SKILLS ASSESSMENT AND NEWCOMER PATHWAYS TO THE LABOUR MARKET

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INTRODUCTION

In recent years, attention to skills and competencies has shaped discussions of the "future of work," focusing on global shifts and their implications for employers and job seekers. Nowhere is this more critical than in discussions of pathways to employment for newcomers. While there is some evidence to suggest certain skills (for example literacy) are associated with better employment outcomes, or at least earnings, others have maintained that bias and barriers prevent newcomers from accessing employment where their skills will be fully utilised. The challenge, then, based on the available evidence, is to better understand 1) which skills are linked to obtaining employment 2) how we can assess these skills 3) how we can develop these skills, and 4) how we can ensure that skills people have are fully utilised.

Skills assessment for immigrants to Canada is an area much in need of solid research. Which skills determine labour market success and attachment for immigrants entering Canada? Which skills can be assessed, with validity and reliability, for newcomers? And are those skills the same?

Existing research is somewhat slim, and what does exist is not conclusive about how skills drive immigrant success in and attachment to the Canadian labour market. In particular, skills outside of literacy, numeracy and problem-solving in technology rich environments are often assessed by self-declaration, self-assessment or credential and there is limited evidence of a relationship to labour market outcomes.

BACKGROUND: WHAT SKILLS ARE LINKED TO EMPLOYMENT?

Debates are common in Canada, and globally, about the types of skills that are most in demand in the labour market and which of those skills are most likely to ensure employment. While educational credentials such as degrees, diplomas and certificates remain strong signalling agents for labour market entry, both for individuals born in Canada and newcomers with a postsecondary education (PSE) credential from elsewhere, the number of people with PSE has increased to a point where it is less valuable as a "sorting" mechanism. Employers are increasingly challenging the reliance on credentials alone, even in applied and professional domains, given the long cycles for curriculum development and the rapid rate of change. A 2014 study revealed that in job ads for non-professional entry-level positions, and follow-up interviews with employers, an emergent theme was that employers used work experience, not a PSE credential, as a proxy for the skills they were looking for.[1] Another recent study shows that the measurement of education during the credential transfer processes for newcomers can be discriminatory and reflect geopolitical bias and other social hierarchies.[2]

Furthermore, while credentials are clear indicators of some skills (how to code in Java or build a bridge, etc) they are only weakly related to competencies in employability or essential skills. PSE institutions rarely directly assess skills such as critical thinking or literacy, but consider them implicit in teaching and learning processes, and how learning outcomes are achieved. Efforts to apply standardised testing for example, show many PSE graduates demonstrate only average or below-average literacy and numeracy skills, and that skills gain in these areas during the PSE experience is minimal.[3]

One of the basic assumptions, that is embedded at every level of our system, is that facility in one of the official languages is foundational in terms of employment. There is some research that suggests that language scores are linked to employment outcomes overall,[4] and some of this research has focused on the effect of language proficiency of newcomers on labour market outcomes,[5] demonstrating, in particular, a positive effect between language proficiency and earnings. While the studies that point in this direction are numerous, most of this body of research has used self-assessment or self-declaration of language proficiency. Additionally, most of this research has relied on subjective measures of language proficiency across a single domain: oral proficiency.

At the same time, other research suggests that when we control for education and look at principal applicants in the economic class of immigrants, there is limited connection between scores on standardised tests and employment,[6] although there is a link between scores and income over time. This calls into question some of the assumptions about skills and employment and the primacy of language skills.

Some research has found that among populations whose mother tongue is either English or French, oral proficiency is not highly correlated with skills in other domains, such as document and prose literacy, and numeracy and has relatively no impact on employment,[7] written communication skills and prose literacy however are found to impact annual earnings for this population. When focussed on populations expected to have low oral proficiency skills, for instance, immigrants who have different mother tongues, oral proficiency does impact economic stability and growth. Other research suggests that there are inadequacies in current assessment methods that favour native speakers of-English and French,[8] and negatively impact newcomers with lower language proficiency in Canada's official languages.[9]

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1 Borwein, S. (2014). "Bridging the Divide, Part I: What Canadian Job Ads Said," Toronto: Higher Education Quality Council of Ontario.

