



# Empowering youth for post-secondary education preparedness

## Final synthesis report – Summary version

REUBEN FORD | KEMI ODEGBILE | JENILEE FORGIE

## SRDC Board of Directors

Richard A. Wagner  
Partner, Norton Rose Fulbright LLP

Tim Aubry, Ph.D.  
Professor, School of Psychology  
Senior Researcher, Centre for Research on Educational and Community Services

Gordon Berlin  
Research Professor, Georgetown University and  
Past President, MDRC

Satya Brink, Ph.D.  
International Consultant, Research, Policy Analysis and  
Strategic Policy advice  
Education, Lifelong Learning and Development

Erica Di Ruggiero, Ph.D.  
Director, Centre for Global Health  
Director, Collaborative Specialization in Global Health  
Dalla Lana School of Public Health, University of Toronto

Pierre-Gerlier Forest, Ph.D., FCAHS  
Professor, School of Public Policy,  
Cumming School of Medicine, University of Calgary

Marie-Lison Fougère  
Deputy Minister, Ministry of Francophone Affairs  
Deputy Minister Responsible for Women's Issues

Renée F. Lyons, Ph.D.  
Founding Chair and Scientific Director Emeritus,  
Bridgepoint Collaboratory for Research and Innovation,  
University of Toronto

James R. Mitchell, Ph.D.  
Founding partner, Sussex Circle

Andrew Parkin, Ph.D.  
Executive Director of the Environics Institute

Nancy Reynolds  
Managing Partner, Sterling Lifestyle Solutions

## SRDC President and CEO

David Gyarmati

## The Social Research and Demonstration Corporation

**(SRDC)** is a non-profit research organization, created specifically to develop, field test, and rigorously evaluate new programs. SRDC's two-part mission is to help policy-makers and practitioners identify policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and to raise the standards of evidence that are used in assessing these policies.

Since its establishment in December 1991, SRDC has conducted over 400 projects and studies for various federal and provincial departments, municipalities, as well as other public and non-profit organizations. SRDC has offices located in Ottawa and Vancouver, and satellite offices in Calgary, Hamilton, London, Moncton, Montreal, Regina, Toronto, Victoria, and Winnipeg.

For more information on SRDC, contact

Social Research and Demonstration Corporation  
55 Murray Street, Suite 400  
Ottawa, Ontario K1N 5M3  
613-237-4311 | 1-866-896-7732  
info@srdc.org | www.srdc.org

*Vancouver Office*  
890 West Pender Street, Suite 440  
Vancouver, British Columbia V6C 1J9  
604-601-4070

*Remote offices:*  
Alberta, British Columbia, Manitoba, New Brunswick,  
Ontario, Quebec, and Saskatchewan  
1-866-896-7732

Published in 2022 by the Social Research and  
Demonstration Corporation

## TABLE OF CONTENTS

<b>PROJECT SUMMARY</b>	<b>1</b>
Lessons from the literature	1
Lessons from the environmental scan	3
Pilot project recommendations	5
<b>REFERENCES</b>	<b>11</b>
<b>APPENDIX A: KEY DEFINITIONS</b>	<b>23</b>
<b>APPENDIX B: LIST OF PROGRAMS INCLUDED IN LITERATURE REVIEW BY TYPE</b>	<b>25</b>
<b>APPENDIX C: DIMENSIONS TO CONSIDER FOR THE IMPLEMENTATION OF PILOT PROJECTS</b>	<b>28</b>
<b>APPENDIX D: KEY STEPS IN PSE DECISION-MAKING</b>	<b>32</b>
<b>APPENDIX E: TO WHAT EXTENT ARE YOUTH EMPOWERMENT PROGRAMS TARGETING OR HELPING UNDERREPRESENTED YOUTH?</b>	<b>34</b>

## PROJECT SUMMARY

The Social Research and Demonstration Corporation (SRDC) has been conducting research and consolidating information from potentially promising practices to empower youth from families with low incomes to be active participants in their own preparation for post-secondary education (PSE). This synthesis report summarizes earlier work by SRDC to prepare (a) a **literature review** that identified documented research and evaluations of Canadian and international programs meeting pre-specified criteria and (b) a pan-Canadian **environmental scan** of community-based programs, services and supports that foster youth empowerment with respect to PSE preparedness. It rounds out the project with a discussion and recommendations on potential interventions for future piloting including target populations, type of partners, and methodological considerations to assess long-term results.

To support the literature review and environmental scan, SRDC first developed a search strategy to meet the objectives of the project. It began with its own existing knowledge base – built since 2003 as a result of SRDC’s involvement in the development and testing of multiple Canadian youth empowerment initiatives. SRDC then built out its own library of relevant publications through contact with its network of analysts working in this area. Then it used standard search techniques to ensure it has not left gaps in the knowledge needed to produce a comprehensive review. Ultimately, a total of 204 papers, reports and grey literature met the criteria for inclusion. Within these, SRDC identified 61 programs that would be analyzed to help meet the objectives of the project. The literature also informed a detailed understanding of previously evaluated youth empowerment programs and thus the narrowing down of options for pilot projects.

## LESSONS FROM THE LITERATURE

SRDC identified recommendations for steps in decision making. Pilot project developers should:

- **Identify the core target group motivation and tailor support accordingly** by considering very carefully the barriers that need to be tackled. Are youth already aspiring to attend PSE but need empowering through support to get there? Or are they uninterested in further education and need empowerment through motivation – providing *social and cultural capital* such that they embrace the role PSE could play in transforming their lives?
- **Engage youth who will not enter PSE without intervention**, deciding how best to ensure the youth who most need empowerment will actually receive the relevant services through the program. It will not be enough to expect youth to seek out support and volunteer to

attend sessions. The program may need to go to where the target youth are and engage them through their current interests before phasing in PSE-related components.

- **Have a viable mechanism to engage all youth in the target group in the program** by accommodating the diversity of youth experiences within all program offerings. For example, it will be important for Indigenous participants that youth programming is culturally relevant. It will be important for youth with disabilities that the programming they receive is accessible. However, these underrepresented groups overlap (as do most others) and likely share many common needs around motivation and/or understanding the benefits of PSE and available financial supports. Thus, programming should be designed with all targeted groups and their intersections in mind.
- **Simplify participation from the youth's perspective.** Avoid introducing new barriers or stigma through program procedures such as hard deadlines, fees, or unnecessary forms.
- **Develop program content with focus on youth engagement and need with respect to PSE access, developmental sequence, and pedagogy.** Priorities for programming include:
  - matching the needs youth have to make the pathway towards their envisaged future serves a desired and viable one. Program activities must be engaging and attractive to ensure youths are supported in arriving at informed decisions about meeting their goals.
  - planning from the youths' perspective not the program funders' or administrators'. Youth are on a trajectory from childhood into adulthood and need continuity in the most relevant supports for their age and stage in career-decision making. Youth are most at risk of dropping out when their support systems change. This clearly presents an opportunity for programming. The success of "summer melt" programming highlights the vulnerability created by the gap between the end of Grade 12 and PSE. Aging out of the care system also presents as a highly sensitive time for affected youth.
  - embracing funding and staffing plans that sustain supports for as long as each youth needs them and through the inevitable transitions each youth will face.
- **Evaluate with a convincing counterfactual design to yield credible estimates of program impacts.** Build rigorous evaluation into programming from the outset. There is a clear need for better information on what interventions work for whom, and how. With a rigorous evaluation framework, all partners can begin to understand the effects of their programs and consider their merits. Without evaluation, there is a risk of introducing multiple and competing programs that duplicate or cancel out each other's effects, possibly yielding outcomes that are less than optimal for the individuals involved. Importantly also,

without evaluation we may simply not know programs' negative effects. Decision makers and practitioners can use evaluation to fine tune program design and better fulfill their objectives. Evaluation of what works helps align the types of PSE pathways youth follow to their aspirations and (ultimately) their community's and country's future social development needs and labour market realities.

The literature reviewed supports the above recommendations. Nevertheless, it draws its lessons from two or more decades of activity internationally and can report only on what the studies and evaluations measured. SRDC sought to learn more detailed insights from the environmental scan interview stage of the project. SRDC interviewed 11 operators of Canadian youth empowerment programs to learn about the refinements they found necessary to deliver programs currently in Canada, and on what worked best – based on their experience – to empower youth for PSE preparedness.

## LESSONS FROM THE ENVIRONMENTAL SCAN

SRDC interviewed Canadian youth empowerment programs identified in the literature or by key informants, not necessarily those subject to rigorous evaluation. Below are the crosscutting observations and dominant themes emerging from SRDC's synthesis: a combination of common practices and recommendations reported by the program operators.

### Selecting youth: role of partnerships

More often programs target middle-school students, which is generally justified by reference to the PSE access literature, than high school students. The latter have gradually extended their target (informally or formally) toward middle school students over time. Most of the programs target youth with "high needs", "barriers to PSE", or "at risk" of not moving onto PSE. Operators suggest identification and selection of youth are both difficult and possibly most effective when done by actors closest to the students. Here, partnership with school boards, schools and post-secondary institutions can be important. A common targeting approach delegates to school board administration to identify schools, and school administration to identify students. Among community-based programs, Pathways to Education is by far the most rigorous in its selection criteria. Once a community is targeted, all youth in that community are included.

