



The Argument for a New Career Development Framework in New Brunswick

INTRODUCTION

New Brunswick has much to be proud of in the career education that it makes available to young people. Across the province, schools and counsellors work hard to support students as they work to visualise and plan their futures, with the CMEC *Reference Framework for Successful Student Transitions* (CMEC, 2017) providing a resource to guide approaches. However, it is also clear that career education both nationally and within the province does have areas of weakness and will need to develop further if it is to keep pace with important structural trends changing our societies and economies, and with new findings on what works most effectively in career education.

Around the world, young people are making more decisions of relevance to their futures than before as they stay in education longer. The increasing dynamism of the labour market, the rapidly changing demand for skills, and the growing diversification and fragmentation of education and training is making decision-making more difficult (Cedefop, 2021). At the same time, substantial new international evidence has highlighted the ways in which teenage career education can best help young people develop the characteristics that shape access to desirable employment by accumulating human capital (experience and qualifications required by employers), social capital (networks of people who provide information, advice, and practical help related to career ambitions), and cultural capital (a confident vocational identity recognised and valued by recruiters). However, effective career development systems are about more than getting a job; their purpose is broadening to help young people create personally fulfilling lives, including young people who can expect greater challenges in achieving their goals due to wide-ranging inequalities. Young people themselves have rightly become more assertive in visualising working lives for themselves that allow them to express their values and identities, and to balance waged work with other responsibilities and interests. As countries have become more aware of the importance of career development, attempts have been made to put in place comprehensive frameworks that describe the steps through which students can gain the skills necessary to manage their ultimate transitions into work. In creating a new articulation of the cumulative steps expected of schools and the entitlements anticipated by students, useful insights from recent research and previous work describe the activities, experiences, attitudes, and competencies that most effectively guide student career provision through schooling. This short paper highlights these key insights and discusses how they shape the new provincial framework for career development.

POLICY CONTEXT WITHIN NEW BRUNSWICK

In 2016, the province of New Brunswick published its 10-Year Education Plans for both the Anglophone and Francophone sectors. The Anglophone sector's 10-Year Plan, New Brunswick: Everyone at their best (Province of New Brunswick, 2016a), states that to be successful in both the present and the future, learners require the global competencies necessary to be open and engaged citizens.

The Anglophone sector of EECD has been actively working on the advancement of career education in K-12 as a means to achieve the outcomes in the 10-Year Education Plan. The career education strategy—Career Connected Learning¹—and its associated best practices have provided a foundational understanding of how to best prepare young people for the future. However, a framework would offer more guidance and support as we continue to work towards making career connected learning cross-curricular. The framework will be an important next step in assisting schools, educators, families, and students in understanding what competencies, knowledge, and other attributes will bring them towards their preferred future. Similarly, the Francophone sector of the Department of Education and Early Childhood Development launched the Allumer l'étincelle² campaign with the goal to educate families, community members, and various professionals about the role they can play in helping students explore career and life readiness plans—the first objective of the Francophone 10-year education plan (Province of New Brunswick, 2016b). The preK-12 Career Development Framework will be in alignment with this objective and will give schools more guidelines around a career development continuum.

Other provincial policy initiatives relevant to the Career Development Framework include:

- Policy 322 Inclusive Education, released in 2013 by the Department of Education and Early
 Childhood Development. The policy sets out requirements within a human-rights framework for an
 inclusive provincial education system in New Brunswick's K-12 schools.
- The Portrait of a Learner (Province of New Brunswick, 2019). This document identifies the competencies and attitudes learners need to develop through educational and life experiences from their first contact with public school through to their high-school graduation. These competencies and attitudes have been defined within the context of the New Brunswick education system, which values inclusion of diverse peoples and ideas, reconciliation and renewal of the relationship with Indigenous peoples and worldviews, equity among all people, plurilingualism, and pluriculturalism. The document outlines the vision and purpose of education to develop learner agency so that all learners have the belief and capacity to take action to make life better for themselves and others, now and for future generations. This portrait has been a guiding vision for the modernized New Brunswick curriculum, resulting in a framework that includes a larger scope than the traditional subject-area outcomes. The development of a career education preK-12 framework will be an important contribution to the modernization of NB curriculum.

¹ Career Connected Learning strategy available at https://www2.gnb.ca/content/gnb/en/departments/education/k12/content/career-connected-learning.html.

² See: https://allumezletincelle.ca/.

- Profil de sortie d'un élève du système scolaire acadien et francophone du Nouveau-Brunswick (Student Profile). This profile serves two purposes: it is a statement determining the educational aims for the Francophone school system in New Brunswick, and it sets out the competencies students need to develop in order to achieve the educational aims pursued throughout their schooling. The Francophone sector has also updated the graduation requirements and now offers some choice starting in grade 9³. This results in more choice earlier in high school. Therefore, there will be more emphasis on planning and preparing for pathways starting in middle school. A Career Education Framework will be an important support in the process of preparing youth for academic and pathway decision-making.
- New Brunswick Global Competencies⁴. In 2017, the Department of Education and Early Childhood Development (EECD) updated the Essential Graduation Learnings (EGLs, 1995) to the New Brunswick Global Competencies. Global competencies are the skills, sets of knowledges, and attitudes of a well-rounded person. They cross disciplines and contexts, and enable a person to thrive in local, virtual, and global communities. The Career Education Framework will be important in supporting the development of these global competencies and bringing students towards the Portrait of a Learner at graduation.
- <u>Updates to graduation requirements in the Anglophone sector</u>⁵. The Anglophone sector of New Brunswick is currently updating the graduation requirements in Policy 316.
- Future Wabanaki | Avenir NB | Future NB⁶. This initiative has positioned New Brunswick as a national leader in experiential education where partners across all levels of education, private industry, not-for-profit organizations and government are working collaboratively towards a shared vision. The strategy's primary goal is to position New Brunswick as a place where all students and employers can access rich learning opportunities and new ways to collaborate with one another through experiential education. Both sectors of EECD published a new policy with guidelines around experiential learning, which is a key component in career development (Policy 307 Experiential Learning English version and French version). The development of a Career Education Framework will work to support the purpose, vision, and outcomes of FutureNB | Future Wabanaki | AvenirNB.

³ See: https://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/policies-politiques/f/316FA.pdf.

⁴ See: http://web1.nbed.nb.ca/sites/ASD-S/Communication/Information Bulletin 1 - Global Competencies.pdf?Mobile=1&-Source=%2Fsites%2FASD%2DS%2F%5Flayouts%2Fmobile%2Fview%2Easpx%3FList%3D1b09dc75%252D06e4%252D4630%252D9cfd%252D357ec28ebdcb%26View%3D770fe4cc%252Db005%252D497f%252Db2d4%252D20b1d84d90bb%26CurrentPage%3D1

⁵ See: https://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/policies-politiques/e/316AA.pdf

⁶ See: https://futurenewbrunswick.ca/.

