

A Comprehensive Review and Development of Measurement Options for Essential Skills Initiatives Phase 2 – Framework Development

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Since its establishment in December 1991, SRDC has conducted over 350 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 and Montreal.

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1.0 Introduction

1.1 Overall project objectives

The Office of Literacy and Essential Skills (OLES) currently supports a wide range of Literacy and Essential Skills (LES) projects that include pilots of various training delivery models in both workplace settings and for jobseekers, through the Adult Learning, Literacy, and Essential Skills Program (ALLESP). This program aims to develop, test and evaluate innovative training models that support Canadians in improving their LES, with the aim to help them obtain and keep a job, as well as to adapt and succeed at work. Performance measurement is critical to the achievement of these broader objectives of ALLESP and to the success of the projects it supports.

One of the many challenges is that the measurement options for evaluating success of LES initiatives are vast and complex in nature. The preferred measurement instruments will vary by, among other factors, program objectives, scope of the models, delivery context, and the target population. Measurement options are also quite dynamic with new indicators and evidence on their validity and reliability emerging on a frequent basis not to mention evolution in the delivery models that require new approaches to measurement. The wider LES community would benefit greatly from i) a consolidation of current knowledge on existing measurement options for LES initiatives, as well as ii) the development of a framework for the application of measurement options in different program contexts, with different targeted populations.

SRDC has been contracted by OLES to conduct a comprehensive review of measurement options for assessing outcomes of LES initiatives and to develop a framework to support a broader performance measurement strategy. The project will be conducted in four phases, each with specific objectives:

Phase 1 - Literature review and environmental scan

Through a comprehensive literature review and environmental scan, SRDC will document currently available instruments and measures relevant to all nine Essential Skills, including the core literacy and numeracy skills (Reading, Writing, Document Use, and Numeracy), digital literacy, and the four 'soft' skills that are receiving increasing attention in recent research: Oral Communication, Thinking, Working with Others, and Continuous Learning. As part of this review, SRDC will outline and assess any existing evidence on the validity and reliability of all measures and their suitability for different contexts and populations. The review will also update and expand on the analysis of publicly-available documents by incorporating information form key informant interviews with assessment developers, practitioners, and other key LES stakeholders.

Phase 2 - Framework development

Following the review and scan, SRDC will develop a broader framework to support performance measurement applicable to a range of LES initiatives. This will include a milestones and pathways based approach that incorporates measures linked to both intermediate performance gains and longer-term and employment outcomes, including key contextual variables that may act to create

conditions for success. SRDC will develop the framework by building on the Phase 1 review as well as evidence from earlier SRDC projects such as Pay for Success, Foundations, and UPSKILL.

Phase 3 - Field testing and data analysis

SRDC will undertake additional data analysis and field testing of a selected subset of key skills measures and performance indicators from the Phase 2 framework. This will help determine the statistical properties of these indicators and provide evidence of their suitability as precursors to longer-term outcomes such as employment. This effort will include extended analyses of existing SRDC data sets (e.g., Foundations, Skilling UP, ESSF, and UPSKILL), with the aim of replicating the Pay for Success approach of determining which indicators function best as possible milestones towards longer-term success of LES initiatives. It may also include further field testing of available instruments and measures with active LES initiatives and partners. The scope and focus of field testing will be determined in consultation with ESDC following completion of Phases 1 and 2.

Phase 4 - Final report and recommendations

Once the analysis and field testing phase is complete, SRDC will revise the framework and recommend a series of preferred indicators along with guidelines for their use in evaluating different LES programs in a range of contexts and for various populations. The final report will aim to serve as a practical guide for LES practitioners and policy-makers in selecting suitable indicators for evaluating success of their initiatives. At the same time, it will support OLES in creating alignment and synergies across projects, as part of a broader performance measurement strategy and monitoring of the achievements of ALLESP.

1.2 Objectives and structure of this report

As documented in the report summarizing Phase 1 review, a best practice for designing and/or selecting ES assessment is to make sure it is an integrated part of a broader conceptual and measurement framework. Assessments and measurements should clearly illustrate how training goals and expectations link with a variety of short- and long-term outcomes based on learner needs. Among other things, this ensures that assessment results are properly interpreted, with those that are intended to have low-stakes implications (e.g., to track program impact at a group level, and be used as individual diagnostic tool only in conjunction with indicators) being appropriately perceived as such. As well, aligning the assessments with learner needs, learning activities and expected outcomes instead of using a single set of assessments as the only or main indicator of success helps boost trainer and learner engagement with the tools.

Building upon Phase 1's review of available Essential Skills instruments and measures, this report develops menus of measurement options that integrate:

- 1. Assessments of core and soft Essential Skills;
- 2. Other important skills and attributes outside the ES framework that are pertinent to work readiness, employability, and learning readiness;

- 3. Key short-, medium- and long-term indicators of downstream success, such as transition to employment or further education; and
- 4. Contextual factors that may help identify conditions for success, and explain why specific training models may have worked better for some people than others.

These four key elements will be discussed in the context of milestone-based performance frameworks designed to align with the needs and training goals of a range of target populations. We will provide in-depth discussions of how the frameworks can be customized to target jobseekers with varying distances from the labour market, as well as currently employed individuals aiming to enhance their job performance through Essential Skills training. We will also illustrate the applicability of these menus by showing how they can be used in programs designed particularly for youth, newcomers and Indigenous jobseekers.

The rest of the report will be organized as follows. Section 2 describes the overarching conceptual approach guiding the development of the performance frameworks as well as the integration of measurement frameworks. This provides a theoretical foundation that explains the importance of each of the four key elements described above, offering not only a rationale for the measurement selection but also a guideline to ensure the chosen tools are grounded in the training services and relevant to the target training participants. Sections 3, 4 and 5 provide further details on the key components of the performance frameworks and their relations to each element of the measurement menus. Particularly, Section 3 elaborates on the categories of contextual factors critical to any Essential Skills training programs targeting workforce development. It also provides recommendations on strategies to collect these contextual data. Section 4 describes the major stages of a program as well as tools and protocols to monitor program progress. Section 5 focuses on outcomes of interest, presenting an organizing structure that helps staff provide practical and encouraging interpretation of results to participants in a timely manner. Section 6 walks through the sample models designed for three different training contexts: pre-employment, employment and workplace training. Section 7 illustrates further application of the frameworks and measurement options by showing how they can be customized to align with the needs of youth, newcomers, and Indigenous participants in different training contexts. Section 8 concludes the report with summarizing remarks and an overview of next steps.

2.0 Conceptual approach

2.1 Training context

Skills assessment and program evaluation tools should be designed and/or selected to align with the context in which training is to be delivered, as well as with the training needs of target populations.¹ In general, Essential Skills training should address a clearly identified set of needs, and contribute to the achievement of goals that are meaningful to all stakeholders (learners, trainers, and employers). Learners and trainers will be motivated to engage with these data collection tools to the extent that these tools are clearly connected to learning activities aligned with needs, and that results are viewed as representing meaningful outcomes along a clearly defined learning and employment pathway.

Figure 1 illustrates three broad training contexts for which data collection tools may be selected, with different levels of learner need defined according to distance from the labour market. Specifically, learners in the first "pre-employment" block typically have multiple barriers that may prevent them from engagement with employment training. In this context, learning activities may focus on boosting transferrable Essential Skills that are important for engagement in subsequent training that may eventually lead to employment. For adult learners, this can include 'readiness to learn' training to allow them to transition between services focused on life stabilization and those that offer job search assistance. For youth, this can include learning supports to facilitate their participation in further education – including post-secondary education – to obtain the necessary credentials to get and keep a job in their chosen sectors.

Figure 1 Employment pathway



Learners in the second block are typically unemployed or under-employed, but ready to engage with employment training. In this context, learning activities may focus on identifying and bridging specific employability or skills gaps. The training models can be designed to allow participants with

¹ See SRDC Phase I Report for an in-depth review and discussion of these assessment tools.

well-defined occupational goals to identify their own Essential Skills in relation to those required by their target occupations, and follow customized learning pathways designed to close gaps between observed and required skills. The models can also be designed in close collaboration with specific employers who are willing and able to hire participants who demonstrate industry-specific skills and competencies as a result of the training.

Finally, the third block represents training models that are designed for employed workers seeking to upgrade the industry-standardized skills that underlie job performance. Delivered in a workplace context, learning activities in this case may focus on embedding Essential Skills training within a well-defined job performance framework. One of the key objectives of these models should be to achieve tight alignment between training activities and performance gaps identified by employers and other stakeholders within the sector. Skills training should be delivered and assessed in the context of job performance, ensuring that skills gains are effectively translated into improved performance on specific job tasks as well as enhanced underlying business outcomes.

Overall, learners with different levels of attachment to the labour market tend to have different skills gaps and training objectives. Understanding where participants fall on the employment pathway can help program staff plans not only the data collection strategies but also program activities, training curricula and training design more broadly. Crucially, it helps ensure that the resulting programs are well-targeted and well-aligned with the training needs of participants.

In the next section, we will describe the key program elements that are common across all three training contexts along the employment pathway. We will use a Theory of Change approach to organize these program elements. More importantly, we will illustrate how this approach can be applied to construct the rationale behind expected program impacts, contributing to shaping the evaluation strategies of the program.

2.2 A Theory of Change approach

A Theory of Change is a comprehensive framework that describes *how* and *why* desired changes happen given a particular context (Weiss, 1995; Connell & Kubisch, 1998; Allen, 2016a). A Theory of Change specifies the program's intended outcomes; the activities it expects to implement to achieve these outcomes; and the contextual factors that are outside the program but can influence program design, implementation, and evaluation.