### Education savings and financial literacy

Programs targeting younger youth integrate financial preparation for PSE (including the Canada Education Savings Program) into lessons and appointments for parents, but with youth participants present. For older youth, empowerment activities that include a financial literacy

focus include information about the costs and benefits of PSE, available funding for PSE, and advising on the aid application process. Longer-run programs often feature direct contributions (e.g., scholarships) towards the costs of PSE.

## Program design and setting: other important program features and components

SRDC heard often that youth should be co-creators in programming; listened to carefully. Features judged important by operators included: supportive relationships between students and adult staff/older mentors who foster a sense of trust, belonging, and support for students; being responsive to student's voice and choice; practical and engaging activities for students; academic support; parent engagement activities; practical supports for completing the specific administrative requirements to apply for PSE; financial incentives in return for participation; providing very specific information about how to make PSE financially viable.

Physically having a presence in the post-secondary world (education or work) and real-world LMI is important for fostering aspirations, demystifying the unknown, linking students to practical and useful resources, and creating a future vision. Middle-school age programs are delivered more often at the classroom level than toward individuals. High school interventions are more often tailored to individuals than delivered at the classroom level. Align and integrate program with provincial education curriculum as much as possible, but many of the targeted youth have negative associations with the school experience; try not to re-create school in programming. Build evaluation in from the beginning and use the data, evaluation results and recommendations to build better programming and secure funding.

Inevitably, the per-participant cost of programs will vary along many dimensions including features and components and program economies of scale. The programs included varied considerably in scale.

## Personnel

Operators stressed the importance of investing in building strong and committed staff/instructors/teachers/mentors since fostering a connection between leader and youth is critical. Leaders should be relatable, respectful, and engaging. This may take the form of formal or informal "mentoring", but the essential component is that a positive, trusting relationship exists between adult and youth. All staff and volunteers should be trained on, and knowledgeable of, the population being served. Academic support activities should be underpinned by meaningful relationships with students, as this facilitates successful learning. One-on-one support for the practical matters of PSE application is invaluable. Having a college advisor or well-informed adult is ideal.

## Limits to program effectiveness

The most commonly identified factors acting to limit program effectiveness were parental engagement/commitment; quality and capacity of instructors/facilitators/leaders, and staff turnover; investment/buy-in by teachers and school administration; poverty/life circumstances; funding limitations and variability; geographic proximity and available space in schools/on post-secondary campuses.

## PILOT PROJECT RECOMMENDATIONS

The aim for the project is to identify options for pilot projects to test potential solutions to better empower youth for PSE readiness, which could be replicated/built upon by the Government in collaboration with partners.

The evidence gathered in this project – however comprehensive – provides only a partial and biased guide to identifying the type of youth empowerment program to pilot. While evidence should inform decision-making, information from evidence only makes sense in the context of clear objectives for the pilot. The objectives determine the information being sought from the pilot, including the target youth and desired outcomes but also what should happen following the pilot (its goals). Local population knowledge (including youth empowerment programming already present) and practical considerations about how best to implement a pilot have key bearings on the choice of pilot, to ensure its goals have the maximum chance of being achieved.

Thus, to conclude the report SRDC discusses evidence limitations, pilot goals and objectives, potential interventions, target populations, types of partners, and methodological considerations to assess long-term results (such as impact on PSE enrolment):

- SRDC has set in context what has and has not been reviewed and included as evidence. A lot has been learned during the project, but considerable evidence has also been excluded. The biases inherent in different sources of evidence have to be acknowledged.
- SRDC presents its assumptions for what a future pilot project is intended to achieve. There can be many purposes for pilots: they can fill gaps in knowledge, or test theory, they can establish real world costs and benefits and behavioural responses that support modelling of yet further new designs, they can road test initiatives prior to national roll out or respond to locally identified needs.
- SRDC reviews pros and cons for two key dimensions of decision-making on how and what to pilot: whether to work with existing programming or new and how much evidence should dictate the combination of program components. It weighs up the specific options identified

in the literature and environmental scan against these two key dimensions for decision-making.

- SRDC concludes with a presentation of four alternative models for pilot projects that could best meet the assumed objectives for a pilot. These represent potential outcomes of a selection process with priorities determined by the context, assumptions, dimensions, and specific options that went before. SRDC does not expect these *specific* models to be taken forward.

For the core target group SRDC assumed the ambitious goal of solving Canada's PSE access problem to the maximum extent possible by empowering all youth for PSE preparedness. The objective for the pilot then becomes testing an intervention that – were it implemented across Canada – would maximize the impact on PSE access for the youth who could be motivated and enabled to attend, given the right services and supports. This target diminished the attractiveness of niche programs that will not reach all youth as well as geographically restricted programs that are thus not fully scalable.

Figure 1 sets out some options with sequences of programming shown on each row, against an approximate scale of likely pilot project cost. To reach all youth in time to motivate and substitute social and cultural capital, the program must start early. However, the program needs also to stick with youth after they become motivated to help them navigate all remaining critical decision points. An ideal program model would combine the program features of these approaches into an ongoing set of supports from Grade 6 through and beyond Grade 12. The Achievement Program already does this on a small scale.

Thus, we include a high cost, high touch program model that would definitely be worthy of piloting. It would include the initial experiential learning of Career Trek to build motivation in youth but would expand the model to all students. Career Trek's all-encompassing effort to engage families with post-secondary financing options and enrol youth in Canada Education Savings programming is an important enabling feature. To guide youth through their later, high school decision making, an engaging and developmentally sequenced set of career education workshops borrowing heavily from rigorously-evaluated programs like Explore Your Horizons and Life After High School is recommended – getting all youth to the point of having applied for PSE and student financial aid. Finally, Summer Counselling is recommended to support youths through the final months of decision making prior to enrolment. While expensive, piloting such an all-encompassing program model would shed considerable light on the potential for youth empowerment programming to move the needle maximally on PSE access.

Alternatively, at somewhat lower cost, it may prove possible to adapt the Achievement Program to engage all students, while placing a significantly earlier emphasis on occupational interests and financial planning (as is the case with Career Trek and Explore Your Horizons). The

experiential components of the Achievement Program currently focus on post-secondary campuses rather than early exposure to the world of work and may not prove as effective.


Both the above high-touch models assume an intensive ongoing relationship with schools in order to be implemented effectively: to capture all youth initially while they are still engaged in education and to keep down costs of operations. Versions can be developed to operate off school premises but with likely lower participation and overall impact.

A still lower-cost version would move to harness digital resources to provide activities and support, although ideally *after* initial motivational sessions modelled after Career Trek. This program model could resemble Career Trek plus Prospect. Should the COVID-19 pandemic restrict options for external facilitation in person for older age groups, moving supports online may be preferred. Prospect was designed to emulate the program features of Explore Your Horizons and Life After High School virtually but, of course, does not yet have the rigorous evidence of impacts associated with the in-person versions.

Finally, a tax return-focused programming option based on the Financial Aid Application Assistance program model could be developed to guide youth and their parents through the key financial decision points that occur throughout childhood, with the aim to engage and enrol families in all available post-secondary financing options, including Canada Education Savings Program products. This model – run early or, as it was in the U.S. pilot, late in the youth’s development – is likely highly enabling but the evidence that it will motivate youth to aim for PSE (the second criterion) is absent. This absence of evidence is a good reason to pilot a new approach. Careful design work and consultation with potential partners, including Canada Revenue Agency, would be required for a nationally rolled out version that would likely yield the lowest cost program model *per youth changed outcome* of all the variants included in Figure 1.

Although the program models in Figure 1 include sets of features from several different existing or already-piloted programs, there remains a key need to develop content with focus on youth engagement. Thus, we recommend continuity in approach, a single branding and developmental sequence related to each youth’s participation. This requires bringing together partners to develop a unified model that will serve many years of each youth’s life. Existing program expertise and infrastructure can be harnessed to some degree, but building a seamless experience incorporating elements from diverse existing programs and previous pilots will require early investment in design work. Design work will be needed to coordinate the partners, build the program content and new pilot infrastructure.

**Figure 1** SRDC recommended program models to maximize impact on PSE access

	Grade					Summer before PSE	PSE
Model option	4-5	6-7	8-9	10-11	12		
Highest touch, highest cost		<b>Career Trek WOW</b>  Experiential career education in workplace and PSE		<b>Explore Your Horizons</b>  Sequenced PSE focused career education	<b>Life After High School</b>  LMI-based program and aid application support	<b>Summer Counselling</b>  Reminders and nudges to smooth the path to enrolment	
	<b>Achievement Program</b>  Financial literacy and educational workshops, athletic mentors, and academic tutors						
		<b>Career Trek WOW</b>  Experiential career education in workplace and PSE	<b>Prospect</b>  Online career exploration and career pathway decision-making platform with automated applications to PSE and student financial aid in Grade 12				
Lowest touch, lowest cost	<b>Financial Aid Application Assistance upon tax return development and filing</b>  Education decision-making support (LMI and automated financial aid applications) integrated with family tax filing process						

**Note:** Green shading indicates interventions with existing rigorous evidence of impact on PSE enrolment. However, SRDC would recommend modifications to all interventions and paying attention to alignment and sequencing through time, prior to implementation in the pilot.

