots of times you like the idea of something but not actually doing it.”
    - “Being hands on lets you see what the job is really like day to day.”

    For many, hands-on learning was described as confidence-building because it replaces guessing with lived experience.

2. *Clear, early, and honest information about pathways*: Respondents expressed frustration with unclear or late information about trades, technology, and apprenticeship pathways. They want straightforward explanations, earlier in high school, about required courses, certifications, timelines, and next steps after graduation. Several respondents noted that decisions felt rushed because guidance came too late:

    - “We should know this stuff way earlier than Grade 12.”
    - “If I knew the requirements in Grade 10, I would have planned better.”

    Students also asked for honesty, not just promotion: “tell us the good and the bad” and “be honest about the work, the hours, and the pay.”

3. *Greater access and equity across schools*: Access to opportunities emerged as a significant concern, particularly for respondents in rural or smaller schools. Many described limited course offerings, reduced shop access, or fewer partnerships with employers compared to larger urban schools. Students articulated this as an issue of fairness:

    - "Other schools get more options than we do."
    - "Rural students should have the same chances."

    Some respondents also felt that trades and technology pathways were either overemphasized or under-supported depending on context, pointing to inconsistent access rather than balanced choice.

4. *Supportive, knowledgeable adults who take students seriously*: Respondents consistently highlighted the role of relationships. They want teachers, counselors, and advisors who understand trades and apprenticeships, listen without judgment, and help them build a plan that fits their interests and strengths. Positive experiences were tied to feeling seen and believed in:

    - "I just need someone who actually listens."
    - "Having one person who believes in you makes a huge difference."

    Conversely, some students described feeling dismissed or left to navigate decisions alone, which reduced confidence rather than building it.

5. *Respect for trades, technology, and apprenticeship pathways*: Many respondents emphasized that these pathways should be treated as legitimate, valued choices, not as backups or second-tier options. They noted that how adults talk about careers strongly influences how students view their own potential. Students expressed this clearly:

    - "Don't talk down about trades."
    - "Make it feel like a real option, not a last resort."

    Feeling respected and validated was closely tied to students' willingness to explore these pathways seriously.

6. *Reduced pressure and more time to explore*: Respondents frequently described feeling overwhelmed by course loads, exams, work responsibilities, and the pressure to "figure it all out" too early. Many asked for more time, flexibility, and reassurance that it is okay not to have everything decided. Their comments reflected emotional weight:

    - "We're young and these are big decisions."
    - "It's stressful being expected to know your whole future."

Students linked reduced pressure with better decision-making, suggesting that exploration, not urgency, leads to stronger outcomes.

7. *Realistic conversations about the world beyond school*: Finally, respondents asked for career education that reflects real life, including discussions about job availability, advancement, physical demands, financial stability, and long-term sustainability of careers. They wanted transparency without discouragement:

    - "Be realistic but don't shut people down."
    - "Show us what life actually looks like after school."

    These conversations were seen as essential for building trust and helping students make informed, confident choices.

The *Experiencing* dimension of career thinking captures students' opportunities to engage in hands-on, real-world career exploration. Survey findings indicate that experiential learning, such as job shadowing, workplace learning, apprenticeships, dual credit courses, CTS/shop classes, volunteering, and part-time employment, plays a critical role in helping students develop confidence and clarity about future career pathways.

Respondents consistently reported that experiencing a career firsthand allowed them to move beyond abstract ideas to understand daily work realities, workplace expectations, and personal fit. These experiences helped students distinguish between interest in a career and enjoyment of the actual work involved. Experiential learning was most impactful when supported by opportunities for reflection and guidance from trusted adults.

Access to experiential opportunities, however, was uneven. While some respondents benefited from meaningful workplace exposure, others, particularly those in rural or smaller school contexts, reported limited or delayed access. This variability influenced students' ability to make informed career decisions.

Overall, the findings underscore the importance of strengthening equitable access to high-quality experiential learning opportunities. Providing students with sustained, supported opportunities to engage directly with work environments is a key lever for advancing career readiness and informed decision-making.