A Theory of Change is vital to the success of a program for three key reasons. First of all, this approach can sharpen the planning and implementation of the program (Connell & Kubisch, 1998). Program staff and stakeholders can use a Theory of Change at the design phase to define all fundamental building blocks of a program – program activities, goals and targeted outcomes, as well as contextual factors. Secondly, articulating a Theory of Change at the outset of a program supports the causal links between program activities and program outcomes (Connell & Kubisch, 1998; Allen, 2016a). Specifying up front how program activities lead to desired outcomes strengthen the scientific case for attributing improvements in these outcomes to the activities included in the program. In other words, it makes it possible for program staff and stakeholders to claim credit for any improvements in the outcomes of interest, if these improvements have been predicted in the theory. Finally, in terms of operation, program staff can use a Theory of Change to

guide the selection and development of measurement tools and data collection process (Allen, 2016a). Theory of Change helps ensure that the decisions of when and how outcomes are measured are directly guided by program objectives. It facilitates the alignment between the measurement framework and the program activities, making measurement instruments meaningful to program staff and participants. This helps avoid the risk of attaching an off-the-shelf tool to a program without careful consideration of its applicability and relevance to trainers and learners.

In brief, a Theory of Change identifies a clear ultimate goal and establishes preconditions for reaching that goal (Allen, 2016a). Any assumptions related to program design, operation, and evaluation are examined and specified in a Theory of Change. As well, indicators documenting progress and measuring ultimate success are also identified. The main benefit of this approach comes from the fact that different views and assumptions about the change process are made explicit right from the beginning. It serves as a useful guiding structure for program staff and stakeholders to check that the program is appropriate and well-targeted. It provides a starting point to discuss and enrich the details related to design, implementation, and evaluation. It also helps put in context the political, social, and environmental realities in which the program operates.

Given the usefulness of the Theory of Chance approach, the next sections of this guideline will elaborate on the key elements that make up a practical and plausible Theory of Change: contextual factors, program models and activities, and program outcomes. We will first describe these elements to highlight the commonality across all three training contexts along the employment pathway. Following this discussion is a more detailed description of these program elements and the associated data collection tools tailored to each of the three training contexts. Ultimately, we aim to illustrate various ways to adopt and customize our recommendations to align with the measurement and evaluation needs of future Essential Skills training programs.

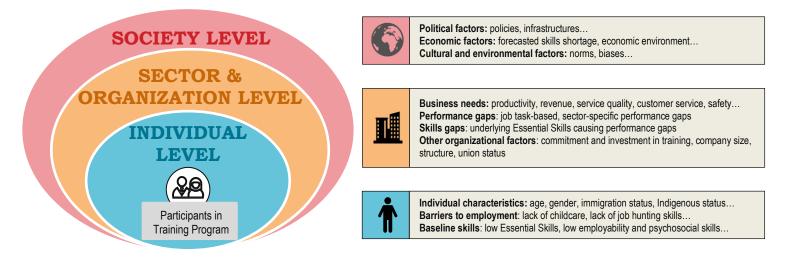
3.0 Contextual factors

As previously mention, contextual factors affect how programs are designed and implemented, as well as how intended outcomes are achieved. They define the environment within which trainers and learners work to achieve their ultimate employment goals. These factors can be grouped into three categories:

- 1) Individual factors that are unique to the participating learners in the program,
- 2) **Sectoral or organizational factors** that are unique to the sectors or companies whose skills requirements and/or performance standards are targeted by the program, and
- 3) **Society-level factors** that describe the broader social, political and economic factors affecting the environment in which the program operates.

Figure 2 illustrates the relationship between these contextual layers and participants in the program.

Figure 2 Contextual factors and their relations to participants in a training program



3.1 Individual-level factors

Individual-level factors include the individual characteristics of participants, any barriers they face that challenge their meaningful and sustained participation in the labour market, as well as the baseline skills that participants have as they enter the program.

3.1.1 Individual characteristics

Individual characteristics are the factors that make up the profiles of the participants of a program. They are important because they define the program's target population, which

influences not only the activities that need to be designed and implemented to deliver desired outcomes, but also the criteria to measure program success. For example, a program boosting the employability skills of Canadian-born youth with limited work experience will be different in design, implementation, and intended goals from a program retraining under-employed recent immigrants with foreign credentials. In addition, detailed participant characteristics can also serve key research objectives, answering questions on program attrition (e.g., what kinds of participants are more likely to complete the program and what kinds are more likely to drop out?) and effectiveness (e.g., what are the characteristics of participants who are most likely to benefit from the program). Typical individual information to collect include demographic characteristics such as *age, gender, marital status, immigration status, Indigenous status, family size, location of residence, individual and household income, as well as employment history and labour market attachment.* Other important personal information includes *self-reported wellbeing, such as physical and mental wellbeing, life satisfaction, social supports, and trust in the community*² (see Appendix A for these self-reported survey scales).

3.1.2 Barriers to employment

Barriers to finding and keeping a job shed light on the breadth and depth of the challenges that service providers need to take into account when designing and delivering training programs. Typically, participants are asked through a survey if they have faced barriers that challenge their ability to find and keep a job. Common barriers to employment include *lack of childcare, lack of education credentials, difficulty with English or French, lack of job hunting skills, limited work experience, problems with drugs and alcohol, physical disabilities and other chronic health problems. A simple way to collect information on barriers to employment is to ask participants to select from a list of common barriers the ones that have interfered with their ability to find or keep a job (see Appendix B for a sample question).*

Some of these barriers can be directly mitigated by the program. For example, an initiative to help job seekers re-focus their job search activities by helping them refine their employment pathways can directly address participants' lack of job hunting skills. Other barriers can have indirect influence on the design of the program. For example, an employment program aiming to help single parents should be mindful of their childcare needs and avoid scheduling training sessions too close to school pick-up or drop-off time. Finally, there may be barriers that are out of scope of influence of the program. For example, a participant who cites drug and alcohol problem in the past as a barrier to employment would still gain the full benefits of a career counselling program, if they are able to manage their addiction either on their own or with other supports outside of the employment program.

Collecting information about barriers to employment is important for both program design and program evaluation. It helps program staff plan and define the appropriate goals to target. For example, a program serving multi-barriered jobseekers who are fairly distanced from the labour

² The rationales of why these scales are relevant and important for these training programs will be discussed in further details in the section 5.0 Outcomes.

market should focus on goals related to employment readiness, prioritizing outcomes such as improvements in career planning skills and job search strategies. On the other hand, a program designed to help recently displaced workers who lack the industry-specific skills to switch to a new target sector can include an industry-specific skills training component to boost their employability.

Furthermore, information on participants' barriers can help with program evaluation, providing staff with a deeper understanding of program results and their implications. For example, participants may identify a lack of Canadian credentials as a barrier to employment because returns to education in the Canadian labour market tend to be much lower for credentials earned outside the country. This suggests that there may be significant differences in how much the program can improve labour market outcomes for Canadian university graduates versus graduates from universities in foreign countries, even though they have similar educational attainment. Another example where barriers to employment shed more light on the implications of the findings is when a program model is implemented at multiple training sites across different provinces. If one of the training sites recruit participants that have more barriers to employment compared to others, understanding the types and severity of these barriers can help explain any variations in program impacts across sites.

3.3.3 Baseline skills and competencies

Finally, designing instruments to collect **baseline skills** of participants are important for both implementation and research purposes. Understanding participants' starting competencies give program staff an opportunity to customize training difficulty and complexity to align with participants' skills needs. Baseline skills levels are important mediating determinants of the effects of training on participants' skills gains. For example, it is often found that literacy and essential skills training has larger impacts for participants who had lower pre-training skill levels. Furthermore, measuring key skills outcomes at baseline as well as after the training allows staff to understand how skills <u>change</u> before and after the program. This offers a richer dataset that allows for a more comprehensive analysis of program impacts, compared to the design in which skills are only measured at the end of the program as a single point-in-time snapshot.

For programs aiming to improve participants' Essential Skills, it is important to collect **baseline Essential Skills** data. Depending on the objectives of the program, these assessments can focus on all or combinations of *Document Use, Reading, Numeracy, Writing, Digital Technology, Oral Communication, Thinking, Working with Others, and Continuous Learning.*

Besides Essential Skills, it is also helpful to collect **baseline measures of non-cognitive and psychosocial skills**. The key is to focus on the types of skills that can provide useful information on participants' learning readiness and employability. While employment history gives an objective measure of individual labour market attachment, these measures are meant to capture the participant's own perception of how well-equipped they are to succeed in finding and keeping a job that suits their skills and interests. Typically, it is useful to collect baseline measures of participants' clarity and confidence with regard to navigating the labour market and achieving career goals. These include *participants' ability to plan their career (Career Planning scale), confidence in their* ability to make career decision (Career Decision-Making Self-Efficacy scale), clarity in the type of job they want (Job Search Clarity scale), and confidence in their ability to conduct a job search (Job Search Self-Efficacy scale). These four sub-scales make up the concept of career adaptability. As well, personality factors indicative of employability and employment-readiness (The Big Five) have also emerged as crucial in the field of Essential Skills training. In addition, receptivity to continuous learning (Attitude toward Learning scale) is another key pre-condition supporting and enabling the attainment of education and employment goals. It has been shown to be an important precursor predicting or supporting participants' subsequent employment achievements. The full survey scales measuring these non-cognitive and psychosocial skills are provided in Appendix C.³

3.2 Sectoral and organizational factors

Contextual factors at the sectoral or organizational levels are particularly important for programs targeting a particular industry or workplace. These include programs for jobseekers training to align their skills with the competency requirements of particular occupation(s), aiming to achieve sustained employment within a sector of interest (the second block on the employment pathway). They also include training programs in the workplace context, which are designed for employed individuals to upgrade their skills and improve their performance on-the-job (the third block on the employment pathway).

Business needs, performance gaps, and skills gaps leading to training needs are the key sectoral and organizational factors directly influencing the design, implementation and evaluation of such programs. Indeed, in order to deliver meaningful value, workplace training and employment training serving the hiring needs of specific employers in target industry or sector must evolve directly from the organizations' key business priorities. A well-cited Canadian study found that business alignment is the most important factor influencing training effectiveness (The Canadian Society for Training and Development, 2010). As well, a large-Canadian study of workplace training in the tourism industry – UPSKILL – has shown that training impacts are significantly and positive related to how well aligned training curriculum is to the tangible business needs, as articulated by employers (Gyarmati et al., 2014).