Whichever option is selected, evaluation should be integrated into the pilot design from the outset, to incorporate a convincing counterfactual design to yield credible and reliable estimates of program impacts. Plans for analysis of pilot program impact should be “designed in” from the outset. The key feature will be identifying or creating a valid “counterfactual” that forecasts reliably what would have happened in the absence of the new programming. SRDC would recommend piloting the interventions in jurisdictions willing to make available the required administrative data and/or development of new data systems to construct (at minimum) a quasi-experimental comparison of outcomes across the target population for the pilot project sites.

**Table 1** The distribution of evidence-informed program features across considered programs

Program feature	JUMPStart	SWAC	Pathways to Education	Equity in Education	Achievement Program	Raise the Grade	Pumped for PS	WOW	Grad Track	Lions Ladder UP	Success BL	Explore Your Horizons	Life After High School	Fin Aid App Asst	Summer Counsel	Prospect	Kocihia	MyFutures
<b>Targeting:</b> Identify the core target group motivation and tailor support accordingly: a. instil confidence in education-motivated youth that PSE is attainable and affordable b. instil early motivation when lacking	Both	a	Both	Both	Both	Both	a	b	Both	Both	b	Both	Both	a	a	Both	Both	Both
<b>Content:</b> An ecosystem of comprehensive supports that meets youths' well-being needs			✓		✓	✓			✓		✓	✓			✓			
Mentoring, counselling, role modeling and the participation of a consistent and reliable adult who can provide advice and guidance			✓	✓	?	✓	✓	✓	✓	?	✓	✓	?		✓		✓	

Program feature	JUMPStart	SWAC	Pathways to Education	Equity in Education	Achievement Program	Raise the Grade	Pumped for PS	WOW	Grad Track	Lions Ladder UP	Success BL	Explore Your Horizons	Life After High School	Fin Aid App Asst	Summer Counsel	Prospect	Kocihta	MyFutures
Timely and useful information about education pathways	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Financial supports	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓		✓
Expectations that will support students developing the study skills and academic credentials they need to succeed	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓				✓	✓	✓
Academic tutoring			✓		✓	✓			✓									
<b>Selection:</b> engage youth who will not enter PSE without intervention	?	?	✓	✓	✓	?		✓	✓	✓	?	✓	✓	✓	✓	✓	✓	✓
<b>Engagement:</b> a viable mechanism to engage all youth in the target group in the program	✓	✓	✓		✓	?		?			?	?	✓	?	?	✓	✓	✓

? = feature is uncertain or partial.

## REFERENCES

- Aboriginal Post-secondary Education and Training Working Group (2014). Aboriginal Post-secondary Education and Training Funding, Aboriginal Post-secondary Education and Training Working Group, November 27, 2014.
- Adelman, C. (2002). The relationship between urbanicity and educational outcomes. *Increasing access to college: Extending possibilities for all students*, 35-64.
- Amandeep K. Singh, Ellis Furman, & Ciann L. Wilson, Wilfrid Laurier University. JUMPStart Evaluation Final Report 2016/17. Retrieved from: <https://www.wlu.ca/information-for/guidance-counsellors/assets/resources/JUMPStart-evaluation-report-2016-17.html>
- Assembly of First Nations (2010). Taking Action for First Nations Post-Secondary Education: Access Opportunity, and Outcomes. Discussion Paper.
- Assembly of First Nations (2012). Supporting First Nations Learners Transitioning to Post-Secondary.
- Avery, C. (2010). The Effects of College Counseling on High-Achieving, Low-Income Students.
- Avery, C. (2013). Evaluation of the College Possible Program: Results from a Randomized Controlled trial. NBER working paper series.
- Barnow, B., Buck, A., O'Brien, K., Pecora, P., Ellis, M. L., & Steiner, E. (2015). Effective services for improving education and employment outcomes for children and alumni of foster care service: Correlates and educational and employment outcomes. *Child and Family Social Work*, 20(2), 159-170. doi:10.1111/cfs.12063.
- Barone, C., Schizzerotto, A., Abbiati, G., & Argentin, G. (2017). Information Barriers, Social Inequality, and Plans for Higher Education: Evidence from a Field Experiment. *European Sociological Review*. jcw062. 10.1093/esr/jcw062.
- Bartik, T. J., Hershbein, B. J., & Lachowska, M. (2016). The Merits of Universal Scholarships: Benefit-Cost Evidence from the Kalamazoo Promise. The W.E. Upjohn Institute for Employment Research.
- Bartik, T. J., Hershbein, B. J., & Lachowska, M. (2017). The Effects of the Kalamazoo Promise Scholarship on College Enrollment, Persistence, and Completion: Working Paper. Retrieved from W.E Upjohn Institute for Employment Research: <https://doi.org/10.17848/wp15-229>

- Bekenn, C. (2016). Indigenous Access to Post-Secondary Education: How Federal Policy Can Help Close the Gap. Accessed online February 17, 2020:  
<https://ruor.uottawa.ca/bitstream/10393/35307/1/BEKENN%2C%20Clare%2020165.pdf>
- Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2009). The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment. Retrieved from The National Bureau of Economic Research:  
<http://www.nber.org/papers/w15361>
- Bird, K. A., Castleman, B., Goodman, J., & Lamberton, C. (2017). Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign (No. 54; p. 34). Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign.
- Buck, S. (2019). Replication on the Rise. Arnold Ventures Commentary. Accessed February 13, 2019: <https://www.arnoldventures.org/stories/replication-on-the-rise/>
- Cahill, E. & Wodrich, N. (2016). Federal Spending on Postsecondary Education. Ottawa: Office of the Parliamentary Budget Officer.
- Canada Millennium Scholarship Foundation (2005). Changing course: improving Aboriginal access to post-secondary education in Canada. Accessed February 20, 2020:  
<https://qspace.library.queensu.ca/bitstream/handle/1974/5735/mrn-changing-course-en.pdf;jsessionid=F6196DCB2D700496C4E7C68FFoD83BDC?sequence=1>
- Carrell, S. & Sacerdote, B. (2017). Why Do College-Going Interventions Work? American Economic Journal: Applied Economics 2017, 9(3): 124-151  
<https://doi.org/10.1257/app.20150530>
- Carrell, S. E. & Sacerdote, B. (2013). Late interventions matter too: the case of college coaching in New Hampshire.
- Carruthers, C. K. & Fox, W. F. (2016). Aid for all: College coaching, financial aid, and post-secondary persistence in Tennessee.
- Castleman, B. & Page, L. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates?
- Castleman, B. & Page, L. (2017). Parental Influences on Postsecondary Decision Making: Evidence From a Text Messaging Experiment.
- Castleman, B., Arnold, K., & Wartman, K. L. (2012). Stemming the Tide of Summer Melt: An Experimental Study of the Effects of Post-High School Summer Intervention on Low-Income Students' College Enrollment.

- Castleman, B., Owen, L., & Page, L. (2015). Stay late or start early? Experimental evidence on the benefits of college matriculation support from high schools versus colleges.
- Castleman, B., Page, L., & Schooley, K. (2014). The Forgotten Summer: Does the Offer of College Counseling After High School Mitigate Summer Melt Among College-Intending, Low-Income High School Graduates?
- Cave, G. & Quint, J. (1990). Career Beginnings Impact Evaluation: Findings from a Program for Disadvantaged High School Students.
- Cheung, S. (2007). Education Decisions of Canadian Youth. Higher Education Quality Council of Ontario.
- Coleman, S., Palmiter, A., Turner, T., Vile, J., Warburton, S., & Reisner, E. (2012). Preparing for college success: Evaluation of the educational impact of the SEO Scholars Program.
- Cosentino, C., Fortson, J., Liuzzi, S., Harris, A., & Blair, R. (2019). Can scholarships provide equitable access to high-quality university? *International Journal of Educational Development*.
- Cunha, J. M., Miller, T., & Weisburst, E. (2018). Information and College Decisions: Evidence from the Texas GO Center Project.
- Davis, L., Watts, K., & Ajinkya, J. (2019). Innovative Strategies to Close Postsecondary Attainment Gaps: Four Regional Approaches to Support Rural Students. Institute for Higher Education Policy.
- Deller, F. & Tamburri, R. (2019). Early Supports for Accessing Postsecondary Education: Good, Bad or Indifferent? Toronto: Higher Education Quality Council of Ontario.
- Deller, F. (2018). Early Intervention Programs for Low Income Students: What Can Evaluations Reveal? A Systematic Review (doctoral thesis). Retrieved from <http://hdl.handle.net/1807/89837>
- Deller, F., Kaufman, A., & Tamburri, R. (2019). Redefining Access to Postsecondary Education. Toronto: Higher Education Quality Council of Ontario.
- Deming, D. & Dynarski, S. (2009). Into College, Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor. Retrieved from The National Bureau of Economic Research: <http://www.nber.org/papers/w15387>
- Directions (2017). Evaluation of the Innovative Programs for Students in Care of, or Receiving Services from, Children's Aid Societies. Report to Ontario Ministry of Education.