WHY A CAREER DEVELOPMENT FRAMEWORK?

Regardless of the policy climate within New Brunswick, it is timely to develop a framework to guide the delivery of career education within the province that reflects the current and developing economic environment and an understanding of effective provision. Several important trends and developments have both accentuated the importance of career development within education and cast substantial new light on the core characteristics of effective delivery.

- i. Young people in New Brunswick and across Canada are entering the labour market more highly qualified than ever before, needing to make more career-related decisions than ever before about the investments they will make in their education.
- ii. Despite young people entering the labour market more highly qualified, many still struggle to transition into desirable work, with challenges exacerbated by the COVID-19 pandemic. Poor employment and mental health outcomes are common and especially likely for Indigenous students, students with disabilities, students from lower socio-economic backgrounds, and students from migrant backgrounds, placing them at greater need for effective career education.
- iii. Decision-making for all students is becoming more difficult. The need for effective career education is increasing as the labour market becomes more dynamic due to the results of automation and digitalisation, increasing precariousness in employment, changes in demand for skills linked to the fight against climate change, and the COVID-19 pandemic.
- iv. A growing number of countries have adopted career development frameworks to structure the career education that students can expect. However, to date, frameworks have been developed with limited research evidence and often designed in such complex ways that implementation has proved difficult.
- v. Substantial new analysis of longitudinal data has recently become available evidencing better employment outcomes that can be related to participation in school-age career education. New international evidence also associates career education with improvements in academic achievement and highlights comparative weaknesses of Canadian provision.

In developing a Career Development Framework for New Brunswick, it is recognised that career education differs from other aspects of school provision in that the character of provision changes over a student's journey through education. Initially, career education plays a limited role in the learning experiences of children as they enter and progress through elementary school, intensifying through middle and high school as students are helped to actively explore the labour market and secure first-hand experiences of the world of work.

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New Brunswickers are remaining in education at record rates: more than nine in ten now complete high school and two-thirds have some form of post-secondary education (Province of New Brunswick, May 2021; Province of New Brunswick, May 2022). This is a success of which the provincial education system can rightly be proud. As students stay on longer however, it becomes more important that they are well placed to make informed decisions that are right for them personally about continuing education and training. As many international organisations argue, the role of career development is more important than ever (Cedefop, 2021). The tools that schools use can enable students to make increasingly complex transitions and to mitigate risks of poor outcomes, but current provision faces some significant challenges. Drop-out remains a problem

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ambitions.

in secondary schooling in New Brunswick, particularly for Indigenous youth, and as described below, good transitions are by no means guaranteed even when students complete high school (Berger et al., 2009). Dropout rates at the post-secondary level are stubbornly high and international studies show that many university applicants find themselves needing to compromise on their post-secondary ambitions because of decisions made years earlier (UCAS, 2021). The most important career-related decisions that students make do not take place at the end of secondary schooling, but much earlier in their education as they decide the subjects and programmes on which they will focus, how hard they will strive to succeed in their studies, and even where they will learn, including within the workplace. It takes time for young people to understand themselves, their ambitions, and how they can best achieve their goals. Available data suggest that many young people have developed narrow perspectives on how they will manage their transitions through education and into ultimate work. The 2018 cycle of the OECD Programme for International Student Assessment (PISA) shows that 84% of Canadian 15-year-olds expect to go on to tertiary education, including 90% of girls and 78% of boys. Many low performers on the PISA tests still plan on attending tertiary education: 76% of girls and 61% of boys from the lowest-achieving quartiles. More than half of students who score lower than Level 2 in the PISA⁷ reading test—suggesting they are facing substantial challenges in literacy—still expect to study at university.

In spite of young people entering the labour market more highly qualified, many still struggle to transition into desirable work, with challenges exacerbated by the COVID-19 pandemic. Poor employment and mental health outcomes are common and especially likely for Indigenous students, students with disabilities, and students from lower socio-economic and migrant backgrounds.

⁷ https://www.oecd.org/pisa/. Some 600 000 students completed the OECD PISA assessment in 2018, representing about 32 million 15-year-olds in the schools of the 79 participating countries and economies. In Canada, 22 653 students, in 914 schools, completed the assessment, representing 335 197 15-year-old students (86% of the total population of 15-year-olds). (https://www.oecd.org/pisa/publications/PISA2018_CN_CAN.pdf).

Over the last generation, young Canadians have entered the labour market more highly qualified than preceding generations and many have thrived through the transitions. However, many too have struggled in the competition against older workers for desirable employment. Despite substantially greater levels of education:

- Young people in Canada have remained over the last twenty years more than twice as likely as older people to experience unemployment.
- Average earnings for young men in Canada have remained stagnant since the 1980s (though average earnings for women have grown significantly)⁸.
- Many young Canadians are working in jobs for which they are overqualified, earning less and showing greater unhappiness in work (OECD, 2019).
- NEET rates for young adults in New Brunswick are among the highest in Canada.



⁸ See: https://www150.statcan.gc.ca/n1/pub/42-28-0001/2021001/article/00002-eng.htm.

Young New Brunswickers leaving education increasingly perceive the labour market as unattractive, contributing to substantial outmigration from the province. The proportion of young adults (aged 15 to 29 years) in New Brunswick has fallen steadily from 29% in 1981 to 16% in 2021, in part because of lack of good job opportunities. While schools and education systems can have only limited impact over the availability of desirable jobs within any society, they can have a major impact on how easy it is for students to compete for, and succeed within, available employment.

2.

A successful New Brunswick framework will help students to understand and prepare for not only the opportunities presented by the labour market, but also its challenges.

Risks of poor outcomes are especially high for young people with lower levels of qualifications, but also for students with distinct characteristics. In Canada, Indigenous and foreign-born students frequently face poorer outcomes than their peers. Young women, despite leaving education more highly qualified and participating in work at comparable levels, consistently earn less than their male counterparts. International studies, including from Canada, show that LBGTQI2S+ youth also face poorer labour market outcomes, avoiding workplaces that are perceived to be hostile and often earning less than would be expected given their academic achievement (Drydakis, 2019)9. Concerns over poor initial transitions are elevated by the fact that Canadian and other studies show that a long-term scarring effect is commonly associated with early unemployment (Krahn and Chow, 2016; Gregg and Tominey, 2005; Bell and Blanchflower, 2011; Thern et al., 2017). Adults who struggle in their transitions can expect to earn less, experience poorer quality work and suffer from poorer mental health than comparable peers many years later. It is important to recognise then, not only that the labour market offers many challenges and opportunities for youth, but that career education systems can help mitigate the risks of poor outcomes and help reduce the danger of psychological damage.