These factors are typically uncovered through extensive Organizational Needs Analysis process, in which company owners, senior managers, Human Resource representatives, and frontline workers are interviewed. The *breadth and depth* of these factors are important to monitor, as the success of training alignment and customization depends on them. Specifically, program staff should gain a full understanding of the business needs, performance gaps and skills gaps of target sectors or organizations in order to design an effective training curriculum that align with the skills needs of participating employers and workers/jobseekers. The magnitude of training impacts also depend in part on these factors. The more clearly participants can articulate tangible needs rather than intangible interests in training, the easier alignment is to achieve and the more likely the resulting program will produce significant gains in key outcomes.

³ These scales will be described in further details in section 5.0. Outcomes.

3.2.1 Business needs

Business needs are the business goals and objectives that the target organization(s) within a sector must achieve to be successful. The details of business needs vary from sector to sector but can be categorized into factors related to *customer satisfaction, revenue increase, productivity, service quality, health and safety, environmental sustainability, and human resource successes.*

3.2.2 Performance gaps

Performance gaps are identified by first knowing the performance needs of workers in the target sector. Performance needs are on-the-job accomplishments and behaviours that are required of employees in order to contribute to the achievement of business goals. In the context of employment programs for jobseekers, these are the competency requirements that participants need to demonstrate in order to successfully find and keep a job in their target occupations. In the context of workplace training programs, these are what employees must do more, better, or differently in order to achieve the desired underlying business outcomes. Once the performance needs are identified, comparing them with the actual, observed levels of competencies that prospective or current employees demonstrate helps pinpoint the performance gaps.

Performance gaps are sector-specific and should be described in behavioural terms, with a focus on the daily job tasks that employees are required to do. Performance gaps vary from company to company and can be fully uncovered through extensive consultations with multiple levels of managers and workers within the organization. To broadly illustrate the language used to describe these gaps, the following indicators are some examples of performance gaps within the tourism industry: "failure to speak clearly and appropriately to address customer needs or requests," "failure to provide service that encourage first-time customers to return," and "failure to ask clarifying questions to confirm information received from customers, e.g., credit card information, reservation details."

3.2.3 Skills gaps

Skills gaps are one of the multiple factors that cause performance gaps. Causes of performance gaps can range from factors that are external to the company such as increased competition, to factors that are internal to the organization such as a poor incentive system. Skills gaps are factors that are internal to the workers and can be addressed through training activities focused on upskilling. Aligning skills gaps with performance gaps is critical, not only to ensure that the interventions meet the organization's training need, but also to hone in on the skills domains that should be the emphasis of training.

One common way to align skills gaps with performance gaps is to analyze the underlying skills that employees need to successfully carry out their required daily job tasks. To use the same example within the tourism industry discussed above, the skills associated with "failure to speak clearly and appropriately to address customer needs or requests" include oral communication (to speak clearly and appropriately) and thinking (to come up with a satisfying solution addressing customer needs or requests). The identification of skills gaps can be done by program staff with extensive knowledge of both the Essential Skills frameworks and the performance requirements of the industry. Consultations with employers, managers, and workers at participating organizations can further confirm and validate the alignment between skills gaps, performance gaps, and business needs.

3.2.4 Other organizational characteristics

Other organizational characteristics that can be mediating factors influencing the effects of training are **learning culture and commitment to training**, measured through proxies such as *direct training expenditures or indirect financial incentives for workers to participate in training*. **Firm size, firm structure, and union status** are also examples of some other important factors that shed light on the organizational context that influences training design, implementation and evaluation. Generally, program staff collects these data through surveys of participating employers. In some cases, for projects with large companies that have well-developed administrative database, program staff can also ask employers to share the relevant parts of their company-wide datasets to construct the organizational profiles.

3.3 Society-level factors

Contextual factors at the society level are the political, economic, cultural and environmental structures, systems and norms that often influence the design, implementation and evaluation of a program. These factors are systemic in nature and are therefore unlikely to be changed by one single employment program. For example, a career counselling program targeting women wanting to work in traditionally male-dominated sectors should take into account the societal attitudes around general roles and expectations. These factors may not be changed by the program but can affect the operations and results of the program, influencing for example the reality of its participants' career trajectories. To maximize the efficiency of the data collection frameworks, such society-level factors are typically not formally measured. However, program staff needs to be aware of how these society-level factors are related to the design, operation, and outcomes of a program in order to maximize program success.

4.0 Program activities

4.1 Arranging program activities using a milestone-based design

This section outlines the steps to design a training model covering one or more training blocks within the employment pathway. A milestone-based design has proven to be one of the most effective ways to develop a training program (Palameta et al., 2013; SRDC, 2017). This design uses a series of interconnected indicators of success to guide training and evaluation activities. Particularly, milestones are arranged in such a way that achievements of earlier, foundational milestones provide the necessary pre-conditions to maximize the chances of achieving subsequent, more advanced milestones.

With this design, service providers work with participants to help them progress through their learning and employment pathway customized to their needs, one milestone at a time. Instead of expecting providers to help learners achieve one ultimate target with no guide for how to get there, the milestone-based design provides practical guidance to help providers develop effective training programs. Data collected at each milestone also provide immediate feedback for program staff to monitor program activities and intervene in a timely manner. Particularly, program staff knows immediately if there is a risk that participants fail to achieve a milestone on the pathway. In such cases, staff can then focus their investigation on the challenges that prevent participants from completing this particular milestone. This will help staff intervene appropriately, providing relevant, targeted supports to keep participants on track and increase their chances of ultimately achieving their career goals.

Depending on the scope of the program, these customized milestones can span one or more training blocks within the overall employment pathway presented in Figure 1. For example, a service provider can focus on preparing unemployed jobseekers for a sector-based work placement. The first classroom-based training component involves enhancing various employability factors – including core Essential Skills as well as an array of other indicators such as career adaptability and receptivity to continuous learning – with the aim to boost participants' chances of engaging successfully in subsequent workplace-based training. The milestones within this component cover the first block on the employment pathway. The second component of the program can then be delivered by sector-based trainers and involves an industry-contextualized, employer-scored assessment based on learner performance of basic job tasks aligned with Essential Skills. This prepares learners to apply their classroom-based knowledge to transition to the job. The type of milestones monitored here fits under the second block of the employment pathway.

Besides being useful for service providers, the milestone-based design is also seen as motivating for participants (SRDC, 2017). With a series of interconnected indicators of success along a well-defined employment pathway, participants can check off milestone accomplishments as they progress through the pathway. The milestone-based design allows them to see clearly not only how close they are to their ultimate employment goals, but also what concrete next steps they need to take to achieve these goals. As well, learners are more likely to appreciate the alignment between

training activities and their training needs, as they see the efforts they spend working on earlier milestones pay off later on to support completion of later milestones.

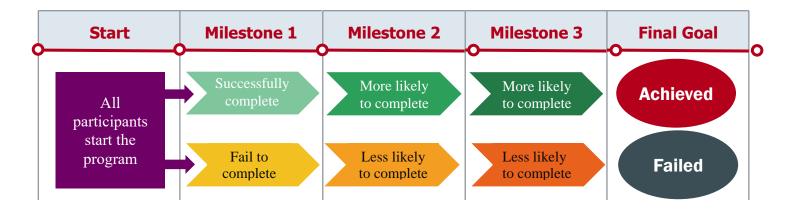
Most importantly, this design helps program staff ensure that participants are fully engaged with the skills assessments and data collection tools within the measurement framework. Program staff can use the milestones to explain to participants that each instrument collects data to gauge their success at a key milestone along the learning pathway. Staff can also help learners interpret their milestone accomplishments by discussing each outcome in relations to the broader framework. Success in earlier milestones is a good predictor of success in later milestones, which altogether provide strong indication of ultimate achievements of employment goals. Essentially, with this design, participants are more likely to appreciate the relevance and value of the assessments and measurement tools, motivating them to put in the time and effort to complete them.

4.2 Defining milestones and developing learning pathways

To re-emphasize, performance milestones are key transition or tipping points that are associated with not only further progression along the learning pathway but also continuing labour market success beyond the program. The milestones should be structured in a logical hierarchy reflecting how each one leads to another and contributes to longer-term employment success. This means that skills gains, improvements in job-related attitudes and behaviours, improvements in wellbeing, etc. at early stages of training should enable later training performance. Figure 3 depicts this meaningful interconnection among the milestones. For the purpose of illustration, only three milestones are shown in Figure 3, but the same concept of interconnectedness applies to programs with more than three milestones.

Close collaboration between service providers, trainers, employers, and other stakeholders is needed to select and define performance milestones. This ensures that milestones are grounded in conceptual theory, backed up by empirical evidence, and at the same time remaining practical to service providers.

Figure 3 The interconnected relationships among the performance milestones



4.3 Aligning program activities with performance milestones

In this section, we will describe the general steps to plan and organize program activities to align with performance milestones. This process ensures that training activities are designed to maximize milestone achievement (see Figure 4 for a summary).

Step 1 – Needs assessment and service planning

- Program activities: All participants start with a *needs assessment* that sheds light on the baseline levels of skills and competencies. For participating individuals, this can include baseline assessments of Essential Skills, other employability skills and work readiness capabilities. For participating employers in workplace training programs, this can be an Organizational Needs Assessment that collects information on business needs, performance gaps and skills gaps among their workforce. Needs assessment helps *define the nature and content of the milestones* along participants' learning pathways.⁴ As participant's distance from the labour market increases, so does the number of milestones associated with his/her personalized employment and learning pathway. Drawing on the assessment results, trainers and learners *develop a service plan* outlining the steps learners need to take to achieve their ultimate training goals.
- **Milestones:** At this stage, completion of needs assessment and service plan can count as some of the earliest milestones of the program. Successful completion of these milestones provides the necessary condition to achieve the next milestones on their learning pathway.