- Dunn, E., Ford, R., Kwakye, I., Hutchison, J., Hébert, S., Foley, K., & Wilson, L. (2008). BC AVID Pilot Project Early Implementation Report. Montreal: Canada Millennium Scholarship Foundation.
- Edmunds, J. A., Arshavsky, N., Lewis, K., Thrift, B., Unlu, F., & Furey, J. (2017). Preparing Students for College: Lessons Learned From the Early College. *NASSP Bulletin*, 101(2), 117-141.
- Ehlert, M., Finger, C., Rusconi, A., & Solga, H. (2017). Applying to college: Do information deficits lower the likelihood of college-eligible students from less-privileged families to pursue their college intentions?: Evidence from a field experiment. *Social Science Research*, ISSN 1096-0317, Elsevier, Amsterdam, Vol. 67, p. 193-212, <http://dx.doi.org/10.1016/j.ssresearch.2017.04.005>
- EKOS Research Associates Inc. (2008). Canadian Views on Volunteer Service and a National Youth Service Policy: Draft Report. EKOS.
- Finnie, R., Wismer, A., & Mueller, R. E. (2015). Access and Barriers to Postsecondary Education: Evidence from the Youth in Transition Survey. *Canadian Journal of Higher Education*, 45(2), 229-262.
- First Nations Education Steering Committee (2014). Making the Jump: Aboriginal Student Transitions Forum Final Report, August 22, 2014.
- Ford, R. & Hui, S.-w. (2018). BC AVID Pilot Project: long-term postsecondary outcomes. Ottawa: Social Research and Demonstration Corporation.
- Ford, R., Frenette, M., Dunn, E., Nicholson, C., Hui, S.-w., Kwakye, I., & Dobrer, S. (2014). BC AVID Post-secondary Impacts Report. Ottawa: Social Research and Demonstration Corporation.
- Ford, R., Hui, T. S.-w., & Nguyen, C. (2019). Postsecondary Participation and Household Income, Toronto: HEQCO.
- French, R. & Oreopoulos, P. (2017). Behavioural barriers transitioning to college. *Labour Economics* 47 (2017), 48-63. <http://dx.doi.org/10.1016/j.labeco.2017.05.005>
- Frenette, M. (2002). Too Far to Go On? Distance to School and University Participation, Statistics Canada Catalogue number 11F0019MIE2002191.
- Frenette, M. (2003). Access to College and University: Does Distance Matter? Statistics Canada Catalogue number 11F0019MIE2003201.

- Goodman, D., Vena, A.-M., Waldmann, A., Marajh, L., Karunanathan, R., Naghavi, F., Green, R., Gregory, D., & Chan, W. (2018). Post-Secondary Education Program Review, Children's Aid Society of Canada.
- Gordon, C. E. & White, J. P. (2014). Indigenous educational attainment in Canada. *The International Indigenous Policy Journal*, 5(3), 6.
- Government of Canada (2007). No Higher Priority: Aboriginal Post-secondary Education in Canada House of Commons Standing Committee on Aboriginal Affairs and Northern Development: Ottawa.
- Government of Canada (2019). ESDC Canada Education Savings Program – Mailing Trials and Results May 2019 Background.
- Government of Canada (2019). Evaluation of Pathways to Education, final report. Employment and Social Development Canada. Retrieved from: <https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations/pathways-education-report.html>
- Group, A. P.-S. (2014). Aboriginal Post-secondary Education and Training Funding. Aboriginal Post-secondary Education and Training Working Group.
- Gunderson, M. (2010). Student Financial Assistance Strategies and Attitudes Towards Debt Among Underrepresented Groups.
- Harris, D., Nathan, A., & Marksteiner, R. (2014). The Upward Bound College Access Program 50 Years Later: Evidence from a National Randomized Trial. Wiscap Working Paper: University of Wisconsin.
- Hastings, J., Neilson, C. A., & Zimmerman, S. D. (2015). The Effects of Earnings Disclosure on College Enrollment Decisions.
- Helin, C. (2010). Good Intentions, Bad Policy. True North: Education: Freeing Aboriginal Youth to Learn.
- Herbaut, E. and Geven, K. (2019) What Works to Reduce Inequalities in Higher Education? A Systematic Review. Policy Research Working Paper 8802 Paris: World Bank.
- Hershbein, B. J. (2018). Promise Programs, Emergency Aid, and Strategies for College Retention: Presentation. W.E. Upjohn Institute for Employment Research.
- Hoxby, C. & Turner, S. (2016). Expanding College Opportunities for High-Achieving, Low Income Students. *Journal of Human Capital*, 10(4), p. 482–519.

- Hughes, D., Mann, A., Barnes, S.-A., Baldauf, B., & McKeown, R. (2016). Careers education: international literature review. London: Education Endowment Foundation. Retrieved from <http://wrap.warwick.ac.uk/80474>
- Hui, T. S.-w. & Ford, R. (2018). Education and Labour Market Impacts of the Future to Discover Project: Technical Report. Toronto: Higher Education Quality Council of Ontario. Retrieved from [http://www.heqco.ca/SiteCollectionDocuments/Formatted\\_FTD\\_long%20report\\_FINAL.pdf](http://www.heqco.ca/SiteCollectionDocuments/Formatted_FTD_long%20report_FINAL.pdf)
- Hull, J. (2005). Aboriginal Post-Secondary Education and Labour Market Outcomes, Canada, 2001. Winnipeg: Prologica Research Inc.
- Hunt, S., Lalonde, C., & Rondeau, Y. (2010). Supporting Aboriginal Student Success. Victoria: University of Victoria.
- JA Volunteer Forum Presentation: Executive Summary (2015). Junior Achievement Volunteer Summit. New York.
- Jerrim, J., Chmielewski, A. K., & Parker, P. (2015). Socioeconomic inequality in access to high-status colleges: A cross-country comparison. *Research in Social Stratification and Mobility*, 42, 20-32.
- Johnson, A. W. (1999). Sponsor-a-Scholar: long-term impacts of a youth mentoring program on student performance.
- Junior Achievement USA, Education Dept. (2016). JA Finance Park Curriculum Evaluation: Final Report. Colorado Springs.
- Kemple, James J. & Cynthia J. Willner, Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood, MDRC, June 2008.
- Kerr, S. P., Pekkarinen, T., Sarvimäki, M., & Uusitalo, R. (2014). Educational Choice and Information on Labor Market Prospects: A Randomized Field Experiment.
- King, K. A. (2009). A Review of Programs That Promote Higher Education Access for Underrepresented Students. *Journal of Diversity in Higher Education*, 2, 1-15.
- Kirby, D. & Sharpe, D. (2010). An Examination of Rural Secondary Students' Decisions. *Canadian Journal of Career Development*, 9(1).
- Kirk, R. & Day, A. (2011). Increasing college access for youth aging out of foster care: Evaluation of a summer camp program for foster youth transitioning from high school to college. *Children and Youth Services Review*, 33(7), 1173-1180.

- Kottmann, A., Vossensteyn, J., Kolster, R., Veidemane, A., Blasko, Z., Biagi, F., & Sánchez-Barrioluengo, M. (2019). Social Inclusion Policies in Higher Education: Evidence from the EU. Joint Research Centre (JRC).
- Le, V. N., Mariano, L. T., Faxon-Mills, S., & Education, R. A. N. D. (2013). Evaluation of the College Bound Program: Early Findings.
- Levine, K., Sutherland, D., & Cole, D. (2015). Creating a lifelong career development model Final Report to CERIC. Winnipeg: University of Manitoba.
- Lingenfelter, Paul (ed) (2003). *Student Success: Statewide P-16 Systems*. Washington: State Higher Education Executive Officers.
- Loyalka, P., Song, Y., Wei, J., Zhong, W., & Rozelle, S. (2013). Information, college decisions and financial aid: Evidence from a cluster- randomized controlled trial in China.
- Luna, G. & Fowler, M. (2011). Evaluation of Achieving a College Education Plus: A Credit-Based Transition Program, *Community College Journal of Research and Practice*, 35:9, 673-688, DOI: 10.1080/10668920903527050.
- MacAllum, K., Glover, D. M., Queen, B., & Riggs, A. (2007). Deciding on Post-secondary Education: Final Report. NPEC 2008-850. National Post-secondary Education Cooperative (NPEC).
- Malatest R.A. & Associates (2006). Social and Economic Impact Study of the Katimavik Program: Final report. Malatest Program Evaluation & Market Research.
- Malatest R.A. (2004). Aboriginal peoples and post-secondary education: what educators have learned?
- Malatest R.A. (2008). Factors affecting the use of student financial assistance by First Nations youth/prepared by RA Malatest & Associates Ltd. and Dr. Blair Stonechild. Millennium research series; No. 20.
- Martinez, A., Linkow, T., Miller, H., & Parsad, A. (2018). Study of Enhanced College Advising in Upward Bound: Impacts on Steps Toward College (NCEE 2019-4002). Washington, DC: National Center for Education Evaluation, Institute of Education Sciences, U.S. Department of Education.
- McCann, C. M. "An Analysis of Educational Achievement: An Evaluation of the Advancement Via Individual Determination Program in a Midsized Gulf Coast School District." Unpublished Doctor of Education Thesis, University of Houston, December 2015. Retrieved from: <https://uh-ir.tdl.org/bitstream/handle/10657/2136/MCCANN-DISSERTATION-2015.pdf>