Discussion & Considerations for System Education Leadership

This section interprets the findings of the study in relation to the literature scan and the survey responses from more than 5,000 Grade 12 students across Alberta. Organized around the three guiding areas of inquiry, the discussion examines the influences shaping early career awareness, the conditions that support alignment between interests and pathways, and the impact of experiential learning on students' confidence in career decision-making.

Influences on Initial Career Awareness (Exploring Career Thinking)

Students' descriptions of early career awareness reveal a fundamentally relational process. Family members were identified as the most significant influence (91%), followed by teachers (69%), friends (62%), and school counsellors or career advisors (52%). These findings align closely with OECD (2021, 2025) research identifying career conversations with family, peers, and school staff as central career readiness indicators. They are also consistent with Canadian studies demonstrating the strong influence of parents and teachers on post-secondary planning (Bloxom et al., 2008; Heymann et al., 2022).

The prominence of teachers is particularly noteworthy. Although teachers are not always formally designated as career advisors, they appear to function as influential career actors through daily instructional interactions. This finding is consistent with social cognitive career theory (Lent & Brown, 1996), which emphasizes the role of modelling, feedback, and persuasion in shaping self-efficacy and outcome expectations. It also aligns with career construction theory (Savickas, 2013; Savickas et al., 2009), which conceptualizes career development as a narrative process embedded in social contexts. Students' initial awareness therefore emerges through sustained relational engagement rather than isolated programming.

Digital media operates as a parallel influence system. Seventy percent of respondents reported that social media platforms influenced their career thinking, and 56% accessed structured career websites such as ALIS or myBlueprint. These findings mirror international evidence demonstrating the predominance of online research in youth career exploration (OECD, 2025). However, 68% of students reported uncertainty about available programs and pathways, suggesting that information abundance does not necessarily translate into clarity. Heymann et al. (2022) and OECD (2025) indicated that students frequently rely on digital sources even when structured school supports are present. Without guided interpretation, digital exposure may shape aspirations unevenly.

Students' reflections suggest that serious consideration of career pathways often intensifies during Grades 10 and 11, corresponding with developmental models

positioning mid-adolescence as a period of vocational exploration (Savickas, 2013). Nevertheless, confidence remains variable. Forty-four percent reported still figuring out their interests, and 40% expressed uncertainty about their strengths. These findings are consistent with Marciniak et al.'s (2022) conceptualization of career preparedness as an evolving combination of attitudes, knowledge, and competencies rather than a fixed state.

Conditions Supporting Alignment of Interests and Pathways (Engaging in Career Thinking)

Students' perceptions of school programming were cautiously positive yet uneven. Approximately 59.7% indicated that school programming was helpful in identifying and pursuing meaningful career goals, and 28.7% described it as very helpful. At the same time, 28.7% reported that it was not helpful, suggesting variability in access or implementation. This pattern aligns with literature indicating that the impact of career education depends on coherence, quality, and sustained implementation (Covacevich, Mann, Besa, et al., 2021; Covacevich, Mann, Santos, & Champaud, 2021; Wang et al., 2024).

Students identified barriers related to insufficient guidance (46%) and uncertainty about available programs (68%). These findings echo earlier research documenting variability in counselling access and preparation among educators (Bloxom et al., 2008; Witko et al., 2006). The literature further cautions that career education initiatives often lack longitudinal evidence of sustained impact when fragmented or inconsistently delivered (Covacevich, Mann, Besa, et al., 2021; Covacevich, Mann, Santos, & Champaud, 2021; ; Wang et al., 2024).

The concept of the "aspiration gap" (OECD, 2025) provides an additional interpretive lens. Socioeconomic background significantly shapes post-secondary expectations independently of achievement. Although this study did not disaggregate by socioeconomic status, reported disparities in exposure and guidance suggest that structural inequities may influence students' ability to align interests with pathways. Effective career development therefore requires universal supports complemented by targeted strategies to ensure equitable access (Keele et al., 2020; Marciniak et al., 2022; Slaten, Wadley, et al., 2024).

The Impact of Hands-On Experiences on Confidence (Experiencing Career Thinking)

Experiential learning emerged as a critical influence on clarity and confidence. Post-secondary campus visits, guest speakers, and exploration events were frequently cited as impactful. However, 63% of respondents reported not having experienced real-world opportunities, such as job shadowing or work placements. This discrepancy between perceived value and limited access is significant.