Step 2 – Training delivery

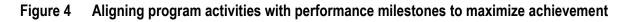
- Program activities: Program staff *delivers training* activities to help participants transition to a state of work-readiness and/or improve sector-specific skills to enhance job performance. The specific training activities learners participate in depends on the steps and milestones outlined in their learning plans. For example, jobseekers who are distant from the labour market may begin with 'ready to learn' programming, which prepares them to successfully transition to and complete further training improving their employability. Programs for those closer to the labour market, who may already be 'work-ready' but need assistance securing employment, could focus on job matching and placement services. Workplace training programs can target industry-specific Essential Skills upgrading, improving workers' ability to carry out daily job tasks, enhancing their performance and underlying business outcomes of their employers.
- Milestones: At this stage, the program should focus on milestones associated with in-class training achievements. Typically, earlier indicators of success are defined as gains in core Essential Skills, career adaptability, receptivity to continuous learning, employability skills and other psychosocial skills. Later indicators of success are defined as gains in skills that showcase their readiness to transition from the classroom to the workplace. These can include gains in

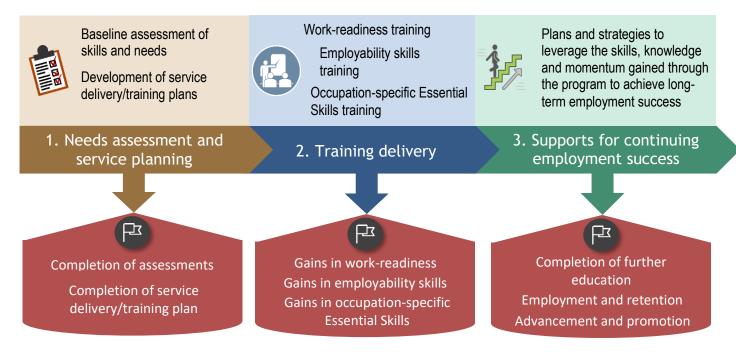
⁴ This step also provides data on the contextual factors that help staff plan the design, implementation, and evaluation of the program.

occupation-specific Essential Skills, job task-related psychosocial skills, as well as job performance and standardized competencies as required by their target industries. Successful achievement of these milestones is a strong indicator suggesting that participants will continue to gain employment success in subsequent stages on their learning and employment pathway.

Step 3 – Supports for continuing employment success

- Program activities: When a participant is deemed ready to move to the next phase on their employment pathway beyond the program, they work with service providers to identify strategies to ensure they can leverage the knowledge, skills, and momentum gained through training to achieve continuing employment success. These wrap-up activities can vary depending on the scope of the program. For example, the final activities of a pre-employment program can include supports to help participants identify and enroll in the next appropriate training course. For a program helping work-ready jobseekers, the service provider can work with learners to identify employment opportunities and strategies to secure a job in their targeted industry. For a workplace training program, program staff and participants can work together to come up with a learning transfer plan, helping participants apply what they have learned in class to what they are expected to do on the job.
- Milestones: At this stage, post-training milestones focus on longer-term indicators of employment success, which results from in-class training success. Some examples of milestones are enrollment in and completion of further education to support a career in chosen sectors or industries, employment and retention in an occupation that aligns with their skills and interests, or retention and advancement at their current company.





5.0 Outcomes

5.1 General tips to define outcomes

Outcomes are the changes, benefits, learning or other effects that happen as a result of the services and supports the program provides (Allen, 2016b). A useful way to conceptualize outcomes is that they show what difference the program makes.

At the design phase, it is helpful for program staff to write out outcomes statements to define what outcomes the program hopes to achieve (Allen, 2016b; Keystone, 2009). An outcome statement describes a result – a change that has taken place. It is not a needs statement, nor a description of a program activity still in progress. Each outcome statement should answer the questions of *what* will change as a result of the program, and by *how much* (or at the very least, in what direction the change is expected to occur). Outcome statements facilitate the planning, development and design of performance measurements. The more clearly an outcome statement specifies a desired change, the easier it is to define an appropriate indicator or set of indicators to measure the outcome. Several guidelines in the field have provided a useful tip: keep the outcomes SMART – Specific, Measureable, Achievable, Relevant, and Time-limited (see Figure 5).

	Keep program outcomes SMART			
S	Specific			
М	Measureable			
A	Achievable			
R	Relevant			
Т	Time-limited			

Figure 5 Tip to design outcomes

With a milestone-based approach, program outcomes are closely tied to program milestones. A useful guide to help plan, design and rationalize program outcomes is to sort them into classroom-based outcomes and outcomes suggesting transition success post-program. Classroom-based outcomes can be seen as the short- or medium-term difference that a program makes for its participants, resulting directly from the training activities delivered in class. Outcomes indicating transition success are longer-term results that participants achieve, indicating their readiness to move to the next phase on the employment pathway beyond the program. In the next sections, we will elaborate on these outcomes and the underlying skills and competencies they capture. For each outcome, we will also recommend the data collection tools that have been proven to be useful in the field, not only because they are valid and reliable but also because they are easy to administer with minimal response burden.

5.2 Classroom-based outcomes

Generally, classroom-based outcomes are directly linked to what the program aims to enhance or improve through its training activities and support services. Generally, training in the preemployment and employment contexts is likely to boost participants' learning readiness and career adaptability. It also tends to be designed to upgrade the types of general Essential Skills that are transferrable to other contexts, helping participants build a foundation upon which more advanced skills and competencies can be developed. Furthermore, a well-designed employment training program should help participants enhance their understanding of the alignment between their own skills and skills required by target occupations. This could help participants define more focused career paths and job search strategies, and make more strategic choices in further training to acquire occupation-specific skills or qualifications.

Training programs can make a difference not only in participants' skills but also their health and wellbeing. This is because better defined career paths and job search, combined with skill upgrading and better training matches, may lead to higher quality jobs and greater job satisfaction. Participants may also develop a greater sense of well-being as a result of feeling more control, less uncertainty, and less anxiety associated with their future career path and attachment to the labour market.

Table 1 lists all classroom-based outcomes and suggested tools to measure them. With the exception of Essential Skills, other classroom-based outcomes are generally measured through self-reported scales. The scales recommended in Table 1 have been extensively used in previous projects and have proven to be statistically valid and reliable. They are also short and straightforward, which mean they can easily be included in a survey without adding too much response burden. Staff of future programs can incorporate the scales recommended here into their own measurement tools, or use them as guidelines to search for and select other scales in the literature that meet their assessment needs.

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference
SKILLS			
Learning Readiness	Refers to the extent to which a learner values the learning itself, and how they see current learning contributes to future employment success (SRDC, 2013).	Receptivity to Continuous Learning (3 items)	Appendix C, Section C.1.

Table 1 Classroom-based outcomes and their associated measures

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference
Career Adaptability	Refers to a person's capacity to cope and shape their future career track in the face of economic stressors such as unemployment or underemployment, job loss or insecurity.	Career Planning , which measures the extent to which respondents can formulate a career path, define career goals, and identify steps needed to achieve these goals. <i>(3 items)</i>	Appendix C, Section C.2.
	negative emotions, leading to short- term thinking and intense unfocused job search for the first available "survival" job. This may in turn lead to further insecurity, underemployment, etc., thus perpetuating the negative career spiral. Career adaptability, on the other hand, emphasizes positive, proactive	Career Decision-making Self-efficacy , which captures respondents' belief in their ability to complete the necessary tasks to make a career decision. (13 items)	Appendix C, Section C.3.
		Job Search Clarity, which illustrates the extent to which job seekers have clear job search objectives and a clear idea of the type of career, work, or job they want. (4 items)	Appendix C, Section C.4.
people to change their existing frames of reference and routines, leading to potential new opportunit and higher quality employment (Palameta et al., 2017).	frames of reference and routines, leading to potential new opportunities and higher quality employment	Job Search Self-efficacy, which gauges the extent to which respondents believe they can successfully perform the task of search for and obtaining employment. (10 items)	Appendix C, Section C.5.
Generic	Refer to the critical skill domains used	Reading	See SRDC
Essential Skills	,	Document Use	Phase I Report
		Numeracy	
		Writing	
		Digital	
		Thinking	
		Oral Communication	
		Working with Others	
		Continuous Learning	

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference		
Personality Traits or Non-	Recent research has showed that personality traits related to extraversion, agreeableness,	Extraversion	Appendix C, Section C.6.		
Cognitive Skills	openness to experience can contribute to	openness to expenence can continuite to	-	Agreeableness	Appendix C, Section C.6.
	educational attainment, employment status, income, health, and life satisfaction (Rammstedt et al., 2017).	Conscientiousness	Appendix C, Section C.6.		
	These non-cognitive skills are also rated by employers as more important in hiring, retention and satisfaction with employees than	Emotional Stability	Appendix C, Section C.6.		
		Openness to Experience	Appendix C, Section C.6.		
WELLBEING					
Social Supports	Are a proxy for social capital – resources accessible through one's social network. The bigger and more heterogeneous the social network is (i.e., the more people one knows and the more diverse one's network is), the more likely it can open up access to other social resources (Gyarmati et al., 2014). In the context of training, gains in social capital may occur as a result of participation in training alone in isolation from any possible skills gains, or may be a co-requisite for skills gains (Myers et al., 2014).	Social Supports (4 items)	Appendix D, Section D.1.		

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference
Trust	Studies have demonstrated that adult learners become more engaged in their communities and express a greater sense of 'connectedness' and increased trust (Balatti & Falk, 2002; Preston & Feinstein, 2004). Trust is an important key precursor to further social engagement, as it facilitates positive interactions with one's social networks. It may also facilitate further literacy practice and engagement with additional channels for learning, thereby propagating the effects of training on skills (Gyarmati et al., 2014).	Trust (3 items)	Appendix D, Section D.2.
Health and Wellbeing	Positive impacts on health and wellbeing have been observed even for interventions that may not directly target health-related outcomes (Smith Fowler et al., 2016). For example, participants in an employment training program may perceive their health and wellbeing to be improved after the program if they experience less stress, feel more in control of their future career path, more satisfied with their jobs, and more secure in their attachment to the labour market (Palameta et al., 2017). It is therefore important to include survey measures that capture effects on health and wellbeing, as ignoring them runs the risk of significantly under-valuing the benefits of the programs.	Mental Health captures the state of overall mental health and its effects on one's ability to carry out daily activities. (1 item) Life Satisfaction captures subjective wellbeing, which is a simple rating of one's satisfaction with key aspects of one's life. This single-item life satisfaction scale has been frequently used in multiple surveys to measure subjective wellbeing, including various Statistics Canada surveys. This scale is not only straightforward but also have been found to be able to validly and reliably account for most of the variability of longer scales on satisfaction of life (Bonikowska et al., 2013).	Appendix D, Section D.3. Appendix D, Section D.4.