- McGahey, G. (2010). Post Secondary Discussion Paper. Association of Iroquois & Allied Indians.
- McMullen, K. (2011). Post-secondary education participation among underrepresented and minority groups. *Education Matters: Insights on Education, Learning and Training in Canada*, 8(4).
- Mendelson, M. (2006). Aboriginal peoples and post-secondary education in Canada. Ottawa: Caledon Institute of Social Policy.
- Mengli Song, Kristina L. Zeiser (2019). Early College, Continued Success: Longer-Term Impact of Early College High Schools. Retrieved from <https://www.air.org/sites/default/files/downloads/report/Early-College-Continued-Success-Longer-Term-Impact-of-ECHS-September-2019-rev.pdf>
- Miller-Adams, M. & Hershbein, B. J. (2017). Learning from a Decade of College Promise Scholarships: Presentation. The W.E. Upjohn Institute for Employment Research.
- Miller-Adams, M. (2011). The Value of Universal Eligibility in Promise Scholarship Programs. Retrieved from W.E Upjohn Institute for Employment Research: [https://doi.org/10.17848/1075-8445.18\(4\)-1](https://doi.org/10.17848/1075-8445.18(4)-1)
- Miller-Adams, M. (2015). Promise Nation: Transforming Communities through Place-Based Scholarships. W.E. Upjohn Institute for Employment Research.
- Mueller, D., Maxfield, J., & Karcher-Ramos, M. (2011). Evaluation of Breakthrough Saint Paul participant outcomes. Minnesota: Wilder Research.
- Mueller, R. (2008). Access and persistence of students from low-income backgrounds in Canadian post-secondary education: A review of the literature.
- National Household Survey in Brief (2011). The Educational Attainment of Aboriginal Peoples in Canada.
- Office of the Chief Audit and Evaluation Executive Evaluation Services Directorate (2010). Summative Evaluation of the Katimavik Program.
- Ogilvie, K. K. & Eggleton, A. (2011). Opening the Door: Reducing Barriers to Post-Secondary Education in Canada. The Standing Senate committee on Social Affairs, Science and Technology.
- Oreopoulos, P. & Dunn, R. (2012). Information and college access: Evidence from a randomized field experiment (NBER Working Paper No. 18551). Retrieved from <http://www.nber.org/papers/w18551>

- Oreopoulos, P. & Ford, R. (2019). Keeping College Options Open: A Field Experiment to Help All High School Seniors Through the College Application Process *Journal of Policy Analysis and Management*, 38(2): 299-329.
- Oreopoulos, P. & Petronijevic, U. (2019). The Remarkable Unresponsiveness of College Students to Nudging and What We Can Learn from It. IZA – Institute of Labor Economics.
- Oreopoulos, P., Brown, R. S., & Lavecchia, A. M. (2017). Pathways to education: An integrated approach to helping at-risk high school students. *Journal of Political Economy*, 125(4), 947-984.
- Page, L. C. & Scott-Clayton, J. (2015). Improving College Access in the United States: Barriers and Policy Responses. Retrieved from The National Bureau of Economic Research: <https://www.nber.org/papers/w21781>
- Page, L. C., Kehoe, S., Castleman, B. L., & Sahadewo, G. A. (2017, October). More than Dollars for Scholars: The Impact of the Dell Scholars Program on College Access, Persistence and Degree Attainment.
- Page, L., Castleman, B., & Sahadewo, G. A. (2016). More than Dollars for Scholars: The Impact of the Dell Scholars Program on College Access, Persistence and Degree Attainment.
- Parkin, A. (2016). Family Savings for postsecondary education, Omega Foundation.
- Parsi, Ace, David Plank, & David Stern, Costs of California Multiple Pathway Programs, Policy Analysis for California Education (PACE), 2010.
- Phillips, M. & Reber, S. J. (2019). Does Virtual Advising Increase College Enrollment? Evidence from a Random Assignment College Access Field Experiment. Retrieved from National Bureau of Economic Research: <https://www.nber.org/papers/w26509>
- Preston, J. P. (2008). The Urgency of Post-secondary Education for Aboriginal Peoples. *Canadian Journal of Educational Administration and Policy*, 86, 1-22.
- Preston, J. P. (2016). Education for Aboriginal peoples in Canada: An overview of four realms of success. *Diaspora, Indigenous, and Minority Education*, 10(1), 14-27. DOI: 10.1080/15595692.2015.1084917.
- ProActive Information Services (2013). Making Education Work Outcomes Report, Winnipeg: ProActive Information Services.

- Public Safety Canada (2018). RAJO Somali Youth Empowerment Project: Program Snapshot. Retrieved from <https://www.publicsafety.gc.ca/cnt/cntrng-crm/crm-prvntn/nvntr/dtls-en.aspx?i=10193>
- Restoule, J. P., Mashford-Pringle, A., Chacaby, M., Smillie, C., Brunette, C., & Russel, G. (2013). Supporting successful transitions to post-secondary education for Indigenous students: Lessons from an institutional ethnography in Ontario, Canada. *International Indigenous Policy Journal*, 4(4).
- Rodríguez-Plana, N. (2012). Longer-Term Impacts of Mentoring, Educational Services, and Learning Incentives: Evidence from a Randomized Trial in the United States. *American Economic Journal: Applied Economics* 2012, 4(4): 121-139. <http://dx.doi.org/10.1257/app.4.4.121>
- Rosinger, K. (2016). Can Simplifying Financial Aid Information Impact College Enrollment and Borrowing? Experimental and Quasi-Experimental Evidence.
- Schochet, P. Z., Burghardt, J., & McConnell, S. (2008). Does Job Corps Work? Impact Findings from the National Job Corps Study. *American Economic Review Association*, 98(5), 1864-86. Retrieved from <https://www.aeaweb.org/articles?id=10.1257/aer.98.5.1864>
- SEO Scholars (2017). Retrieved March 26, 2017 from <http://www.seoscholars.org/>
- Sharpe, A. & Arsenault, J. F. (2009). Investing in Aboriginal education in Canada: An economic perspective. Ottawa, Canada: Canadian Policy Research Networks.
- Sponsor a Scholar (2017). Retrieved March 26, 2017 from <http://www.philadelphiafutures.org/sponsor-a-scholar-overview>
- SRDC (2017). Raising the Grade evaluation – Final report <http://www.srdc.org/media/200039/rtg-final-report.pdf>
- SRDC (2018). *Assistive Equipment and Technology for Students with Disabilities: Final Report*. Ottawa: Social Research and Demonstration Corporation.
- SRDC (2020). *The role of career education on students' education choices and postsecondary outcomes: Theoretical and evidence base preparation*, Toronto: CERIC.
- Statistics Canada (2001). Commonly reported reasons for not completing post-secondary schooling by sex, Aboriginal identity non-reserve population aged 25 to 64, Canada. Sourced from: Aboriginal Peoples Survey. 2001.

- Statistics Canada (2017). Aboriginal peoples in Canada: Key results from the 2016 Census. The Daily. Access online February 20, 2020: <http://www.statcan.gc.ca/daily-quotidien/171025/dq171025a-eng.pdf>
- Stephan, J. L. & Rosenbaum, J. E. (2013). Can High Schools Reduce College Enrollment Gaps With a New Counseling Model?
- Stonechild, B. (2006). The new buffalo: The struggle for Aboriginal post-secondary education in Canada. Univ. of Manitoba Press.
- Swail, W. S., Quinn, K., Landis, K., & Fung, M. (2012). 2012 Handbook of Pre-College Outreach Programs. Educational Policy Institute.
- Swail, W., Quinn, K., Landis, K., & Fung, M. (2012). A blueprint for success: case studies of successful pre-college outreach programs. Washington, DC. Educational Policy Institute. Retrieved from: <https://educationalpolicy.org/publications/>
- Timmeney, B., Hershbein, B. J., Hollenbeck, K., & Miller-Adams, M. (2017). Kansas City Scholars Program: Year One Report. W.E Upjohn Institute for Employment Research.
- Timmeney, B., Hollenbeck, K., & Hershbein, B. J. (2018). Kansas City Scholars: Year 2 Evaluation: Executive Summary. W.E. Upjohn Institute for Employment Research.
- Timmeney, B., Hollenbeck, K., & Hershbein, B. J. (2019). Evaluating the Kansas City Scholars College Scholarship Program: Year Two Report. W.E Upjohn Institute for Employment Research.
- Toutkoushian, R. K., Hossler, D., DesJardins, S. L., McCall, B., & González Canché, M. G. (2013). Effect of twenty-first century scholars program on college aspirations and completion. In Paper presented at the meetings of the Association for Education Finance and Policy.
- Transitions Canada Coalition (2019). Transitions Interactive Digital Platform (IDP): Proposal. Youth Employment and Skills Strategy, Transitions Canada Coalition.
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service (2006). A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report From Phase II of the National Evaluation, Washington, D.C.
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, The Impacts of Regular Upward Bound on Postsecondary Outcomes Seven to Nine Years After Scheduled High School Graduation, Washington, D.C., 2009.