3.

A successful New Brunswick framework will ensure that students understand the role that qualifications and experiences can play in helping to mitigate risks of poor outcomes.



⁹ See also: https://www150.statcan.gc.ca/n1/pub/42-28-0001/2021001/article/00002-eng.htm.

There is growing awareness of the short- and long-term risks of poor mental health linked to poor transitions and the preventative role that career guidance can play in identifying and responding to challenges. Data from Statistics Canada's Canadian Survey on Disability shows that in 2017, approximately one in nine (11.2%) New Brunswick youth (aged 15 to 24 years) had a mental-health-related disability. This represented the second highest percentage among the provinces. Compared to those without disabilities, persons with mental-health-related disabilities are less likely to be participating in the labour force (i.e., working or looking for work), and when they are participating, are more likely to be unemployed 10. Suicide accounts for about a quarter of all deaths among those aged 15–24 within Canada. This is the third-highest rate in the industrialized world (Redekopp and Huston, 2020).

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and anxiety and can be
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problems.

Career development is about more than helping students to find a job and build a career. It has an important role to play to help young people manage anxiety, depression, and other manifestations of poor mental health that can make transitions from education into work more difficult and can in turn be extenuated by poor transitions. Young people suffering from poor mental health are likely to require greater support in visualising potential futures, embracing career development activities and experiences with confidence, and developing helpful social networks (Redekopp and Huston, 2020). Anxieties can be expected to have increased during the COVID-19 pandemic (Hooley, 2022). As Redekopp and Huston recently argued in an important paper:

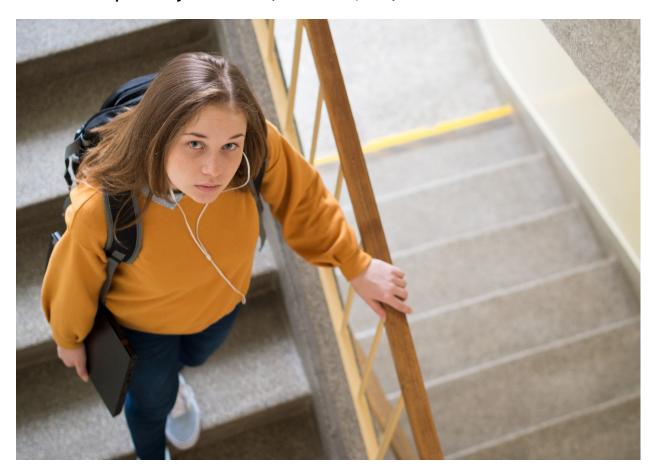
5.

A successful New Brunswick framework will ensure that all students receive a solid foundation of career preparation while putting in place effective mechanisms to identify and support those students who require additional, more personalised support.

 $^{^{10}}$ At the time of the 2016 Census (May 2016), only 49.9% of individuals aged 25 to 64 years with mental-health-related disabilities in New Brunswick were employed, compared to 76.5% of persons without disabilities.



Adolescence is ... when signs of mental illnesses most often emerge and are diagnosed. In fact, half of all mental disorders are diagnosed in adolescence and three quarters by the mid-20s" (Kessler et al., 2007).



Imagine an adolescent who has just started to experience signs or symptoms of a mental illness: The adolescent's self-confidence would likely be low, their willingness to engage in exploratory behaviour (e.g., information interviews about various work roles) would be diminished, and their ability for identity formation (i.e., experimenting with various roles and beginning to see one's identity crystallize) would be weak. To make things worse for the adolescent with a mental illness, they, like many of their peers, may face significant pressure to choose a career path, yet their ability to effectively make use of counselling or career education services lessens after the onset of the illness. Given how difficult the process of exploration can be for any adolescent or young adult, the need for extra support for individuals experiencing mental illness is tremendous and underestimated (Redekopp and Huston, 2020).

Studies show that students who build an understanding of the challenges of the labour market whilst still in education can be expected to demonstrate greater psychological well-being after they have begun the search for desirable work (Koivisto et al., 2010).

While it is still an under-researched field, international studies also highlight the important role that career education has to play in supporting transitions of young people with physical disabilities, using studies that follow young people through adolescence into adult employment (Shandra, 2008). All young people are entitled to a solid foundation of career preparation, and some will need more support related to their personal circumstances.

Decision-making for all students is getting more difficult as the labour market becomes more dynamic due to the results of automation and digitalisation, increasing precariousness in employment, changes in demand for skills linked to the fight against climate change, and the COVID-19 pandemic.

As the labour market becomes more turbulent, career planning grows more challenging and the importance of effective career education more important. Over the last two years, the COVID-19 pandemic has made transitions substantially more difficult for young people. More than other age groups, they saw steep reductions in hours worked, as industries where they are concentrated, such as hospitality, tourism and retail, faced particular disruption (Province of New Brunswick, May 2021). It remains to be seen how the demand in the labour market will settle after the pandemic has finally run its course.

Looking to the longer term, due to processes of digitalisation and automation, demand for skills in work is changing radically. The OECD estimates that 45% of jobs in Canada are at high risk of partial or full automation over the next decade (Nedelkoska and Quintini, 2018). Changes in demand for skills can also be expected considering the needs of a greener economy. Recent research indicates that green jobs will increase by 44% between 2020 and 2030 in Canada¹¹. Consequently, it cannot be taken for granted that once-attractive jobs will remain so. At the same time, many new job roles can be expected to emerge in the years ahead. In such dynamic times, it becomes especially important that students not only understand the character of such structural change, but have a chance to hear directly from people working in affected industries to help understand what these changes may mean in practice.

¹¹ See: https://eco.ca/new-reports/a-green-economic-recovery-trends-developments-and-opportunities-for-the-environmental-work-force/.

Another important trend is the increasing precariousness of the labour market. National data show that growing numbers of young adults are working in non-standard employment (part-time, temporary, multiple, and gig employment). While some young people clearly welcome the flexibility offered by new ways of working and embrace a work-life balance less available to previous generations, it is important that they understand the risks as well as opportunities of such employment. Non-standard employment is closely associated with poor job quality, typically including lower wages, less security, and weaker access to training than peers in permanent, full-time employment. For young people, the risks of becoming trapped in lower-skill, lower-pay work are real. It is important

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that students who actively or involuntarily end up in non-standard employment understand that risks can be mitigated by higher levels of qualifications and by union membership, which is generally linked with higher rates of pay and greater job stability¹².