5.3 Outcomes indicating transition success

To make long-lasting impacts, training programs should aim to improve not only the classroombased outcomes but also sustained outcomes that contribute to participants' success in the next phase of the employment pathway, beyond the program. While classroom-based outcomes can be observed during or immediately after training, outcomes indicating transition success tend to be longer-term in nature and should be measured 6 to 12 months after the training. These outcomes include skills that are embedded within the standardized performance requirements of target sectors or industry, indicating their readiness to become contributing employees in their chosen occupations. They also include labour market attachment outcomes such as employment and retention. In addition, the health and wellbeing outcomes described in the previous section can also be measured again at this stage to get the full picture of the sustained effects of the program.

Table 2 lists all outcomes indicating transition success and recommended tools to measure them. In addition to assessment instruments and survey scales, a project management information system (PMIS) may also be used to track outcomes. A PMIS is an administrative database that project staff can create and maintain to keep track of participants' basic information, program activities and progress. In its simplest form, it can be an Excel spreadsheet documenting participants' names, date of birth, unique program identification number (sometimes referred to as 'Case ID'), and records of completion of program activities as well as post-program achievements. For example, once participants complete employability skills training, project staff can mark it as 'Completed' in the PMIS. In contrast, if a participant drops out of the program after employability skills training, a record of termination in the PMIS can help program staff monitor attrition. The PMIS can be extended to track longer-term education and labour market outcomes. For example, upon following up with participants 12 months after the training via phone interviews, project staff can update their files to indicate whether or not the participants have completed any further training, have got a job, or have received a promotion at their workplace.

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference
SKILLS			
Industry-	the work setting of a specific industry or sector. Represent the foundational skills that align with the job competency requirements of specific industries.	Reading	See SRDC Phase I Report
contextualized Essential		Document Use	
Skills		Numeracy	
		Writing	
		Digital	
		Thinking	

Table 2 Outcomes indicating transition success and recommended measures

Outcomes	Underlying skills and abilities	Measures / Assessments / Survey scales	Reference
	Measures are often embedded within	Oral Communication	
	industry-relevant job performance criteria.	Working with Others	
	Capture the ability to successfully perform daily job tasks in target occupations.	Continuous Learning	
Industry- contextualized personality	Industry-contextualized measures of personality have emerged as an important indicator of employment readiness and workability.	See SRDC Phase I Report	See SRDC Phase I Report
LABOUR MARK	ET ATTACHMENT		
Enrollment in further training	Indicates that learners are willing and able to take the next steps to acquire advanced skills and credentials that are more tightly aligned with the competency requirements of their chosen sectors or industries, beyond the training program.	Record of enrollment	Administrative database / PMIS
Completion of further training	Indicates that learners successfully acquire advanced skills and credentials that are more tightly aligned with the competency requirements of their chosen sectors or industries, beyond the training program.	Record of completion	Administrative database / PMIS
Employment	Indicates that participants enter into paid employment in their chosen sectors or industries, thanks to the improved skills and wellbeing achieved as a result of the program.	Record of employment	Administrative database / PMIS
Retention and advancement	Indicates that participants successfully become contributing employees in their chosen occupations, thanks to the improved skills and wellbeing achieved as a result of the program.	Record of retention and advancement	Administrative database / PMIS

Overall, regardless of training contexts, all training programs share the same types of contextual factors, program activities, and outcomes. Contextual factors of programs across all three training blocks can be categorized into the individual level, organizational level, and society level. In terms of program activities, in general program staff starts with needs assessment and service planning, then moves on to training/service delivery, and finally concludes with supports to help participants leverage training benefits to achieve continuing success. Program outcomes either are classroombased in nature, resulting directly from the activities delivered through the program; or are indicative of successful transition from the program to the next stage of the employment pathway beyond the program.

In the next section, a sample program model and related menu of measurement options will be developed for each of the three training contexts: pre-employment, employability, and workplace training. We aim to illustrate how to align the key elements of the Theory of Change with the unique characteristics and needs of each training context. This means that contextual factors, program activities, and program outcomes will be described with higher level of specificity, further illustrating how to customize our recommendations to meet the measurement and evaluation needs of future programs.

6.0 Sample program models and measurement options

6.1 Pre-employment program

Overview

In this example, we will describe a pre-employment program that is designed for jobseekers who are fairly distant from the labour market. This program aims to help participants build a 'bridging' pathway that enables them to take the next steps to transition to further training to reach their final employment goals. For some participants, these next steps are enrollment and completion of post-secondary education to upgrade their credentials, aligning their skills with the occupational requirements of their target industries or sectors. For other participants, these next steps include participation in further employment services that focus more job search and placement to help them get sustained employment.

To re-emphasize, one key characteristic of pre-employment programs is that they target participants who might require intensive assistance and supports before they can reach the final goal of sustained employment in their chosen occupations. Therefore, a key objective of the program should be to help participants adopt a more future-oriented outlook, encouraging them to see the benefits of putting in the time, efforts and resources to invest in their skills now to achieve better employment outcomes in the future. The importance of future orientation has long been acknowledged in the field of education and training (Horstmanshof & Zimitat, 2007; McInerney, 2004; McInnis & James, 1995). A future-oriented mindset is what motivates learners to persist and complete further training and education. Simons et al. (2004) found evidence that learners who perceived a course as valuable for their future work showed greater motivation, better performance and more intensive persistence than those who did not see the connection between the training and their future career. Moreover, future orientation is a strong predictor of important lifetime outcomes, including key indicators of labour market success. Using a longitudinal dataset that links information on people's future orientation at age 13 to their administrative records over five decades, Golsteyn et al. (2014) found that future orientation was a strong predictor of not only education attainment but also income, employment status, and welfare take-up. The relations held true even after controlling for potentially important confounding factors such as parental socioeconomic status and cognitive ability. Finally, evidence has been shown that future orientation and time preferences are malleable and can be enhanced through training (King & Gaerlan, 2013), giving another strong reason to incorporate it in the design of the pre-employment training program.

Contextual factors

For this program context, the key contextual factors are at the individual level. For ease of reference, the standard factors that have been described in the previous section are highlighted in grey, whereas the *unique* factors that are particularly important for training programs in the pre-employment context are highlighted in yellow in Table 3.

Factors	Details	Data collection tools			
INDIVIDUAL INFORMATION					
Demographic characteristics	Age, gender, education, marital status, immigration status, Indigenous status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey			
Personal characteristics	Self-reported Mental Wellbeing, Life Satisfaction, and Social Networks (see Appendix D)	Baseline survey			
Future orientation	Assessments to reveal if respondents prefer receiving a larger reward later or a smaller reward sooner (see Appendix E for further details)	Baseline survey			
BARRIERS TO EMPLOYMENT					
Barriers to employment	Participants are asked to indicate if they have faced one or more barriers on the list of common barriers that make it challenging to find and keep a job (see Appendix B)	Baseline survey			
BASELINE SKILLS					
Generic Essential Skills	Reading, Document Use, Numeracy	TOWES General Series (see SRDC Phase I Report for more details)			
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey			
Career Adaptability	Career Planning, Career Decision-making Self-efficacy, Job Search Clarity, Job Search Self-efficacy (see Appendix C)	Baseline survey			
Personality	The Big Five (see Appendix C)	Baseline survey			

Table 3 Contextual factors for a pre-employment program

To reiterate, **demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

Future orientation is a personal trait that plays a key role in the design, implementation and evaluation of pre-employment training programs. As previously discussed, future orientation predicts participants' persistence and performance within the training program, as well as their future educational and employment achievements. Collecting information on the starting level of

future orientation among participants helps program staff design training activities that aligns with participants' abilities, attitudes and interests. It also helps them make appropriate plans to minimize attrition, especially among participants with low future orientation, by making the link between the current training and their later employment success especially salient.

Information on **barriers to employment** is important to understand the breadth and depth of the employment challenges participants face. Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Understanding baseline Essential Skills help staff adjust the level of difficulty and complexity of their training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness, career adaptability, and personality enrich staff's understanding of participants' preconditions that support and enable their attainment of later learning and employment milestones.

Program activities, associated milestones, outcomes, and suggested measurement tools

To reiterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each stage, as well as their associated milestones, targeted outcomes, and recommended measurement tools. Again, standard elements that have been discussed in previous sections are highlighted in grey, whereas the elements that are unique to the pre-employment program context are highlighted in yellow in Table 4.

During the **needs assessment and service planning** stage, program staff administers baseline survey and assessment to collect data on learners' initial skill levels. Because the training focuses on generic, transferrable Essential Skills, a generic Essential Skills assessment tool is used.⁵ Program staff then works with participants to develop an Employment and Learning plan that aligns with their initial skill levels and training needs. The plan details the steps participants need to take to achieve their ultimate employment and learning goals, outlining the classroom-based milestones and post-program milestones that participants aim to achieve along their pathway. At this stage, indicators of success are completion of the baseline survey and assessment, and creation of the Employment and Learning Plan that aligns with participant's initial skills and abilities. These can be documented through an administrative database or a PMIS monitored by program staff.

Program staff then **delivers the training**. Training focuses on learning readiness; career pathfinding skills; as well as generic Reading, Document Use and Numeracy – the three core Essential Skills that are transferrable to multiple learning and employment contexts. Another key component of the training is to help participants see the benefits of investing the time and efforts in acquiring more skills and competencies now, as it will help them get better employment outcomes

5

For the purpose of illustration, we choose the TOWES General Series in this example. See SRDC Phase I report for the full inventory of assessment tools to help select the tools that best align with future program's assessment needs.

in the future. Incorporating in the training exercises that make the benefits of learning more salient to participants is one way to strengthen their future-oriented mindset.