- Usher, A. (2009). The Post-Secondary Student Support Program: An Examination of Alternative Delivery Mechanisms. A Report to the Indian and Northern Affairs Canada. Educational Policy Institute (NJ1).
- Weegar, K., Hickey, A. J., Shewchuk, S., Fall, M., & Flynn, R. J. (2016). A Formative Evaluation of Two Crown Ward Education Championship Teams in Ontario, CRECS Report, University of Ottawa.
- What Works Clearinghouse, Institute of Education Sciences, U.S. Department of Education (2018, December). Transition to College intervention report: Facilitating Long-Term Improvements in Graduation and Higher Education for Tomorrow (FLIGHT)/Take Stock in Children (TSIC)®. Retrieved from <https://whatworks.ed.gov>
- Wong, M. & Murray, S. (2010). More than Money: Mining the human and financial potential of Canada's education savings programs for low-income families, The Maytree Foundation.

## APPENDIX A: KEY DEFINITIONS

### Post-secondary education

**Post-secondary education** is enrolment at university, community college, private college, or vocational institute, or becoming a registered apprentice as follows:

*University enrolment* is defined as being enrolled at a university in a program leading to a degree, certificate, or diploma at the bachelor's degree level or higher. This includes a teaching certificate, bachelor's degrees (e.g., B.A., B.Sc., B.Ed., B.Eng., LL.B., etc.), any certificate above a bachelor's, master's degrees (e.g., M.A., M.Sc., M.B.A), degrees in medicine, dentistry, veterinary medicine, or optometry, doctorate or post-doctorate programs, professional association diploma, certificate, or license (e.g., accounting, banking, insurance). University enrolment also includes being enrolled at a college in a program that leads to a bachelor's degree.

*Community College* enrolment is defined as being enrolled in a community college or technical institute in a program leading to a degree, certificate, or diploma, below a bachelor's degree level, excluding any programs that would normally last five weeks or less and apprenticeship programs. College enrolment includes CEGEP, university transfer programs, certificate or diploma programs in cosmetology, business administration, radiology, certificate of bricklaying, and so on. College enrolment also includes being enrolled at a university in a program that leads to a diploma or certificate below a bachelor's degree, excluding any programs that would normally last five weeks or less.

Enrolment at a *private college or vocational institute* involves programs leading to a diploma or certificate, excluding programs that would normally last five weeks or less. These institutions normally offer job-oriented training programs lasting no more than two years. Examples of these include certificate programs in cosmetology, hairdressing, automotive mechanics, computer technology, and so on.

*Registered apprentices* include those who have registered with a provincial or territorial apprenticeship authority for training in a trade leading to a journey-person certificate. It also includes those enrolled at community college in an apprenticeship program.

### Underrepresented youth

**Youth underrepresented in post-secondary education** can include locally specified definitions but in general are 12-17-year-olds possessing socio-economic or demographic characteristics that on average are underrepresented in post-secondary education relative to the general population.

Canada-wide such groups include youth from lower-income families, Indigenous youth, youth from first-generation families, youth with disabilities, males, Crown wards/youth in care and youth resident in rural areas.

## Community based programs, services, and supports

**Community based programs, services, and supports** will include programs, services and supports intended to foster youth empowerment with respect to PSE preparedness or that increase preparedness as a by-product of their intended activities. It will not include courses, classroom activities run or learning materials that exist solely as a formal part of mandatory schooling.

- **Programs** will in general involve ongoing direct transfers of information, advice or other resources between program operators/facilitators/mentors and youth. This definition will include skills development programs and curricula (e.g., formal mentoring/ tutoring/ workshops/ courses), delivered by community organizations as well as outreach efforts (e.g., mailings, social media).
- **Services** will include provision of information, advice, or other resources that students can access on an ad hoc or as required basis such as go-to advisors, drop-in sessions, and websites. The information and advice will cover labour market and career information, PSE options, PSE cost calculators, PSE financing options.
- **Supports** will include other offline or more passive tools and financial resources intended to increase preparedness but excluding those intended to facilitate actual attendance. Under this definition of supports, conventional targeted scholarships and bursaries, aid and program application websites, federal and provincial student aid will not be included but programs and services that facilitate access to such resources will be included.

In general, programs, services and supports must be free to the youth at the point of use (so the review will not include fee-for-service tutors/consultants/counsellors or website subscriptions where services lie beyond a paywall).

## APPENDIX B: LIST OF PROGRAMS INCLUDED IN LITERATURE REVIEW BY TYPE

Programs marked \* include a financial planning component. Programs marked § were included in the environmental scan.

### *Education system improvements*

- Achieving a College Education Plus Program (ACE)
- Early College High School Model
- Career Academies

### *College outreach*

- College of Sciences and Mathematics Outreach Program

### *Academic support*

- Advancement Via Individual Determination (AVID)\*
- Breakthrough Saint Paul Program\*
- College Possible\*

### *Financial promises*

- Dell Scholars Program
- Indiana Twenty-First Century Scholars\*

### *Financial literacy*

- Canada Education Savings Program (CESP) outreach and awareness – letter mailings\*
- Information Barriers, Social Inequality, and Plans for Higher Education
- Crown Ward Education Championship Teams

- LMI (Earnings) information
- SMARTSaver\*

#### *Support for career decision-making/Using LMI*

- Explore Your Horizons (EYH)\*
- Coaches for counselling\*
- Information, college decisions and financial aid\*
- Information on returns to education
- JUMPStart to Higher Education\*§
- The Berliner-Studienberechtigten-Panel (Best Up)

#### *Behavioural nudges: application and pathway navigation support*

- Bottom Line (BL) College Advising\*
- College Counselling to Counter Summer Melt
- College Matriculation Support\*
- H&R Block College Financial Aid Application Assistance\*
- Life After High School\*
- Nudging at a National Scale\*
- Outreach including parents
- Simplifying Financial Aid Information\*
- Summer College Matriculation Support
- Summer counseling intervention
- Texas GO Center Project
- The Expanding College Opportunities Comprehensive (ECO-C) Intervention
- Transcript and letter of encouragement

### *Motivational supports and mentoring*

- Career Beginnings
- Mentoring/college coaching\*
- Sponsor a Scholar (SAS) program\*
- Success Beyond Limits§

### *Multi-faceted interventions*

- Career Trek\*§
- College Bound St. Louis program\*
- Equity in Education\*§
- Facilitating Long-term Improvements in Graduation and Higher Education for Tomorrow (FLIGHT)
- GEAR UP
- Grad Track§
- I Have a Dream\*
- Knox Achieves\*
- Lakehead University Achievement Program\*§
- Making Education Work
- Native Youth Advancement with Education Hamilton (NYA WEH) [§ but did not respond]
- Pathways to Education (Pathways)\*§
- Raise the Grade\*§
- RAJO: The Somali Youth and Family Empowerment Project
- SEO Scholars program
- The Quantum Opportunity Program (QOP)
- TRIO Programs

## APPENDIX C: DIMENSIONS TO CONSIDER FOR THE IMPLEMENTATION OF PILOT PROJECTS

### Dimensions to consider in implementing a pilot project: established program or new?

A pilot project represents a large investment of resources including considerable human effort over time. An intervention must be designed, developed, and delivered by people trained to do so, with premises, equipment, and resources sufficient for an appropriate number of participants. For a pilot program undergoing evaluation, participant numbers must sum at minimum to a large-enough sample size to calculate credible and convincing estimates of program impacts. Such target youth must be located, invited, and motivated to participate. Data must be collected and analyzed. Depending on how early the intervention is required, it may be many years before the first evidence of impacts on PSE enrolment can be generated. If 13-year-olds are targeted for example, PSE outcomes will be observed six years later. A decision must be made over whether to continue recruiting new cohorts of participants to the project while the evaluators wait for the data on the initial cohorts' outcomes to be available. Continuing to operate the as-yet unproven program will be expensive, but there will be risks arising from ending the program. Such considerations have a bearing on decisions for who should be tasked to operate a new program as part of a pilot.

#### *Rationale to build or expand from an existing program*

Given current program operators represent a pool of experience and expertise, there is a natural tendency to seek to task them with implementing similar programs for the purposes of pilot projects. Furthermore, if the pilot project team is constructed from scratch, phasing out the program while waiting for the results will mean the program operator team must disband and any project partners (such as educators) must move on to new tasks. There can be negative consequences:

- With such plans, it may initially be harder to recruit skilled or experienced operators or secure the collaboration of needed partners for pilot projects that have a limited life.
- Should the now-defunct program be found successful, there will likely be no team of available experienced staff to re-activate and implement the program to new cohorts of participants.

- Should the program be found unsuccessful, the program infrastructure will be gone and with it the opportunity to tweak or modify the approach to seek to improve outcomes.

The choice to build or expand from an existing program team increases the chances the pilot can move quickly to build the piloted intervention. The cost of program start-up will likely be lower than for a “from scratch” team. Data collection costs for the evaluation may be lower. More of the accumulated program knowledge will be retained upon suspension of pilot program operations rather than dispersed as it might with a disbanded “from scratch” team. Alternatively, an existing program could even have the capacity to continue to deliver a version of the program while the results are awaited. Existing program staff could be made available to support the wider roll out of the new program if it is found successful.

Building a project team from scratch can prove hard for government to do. People with the appropriate skills have to be available and able to collaborate with other required partners to make the new pilot program a reality in a short period. Only a few large organizations may have the capacity to commit staff to an appropriately qualified team, although one or two applied research organizations like SRDC also exist to provide such a capacity for evaluation and demonstration projects in Canada. Outside of these options, decision makers may find it necessary to build the necessary partnerships and delivery capacity themselves, which can complicate and delay the establishment of pilot projects.