A growing number of countries are adopting career development frameworks to structure the career education that students can expect. However, to date, frameworks have been developed with little regard to the research evidence.

Over the last thirty years, in response to structural trends and the desire to place career education on a footing comparable to other school subjects, increasing numbers of countries have articulated detailed expectations of schools and student entitlements related to career development through schooling. In the 1990s, Canada was one of the first countries to develop a Career Development Framework to guide the work of schools. In its wake, frameworks were developed in the United States (NCDG, 2004), Australia (MCEEDYA, 2010), England (LSIS, 2013), Ireland (NCGE, 2017), Scotland (Education Scotland, 2015), and Malta (Gravina and Camilleri, 2020).

7.

A successful New Brunswick framework will ensure that students understand the changing character of employment, its benefits and drawbacks, and how less desirable transitions can be mitigated.

 $^{^{12}}$ See: https://www150.statcan.gc.ca/n1/pub/42-28-0001/2021001/article/00002-eng.htm and https://www150.statcan.gc.ca/n1/pub/11f0019m/11f0019m2019025-eng.htm.

These frameworks share much in common. They are strongly structured around the development of career development skills, typically expressed as competencies ("I know how to...") that reflect increasingly sophisticated understandings of self and society over time. As would be expected, the different frameworks vary over time and national circumstance. More recent ones, for example, place ever greater emphasis on the confidence that students express in being able to make use of digital resources. Others also recognise that the increasingly dynamic labour markets present challenges as well as opportunities, for students at particular risk of poor outcomes. The Scottish framework, for example, expects that students be able to "describe the rights and responsibilities placed on employers and employees and how these relate to creating a positive, productive and sustainable work environment." In Ireland, students are expected to "assess barriers to equality and inclusion in the workplace and in educational settings." In Malta, more explicit focus is placed on the challenges of the modern labour market. Students are expected to:

- Develop an understanding of the advantages and disadvantages of various work alternatives (e.g., voluntary work, full-time/part-time employment or self-employment options);
- ▶ Develop an understanding of the value of work ethics, the rights, duties and responsibilities of the employer and employee; and
- ► Explore and develop a critical stance towards non-traditional life scenarios, the notions of decent work versus precarious work and other work scenarios.

However, important concerns have been raised over such career development frameworks, which are often characterised by highly granular articulation of learning outcomes, including in some cases hundreds of competency statements to reflect desired student development¹³. In Canada in particular, in spite of being developed by national authorities in an impressively consultative fashion, the Career Development Framework of the 1990s fell into disuse and was then disregarded by both policy makers and practitioners, perhaps due to the challenges of effectively assessing competency development in an area of child development as complex, personal, and socially located as career development (Hooley, 2013).

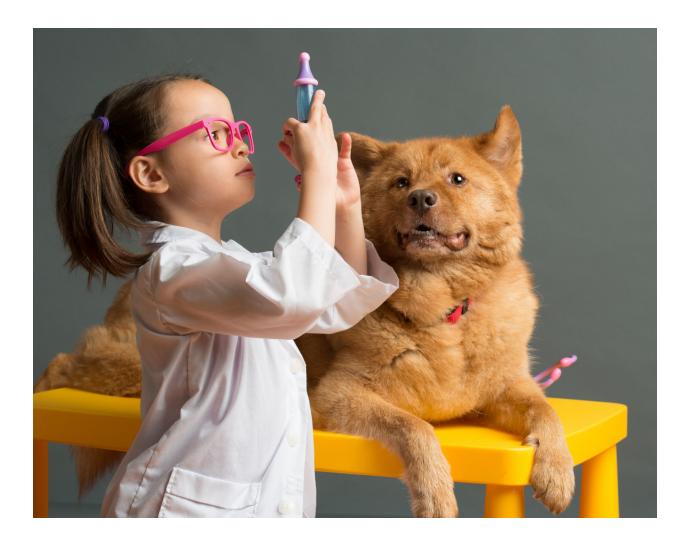
8. A successful New Brunswick framework will be developed as a living document that will respond to important contextual changes and new information related to the more effective transitions of young people through education and into work.

¹³ As Hooley (2013) notes, the Australian framework includes 328 competencies, each of which is linked to between 8 and 17 'performance indicators' which school staff are expected to adjust to local contexts. The Canadian Blueprint includes a 391-page overview document (Haché, Redekopp, & Jarvis, 2006) alongside a 243-page implementation guide (Haché & de Schiffart, 2002).

A final, and particularly important, concern relates to the weakness of the research evidence on which career development frameworks have been built. The availability of evidence on the long-term impact of career development interventions has much improved in the last twelve months. However, the career competency approach remains largely unproven. The perspectives that Hooley and colleagues expressed in 2013 remain valid:



It is important to note that, despite the influence achieved by the [career development framework model] with both practitioners and policymakers, it cannot claim to be based on an empirically demonstrated analysis of the elements that lead an individual to career success, happiness or economic productivity. The framework is at once a theoretical proposition and ... a process of policy and practice development. Its elements have been developed by a number of thought leaders in the career development field through a mix of conceptual thinking and iterative consultation and development. So far, this development has not been explicitly connected to existing career theory, and its effectiveness has not been empirically tested by any substantial systematic study. (Hooley et al., 2013).



In recent years, some governments moved to simplify frameworks while retaining their approach (Scotland) and others have adopted very different means of framing the delivery of effective career education. In England and Canada in particular, governments have turned away from finely detailed frameworks articulating competency development at each stage of schooling and moved towards much simpler frameworks to oversee the delivery of career education from an institutional perspective. The Gatsby Benchmarks for example, were introduced as a requirement of English schools serving young people aged 12-18 in 2018 (Department for Education, 2021).



9.

A successful New Brunswick framework will draw on existing practice in framework design while privileging available longitudinal data to focus on those aspects of career education that can be most confidently connected with better outcomes for young people.

The Benchmarks, which describe eight core attributes of career education, have attracted considerable international attention. In Canada, they have been very influential within CMEC's *Reference Framework for Successful Student Transitions* which focuses on 11 policies, programmes, and implementation strategies that serve as benchmarks. These benchmarks provide high-level guidance to schools, with some (if limited) direction as to the characteristics of good quality provision. For example, the CMEC document expects:



All students participate in work-integrated learning opportunities: Students have multiple opportunities over the course of their education pathways to learn from employers and in workplaces about the realities of diverse work environments, and to develop the skills needed for labour market success. Community partnerships are developed with employers and businesses as key contributors in the process. Employers and businesses have access to resources and training to assist in the onboarding of students from disadvantaged or underrepresented groups (e.g., cultural awareness tools and information regarding accommodations for students with disabilities or mental-health concerns). Targeted programming is available to specific student populations (e.g., Indigenous, youth with disabilities, youth from rural or Northern communities) to provide more equitable access to work-experience opportunities.