Kashefpakdel and Percy (2017) found associations between exposure to career talks and later income outcomes, while Plasman and Thompson (2023) reported positive earnings associations for students engaged in work-based learning. The OECD (2021) similarly identified workplace visits and occupationally focused programs as meaningful career readiness indicators. Students' perceptions reinforce that hands-on experiences strengthen decision-making confidence by connecting interests with authentic contexts.

Lent and Brown (1996) posited that mastery experiences are central to developing self-efficacy. Students' accounts suggest that experiential opportunities increase confidence by transforming abstract interests into concrete possibilities. However, logistical challenges in arranging placements, including supervision, liability, and community capacity constraints, were noted. These findings indicate that equitable experiential access requires coordinated system-level planning rather than reliance on individual initiative.

Considerations for System Education Leaders

The convergence of literature and survey data points to several considerations for system education leaders. First, career development should be conceptualized as a developmental continuum across K–12 rather than a discrete Grade 12 outcome. Students' identification of Grades 10 and 11 as critical transition years aligns with career construction theory's emphasis on progressive identity formation (Savickas, 2013). Embedding structured exploration and reflection earlier in schooling may reduce uncertainty and alleviate the pressure for premature certainty.

Second, relational density must be intentionally designed. Given the strong influence of teachers and family, as well as OECD (2021) evidence regarding the impact of career conversations, system education leaders may consider professional learning that equips educators with foundational career development competencies. Addressing the documented gaps in formal preparation among teachers and counsellors (Witko et al., 2006) could strengthen the quality and consistency of relational guidance.

Third, coherent information systems are essential. High levels of reported uncertainty about available programs indicate the need for centralized, accessible, and clearly articulated pathway maps. The literature emphasizes that fragmented approaches undermine impact (Covacevich, Mann, Santos, & Champaud, 2021; Wang et al., 2024). Coordinated system-level strategies may reduce inequities in exposure across schools.

Fourth, experiential learning requires structural investment. While students value hands-on opportunities, access remains uneven. Evidence supporting the positive association between work-based learning and later outcomes (Kashefpakdel & Percy, 2017; Plasman & Thompson, 2023) suggests that system-level partnerships with industry and post-secondary institutions is necessary. Centralized coordination may alleviate teacher fatigue and improve equitable access.

Finally, equity must remain a central consideration. The aspiration gap identified by OECD (2025) underscores the importance of ensuring that career supports reach students whose social capital may be limited. Whole-school approaches that integrate high expectations, structured guidance, and community partnerships (Slaten, Wadley, et al., 2024) offer promising models for mitigating disparities.

Concluding Reflections

Taken together, the findings depict career development for Alberta Grade 12 students as relationally grounded, digitally mediated, developmentally evolving, and structurally uneven. Students describe career thinking as a layered process shaped by trusted adults, online exposure, structured programming, and experiential learning. Awareness does not automatically produce clarity; rather, significant proportions remain uncertain about available pathways and their own strengths.

The findings support theoretical perspectives that frame career development as adaptive and ongoing rather than linear or terminal (Savickas, 2013; Savickas et al., 2009). They also reinforce the central role of self-efficacy and environmental supports in shaping career behaviour (Lent & Brown, 1996). Effective career education should therefore be conceptualized as a coordinated K–12 developmental continuum designed to cultivate adaptive capacity, informed exploration, and navigational competence across adolescence.

Conclusion

This study set out to gather the voices of Alberta Grade 12 students to identify the essential conditions that support successful career decision-making. Drawing on responses from more than 5,200 students across Alberta, the findings provide a comprehensive portrait of how young people experience career thinking through the interconnected dimensions of *Exploring*, *Engaging*, and *Experiencing*, drawn from the TAVE Framework (CASS, 2022). The study affirms that career development is not a singular event, nor a discrete course requirement, but a relational, developmental, and contextually shaped process embedded within the broader ecology of students' lives (Lent & Brown, 1996; Savickas, 2013).