2 Cukier, W. & Stolarick, K. (2019). "Immigrant Labour Market Outcomes and Skills Differences in Canada," Toronto: Higher Education Quality Council of Ontario.

3 Weingarten, H. P., Brumwell, S., Chatoor, K. & Hudak, L. (2018). "Measuring Essential Skills of Postsecondary Students: Final Report of the Essential Adult Skills Initiative," Toronto: Higher Education Quality Council of Ontario.

4 Imai, S., Stacey, D., & Warman, C. (2019). "From engineer to taxi driver? Language proficiency and the occupational skills of immigrants," *Canadian Journal of Economics/Revue canadienne d'économique*, 52(3), 914-953.

5 Chiswick, B. R., & Miller, P. W. (2002). "Immigrant Earnings: Language skills, linguistic concentrations and the business cycle," *Journal of Population Economics*, 15, 31-57.

6 Cukier, W. & Stolarick, K. (2019). "Immigrant Labour Market Outcomes and Skills Differences in Canada," Toronto: Higher Education Quality Council of Ontario.

7 Murray et al. (2011). "Toward a better understanding of the link between oral fluency, literacy and Essential skills." DataAngel Policy Research Inc.

8 Solati, F., Chowdhury, M. and Jackson, N. (2022). "English and French language ability and the employability of immigrants in Canada." *International Journal of Social Economics*, 49(1), 34-58. https://doi.org/10.1108/IJSE-12-2020-0851

9 Sivakumar, V. (2023, February 19). "Canadian immigrants' efforts to find employment complicated by perceived skills mismatch," *CIC News*. www.cicnews.com/2023/02/canadian-immigrants-efforts-to-find-employment-complicated-by-perceived-skills-mismatch-0232695.html#gs.6m0wbg

A recent Statistics Canada study used the language testing[10] results for newcomers going through the Express Entry program to Canada between 2015 and 2018. On top of using an objective measure of language proficiency, this study also looked at test-based scores in four domain areas, as opposed to one (oral proficiency): listening, speaking, reading and writing – and used self-assessment of language proficiency as an additional comparator.

The study found that in the first years after immigration, both test-based results across all four domains, as well as self-assessment results, had little impact on employment. However, the study also showed that test-based scores had a stronger effect on earnings than education level and age, and had as strong an effect on earnings as pre-immigration work experience.[11]

The Organization for Economic Co-operation and Development's (OECD) *Programme for the International Assessments of Adult Competencies* (PIAAC) is considered to be the gold standard for assessing fundamental skill areas, namely literacy, numeracy, and problem-solving in technology-rich environments as well as providing global standards for comparison.[12]

Using PIACC domains shows that the skills gap between Canadian-born individuals and immigrants is significant, but it is less significant than in other OECD countries, with the foreign-born population in Canada scoring well above the foreign-born population in other OECD countries.[13] This is likely a result of the use of the point system which places a premium on competency in official languages and education. Furthermore, the gap diminishes with age and education. The 2017 CMEC report on PIACC results, notes that both immigrants and Canadian-born individuals with higher educational levels perform better than those with lower educational levels, across all three skills.[14] At any given educational level, the Canadian-born perform better than immigrants, but the skills gap for immigrants diminishes with level of education. Immigrants who landed in Canada at younger ages have higher proficiency scores and the skills gap increases with the age at entry.[15] However, when we control for all other factors, immigrants are three and a half times more likely to be unemployed when compared to equally skilled Canadian-born populations.[16] Skills proficiency, specifically language and literacy, are, therefore, poor predictors of employment. While there is some evidence of a direct connection between literacy and language proficiency and income, even the wage gap is not fully explained by the skills gap.

In fact a 2008 study,[17] using PiACC results for Ontario only, found that literacy skills explained only about two thirds of the wage gap between Canadian educated and foreign educated individuals. A later study in 2017,[18] also using PIACC for a cross country comparison, found that literacy skills only explained one third of the wage gap between Western and Non-Western educated immigrants in European countries. The implications of this are significant and warrant further exploration.

WHAT SKILLS SHOULD WE MEASURE?