Students learn about all PSE pathways: Students understand, have exposure to, and have the supports to consider the full range of postsecondary learning opportunities that are available to them. Programming and approaches address equity of access for underrepresented groups. (CMEC, 2017).

These framework approaches have moved away from competency development to focus more strongly on describing the career-development-related resources, activities, and experiences that students should expect to access while in secondary school. Such an approach is more easily measured and, as discussed below, better aligns with an evidence base that has significantly improved over the last twelve months. However, risks remain that the personal development of individual students over time may be overlooked. For example, outcomes for young people are not driven by the fact that they encounter employers and employees while in school or in a workplace, but by students **using** such interactions to serve a purpose. These activities enable the accumulation of human, social, and cultural capitals whereby students are presented, for example, with opportunities to gain experience that will be valued by future employers, develop networks of lasting value and/or gain new and useful information to inform their career thinking and planning. These activities build the confidence that underpins self-efficacy and personal agency (Jones et al. 2016).

Substantial new analysis of longitudinal data has recently become available evidencing better employment outcomes related to participation in school-age career education. International evidence also points towards career education being associated with improvements in academic achievement and highlights comparative weaknesses of Canadian career education.

Reviewing the international research literature in 2016, Hughes et al. (2016) found that scientific evidence on the long-term impact of career-education-related interventions undertaken by young people within secondary education could best be characterised as "weak and fragmented" with "significant shortages" in quasi-experimental [longitudinal] and experimental [randomised control trials] studies" (Hughes et al. 2016). Over the last twelve months however, considerable new evidence has become available on how teenage career-related activities, experiences, and attitudes relate to better employment outcomes.

EXPLORING, EXPERIENCING, AND THINKING ABOUT POTENTIAL FUTURES IN WORK

The 2021 OECD Career Readiness project undertook a systematic analysis of career-related interventions using longitudinal datasets, ultimately identifying a number of new predictors of better employment outcomes. Longitudinal studies take a quasi-experimental research approach, following large cohorts of young people from childhood and adolescence into adulthood, using statistical controls for the factors that typically shape labour-market outcomes (i.e., gender, academic achievement, socio-economic background, and migrant status) to test for associations between teenage characteristics and better employment outcomes in adulthood. Longitudinal datasets in 10 countries, including Canada, the United States, United Kingdom, and Australia were reviewed by the OECD. Many of the datasets, including Canada's, had never previously been reviewed in this way. Typically, surveys included data on teenage lives at ages 14-16 (aligning with PISA's focus on 15-year-olds) and adult lives, commonly ten years later. In Canada, researchers at the University of Quebec reviewed the Youth in Transition Survey which initially collected data from young people at age 15 in 2000 and then collected data on their outcomes at ages 25 and 30 (Covacevich et al., 2021a).

In terms of outcomes, analysts looked for evidence of better employment outcomes in three areas:

- NEET status (young adults being Not in Education, Employment, or Training)
- Earnings (if in full-time employment)
- Career or job satisfaction

While datasets varied considerably in terms of questions asked, sufficient comparable data was available to allow the OECD to confirm eleven teenage career-related predictors or indicators of better employment outcomes. In at least three countries analysts were 90%+ confident that better outcomes linked to these teenage career-related activities, experiences, and attitudes could not be attributed to chance. The new findings were then integrated into existing academic literature that analyses longitudinal literature. The new OECD analysis has substantially increased understanding of how career education interventions link with better employment outcomes. While beneficial results cannot always be guaranteed and may depend on the quality of provision, the patterns in the data are clear. In the tables below, the countries in bold reflect those ones where beneficial relationships were identified for the first time, including considerable new Canadian evidence. The OECD Career Readiness Indicators gather around three coherent areas of teenage lives:

- exploring potential futures in work;
- · experiencing potential futures in work; and,
- · thinking about potential futures in work.

A summary of the analysis and its implications for secondary education, including fourteen questions for consideration by schools, is available in:

OECD. (2021). Career Readiness in the Pandemic: Insights from new international research for secondary schools., *OECD Education Policy Perspectives*, *44*, OECD Publishing, Paris, https://doi.org/10.1787/8b1215dc-en.

Exploring the Future	STUDIES THAT FOUND BENEFICIAL AND STATISTICALLY SIGNIFICANT ASSOCIATIONS	COUNTRIES IN WHICH STUDIES FOUND BENEFICIAL ASSOCIATIONS (countries in bold show new OECD analysis concluded in 2021)	EXAMPLES
Engaging with people in work through career talks or job fairs	4 out of 7 studies from 6 countries	Australia, Canada, United Kingdom, Uruguay	Canadian students who had attended a career talk by age 15 were 3 percentage points less likely to be NEET at 25 relative to comparable peers who had not.
Joining workplace visits or job shadowing	4 out of 6 studies from 6 countries	Australia, Canada, Korea, United States	Canadian students who had attended an organised visit to a workplace by age 15 were 4 percentage points less likely to be NEET at 25 relative to comparable peers who had not.
Participating in application and interview skills development activities	3 out of 4 studies from 4 countries	Australia, Canada, United Kingdom	Canadian students who had been taught how to write a CV by age 15 earned 4% more annually at age 30 relative to comparable peers who had not.
Participating in occupationally-focused short programmes (e.g., co-op programmes)	14 out of 17 studies from 3 countries	Australia, Canada, United States	Canadian students who participated in occupationally focused short courses by age 15 earned 3% more at age 30.
Participating in career conversations (e.g., with teachers, family members, friends, and career guidance counsellors.)	7 out of 10 studies from 6 countries	Australia, Canada, United Kingdom, United States	Canadian students who had career conversations with a school counsellor by age 15 were 3 percentage points less likely to be NEET at 25 relative to comparable peers who did not.

Experiencing potential futures in work	STUDIES THAT FOUND BENEFICIAL AND STATISTICALLY SIGNIFICANT ASSOCIATIONS	COUNTRIES IN WHICH STUDIES FOUND BENEFICIAL ASSOCIATIONS	EXAMPLES
Part-time working	20 out of 27 from 6 countries	Australia, Canada, United Kingdom, United States	Canadian teenagers who worked part-time at age 15 earned 5% more in annual earnings at age 30 compared to those who did not work part-time at age 15.
Volunteering	8 out of 9 studies from 5 countries	Australia, Canada, Germany, United Kingdom, United States	Canadian teenagers who volunteered 4-10 times in the year at age 15 earned 4% more in annual earnings at age 30 relative to comparable peers who never volunteered at age 15.