Across all three dimensions, one conclusion is unmistakable: relationships matter most. Family members, teachers, counsellors, and mentors form the primary architecture of students' career awareness and confidence. Students consistently identified relational support as more influential than isolated programs or tools. Feeling supported by trusted adults and having access to one-on-one guidance were rated as essential conditions for success, findings that align closely with the OECD's (2021, 2025) identification of career conversations as key career readiness indicators and with Canadian research demonstrating the strong influence of parents and teachers on post-secondary planning (Bloxom et al., 2008; Heymann et al., 2022). Consistent with social cognitive career theory, students' confidence appears closely tied to feedback, modelling, and perceived self-efficacy (Lent & Brown, 1996). Similarly, career construction theory emphasizes that adolescents build meaning through social interaction and narrative reflection, reinforcing the importance of sustained relational engagement (Savickas, 2013; Savickas et al., 2009).

At the same time, the data reveal persistent variability in access and implementation. While many students described helpful programming and impactful experiences, substantial proportions reported limited access to real-world learning opportunities, insufficient guidance, and uncertainty about available pathways. These findings echo earlier critiques in the literature regarding uneven delivery of career education and variability in counsellor preparation and capacity (Bloxom et al., 2008; Witko et al., 2006). They also align with broader research cautioning that fragmented or inconsistently implemented interventions may limit sustained impact (Covacevich, Mann, Santos, & Champaud, 2021; Wang et al., 2024).

Experiential learning emerged as one of the most powerful contributors to clarity and confidence. Students consistently described job shadowing, work placements, dual credit, RAP, campus visits, and hands-on CTS experiences as transformative when accessible. These perceptions reinforce international and longitudinal findings linking work-based learning and career talks to improved employment and earnings outcomes (Kashefpakdel & Percy, 2017; OECD, 2021; Plasman & Thompson, 2023). Yet large proportions of respondents reported not having participated in such experiences, suggesting access gaps that may reflect geographic, structural, or partnership constraints. Research has repeatedly emphasized that high-

quality, well-supported career and technical education and work-based learning must be both rigorous and equitably accessible to produce positive outcomes (Ecton & Dougherty, 2023; Herdman et al., 2024; Kim et al., 2021).

Students also described contextual pressures that shape career decision-making, including financial stress, heavy academic loads, mental health challenges, and uncertainty about labour market conditions. These concerns align with OECD (2025) findings regarding Canadian students' reported anxieties about post-school transitions and preparedness. The literature further highlights the aspiration gap, whereby socioeconomic background influences post-secondary expectations independent of achievement (OECD, 2025). Although this study did not disaggregate responses by socioeconomic status, students' references to cost, debt, and uneven access to opportunities underscore the importance of equity-focused career supports (Keele et al., 2020; Marciniak et al., 2022; Slaten, Wadley, et al., 2024).

Importantly, students called for clarity and authenticity in career education. They asked for earlier exposure to pathway requirements, transparent conversations about labour market realities, and greater respect for trades and apprenticeship pathways as legitimate, valued options. These insights reflect the literature's emphasis on coherent, strength-based, whole-school approaches that integrate academic instruction, vocational exposure, and relational guidance (Deissinger, 2015; Kim et al., 2021; Slaten, Wadley, et al., 2024). When students perceive alignment between school learning and real-world careers, their engagement and confidence increase, an outcome consistent with career preparedness frameworks that link attitudes, knowledge, and competencies to future-oriented behaviour (Marciniak et al., 2022).

Collectively, the findings suggest that effective career development requires a coherent, system-level approach rather than isolated initiatives. A structured continuum of supports, targeted programming, and individualized guidance appears necessary to meet the diverse needs of Alberta students (Wang et al., 2024). Strengthening educator capacity for career conversations, expanding equitable access to experiential learning, and ensuring clarity of pathways are central levers for improvement.

Ultimately, this study reinforces a foundational principle: student voice provides indispensable insight for system improvement. Alberta students articulated thoughtful, pragmatic, and experience-grounded perspectives on what enables confidence in career decision-making. Their reflections affirm established research while adding contemporary, context-specific nuance. Career development is most powerful when it is relationally grounded, experientially rich, equitably accessible, and systemically coherent. Listening carefully to students' lived experiences is not only informative but also essential to ensuring that every learner is supported to navigate future pathways with confidence, agency, and hope (OECD, 2021; Savickas, 2013).

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