### *Rationale to design and build program delivery from scratch*

Given the goal to find a successful approach to youth empowerment and roll it out nationally, models will need to be robust to the choice of program operator. What if a program’s impacts are actually attributable to the personal qualities of the individual team involved rather than the particular program model? Replication of a program approach by different operators provides reassurance that its effects are genuinely attributable to the program.

Another practical issue for pilot projects would arise if existing operators lack the logistical capacity to roll out a new pilot project, given the demands of their existing programming. A new location may be required for the pilot. If the location does not change, the target population may overlap too much with that of their existing program. Depending on how similar the pilot is to an existing approach, some personnel with the original program may find it difficult to change their practice sufficiently to run a differently designed pilot. Personnel may find it difficult to “unlearn” the delivery features of the original program and apply them to the new pilot program even when they are not part of the model.

A key advantage arising from custom-creating a pilot project delivery team for decision makers is more direct control over the activities personnel are committed to undertake for the piloted approach to have a fair test. The more aligned the piloted approach becomes with a particular

operator the more difficult it may be later to roll out the model in locations the operator does not serve or to incorporate the intended features and target populations in the approach if the operator does not support them. It may even prove difficult to articulate publicly the core features of the new program separately from those of the organization implementing the pilot.

## Dimensions to consider in implementing a pilot project: evidence for program design

### *Rationale to pilot an existing combination of features with evidence of impact*

Program models can be thought of as combinations of design features (whom to target, how to recruit and select, program activities, delivery schedules and settings). When it comes to decisions on the program design to test in a new pilot project, a program model already found to produce positive impacts on PSE enrolment could seem very attractive. By picking a model with evidence of success, there are good chances the piloted approach will also generate successful outcomes. There is a good chance decision makers' investment will pay off with evidence from the pilot supporting wide-scale roll-out of the program model with the given set of program features.

A common refrain in the evaluation literature is the need for positive findings to be replicable (e.g., Buck, 2019). There are statistical reasons to exercise caution interpreting a statistically significant positive result obtained from a single study. Such results could have occurred by chance. There is added reason for caution in situations where publication bias may mean negative and null results on the same program model have not been made public. Replication is sought because the chances of two separate studies of the same approach both yielding significant positive results in the absence of a real positive impact is very low. The body of knowledge on what program models work is made more reliable when approaches are found successful more than once. More meaningful to decision makers may be the implication from this more reliable knowledge of success: following roll-out of the piloted program on a large scale, there is an increased likelihood this program is actually going to solve, as advertised, the problem it was established to tackle.

### *Rationale to pilot a new combination of evidence-informed features*

Despite the advantages of repeatedly testing the same program model, there are also drawbacks from investing scarce pilot resources in an established program model. The opportunity cost is knowledge building on the impact of new approaches to solve the problem.

Program models may need to be updated for a number of reasons, not just to allow decision makers to innovate and be recognized for improving upon what has gone before. Impact results

pointing to the success of a program model are, by definition, derived from the experiences of earlier youth cohorts. It is plausible the original program model becomes less effective with time, especially if features rely on dated technology or cultural assumptions. There may be a need to test approaches that improve upon those features rather than simply replicate them (to meet more contemporary needs or to include newer program approaches). Sticking with a program model previously found successful means that any side effects or less attractive attributes of that approach – such as its cost, the extent to which it sometimes delivers unsuccessful outcomes, the range of youth targeted – will be “baked in” to the program model intended for eventual larger scale roll out, assuming it is determined to be successful (again). Finally, new program models may be needed because the problem to be solved has changed.

For the above reasons, most pilot projects test out a “new” approach. However, there are boundless possibilities for what can comprise the “new” approach. The pilot may modestly reconfigure a set of features tried before. It may keep an established set of program activities but bring them to a different target group. It may include one or two truly new components (an app, say) alongside familiar program features. It may deliver via new communication channels or with altered sequencing and timing. In deciding how to select and construct the new program model, decision-makers would be wise to review evidence. They should assess what action is suggested to solve a problem (often coming from observational studies like Finnie, Wismer, & Mueller, 2015) and draw on the evidence of how these different activities have fared in earlier implementations, from evaluations or the reported experience of those delivering and receiving them. SRDC would recommend any pilot of a new combination of features is similarly evidence-informed.

One variant of a “new combination of features” pilot is a test of an existing but under-evaluated program model.<sup>1</sup> There may be considerable evidence underlying several of the components program operators have adopted yet the specific combination they are implementing may lack evaluation. Arguably, a number of such approaches that could be piloted more formally have been included in SRDC’s environmental scan.<sup>2</sup>

---

<sup>1</sup> There are many types of evaluation. Here we use the term as shorthand for “rigorous estimation of impact on PSE enrolment”.

<sup>2</sup> Before a pilot is finalized, it may be worth determining whether data already exist to support a retroactive evaluation of some of the programs that have been under-evaluated to date, as Oreopoulos, Brown, and Lavecchia (2014) did with Pathways to Education, gathering school records data dating back to 2000. This could improve knowledge of the under-evaluated models before they were chosen as future pilots.

## APPENDIX D: KEY STEPS IN PSE DECISION-MAKING

We describe here how learnings from the literature and tested career development approaches (SRDC, 2020) informed how SRDC designed Prospect to solve the problem of youth needing optimal information and assistance to guide their schooling and career decisions. This means considering how comprehensive and up to date information on the skills requirements of the labour market at the appropriate level flow to youth as they go through the process of deciding how best to make their investments, as well as guidance for them in how to use information better, as they reach key decision points during high school. Many also need motivation even to consider such matters in a timely manner.

The evidence points to supporting youth in taking each step of their journey towards a future-viable career in sequence, minimizing backtracking or delays. Youth need to be encouraged to become active and discerning consumers of labour market information relevant to their career aspirations, to enhance the quality of their resulting decisions. Since key information about the labour market may not currently be reaching all young people at the right time or in formats that they find accessible, a range of supports are likely needed in high school, encompassing several key stages of career development:

- Youth needing information on labour market demands for skills sufficiently early to cultivate their interests across a wide range of careers than might typically be popularized, including a framework for understanding that there are tangibly different types of costs and benefits to weigh against each other for different career pathways.
- Information being made available in a developmentally appropriate sequence throughout the decision-making process. Youth should be able to log their progress and record key decisions for later review and revision and to share with others.
- Clear presentation of the mix of skills in demand for sectors of the economy likely to account for growing areas of labour demand.
- The need to encourage youth to hone in on broadly-defined career focuses that matches their interests and abilities.
- Making alternative educational paths clear and accessible to follow.
- Motivating youth to use tools to weigh up the different occupations that interest them, using accurate and personalized information about the costs and benefits of obtaining different trade and post-secondary credentials.

- The need for supports as youth narrow down their options to focus on their chosen post-secondary pathway and eventual occupation.
- Helping all youth keep their options open and avoid the missing of deadlines due to inertia. Applications for education programs and student aid should be as simple and automatic as possible.
- Logically, also feeding information on the emerging career aspirations of youth *back* to post-secondary planners and decision makers so that they can quantify emerging demand for and supply of different career pathways.

Youth need tools and supports to become better informed and guided in light of the large volume of proposed opportunities, decisions and challenges they will face. Governments have made investments in this direction with support for labour market information. However, many youths are not seeking out these resources, or may receive the information at the wrong time. SRDC took into account each of the above stages in designing Prospect to provide a process to ensure that all youth engage with their futures and make timely decisions. The proposed approach aims to bring together the necessary tools and supports for such a seamless pathway for all, during secondary school.

## APPENDIX E: TO WHAT EXTENT ARE YOUTH EMPOWERMENT PROGRAMS TARGETING OR HELPING UNDERREPRESENTED YOUTH?

Selection of participants is integral to the delivery of any program that is not made available to all youth, and to interpretation of its effects on underrepresented youth. Additionally, selection is often a design feature critical to the success of many youth empowerment programs. Selection takes many forms.

**Programs with no intended target group (including Web sites)** may accept any youth on a drop-in basis. However, unless they are mandatory, they will not attract all youth. Youth will elect to participate depending on when and where they are run, their accessibility, theme, reputation, communication tactics, staffing, requirements placed on attendees, and other factors. The absence of criteria for selection does not mean that youth are not selecting for themselves whether to attend. Those who attend will still represent a select group from among all youth. Often the precise characteristics of who chooses the program – or if it runs over an extended period, who stays with the program – are not collected, so who is being helped relative to who is not is not known.

**Programs with no intended target group but limited places or fixed enrolment periods** may accept youth up to a certain number or point in time and then stop accepting youth. The selection mechanisms at work are often first-come first-serve, but also occasionally waitlisting. Thus, youth who learn about the opportunity late or who procrastinate are less likely to participate or miss parts of the program if a slot opens up later. Plausibly, there may be situations where these are exactly the characteristics of youth (more disconnected or slow starters) who are most likely to benefit from an intervention. Programs with limited slots can sometimes use lotteries to allocate places. In theory, lotteries produce more representative cross-sections of all youth than first come first served or waitlists. However, program lotteries are administratively complex to operate well and can divide peers and siblings in ways that alienate participants so produce a different type of self-selection into the program pool.