Using PIACC has advantages. The skills tested (literacy, numeracy and problem-solving in technology-rich environments) are thought to be associated with success in the labour market and PIACC is used widely by OECD countries and therefore has a larger base of research than some other tools. However, the empirical research suggests other forces are at play. While language skills are generally important they are perhaps not as important as previously considered. It is possible that PIACC does not actually measure skills needed for success in the workplace. Or it is possible that PIACC does measure skills needed for success in the workplace but barriers and discrimination still trump skills. For instance, a 2021 study has shown that immigrants with foreign-sounding last names are less likely to get interviews than their counterparts with the

10 Xu, L., & Hou, F. (2023, January 25). "Official language proficiency and immigrant labour market outcomes: Evidence from test-based multidimensional measures of language skills," *Economic and Social Reports*. Statistics Canada. www150.statcan.gc.ca/n1/pub/36-28-0001/2023001/article/00002-eng.htm

11 Ibid.

12 Organization for Economic Co-operation and Development. (n.d.). *About PIAAC*. www.oecd.org/skills/piaac

13 Council of MInisters of Education, Canada (2017). "Skills Proficiency of Immigrants in Canada: Findings from the Programme for the International Assessment of Adult Competencies (PIAAC)."

14 Ibid.

15 Ibid.

16 Cukier, W. & Stolarick, K. (2019). "Immigrant Labour Market Outcomes and Skills Differences in Canada," *Toronto: Higher Education Quality Council of Ontario*, p 14.

17 Ferrer, A., & Riddell, W. C. (2008). "Education, credentials, and immigrant earnings," *Canadian Journal of Economics/Revue canadienne d'économique*, 41(1), 186-216.

18 Lancee, B., & Bol, T. (2017). "The transferability of skills and degrees: Why the place of education affects immigrant earnings," *Social Forces*, 96(2), 691-716.

same credentials.[19] It is also possible that once people overcome the barriers to employment, those with better skills will be more successful and hence earn more.

Another factor to consider is that PIACC may measure some necessary skills for the labour market, but not all. Current federal programming, including the Federal Skilled Worker program, the Federal Skilled Trades program and the Canadian Experience Class, has been criticised for its focus on newcomers' possession of basic or essential skills, such as literacy and language proficiency, as well as the priority it assigns to formal education credentials, life experience and age as opposed to practical, technical skills.[20] Some have argued that these criteria does not easily translate into skill indicators.[21] And while the identification of agreed upon skills that matter in the labour market has been difficult, it is not insurmountable; answering the question of whether or not an individual possesses those skills and at what level, and for what purpose, has been more challenging.

If we look at other skills that are assumed to be needed by the labour market, there are many assertions about the importance of those skills in driving labour market success, in particular for newcomers to Canada, but surprisingly little empirical data. Increasingly industry reports claim that "employability", "soft" or "socio-emotional" or "transversal" skills such as interpersonal skills, communication, and resiliency, are essential.[22] Typically evidence regarding the importance of these skills is based on surveys of employers. For example, the Business Higher Education Roundtable surveys their members every two years, and finds that while large employers are increasingly pointing to specialised skills needs, they continue to agree that soft and socio-emotional skills are table stakes.[23] There are also concerns that these claims can embed or mask bias as the assessments of these skills, for example, interviews can be fraught with gender and cultural bias, privileging neurotypical styles of communication without necessarily assessing skills relevant to job performance.

COMPETENCY AND SKILLS FRAMEWORKS

Global organisations, such as the International Labour Organization (ILO),[24] World Economic Forum (WEF),[25] and World Bank,[26] have proposed frameworks to highlight the skills needed in a globalised world. The ILO's Global Framework on Core Skills for Life and Work in the 21st Century focuses on non-technical skills, such as social and emotional skills, cognitive and metacognitive skills, basic digital skills, and basic skills for green jobs, to ensure that individuals are employable, adaptable to labour market demands, and can contribute to their well-being and their community.[27] The WEF categorises 21st Century Skills as foundational literacies (core skills to everyday tasks), competencies (approaches to complex challenges), and personal qualities (approaches to changing environments).[28] Universities across Canada have also proposed competency frameworks, although they are highly fragmented and inconsistent. For example, the University of Waterloo's Future Ready Talent Framework identifies 12 key competencies in demand for the global workplace but the basis of these is unclear.[29]