With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also become more future-oriented and may develop habits, attitudes and personality traits that contribute more positively to their employability. At this stage, indicators of success are gains in learning readiness, career pathfinding skills, Essential Skills, general wellbeing, future orientation, and personality/non-cognitive skills measured through follow-up survey and assessment.

In the final stage of the program, program staff provides **supports to ensure continuing learning and employment success**. They work with learners to design plans and strategies to help them leverage what they have learned in class to continue to achieve success in learning and employment contexts beyond the program. For example, they can help participants identify the next training course or education program to acquire more advanced skills that are more tightly aligned with the competency requirements of their target industry or sector. At this stage, staff needs to follow up with participants to track indicators of success, which are enrollment, persistence, and completion of further targeted education and training.

Table 4 Activities, milestones, outcomes, and data collection tools for a pre-employment training program

Program activities	Milestones	Outcomes	Data collection tools
1. NEEDS ASSESSMENT AND SERVICE PLANNIN	IG		
Participants complete baseline survey and assessment to measure baseline Essential Skills, learning readiness, career pathfinding skills, general wellbeing, future orientation, and personality factors indicative of their employability.	Completion of needs assessment	Record of completion	Baseline assessment and survey; Administrative database/PMIS
Participants work with project staff to create customized Employment and Learning Plans. These plans sketch out a pathway to employment based on participants' starting skills and competencies. They also give the details of the milestones participants hope to achieve as a result of the training program, outlining the steps they need to take to achieve their learning and/or employment goals.	Creation of Employment and Learning Plan	Record of creation	Administrative database/PMIS

Program activities	Milestones	Outcomes	Data collection tools
2. TRAINING DELIVERY			
Program staff delivers learning and work readiness training, providing participants with a better understanding of the labour market. They also equip participants with the basic skills to navigate the job market and find industry-relevant information themselves, including information on skills requirements and aredentials to plan the part	Gains in learning readiness	Increases in Receptivity toward Continuous Learning scale scores between baseline and post- training	Follow-up survey
skills requirements and credentials to plan the next education or training programs they need.	Gains in career pathfinding skills	Increases in Career Adaptability scale scores between baseline and post- training	Follow-up survey
Program staff delivers Essential Skills training, focusing on the core literacy skills that are transferrable to multiple learning and employment contexts: Reading, Document Use, and Numeracy.	Gains in Essential Skills	Increases in Essential Skills scores and/or levels between baseline and follow-up	TOWES General Series
Staff delivers exercises to make the benefits of additional training and education more salient, linking its usefulness to realistic career opportunities in the future for participants.	Gains in future orientation	Increases in scale scores measuring Future Orientation and related concepts such as Self-Control and Time Preference between baseline and post-training (see Appendix E for details)	Follow-up survey
With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market.	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post- training	Follow-up survey
hey may also become more future-oriented and hay develop habits, perceptions, attitudes and ersonality traits that contribute more positively to heir employability.	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post-training	Follow-up survey

Program activities	Milestones	Outcomes	Data collection tools
3. SUPPORTS FOR CONTINUING EMPLOYMENT SUCCESS			
Staff works with learners to leverage the skills, knowledge, attitudes, perceptions and mindsets gained from the program to achieve continuing success.	Enrollment in further education and training	Record of enrollment	Administrative database/PMIS
	Persistence and completion of further education and training	Record of completion	Administrative database/PMIS

Finally, Figure 6 captures the contextual factors, program activities, program outcomes and associated data collection tools for this pre-employment training example. It also serve as a useful illustration of how a pre-employment training program model can be summarized and depicted.

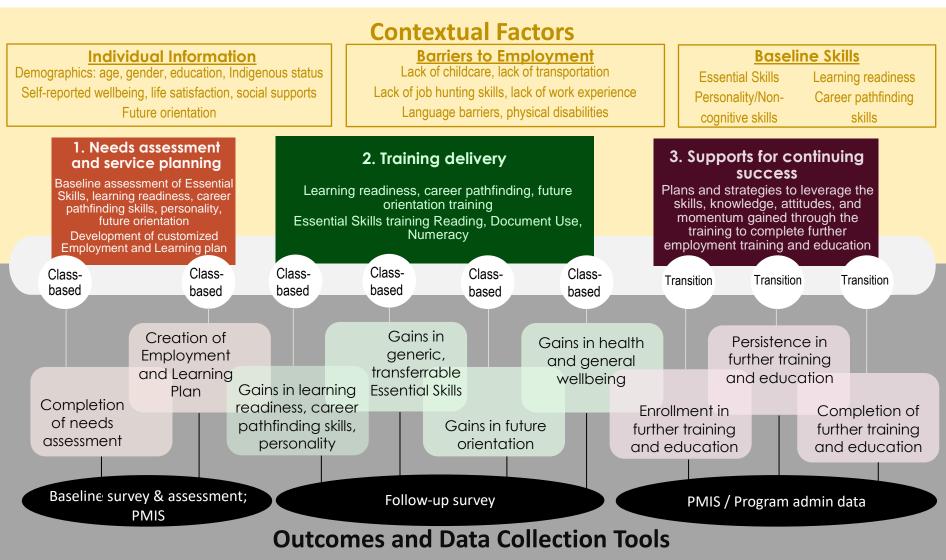


Figure 6 Sample model for a pre-employment training program

6.2 Employment training program

Overview

Compared to the pre-employment training model previously described, this employment training program is designed to serve jobseekers who are closer to the labour market. Suitable participants for this type of programs are unemployed, or underemployed in "survival jobs," seeking assistance to get a job that is better aligned with their skills and interests.

A key objective of employment training programs is to help participants meet the skills requirements and performance standards to work in their chosen sector or industry. Using a sector-based approach to develop employment training programs helps ensure that sector-specific skills requirements and performance standards are integrated into the model, curricula and evaluation tools. This means the resulting program model aligns with not only the training needs of jobseekers but also the skills needs of employers who are looking to hire workers whose skills and competencies meet their expectations and standards.

In this section, we will describe such employment training program developed for the manufacturing sector, training participants with the ultimate goal to gain sustained employment as sewing machine operators. Program staff works closely with one manufacturing employer to uncover industry performance benchmarks. Aligning industry-specific performance standards with the Essential Skills framework, the resulting program model contextualizes Essential Skills training within the performance framework of the manufacturing industry, focusing on the types of skills that can boost jobseekers' ability to meet job performance benchmarks.

The program is designed with two Essential Skills training components. Participants start with generic Essential Skills training, upgrading the foundational skills necessary to achieve later industry-contextualized training success as well as employment milestones. At a later stage of the training, participants receive occupation-specific Essential Skills training, acquiring the competencies to meet or exceed industry performance benchmarks. Together both Essential Skills training components help jobseekers transition to a state of work-readiness, equipping them with the necessary skills and competencies to successfully carry out job tasks and become meaningfully contributing employees in their target sector.

Contextual factors

For this program context, the key contextual factors are both at the individual and organizational levels, as shown in Table 5.

To reiterate, **demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

Factors	Details	Data collection tools
INDIVIDUAL LEVEL	FACTORS	
INDIVIDUAL INFOR	MATION	
Demographic characteristics	Age, gender, education, marital status, immigration status, Indigenous status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey
Personal characteristics	Self-reported Mental Wellbeing, Life Satisfaction, and Social Networks (see Appendix D)	Baseline survey
BARRIERS TO EMP	LOYMENT	
Barriers to employment	Participants are asked to indicate if they have faced one or more barriers on the list of common barriers that challenge their ability to find and keep a job (see Appendix B)	Baseline survey
BASELINE SKILLS		
Generic Essential Skills	Document Use, Numeracy	TOWES General Series (see SRDC Phase I Report for more details)
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey
Career Adaptability	Career Planning, Career Decision-making Self-efficacy, Job Search Clarity, Job Search Self-efficacy (see Appendix C)	Baseline survey
Personality	The Big Five (see Appendix C)	Baseline survey
ORGANIZATIONAL	FACTORS	
PERFORMANCE ST	ANDARDS	
Performance standards	Through interviews and consultations with senior managers and Human Resource managers of the company, program staff identifies key performance benchmarks that employer expects prospective employees to demonstrate to become meaningfully contributing workers of the organization. These performance benchmarks are based on job tasks that employees complete on a daily basis (see Appendix F).	Documentations by project staff

Table 5 Contextual factors for an employment training program

Information on **barriers to employment** is important to understand the breadth and depth of the employment challenges participants face. Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Understanding baseline Essential Skills help staff adjust the level of difficulty and complexity of their training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness, career adaptability, and personality enrich staff's understanding of participants' preconditions that support their attainment of later employment and retention milestones.

At the organizational level, **performance standards** are what employers expect workers to do in order to meaningfully contribute to key underlying business outcomes. To uncover these performance standards, program staff conducts interviews and consultations with senior managers and human resource specialists at the company. The team jointly define major performance areas covering key job tasks workers should be doing to achieve business results. Achieving these performance standards is one of the key training milestones for participants. Program staff then designs and develops the training around these goals, contextualizing their training activities within the framework of job performance.

Program activities, associated milestones, outcomes, and suggested measurement tools

To iterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each of the stages and the associated milestones, targeted outcomes, as well as the recommended tools to measure these outcomes. Table 6 provides a summary of this alignment.

During the **needs assessment and service planning** stage, program staff administers baseline survey and assessment to collect data on learners' initial skill levels. At this stage, staff administers the generic assessment to document baseline generic Essential Skills.⁶ Program staff then works with participants to develop an Employment and Learning plan that aligns with their initial skill levels and training needs. The plan details the steps participants need to take to achieve their ultimate employment goals, outlining the classroom-based milestones and post-program milestones that participants aim to achieve along their pathway. At this stage, indicators of success are completion of the baseline survey and assessments, and creation of the Employment and Learning Plan that aligns with participant's initial skills and abilities. These can be documented through an administrative database or a PMIS monitored by program staff.

⁶ For the purpose of illustration, we choose the ESG assessment in this example. See SRDC Phase I report for the full inventory of assessment tools to help select the tools that best align with future program's assessment needs.