**Programs operating with some type of target group in mind** are common. However, they vary greatly in how they apply selection criteria. They may resort to enforcement to ensure the program places are occupied by members of the target group but to different degrees. The mechanisms range from subtle profiling of the youth in scope, influencing where youth are recruited from, how the program is described and promoted, through more explicit labelling of the types of youth the program is intended to serve, through to even more strict application

processes with rigorous criteria for inclusion and exclusion. Following admission, there can be participation or achievement requirements that determine whether the place remains open.

If places are limited or selection by type of youth is applied, however subtly, the stakes are raised for programs to ensure those who can truly benefit make it into the program and that those who cannot benefit are among those excluded. For many community programs with limited capacity or resources per youth, this creates the problem of student selection. Student selection done wrong can harm program success, as the next section illustrates.

## The problem of selection

Many evaluations included in SRDC's literature review suggest selection of participants was at least partly to blame for reducing the program's impacts. Selecting the right youth for a selective program is of course very necessary but actually very difficult. Almost by definition, most youth empowerment programs implicitly assume that a place in the program is not expected to change post-secondary outcomes for just any youth. An often-overlooked point is that when the program is offered to students who are already destined for PSE — by virtue of their academic skills, motivation, hard work or even luck — then the program can have no positive impact on whether they access PSE. Including them may reduce the slots for youth more in need of help. However, recognizing such PSE-destined youth in advance and successfully excluding them may prove very awkward.

Programs typically explicitly target youth in categories *thought* less likely to attend post-secondary education without intervention. Logically, teenagers whose characteristics at the time of entering the program are strongly associated with likely post-secondary enrolment (e.g., females from high-income families in urban areas whose parents attended post-secondary education, for example) would not be actively sought after to populate a program with limited slots. If a student is destined for post-secondary education anyway, why offer him or her a valuable place in the program when someone who is not PSE-destined could take it?

Unfortunately, of course, it is hard to know in advance precisely who is destined for post-secondary education. Youth programs use proxy indicators as criteria to guide outreach and selection that can only imperfectly predict need for the program. For example, they might seek:

- Academically underprepared students or those prematurely leaving high school
- Youth resident in low-income neighbourhoods
- Indigenous youth
- Youth with disabilities
- Youth in care.

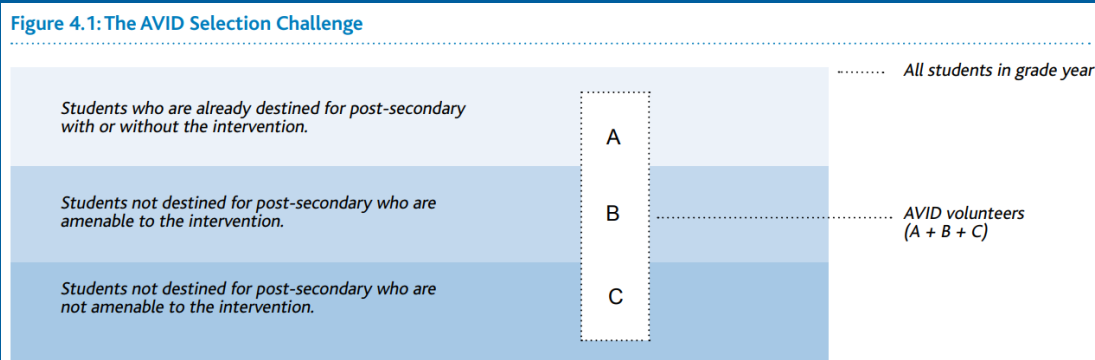
However, premature high school leavers do, sometimes, return to school, graduate, and enter post-secondary education, even without engaging in additional youth programming. Some youth in low-income neighbourhoods do enrol in post-secondary education, without additional programming. Some youth in low-income neighbourhoods are actually living in high-income families with parents who attended post-secondary education. So, youth can be selected because they meet selection criteria but who are in fact unlikely to need the program to reach post-secondary education. Complicating the picture still further, selection criteria can mean some youth may be excluded who actually would benefit from a place. Youth who are not motivated to show up, who are not willing to provide personal information on a form, might actually be the ones most likely to benefit from the program. For the selection in a program to be effective, the criteria need to minimize both false positives (people who meet criteria but do not need the program) and true negatives (people who do not meet criteria and do not need the program). We present a real-life example of this challenge from a program SRDC evaluated in Box E1.

### Box E1 The AVID selection challenge

In their 2008 consideration of the selection criteria for the AVID program, Dunn et al. (2008) describe in detail the dilemma the program faces applying selection criteria when it has a particular target profile of youth in mind who can benefit from the program. In the case of AVID, these are middle or high school students in the academic middle. The same dilemma applies to many other programs albeit with different targeting in mind.

Should the program be offered to youth who are (in the absence of the program) not destined for PSE, it could have an impact on their PSE access, but only on those among them who are amenable to the program. If the program is offered to students not amenable to the program, it cannot have an impact on their PSE access.

Figure 4.1 from the original publication illustrates this selection challenge. Youth are divided into the three groups depending on whether they might benefit. Those that volunteer to be considered for the program — shown in the diagram as groups A, B and C combined — are a subgroup of all youth. The middle group (B) is the group upon whom the program is anticipated to have an impact.



Program staff charged with selecting youth will not be able to forecast outcomes perfectly, so when they select youth they could by accident or even by design include students from all three groups. Still, the program's impact will only be realized for youth in group B. The higher the proportion of youth in groups A and C in the program, the less effective the program will be. This, however, would not be readily apparent (outside of an experiment).

If the proportion of youth selected for the class and in group A, already destined for PSE, is high enough, the program is still guaranteed positive outcomes. Students from the program will be seen to go on to PSE. By definition, however, these youth from group A would have accessed PSE even without the program. Allocating places to them for potentially several years might not represent an efficient use of scarce places in the program, if the program actually has its impacts on youth from group B. More to the point, *helping group A youth does not solve the PSE access problem*. Since the program could only have its impact upon youth not already destined for PSE and who are amenable to its effect, this is the group of youth who should be the target of recruitment and selection for the program. Nonetheless, this group of youth would be hard to tell apart from others since the identifying characteristics — youths' response to the program and PSE access — would not have been observed.

Those determining the selection would have to use proxy indicators, based on experience or evidence from elsewhere, to identify the youths not destined for PSE but among whom the program will change this outcome. There are very few evaluations of how successful each program is in performing this skilled task. SRDC (Ford et al., 2014) found 62 per cent of the youth selected for AVID went on to PSE even when assigned to the control group (who received no AVID programming).

A story about selection similar to the one in Box E1 for AVID is ventured by the evaluators of FLIGHT (What Works Clearinghouse, 2018) – also rigorously evaluated using a randomized design. They argue similarly that the absence of significant effects on outcomes like weighted GPA, the perception of barriers to college, and school attendance was likely because sample students were already very advanced academically at baseline. Outcome measures at baseline indicate that the students selected for the program represented a more advantaged and academically proficient group of students than is typically served by the community group in question (Take Stock in Children). The author concluded that even a more intensive implementation of FLIGHT would likely not have improved the outcomes of students who were mostly already “on-track” for college.

It is worth noting that some youth programs deliberately include in their selection criteria some proxy indicators that generally do not characterize underrepresented youth. Such criteria can actually be predictors of youth making it to post-secondary education in the absence of further intervention:

- There are several examples in Appendix B of programs that select only more future-orientated youth or those willing to commit to regular attendance or who are doing well in school academically. Sometimes they do this because the youth possesses another characteristic that the program operators believe places the youth at risk of not reaching PSE (having a lone parent, for example).
- Some programs even deliberately select a small number of youths they believe will definitely go on to PSE. The objective is for such participants to act as role models. The AVID program selection does this. These youth do not need the program themselves, but they act as role models for their peers and – in theory – become part of the features of program treatment promoting success for the other youth.

Thus, hopefully, such counterintuitive selection criteria increase overall program success. However, the kind of data collection that would verify the theories underlying selection are rarely collected.

Finally, selection criteria can introduce a moral hazard for program staff or operators if they are in any way rewarded based on participant success. Programs could actually find themselves incentivized to recruit youth with good chances of PSE enrolment (sometimes dubbed “creaming” in the economics literature) regardless of what the program actually delivers.

Therefore, to answer the question of to what extent programs target or help underrepresented youth requires a separate response to each part of the question. On the first part, there is considerable targeting of youth with at least some characteristics of disadvantage with respect to PSE access (Indigenous youth or first-generation students). However, targeting often goes further to include characteristics of *advantage* with respect to PSE access (academically-motivated, future-orientated or less likely to procrastinate in making applications). On the second part, the extent of genuine help offered to underrepresented youth depends on the definition of underrepresented and the outcome of relevance. Those whose characteristics in early teenage match proxy indicators that predict a low likelihood of PSE attendance do often get *help* from PSE access programs (whether it is supports for career decision-making or academic work, mentoring or information) but whether it helps them access PSE is rarely determined. A pilot provides an opportunity to test whether the supports youth empowerment programs offer actually change youths’ post-secondary outcomes.

OTTAWA • VANCOUVER • CALGARY • HAMILTON • LONDON • MONCTON

MONTREAL • REGINA • TORONTO • VICTORIA • WINNIPEG