Most countries have adopted frameworks to identify and develop essential skills for their citizens to meaningfully participate in the workplace, education, and society, but there is little consistency in terms and definitions. Canada's Skills for Success Model (formerly Essential Skills) identifies nine essential skills for engagement in the workforce,

19 Banerjee, R., Hou, F., Reitz, J. G., & Zhang, T. (2021). "Evaluating foreign skills: Effects of credential assessment on skilled immigrants' labour market performance in Canada," *Canadian Public Policy*, 47(3), 358-372.

20 Tobin S., & Barata, P. (2022, December 13). "Work skills must be central to Canadian immigration efforts," *Policy Options*. https://policyoptions.irpp.org/magazines/december-2022/work-skills-canadian-immigration

21 Ibid.

22 Business Higher Education Round Table. (2022, March). "Empowering People for Recovery and Growth," Business Council of Canada. https://bher.ca/sites/default/files/2022-03/Empowering%20People%20for%20Recovery%20and%20Growth%202022%20Skills%20Survey%20Report_3.pdf

23 Ibid.

24 International Labour Organization. (2021). "Global framework on core skills for life and work in the 21st century," www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_813222.pdf

25 World Economic Forum. (2016). "Ten 21st-century skills every student needs," www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students

26 World Bank. (2021, July 21). "Skills development," www.worldbank.org/en/topic/skillsdevelopment

27 International Labour Organization. (2021). "Global framework on core skills for life and work in the 21st century," www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_813222.pdf

28 World Economic Forum. (2016). "Ten 21st-century skills every student needs," www.weforum.org/agenda/2016/03/21st-century-skills-future-jobs-students

29 University of Waterloo. (n.d.). "Future ready talent framework," https://uwaterloo.ca/future-ready-talent-framework

education, and society: adaptability, creativity and innovation, problem-solving, communication, collaboration, digital, and literacy, including reading, writing, and numeracy.[30] Australia, on the other hand, distinguishes between "Core Skills" for societal participation (i.e., learning, reading, writing, oral communication, and numeracy)[31] and "Core Skills for Work and Development" for success in the workplace (e.g., problem-solving, collaboration, self-management, communication, and information technology skills).[32] Other countries use classification systems or taxonomies that tie skills to occupational codes, such as the United States ONET system[33] and the European Commission's ESCO classification.[34]

But while there remains limited agreement on how to define these skills, there are some efforts to assess these skills. There is no shortage of skills assessment tools available to connect individuals to the labour market, via in-demand skills. The Skills Council of Canada, alone, lists over 800 pre-prepared assessment tools on its website, along with the ability to customise an assessment tool. For example FutureWorx's Employment Skills Assessment Tool (ESAT) assesses the development of social and emotional skills like attitude, accountability, confidence, adaptability, creativity, and collaboration. ESAT is generally used in training and educational programs that raise awareness of employability expectations and skills.[35] The European Commission's free digital skills assessment tool allows individuals to self-assess their digital skills, such as information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. Results serve as a compass, guiding individuals' relevant resources and training opportunities.[36] The United Kingdom's National Career Service's free online skills health check allows individuals to assess their personal skills, such as interests and motivations, and work-based skills, such as numeracy, verbal reasoning, and problem-solving.[37]

However, skills, such as resiliency, teamwork, and communication are challenging to assess, and often rely on self-assessment.[38,39] Moreover research has suggested that definitions and understandings of skills such as communication can be very divergent particularly where self assessments are used. For example, in one study 90% of university students and graduates surveyed indicated they had excellent communication skills, compared to only 30% of their employers.[40]