Table 6 Activities, milestones, outcomes, and data collection tools for an employment training program

Program activities	Milestones	Outcomes	Data collection tools
1. NEEDS ASSESSMENT AND SERVICE	PLANNING		
Participants complete baseline survey and assessment to measure baseline Essential Skills, learning readiness, career pathfinding skills, general wellbeing, and personality factors indicative of their employability.	Completion of needs assessment	Record of completion	Baseline assessments and survey; Administrative database/PMIS
Participants work with project staff to create customized Employment and Learning Plans. These plans sketch out a pathway to employment based on participants' starting skills and competencies. They also give the details of the milestones participants hope to achieve as a result of the training program, outlining the steps they need to take to achieve their learning and/or employment goals.	Creation of Employment and Learning Plan	Record of creation	Administrative database/PMIS
2. TRAINING DELIVERY			
Program staff delivers learning and work readiness training, providing participants with a better understanding of the labour market. They also equip participants with the basic skills to navigate the job	Gains in learning readiness	Increases in Receptivity toward Continuous Learning scale scores between baseline and post-training	Follow-up survey
market and find industry-relevant information themselves, including information on skills requirements and credentials to plan the next education or training programs they need.	Gains in career pathfinding skills	Increases in Career Adaptability scale scores between baseline and post-training	Follow-up survey
Program staff delivers Essential Skills training, focusing on the core literacy skills that are transferrable to multiple learning and employment contexts: Document Use and Numeracy.	Gains in generic Essential Skills	Increases in Essential Skills scores and/or levels between baseline and follow-up	ESG generic Essential Skills assessments

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Program activities	Milestones	Outcomes	Data collection tools	
Program staff delivers training that embed Essential Skills within employer- defined performance standards, focusing on the aspects of Essential Skills that align with the performance expectations the employer has for their prospective employees.	Meeting industry- specific Essential Skills requirements	Meeting the minimum score threshold on the Occupation-Specific Essential Skills assessment. This assessment is developed jointly by the employer and program staff based on employer- defined benchmarks of Essential Skills in the workplace (see Appendices F and G)	Occupation-specific Essential Skills Assessment	
With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post- training	Follow-up survey	
more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also become more future-oriented and may develop habits, perceptions, attitudes and personality traits that contribute more positively to their employability.	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post- training	Follow-up survey	
3. SUPPORTS FOR CONTINUING EMPLOYMENT SUCCESS				
Staff works with learners to leverage the skills, knowledge, attitudes, perceptions and mindsets gained from the program to achieve continuing success.	Participation in significant work experience co-op in targeted industry and	Achievement of 10% productivity, based on internal employer assessment	Administrative database/PMIS	

occupation		
Completion of further	Achievement of 20%	Administrative
industry-specific	productivity, based on	database/PMIS
technical training	internal employer	
	assessment	

Program activities	Milestones	Outcomes	Data collection tools
	Employment placement in targeted industry and occupation	Employment in target occupation identified in Employment Learning Plan	Administrative database/PMIS
	Retention at 3 months	Record of continuing employment.	Administrative database/PMIS
	Retention at 6 months	Participants must work a minimum of 20 hours per week over each of the	Administrative database/PMIS
	Retention at 12 months	three follow-up periods identified.	Administrative database/PMIS

Program staff then **delivers the training**. Training focuses first on learning readiness; career pathfinding skills; as well as generic Reading, Document Use and Numeracy – the three core Essential Skills that are transferrable to multiple learning and employment contexts. The second component of the training is industry-specific Essential Skills training, with the focus on key aspects of Essential Skills that align with specific performance requirements of sewing machine operators.

An Occupation-Specific Essential Skills (OSES) assessment is developed based on the performance benchmarks jointly defined by program staff and employers. In this project, the OSES assessment is an employer-rated, industry-contextualized tool that embeds assessments of Essential Skills within a set of sector-specific job tasks to document progress toward industry-standardized competencies. It provides indication of learners' readiness to meet employer-defined performance benchmarks as they transition from classroom-based training to work placements. Employer trainers observe and evaluate each participant on a scale from 1 to 5 on fourteen job performance areas as they deliver technical training to provide learners with the fundamental technical skills to be employed in this occupation (see Appendices F and G as well as SRDC Phase I report for further details).

Other outcomes are also collected at this stage. Specifically, with an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also develop habits, attitudes and personality traits that contribute more positively to their employability. At this stage, indicators of success are gains in learning readiness, career pathfinding skills, generic Essential Skills, meeting the minimum score on the industry-specific Essential Skills assessment, as well as gains in general wellbeing and personality/non-cognitive skills measured through survey and assessments.

In the final stage of the program, program staff provides **supports to ensure continuing learning and employment success**. They work with learners to design plans and strategies to help them leverage what they have learned in class to continue to achieve success in learning and employment contexts beyond the program. In this case, staff works with participants to develop a learning transfer plan, giving them concrete strategies to translate what they have learned in class to what they need to do on the shop floor. Staff continues to provide supports as possible and monitor participants' achievements of milestones that indicate successful transition to the workplace.

These transition milestones start with successful participation in work experience co-op with the employer. At this stage, program staff makes pre-arrangements with the participating employer to provide a basic work experience program that includes the equivalent of 40 hours of work. Each participant receives participation orientation/workshop, training/employment plan developed with the employer, regular supervision and feedback from employer supervisors, as well as check-in with formal and informal feedback and coaching from program staff. The milestone at this stage is linked to an employer-defined performance benchmark – 10% productivity rate. Participants who achieve this milestone are then enrolled in industry-specific technical training provided by the employer. At this stage, employer expect participant to achieve 20% productivity rate in order to be hired. Once participants are hired, program staff continues to check in with participants at 3-, 6-, and 9-month follow-ups to monitor retention.

Finally, Figure 7 captures the contextual factors, program activities, program outcomes and associated data collection tools. It also serves as a useful example of how a milestone-based employment training program model can be depicted.

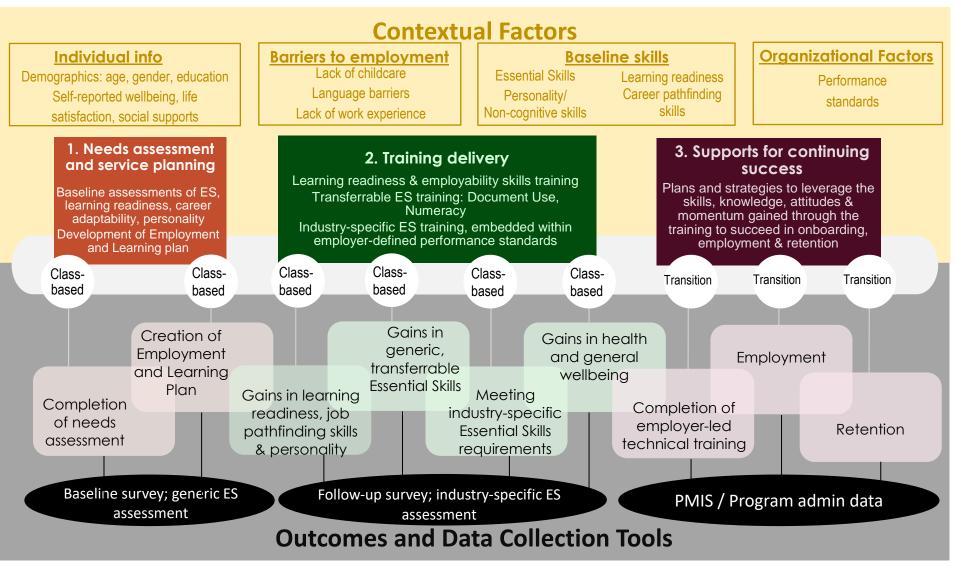


Figure 7 Sample model for an employment training program

6.3 Workplace training program

Overview

This section describes a workplace training program designed for workers in the construction industry to upgrade their Essential Skills, strengthen their job performance, and ultimately, contribute to enhance the underlying business outcomes of their employers. The construction industry is estimated to lose 250,000 skilled tradespeople to retirements over the next decade, leading to skilled labour challenges at unprecedented levels (BuildForce Canada, 2015). This is placing significant pressure on training capacity, particularly for employers, unions, and current supervisors and journeypersons who are responsible for the large majority of skills development through apprenticeship and mentorship.

Training models designed for construction workplaces need to take into account the fact that the industry relies heavily on mentorship to provide hands-on training. Over 80 per cent of technical training in the skilled trades takes place on the job through mentoring relationships. In a recent study by BuildForce Canada (2015), an overwhelming majority of employers reported mentorship as the key to the development of the next generation of qualified journeypersons. At the same time, results indicate that there is a great deal of variability in how mentorship is implemented and whether or not it is efficiently delivered. More importantly, of greatest concern is the fact that the quality of mentorship is drastically uneven, as the majority of journeypersons are not prepared to take on mentoring roles.

Effective mentoring relies on strong Essential Skills with an emphasis on oral communication, teamwork (working with others), and problem solving or thinking skills. Recent studies have demonstrated that Essential Skills not only are key to the acquisition of further technical skills but also have a significant positive effect on workers' productivity – and in turn, on employers' bottom line. To illustrate, results from a pan-Canadian study for the tourism industry have shown that even modest investments in workplace Essential Skills training translated into substantial gains in job performance of workers, leading to increased success rates on industry certification (Gyarmati et al., 2014). This was accompanied by a wide range of improvements in business outcomes, including increased job retention, productivity gains, and costs savings from reduced errors and waste, with firms ultimately realizing a 23 per cent return on their training investments within the first year.

Given this interconnectedness between Essential Skills, mentorship, job performance, and business outcomes, program staff constructs a training model that focuses on the key steps that journeypersons and apprentices can take to become effective mentors and mentees. Training includes two half-day workshops, one tailored to mentors and the other tailored to mentees. The workshops aim to equip participants with practical strategies and tips to help them strengthen the mentorship relationships on jobsites. After the workshops, both mentors and mentees receive enhanced workplace tools and supports such as weekly toolbox talks and weekly mentorship exercises to further reinforce their mentorship skills and knowledge. The goals of the program are to directly enhance the quality of mentorship on the job and indirectly improve job performance through more effective technical skills and knowledge exchange between mentors and mentees. This in turn will strengthen the underlying organizational outcomes for the employers.