OECD CAREER READINESS INDICATOR:

Thinking about the future	STUDIES THAT FOUND BENEFICIAL AND SIGNIFICANT ASSOCIATIONS	COUNTRIES IN WHICH STUDIES FOUND BENEFICIAL ASSOCIATIONS	EXAMPLES
Career certainty (expression of an occupational expectation)	15 out of 20 studies from 9 countries	Australia, Canada, Denmark, Switzerland, United Kingdom, United States	Canadian students who were career certain at 15 were 6 percentage points less likely to be NEET at 25 than those who were not career certain.
Career ambition (expectation to work in ISCO 1 or 2 occupation)	15 out of 19 studies from 9 countries	Australia, China, Korea, Switzerland, United Kingdom, United States	No data available.
Career alignment (educational plans anticipate securing qualification levels typically required for entry into desired occupation)	9 out of 11 studies from 7 countries	Australia, Canada, China, Korea, United Kingdom, United States	Canadian students who were career aligned at 15 earned 10% more per annum at 30 compared to those who were misaligned (and who planned for an educational level lower than the one required for their planned job)
Instrumental motivation towards school (confidence that schooling will help secure desirable employment)	13 out of 15 studies from 8 countries	Australia, Canada, Denmark, Korea, United Kingdom, United States	Canadian students who agreed that school was a waste of time at 15 earned 5% less per annum at age 30 compared to those who strongly disagreed with the statement.

In addition, the study found partial evidence linked to three further potential indicators: student participation in what are described as school-based reflection activities (including career education classes and career questionnaires), career originality (when students express an occupational expectation that is not among the most popular ten choices for their gender in their country), and work experience placements typically lasting 1-2 weeks. Here, evidence was found to be insufficient or too inconclusive for indicators to be confirmed.

A common thread across the indicators is the importance of career education being enriched by engagement with employers and people in work. The indicators include some that can only be delivered with the support of the economic community (e.g., job fairs, guest talks) and others that are considerably enhanced through employer engagement (e.g., application skills, occupationally focused short programmes). This is

10.

A successful New
Brunswick framework will
draw on best available
longitudinal evidence in
relation to the specific
teenage ways in which
students explore,
experience, and think
about potential futures
in work have been linked
with better employment
outcomes.

unsurprising given the growing understanding of the value of direct employer involvement in Career Connected Learning (Mann et al., 2018). Through such engagement, students have the opportunity to gain information and experiences which are not so easily replicated in schools without the support of members of the economic community. An important finding from research is that students commonly feel that their interactions with people in work and workplaces are more authentic and trustworthy than other forms of career development. Studies also show that the more students engage with employers in school, the greater the benefits they can expect in young adulthood (Kashefpakdel and Percy, 2017), that different types of interaction are related to different types of outcomes, and that greater benefits can be expected if engagements are personalised and contextualised by schools and school counsellors. As students get older, the focus of employer engagement can be expected to centre more at first on initial exposure to the breadth of the labour market, then growing exploration before gaining first-hand experiences (Mann et al., 2018)¹⁴.

Better understanding of the employment benefits linked to career education enriched by employer engagement make it easier to understand that employers themselves have much to gain from their involvement with schools. Lower unemployment rates, higher wages, and greater job satisfaction all suggest that young people are finding better matches for their skills and interests in the early labour market. Wage premiums of 5%-10% are commonly linked to the Career Readiness Indicators, suggesting that higher levels of productivity are being acknowledged by employers (OECD, 2022).

¹⁴ See for example the WE3 continuum of employer engagement adopted by some New Zealand schools https://www.oecd.org/education/career-readiness/examples-of-practice/collapsecontents/New%20Zealand%20WE3%20for%20Web.pdf.

While employer engagement has long been seen as desirable within career education, new research shows that it is an essential component of effective provision. Being a largely rural province, this insight presents challenges for New Brunswick in ensuring that all young people have fair opportunity to engage directly with employers and people in work to explore and experience potential futures in work. In response to the social isolation required by the COVID-19 pandemic, the last two years have seen considerable innovation in the use of digital resources to deliver career education. Around the world, virtual work experience placements, job fairs, and career talks from guest speakers are now regularly delivered online. While care must be taken to ensure that provision enables high-quality experiences comparable to face-to-face delivery, new opportunities have emerged to deliver aspects of career education in more equitable ways than has been the case in the past.

A successful New
Brunswick framework
will ensure that career
education is enriched for
young people through
multiple and diverse
opportunities to engage
with employers and people
in work from a young age.

The OECD analysis provides strong evidence that beneficial long-term employment outcomes can be linked to teenage specific career-related activities, experiences and attitudes. The analysis does not show strong links to the competencies which are the primary focus of previous career development frameworks. While very welcome, the new OECD data are frustrating in their limitations. For example, very few competency-related questions were asked in the questionnaires that were analysed. By way of illustration, it is now known that students who participate in application and interview skills development activities can be expected to enjoy better employment outcomes than peers, but it is not known whether better outcomes can be expected of students who simply agree with the statement 'I know how to prepare a CV.' Moreover, data overwhelmingly relate to the experiences of young people at age 15. Much less is known about the long-term impact of experiences at a younger or older age.



However, the new OECD analysis does offer important insights for understanding provision at a younger age and in a more comprehensive manner. For example, analysis of PISA 2018 data shows consistently strong statistical relationships between more beneficial career thinking and participation in career development activities and work-based experiences: speaking with a career guidance counsellor, engaging in career conversations, completing questionnaires, researching careers on the internet, attending a job fair, visiting workplaces, volunteering, working part-time, and taking part in work placements or internships (Covacevich et al. 2021a).

12.

A successful New Brunswick framework will ensure that young people are well prepared to take full advantage of digital innovations in career education.

In making sense of the findings, the new analysis highlights the role of career education in supporting the emergence of a stronger sense of personal agency among young people, being "the ability and determination to influence their lives through their own development," which is co-built with families, friends, schools, and communities (Covacevich et al., 2021a). Consequently, in order to enhance career thinking that reflects a confident intellectual engagement with potential working futures and how they relate to ongoing education and training, career development will begin young and create a culture of continual enquiry and reflection. Wider OECD analysis has shown that by the age of five, children are already imagining future adult lives in work, but their perspectives are heavily and continually shaped by gender and other personal characteristics (OECD, 2022). Several countries, including the UK and Australia, now begin interventions during the first years of schooling (Hooley, 2021; Percy and Amegah, n.d.). In Canada, CERIC made many resources available to practitioners working in elementary schools¹⁵. The focus of such provision is on activities that broaden the understanding of children about work, helping them to see the relationship with education while challenging stereotypical thinking about what is reasonable for children of different types to aspire to, and helping them to envisage future pathways that may include both university and vocational progression.