Not only do these tools rely quite heavily on self-assessment, there is limited research showing how these are actually related to employment as well as questions about the extent to which these skills assessments embed cultural biases in the questions that can exclude some populations, and lead to replicating the status quo. For instance, there is evidence that informal processes, unspoken rules, and cultural competencies also play a role, but in a hidden and possibly insidious way. Some employer tools build profiles of successful employees and use those characteristics to identify applicants with the same attributes. While this may seem like a rational way to proceed, it has the potential to simply embed bias and encourage hiring more of the same. And while proxy assessments can sometimes be valuable in connecting employers to potential employees, they are not direct assessments of human capital skills. In a recent study using PiACC, the author calls human capital skills, "surprisingly difficult to assess" as most measures are self-reported in some fashion, or credential based.[41]

There is also much attention on the "digital skills gap" and the desperate need for highly trained science, technology, engineering and math graduates as well as an acute shortage of trades and skilled labour. Studies demonstrate that the digital skills gap is a global phenomenon. 80% of businesses need more workers with digital skills, and two-thirds are having

30 Government of Canada. (2023, June 2). "Learn about skills," www.canada.ca/en/services/jobs/training/initiatives/skills-success/understanding-individuals.html

31 Australian Government. (2020). "Australian core skills framework," Department of Employee and Workplace Relations. www.dewr.gov.au/skills-information-training-providers/australian-core-skills-framework

32 Australian Government. (2020). "Core skills for work developmental framework," Department of Employee and Workplace Relations. www.dewr.gov.au/skills-information-training-providers/core-skills-work-developmental-framework

33 O*net. (n.d.).. "About O*net," www.onetcenter.org/overview.html#data

34 European Commission. (n.d.). "The ESCO classification," https://esco.ec.europa.eu/en/classification

35 Futureworx. (n.d.). "Employability skills assessment tool," https://futureworx.ca/employability-skills-assessment-tool

36 Europass. (n.d.). "Test your digital skills!," https://europa.eu/europass/digitalskills/screen/home

37 National Career Services. (n.d.). "Skills health check," https://nationalcareers.service.gov.uk/skills-health-check/home

38 See for instance, Weingarten, H. P. & Hicks, M. (2018). "On Test: Skills. Summary of Findings from HEQCO's Skills Assessment Pilot Studies," Toronto: Higher Education Quality Council of Ontario; and Kaupp, J., Frank, B., & Chen, A. (2014). "Evaluating Critical Thinking and Problem Solving in Large Classes: Model Eliciting Activities for Critical Thinking Development," Toronto: Higher Education Quality Council of Ontario.

39 Patry, D., & Ford, R. (2016). "Measuring Resilience as an Education Outcome," Toronto: Higher Education Quality Council of Ontario.

40 Cukier, W. (2014). "Understanding Employer Needs and the Skills of Social Science and Humanities Graduates," Toronto: OCHRIF.

41 Richwine, J. (2022). "Skill deficits among foreign-educated immigrants: Evidence from the US PIAAC," *Plos one*, 17(8).

trouble finding and hiring the right talent.[42] In Canada, 79% of CEOs indicate that the pandemic has changed how they work and that more employees with IT skills are required.[43]

However, while these skills are in high demand, there is evidence, for instance, that internationally educated engineers have high levels of unemployment. They may have the skills but the lack of international credential recognition. Effective pathways to professional practice, including Canadian "experience", remain impediments. For some regulated professions, there are also specific skills frameworks for licensure.[44,45] Professional engineering applicants are required to detail their work experience and self-assess their competence level across several domains, such as project and financial management and communication.[46] Nursing in Ontario also uses a similar approach. After the College of Nurses in Ontario has assessed registered practical nurses' education and practice, they are required to submit a competency assessment supplement, which requires them to submit a reflection that identifies a gap in their entry-to-practices competencies.[47,48] However, other professional occupations, such as teaching and medicine, continue to rely on qualifications for licensure coupled with acceptable work experience. The occupational licensure landscape is fraught and Canada lags behind many other nations. Much of the process is left to professional organisations which may have competing goals - for instance, protectionism and risk management, as opposed to access. Even in professions where there are acute labour shortages, processes are slow and expensive.

