“Soft Skills are Hard”: The Skills Gap and Importance of Soft Skills
Wendy Cukier, Ryerson University
Jaigris Hodson, Royal Roads University
Aisha Omar, Ryerson University

Key Messages

1. There is wide agreement that “soft” skills (often termed “professional” or “generic” skills) are among the skills essential to employment across sectors.
2. While there is little agreement, however on how specifically these skills are defined.
3. While much attention is focused on providing Science Technology Engineering and Math (STEM) graduates with training in soft skills, less attention is focused on Social Sciences and Humanities (SSH) graduates because of an assumption, perhaps mistaken, that these graduates will possess soft skills.
4. Employers report a “skills gap” and generally do not feel graduates possess sufficient “soft” skills to perform effectively.
5. There are significant differences in the expectations and perceptions of employers and the perceptions of educators and graduates regarding the level of soft skills graduates possess.
6. While there are some standardized tests for some soft skills – writing and critical reasoning for example, many soft skills can only be assessed in context and just as there is little agreement on definition, there is little agreement on assessment of these skills.
7. There are many stakeholders involved in the development and assessment of soft skills and most agree a combination of formal and informal or experiential learning are required.
8. Because of the way in which soft skills are learned, many segments of the population are disadvantaged in access to the coaching, training and role models needed to develop these skills and cultural biases may play a role in the definition and assessment of soft skills. Moreover the boundaries between “skills” and “personality traits or habits” are blurred particularly with respect to interpersonal skills. A diversity lens is critical.
9. The lack of consistency in definitions and fragmentation of stakeholders involved in soft skills development compounds the problem and more coordination is needed to develop shared expectations and to bridge the gap between supply and demand.
10. More research is needed to systematically assess empirically the ways in which soft skills can be defined, developed and evaluated.
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Introduction
Technological growth, the expansion of a global communication and IT infrastructure, the ageing labour force and growth of the knowledge economy in Canada has prompted demand for workers with new skill sets. Recent research demonstrates a perceived gap between the skills possessed by many university graduates and the requirements of employers in Canada’s fastest growing sectors (e.g Allington and Fernandez-Fuentes, 2013). Some have argued that the youth skills gap could limit growth of the Canadian labour market and economy (Tal, 2012), while others argue that this perceived gap is overstated (Mas, 2015; TD Economics, 2013). Surveys of employers have tended to categorize skills into “technical skills” and “soft skills”. However, existing research on these gaps is still lacking, particularly on the nature of required “soft skills” and how they can best be developed.

Project goals and methodology
This project has reviewed the existing English and French language literature, from Canada, and internationally, to explore the following themes:
• Definitions of soft skills; a typology of different soft skills valued in the workplace, as well as their similarities and differences;
• Benchmarks used to assess soft skills, in academic and professional contexts
• Strategies related to soft skill development, including operative definitions, components and evaluations
• Taxonomies of stakeholders as well as initiatives that provide (or claim to provide) soft skills; and finally,
• Potential models that may serve as a basis for future work.

In order to better understand the question at hand, we conducted a search of the relevant academic and professional databases including Academic Search Premier, CBCA Complete, ProQuest Research Library, Web of Science, Google Scholar for English language academic documents, Google for grey literature and Google Scholar for French documents using 25 standardized search terms, which produced more than 12,164 documents. We then removed duplicates or documents that were not relevant and coded more than half (6,127) of the citations according to the subject and the most relevant were included in this review.

Definitions of soft skills
While there are some areas of agreement, there is a lack of consistency in terminology – essential skills, “soft” skills, generic skills and professional skills are used interchangeably. Soft skills are understood to be the non-domain specific skills that help individuals thrive in a professional context (Heckman and Kautz, 2012; Bancino and Zevalkink, 2007; Andrews and Higson, 2008) including writing skills, oral communication skills, presentation skills, listening skills, critical thinking and analytic skills, interpersonal skills, priority and goal setting and lifelong learning skills (e.g., Canadian Chamber of Commerce, 2014). Leadership skills, critical and problem solving skills, information management skills and entrepreneurship skills are also considered key soft skills for recent graduates (Kee, Ahmad, Ibrahim, & Nie, 2012). These are also referred to as
“professional skills” (e.g Environics, 2014) or ‘generic skills’ (e.g Badcock et al., 2010) and dominate essential skills (HRSDC, 2013a, 2013b). Few definitions of “soft skills” which are exactly the same. An important contribution of this paper is the review of definitions and development of a proposed taxonomy.