¹⁵ See: https://careerwise.ceric.ca/2021/09/24/try-out-these-tools-for-career-exploration-with-elementary-students/#.Ywfa1XZ-Bw2x.

Recent research also points towards career education contributing to the academic achievement of young people. A 2016 review of the international research literature based on experimental and quasi-experimental research designs found that of 45 studies which reviewed 67 different interventions, 60% provided largely positive findings evidencing improvements in educational outcomes. Only one study suggested negative impacts. The remainder provided either mixed results or no clear patterns of achievement. The literature, which was overwhelmingly seen as very limited in scope and focused on provision in secondary education, found that improvements in academic achievement were "on average, relatively modest" with data broadly supporting "the hypothesis that careers education helps young people to better understand the relationship between educational goals and occupational outcomes, increasing pupil motivation and application" (Hughes et al., 2016). In attempting to understand evidence of improved academic attainment, Hooley and colleagues (2014) drew on the earlier work of Killeen and colleagues (1999) to theorise that the relationship of career development to attainment is due to its capacity to help young people to:

- understand the relationship between educational goals and access to occupational goals;
- clarify valued outcomes;
- · set attainable educational goals; and
- understand the relationship between current educational effort and performance and the achievement of educational and career goals.

Consequently, enabling students to draw connections between learning and potential futures in work from an early age can be expected to enhance the motivation and engagement of students as they gain a greater sense of ownership over their studies.



OTHER RELEVANT INSIGHTS FROM PISA 2018: WEAKNESSES IN CANADIAN CAREER EDUCATION

Further analysis of data from PISA 2018 in light of the new Career Readiness Indicators provides additional insights of value into the challenges facing career education in Canada. Young Canadians are increasingly uncertain about their plans for the future, and when they do express occupational plans, these are heavily shaped by personal characteristics and relate very poorly to actual patterns of labour market demand. By the age of 15 many young Canadians are unable to name the type of job they expect to have at around age 30. While students are not expected to have fixed career plans at such a young age, the absence of plans suggests a lack of engagement in career thinking, which makes decision-making through secondary education more challenging. In Canada, 28% (OECD average, 24%) of 15-year-olds can be described as uncertain, a proportion that has grown considerably since 2000 when it stood at 16%. Uncertainty is particularly high among boys at 32% (OECD, 26%) and students in the lowest quartiles of academic performers at 34% (OECD, 27%). As highlighted above, longitudinal studies from multiple countries link career uncertainty with poorer employment outcomes than would be expected of young people. For schools, it is helpful to check regularly on the career thinking of students and put in place career development interventions that can be expected to clarify planning.

When young people do express an occupational expectation at 15, analysts code responses against the International Standard Classification of Occupations (ISCO). OECD comparisons between countries focus particularly on the percentage of students who say that they will be working by the age of 30 in one of the ten most popular choices of jobs among their peers by gender. This gauge of career concentration provides an insight into the effectiveness of labour market signalling within a country. Career concentration is slightly higher in Canada than in other OECD countries (58% of girls and 51% of boys expressing an occupational expectation say that they will be working in one of the ten most popular choices of their peers). Students expressing particularly high levels of concentration include foreign-born students (60%) and students from the highest SES quartile (58%).

Most popular occupational expectations in Canada by gender (PISA, 2018).

GIRLS

1	Doctors	16.9
2	Teachers	8.2
3	Nurses and midwives	7.2
4	Lawyers	6.5
5	Psychologists	4.6
6	Veterinarians	3.7
7	Designers	3.4
8	Engineers	2.9
9	Social workers and counselling professionals	2.4
10	Dentists	2.4
TOTAL		58.2

BOYS

1	Engineers	12.1
2	Doctors	8.0
3	ICT professionals	7.0
4	Sportspeople	4.5
5	Police officers	4.3
6	Lawyers	4.3
7	Motor vehicle mechanics and repairers	3.5
8	Designers	2.8
9	Teachers	2.5
10	Architects	2.4
TOTAL		51.3

OECD analysis of PISA data show that the career aspirations of young people are heavily influenced by gender, social background, and migrant status (Musset and Kurekova, 2018). For example, while 7% of girls in Canada expect to work in nursing or midwifery, this applies to just 0.8% of boys¹⁶. Many students, especially disadvantaged students, hold lower ambitions than would be expected given their academic achievement as measured on the PISA tests. In Canada, about one in seven high-achieving disadvantaged students—but about one in thirty high-achieving advantaged students—do not expect to complete tertiary education¹⁷.

The young Canadians now leaving secondary education are not only the most educated in history, they are also the most ambitious in terms of the social status of desired employment. Young Canadians now expect to work overwhelmingly in ISCO groups 1 and 2 as managers or in a professional occupation¹⁸. In PISA 2018, 74% expressed such ambitions, up from 61% in 2000. While such 'high' ambition is associated with better outcomes in longitudinal research, it also raises important questions about the effectiveness of employers signalling to young people about demand for employment (Covacevich et al., 2021a; Covacevich et al., 2021b). In 2014, 6.1% of Canadians in work were employed in ISCO 1 jobs and 21.2% in ISCO 2 professions¹⁹. Many young Canadians can be expected to fail in achieving their occupational ambition, risking the need to make impromptu decisions about alternative pathways as plans falter and risking potentially poor mental health as they adjust to realities. Unsurprisingly, many employers in Atlantic Canada report difficulties in recruiting employees²⁰.

Predictably, Canada has a problem attracting young people to skilled employment. Interest in jobs from the three ISCO categories (6, 7, and 8) related particularly to trades and skilled occupations, which are commonly entered through vocational education and training VET programmes, are especially low. In Canada, 8% of 15-year-olds expressing an occupational expectation name a job from these three areas of work, compared to an OECD average of 10%. As in other countries, such interests are heavily gendered. Just 1.6% of Canadian girls expect to work in such occupations, lower than the OECD average of 2.9%. Interest is also lower among students from higher socio-economic backgrounds and urban dwellers, and among higher academic achievers than is found in comparable countries. An important finding from the OECD PISA data is that young people who are foreign-born are much less likely to express plans to pursue such skilled work than is typically found across the OECD. In Canada, 2.9% of migrant youth and 10.3% of native-born youth expect to work in this employment, compared to OECD averages of 7.5% and 10.2% respectively. As interest in skilled employment is currently so limited, it is important to help students from a young age to explore potential futures in such employment, meeting people with first-hand working experience and visiting workplaces (OECD, 2018).

¹⁶ See: https://www.oecd-forum.org/posts/can-nursing-thrive-in-the-age-of-the-coronavirus-what-young-people-think-about-the-profession-dce5a659-cc6d-4914-b412-42e994be8197.