Finally, while numerous skills frameworks and assessment tools exist, few specifically target newcomers. International standards and practices use points systems for skilled immigrants,[49,50,51] and foreign credential recognition.[52,53] However, other countries are leading the way to change this practice. Australia, for instance, assesses both the skills and qualifications of skilled immigrants. Skills assessments are issued through relevant skills authorities – for example, skilled migrants seeking employment in education and childcare would have their knowledge, skills, and competency assessed through their work experience. Skilled immigrants are required to explain their role, skills used, and descriptions of situational examples as they relate to relevant assessment standards.[54] The Australian government currently lists 215 in demand occupations that have skill assessment processes for potential immigrants. Additionally, the Australian National Skills Commission provides advice to the government on labour market and skills needs related to the list.

CONCLUSION

The skills required for the current and future labour market is a hot topic right now, in Canada but also globally. Governments, employers and other stakeholders and policymakers are producing a significant amount of documentation trying to define and categorise what those skills should be and how they align with labour market needs. What is less clear from these conversations is how to effectively assess whether or not individuals have these skills, and what the direct impact of these skills are on an individual's success in the

42 Cukier, W., Zou, C., Jae, K., & Sabat, M. (2023). "Digital skills and the skills gap. Diversity Institute," www.torontomu.ca/diversity/reports/digital-skills-and-the-skills-gap

43 Ibid.

44 Engineers Canada. (2018, September 6). "A closer look at the competency-based assessment project," https://engineerscanada.ca/news-and-events/news/a-closer-look-at-the-competency-based-assessment-project

45 Engineers and Geoscientists BC. (2023). "Competency assessment," https://competencyassessment.ca/About

46 Ibid.

47 Colleges of Nurses of Ontario. (2023). "Entry-to-practice competencies for registered practical nurses," www.cno.org/globalassets/docs/reg/41042_entrypracrpn-2020.pdf

48 College of Nurses Ontario. (2017, October 12). "FAQs: Competency assessment supplement," www.cno.org/en/become-a-nurse/registration-requirements/education/faq-competency-assessment-supplement

49 Government of the United Kingdom. (2020, October 19). "The UK's points-based immigration system: Information for EU citizens," www.gov.uk/guidance/the-uks-points-based-immigration-system-information-for-eu-citizens

50 New Zealand Immigration. (2023). "New Zealand skilled residence pathways," www.immigration.govt.nz/new-zealand-visas/preparing-a-visa-application/living-in-new-zealand-permanently/new-zealand-skilled-residence-pathways

51 Government of Canada. (2023, August 23). "Comprehensive ranking system (CRS) tool: Skilled immigrants (express entry)," www.cic.gc.ca/english/immigrate/skilled/crs-tool.asp

52 Government of Canada. (2023, May 25). "Learn more about foreign credential recognition in Canada," www.canada.ca/en/employment-social-development/programs/foreign-credential-recognition.html

53 European Commission. (n.d.). "Recognition of foreign qualifications," https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/recognition-foreign-qualifications_en

54 Australian Children's Education & Care Quality Authority. (n.d.). "Skills assessment: Pilot 2.," www.acecqa.gov.au/qualifications/skills-assessment-pilot-2

labour market. This is even more apparent for newcomers to Canada. Many of the opportunities for assessing newcomer skills are either credential based, which is a very indirect measure of soft or transferable skills, language proficiency-based, which has only a rough impact on labour market outcomes, or self-assessment based, which holds enormous opportunity for embedded bias. Further, the skills assessed are not found sufficiently to be direct indicators of labour market outcomes.

RECOMMENDATIONS

There is clearly a need to ensure we use evidence-based approaches to assessing skills whether in the selection of immigrants to Canada or in recruiting people for jobs. But in order to do that we need to better understand the ways in which skills are defined, assessed and, perhaps most importantly, utilised. Current research is contradictory and paradoxical, particularly with respect to immigrants, skills and employment. We need to better understand the alignment of certain skills with labour market outcomes for individuals and to challenge assertions that may reflect assumptions but not evidence. We need to better understand the ways in which our definition of skills and our assessment of skills, for example, aligns to employment realities. We need to continue to explore the ways in which bias is embedded in our assumptions, in our measures and in our processes. We need to explore how processes and practices in the regulated professions might be improved to support the pathways of skilled immigrants to the labour market. We need to consider international policies and practices, for instance the Australian approach, and ways to better align these at the national level but also at the organisational level to address skills mismatches and under-utilisation.

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