Supply and Demand for Soft Skills
Much of the focus of research on “soft skills” has been on the needs for these skills among Science, Technology, Engineering and Math (STEM) graduates (Gordon, 2013) and Business Students (AACSB, 2014). Less attention is focused on social sciences and humanities graduates, yet some research suggests that while they are well-trained in research, critical thinking, and academic writing, they still may lack the soft skills required for the workplace (e.g Singmaster, 2013). Fundamental to understanding how to best equip any students with relevant soft skills is a consideration of how to match talent (supply) with employer needs (demand). Generally we found:

- Employers report that they want employees to possess a diverse skill set, including a wide variety of soft skills even in highly technical fields.
- Employers also report that there is a gap between what they need and what current graduates possess.
- There is a gap between how graduates and employers assess skill levels.
- Marginalized youth, including youth with lower socio-economic status, and diverse youth may not have access to the same educational and cultural opportunities to develop soft skills.

Benchmarks to Assess Soft Skills
Soft skills are difficult to objectively assess. Generally speaking, standard achievement or IQ tests cannot capture proficiency in soft skills although they can assess aspects such as writing skills and reasoning (Heckman and Kautz, 2012). Instruments such as the employment readiness scale in Canada measure soft skills to a certain extent (Ward and Riddle, 2014). Overall, graduates. There is significant variation across the literature on ways of measuring soft skills:

- Many of the assessment tools currently used are based on psychometric or "pen and paper" survey instruments and thus may not be the most accurate way to measure soft skills, most of which require at least an element of observation or interviews.
- Some sectors have established methods for assessing and benchmarking soft skills, for example, health care, or public relations, but in the majority of sectors a unified benchmark for soft skills is absent.
- More research needs to be done to clarify definitions being used and to benchmark Canada’s performance compared to other regions.

Stakeholders
There is a lack of consensus about the definition and assessment of “soft skills” and, consequently, there is considerable fragmentation. Moreover, as the development of soft skills requires a combination of formal education, experiential learning and targeted supports for specific populations such as immigrants requiring active involvement by a range of stakeholders.

- Stakeholders with interest in soft skills development in Canada include governments, educational institutions (K-12 as well as colleges, polytechnics, universities and private educational institutions), employers and business leaders, and other stakeholders (community groups, professional organizations and organizations representing specific groups, etc.)
• There are significant variations in definitions, assessments and approaches of stakeholders.
• Inconsistencies in definitions, fragmentation among stakeholders and lack of coordination between supply and demand sides of the employment market need to be addressed.

**Strategies for soft skill development**

There are many different initiatives within higher education and also within various technical sectors such as health care or engineering, to provide professional development in the areas of soft skills. However, there are currently few initiatives that offer soft skills measurement or training to students enrolled in social science and humanities programs, as these students are assumed to already possess soft skills. Research has shown however, that this is not necessarily the case, according to employers who hire these graduates. We found that:

• Soft skills should be thought of as part of cradle to grave learning, insofar as they need to be developed at every stage of curriculum and beyond.
• A wide range of initiatives have been identified to improve soft skills, but these need to be consistent, and maintained over time and evaluated.
• Gaming and simulation in education hold promise for the development of experiential learning opportunities in support of soft skills.
• On the job training and situational judgement tests can also be employed both in the classroom and in the workplace to assist with soft skills development.
• Partnerships may be the best way to support soft skills development and sustain it over time. Collaborative, interdisciplinary and cross sectoral research and training opportunities should be explored at all levels.

**Overall conclusions –Equipping graduates for the 21st century workforce.**

• The need for soft skills or professional skills is clear. There is a general consensus that soft skills are necessary for continued economic growth.
• There are different definitions of “soft” or “professional” or “essential” skills.
• While there is some agreement regarding “essential skills”, the priority ascribed to specific soft skill sets is dependent on the type of organization, as is strategies for measuring, benchmarking and training soft skills.
• A gap existing between what employers perceive that they need vs what they are getting from new graduates, and also in the assessments of skill levels by employment seekers and employers.
• Clearer and more consistent measurements of soft skills needs to be established as well as benchmarks at each level.
• The lack of consistency in definitions and fragmentation of stakeholders involved in soft skills development compounds the problem and more coordination is needed to develop shared expectations and to bridge the gap between supply and demand.
• Because a combination of formal training and experiential learning are required, new techniques including simulation hold promise for developing these skills. A diversity lens is critical, given potential for cultural and other forms of bias in the definition and assessment of soft skills.