¹⁷ See: https://www.oecd.org/pisa/publications/PISA2018 CN CAN.pdf.

¹⁸ ISCO major categories 1 and 2. In Canada in 2018, 82% of girls (OECD average, 70%) and 64% of boys (OECD, 54%) expressing an occupational ambition stated that they expected to work in such a high-status job. High ambitions are especially common among foreign-born youth; 84% expect to work in an ISCO 1 or 2 job (OECD, 66%).

¹⁹ See: https://ilostat.ilo.org/data/.

²⁰ See: https://www.canada.ca/en/atlantic-canada-opportunities/services/researchstudies2.html.

In many countries, vocational education can be seen as second-best to academic learning in spite of the fact that, in Canada as elsewhere, many occupations entered through vocational education—such as technical and paraprofessional workers—are well-paid and in high demand²¹. It is important that the career interests of young people are broadened and that they have opportunity to explore and understand the professions and careers that can be entered through vocational training and not just the programmes and courses that it offers. Choosing post-secondary training puts a young person on a pathway for particular types of employment, preparing them well while limiting other options. It is a big decision, and students need time to explore such professions, confirming their interests through first-hand experiences of work. While co-op programmes offer such a preparation to many students, they are not always available. In their absence, it falls to career development systems to create personalised journeys through secondary education to allow students to make confident and informed decisions about their futures.

13.

A successful New Brunswick framework will encourage and enable children from elementary school to build understanding of the relationships between education and employment, and broaden understanding of contemporary careers, including skilled employment, while challenging forms of stereotypical thinking that are linked to gender and other personal and social characteristics.



²¹ See: https://www.canada.ca/en/atlantic-canada-opportunities/services/researchstudies2.html.

Canadian students are also less likely than peers across the OECD to aspire to run their own enterprise. On average 52% of Canadian teenagers agree that they would like to run their own business in the future (OECD, 63%). Girls (48%) are much less likely than boys (62%) in Canada to harbour such ambitions. Young people who were lower performers on the PISA academic tests are also more likely to expect to ultimately work for themselves (61%). In Canada, the majority of self-employed individuals are over the age of 35²² and effective provision will consequently help students understand how entrepreneurial careers are planned and built over time as well as developing the social and emotional learning and confidence that is necessary for entrepreneurial success (OECD/European Commission, 2021).

14.

A successful New Brunswick framework will ensure that all students develop a strong understanding of all post-secondary pathways open to them, including direct entry to employment, self-employment, vocational education and training, and university study.

A further insight from the most recent PISA data relates to the risk of automation and digitalisation in work, which has been found to be particularly high in entry-level employment (Nedelkoska and Quintini, 2018). Analysis finds that two in five 15-year-olds in Canada surveyed within PISA 2018 expect to be working by the age of 30 in an occupation at high risk of partial or full automation or digitalisation within the next decade. It is likely that the pace of automation has been accelerated by the COVID-19 pandemic (OECD, 2022).



²² See: https://www.cibc.com/ca/pdf/RRSP-sb-020404-en.pdf.

Finally, PISA 2018 has lessons for teenage experiences of potential futures in work. While young Canadians are more likely to work part-time or volunteer than peers in other countries, distinct groups are less likely to have the experience. Foreign-born students for example, are much less likely to have worked part-time in a relatively formal job than native-born students, and students from the most disadvantaged backgrounds are less likely to have either worked or volunteered alongside their full-time studies. All students should have some first-hand experience of work by the time they leave secondary education, whether that is arranged by their school or privately. Opportunity exists to gain greater benefit from part-time work and volunteering when schools help students to gain experiences related to their long-term occupational goals and when schools encourage cultures of preparation and reflection before and after experiences.

15.

A successful New Brunswick framework will ensure that students gain first-hand experiences of work through internships, volunteering, and/or part-time working; encouraging and enabling students to reflect on their experiences in light of career development while discouraging excessive hours.

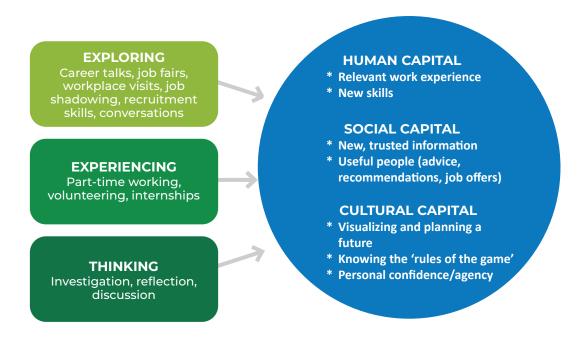
Schools can also help students to gain first-hand experience through short placements of 1-2 weeks. When these experiences are well-designed, positive long-term benefits are more likely to result. (OECD 2021). One of the most striking findings from PISA 2018 is that students who take part in part-time working, volunteering, or work placements, or who speak with a career counsellor can be seen in the data to be more confident than peers in their own ability to adapt to unusual and unfamiliar situations and people—an important aspect of social and emotional learning (Covacevich et al., 2021a)²³.



²³ International studies highlight potential risks related to part-time working: where students work more than 10 hours a week, increasingly they can expect their academic performance to suffer (Mann et al., 2020).

EXPLAINING THE LONG-TERM IMPACTS OF TEENAGE CAREER INTERVENTIONS

Researchers have long sought to make sense of longitudinal evidence of better employment outcomes linked to teenage career-related activities, experiences, and attitudes. A common approach is to draw connections with the accumulation of human, social, and cultural capital that shapes access to desirable employment (Mann et al., 2020).



Where students are gaining workplace experience, building social networks, and improving their understanding of how careers in different sectors are built, they become better able to provide potential employers with confidence that they will not present a recruitment risk. Young people have plentiful opportunities to build such experience, networks, and confident understanding through the support of their families, but inevitably access to these resources is heavily shaped by the circumstances in which families find themselves.

Children's networks—their reservoir of social capital and ability to bank on that capital for support, advice, or opportunities down the line—remains largely determined by random luck: the luck of where children are born, whom their parents know, and whom they happen to end up sitting next to in class (Fisher, 2018).

It is the democratic function of schools through career education to provide fair access to resources that play a fundamental role in enabling young people to optimise the academic achievements with which they leave secondary education. This includes providing full support for students planning on entering employment immediately or enrolling in vocational education and training, as well as for those progressing to university after secondary schooling. Schools can help students to manage their transitions, learning how employers think when recruiting, learning how job searches can be optimised, and developing the skills to apply for work, including online.

16.

A successful New Brunswick framework will ensure that all young people are helped to actively manage their transitions out of secondary education.



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