Contextual factors

Key contextual factors for this workplace training program are shown in Table 7. **Demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Baseline Essential Skills are measured within the mentorship context through indicators capturing the alignment between mentorship skills and Essential Skills, with a focus on Oral Communication, Working with Others, Thinking, and Continuous Learning.⁷ Participants receive different baseline skills assessments depending on their mentorship roles. Journeypersons are assessed on their ability to be constructive mentors or teachers on the job, whereas apprentices are assessed on their ability to be effective mentees or learners on the job. Understanding the baseline levels of Essential Skills in the context of mentorship help staff adjust the level of difficulty and complexity of their mentorship training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness and personality enrich staff's understanding of participants' pre-conditions that support their attainment of later milestones indicating further professional growth and career development.

Organizational factors – business needs, performance gaps, as well as skills and training gaps – play a prominent role in the design, implementation and evaluation of this workplace training program. As stated in the previous section, in order to deliver meaningful value, workplace training must evolve directly from the organizations' key business priorities. Indeed, a well-cited Canadian study found that business alignment is the most important factor influencing training effectiveness (The Canadian Society for Training and Development, 2010). As well, a large-Canadian study of workplace training in the tourism industry – UPSKILL – has shown that training impacts are significantly and positive related to how well aligned training curriculum is to the tangible business needs, as articulated by employers (Gyarmati et al., 2014).

⁷ The assessment of Essential Skills contextualized within the mentorship environment of the construction industry will be discussed in further details in the Outcome section. See Appendix H for the full assessment.

Factors	Details	Data collection tools		
INDIVIDUAL LEVEL FACT	ORS			
INDIVIDUAL INFORMATION				
Demographic characteristics	Age, gender, education, marital status, immigration status, Indigenous status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey		
Personal characteristics	Self-reported Mental Wellbeing, Life Satisfaction, and Social Networks (see Appendix D)	Baseline survey		
BASELINE SKILLS				
Essential Skills contextualized within mentorship environment	Oral Communication, Working with Others, Thinking, and Continuous Learning (see Appendix H)	Baseline assessment		
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey		
Personality	The Big Five (see Appendix C)	Baseline survey		
ORGANIZATIONAL FACTORS				
BUSINESS NEEDS				
Business needs	 Through interviews and consultations, program staff and employers jointly identified the following three areas as the top business priorities of construction companies: Health and safety, Productivity, and Quality of the work. 	Documentations by project staff		
PERFORMANCE GAPS				
Performance gaps	 Through interviews and consultations, program staff, employers and employees jointly identified that apprentices in the construction industry tend struggle to meet performance standards or expectations in the following areas: 1) With respect to health and safety: a. Using Personal Protective Equipment (PPE) b. Following safety procedures and regulations c. Conducting field hazard assessments d. Maintaining a safe work environment 	Documentations by project staff		

Table 7 Contextual factors for an employment training program

Factors	Details	Data collection tools	
	2) With respect to productivity:		
	a. Material handling and organization		
	 Handling change orders and other work interruptions 		
	c. Task efficiency/Working efficiently		
	d. Maintaining time-on-tools		
	3) With respect to quality:		
	a. Quality-related tasks		
	b. Understanding company expectations on quality		
	 Understanding workers' own roles in quality assurance and quality control 		
	d. Completing quality control appropriately		
SKILLS GAPS AND TRAINING NEEDS			
Gaps in Essential Skills, as manifested through gaps in mentorship skills	Project staff conducts a review of the mentorship literature the Essential Skills framework to align the mentorship principles with relevant aspects of Oral Communication, Thinking, Working with Others, and Continuous Learning skills.	Document review, analysis, and alignment documentation by project staff	

Information on **business needs**, **performance gaps**, **as well as skills gaps leading to training needs** is uncovered through comprehensive Organizational Needs Analyses. This process starts with the development of a preliminary performance framework, which offers a systematic approach in the development of a common structure and terminology for describing and identifying skills deficits, job performance gaps, and business outcomes across all selected trades. The objective of the preliminary framework is to link together a manageable number of broadly defined business outcomes with employee-level performance requirements, for instance by acknowledging how *employee-level* workplace practices may influence *business-level* outcomes.

To develop this performance framework, project staff reviews relevant documentation on the performance standards for the targeted trades set by trade associations and other related organizations and training authorities, at both the federal and provincial levels. These documents provide a starting point to organize employee-level performance standards, and to identify broad performance requirements as they related to specific job tasks. This helps ensure that the linkages between business priorities and performance requirements are grounded in actual work required by employees in the targeted trades.

The performance framework is developed at the beginning of the program, serving as a critical guide to provide directions for subsequent research and implementation activities throughout the project. Particularly, the framework helps inform the development of research tools and protocols used for data collection. It also serves as content drivers for the mentorship program's curricula,

providing crucial information on the specific performance gaps that need to be addressed through mentorship activities.

Project staff then conducts interviews and consultations with multiple levels of workers within the participating organizations, including senior managers, human resources managers, superintendent, foremen, as well as journeypersons and apprentices. The purpose of these consultations is to confirm and validate the performance framework, refining the alignment between business needs, performance gaps and skills needs, ensuring the resulting training is well-customized to target the needs of the construction industry.

In addition, staff relies on their understanding and expertise in the realm of mentorship and Essential Skills training to align core mentorship principles with key aspects of Essential Skills. This not only ensures that the program delivers well-contextualized Essential Skills training activities that can make a difference to mentorship quality on construction jobsites, but also informs the design of contextualized Essential Skills assessments to document participants' skills gains. The results of this process is briefly discussed in Table 7.

Program activities, associated milestones, outcomes, and suggested measurement tools

To iterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each of the stages and the associated milestones, targeted outcomes, as well as the recommended tools to measure these outcomes. Table 8 provides a summary of this alignment.

Needs assessments are conducted with not only individual workers but also participating employers. Project staff engages with employers to conduct Organizational Needs Analyses, uncovering and validating key business needs, major performance gaps, as well as critical skills gaps requiring training needs among their workers. Staff then works with individual participants to assess their baseline Essential Skills in the mentorship context, using contextualized assessments developed based on the validated performance framework. Participants are also assessed on their baseline levels of job performance, gauging the nature and severity of the gaps between actual employee performance and the standard levels of performance expected by the employers through self-assessed survey. The performance assessment is also developed based on the validated performance framework.

In the **service planning** stage, staff works closely with participating employers and employees to create customized Mentorship Plans. For employers, the Mentorship Plans include the customization and contextualization of mentorship curricula, tools and supports, aligning with their business needs and workplace cultures. The plans also include strategies to incorporate trade-specific examples into the mentorship curricula to illustrate how mentorship can be applied on jobsites. Finally, employers receive recommended implementation strategies to roll out ongoing mentorship tools and supports in the workplace based on the unique characteristics of their companies.

Table 8Activities, milestones, outcomes, and data collection tools for an employment training
program

Program activities	Milestones	Outcomes	Data collection tools		
1. NEEDS ASSESSMENT AND SERVICE	1. NEEDS ASSESSMENT AND SERVICE PLANNING				
Program staff conducts Organizational Needs Assessments with participating employers, uncovering and validating not only the key business needs, performance gaps and skills gaps, but also how they are aligned and can be improved through mentorship training.	Completion of Organizational Needs Assessments	Record of completion Identification of business needs, performance gaps, and skills gaps leading to training needs	Organizational Needs Analysis protocols		
Participants complete baseline assessment to measure Essential Skills contextualized in the mentorship environment of the trades. Participants also complete baseline assessments of learning readiness, general wellbeing, and personality factors indicative of their workability.	Completion of Individual Needs Assessment	Record of completion Record of baseline Essential Skills contextualized in mentorship environment, as well as baseline job performance	Baseline assessments and survey; Administrative database/PMIS		
Participating employers and employees work with project staff to create customized Mentorship Plans that align with skills gaps and performance gaps of employees, as well as business needs and workplace cultures of employers.	Creation of Mentorship Plan	Record of creation	Administrative database/PMIS		
2. TRAINING DELIVERY					
Program staff deliver mentorship workshops, focusing on improving participants' Oral Communication, Working with Others, Thinking, and Continuous Learning skills.	Gains in Essential Skills contextualized in mentorship environment in the construction trades	Increases in scores on Essential Skills assessed in the context of mentorship between baseline and follow-up	Follow-up assessment of Essential Skills contextualized in mentorship environment		
Equipped with the skills to become more effective learners and teachers on the job, participants become more receptive to continuous and lifelong learning.	Gains in receptivity toward continuous learning	Increases in Receptivity toward Continuous Learning scale scores between baseline and post-training	Follow-up survey		

Program activities	Milestones	Outcomes	Data collection tools
Participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their career and attachment to the trades. They may also see their social support network expanded. As well, they may develop habits, perceptions, attitudes and personality traits that make them more conscientious and reliable workers.	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post- training	Follow-up survey
	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post- training	Follow-up survey
3. SUPPORTS FOR CONTINUING SUCCE	ESS ON THE JOB		
Staff work with learners to leverage the skills, knowledge, attitudes, perceptions and mindsets gained from the program to achieve continuing success.	Completion of weekly mentorship goals	Record of completion	Administrative database/PMIS updated by employers and monitored by project staff
	Gains in job performance at 6-month follow-up	Gains in job performance before and after the training	Follow-up assessment of job performance
	Progress through the next level of apprenticeship at 12-month follow-up	Record of progress	Administrative database/PMIS

For individual employees, the Mentorship Plans At the individual levels, the Mentorship Plans sketch out a pathway to better mentoring skills and job performance in the areas of safety, productivity and quality. They also give the details of the milestones participants hope to achieve as a result of the mentorship workshops, outlining the steps they need to take to leverage their mentorship skills and knowledge to improve their job performance. It also shows them how they can make the best use of hands-on technical training through mentorship, in order to acquire all the necessary trades skills to complete their apprenticeship. At this stage, indicators of success are completion of the needs assessments and identification of business needs, performance gaps and skills gaps. These can be documented through an administrative database or a PMIS monitored by program staff.

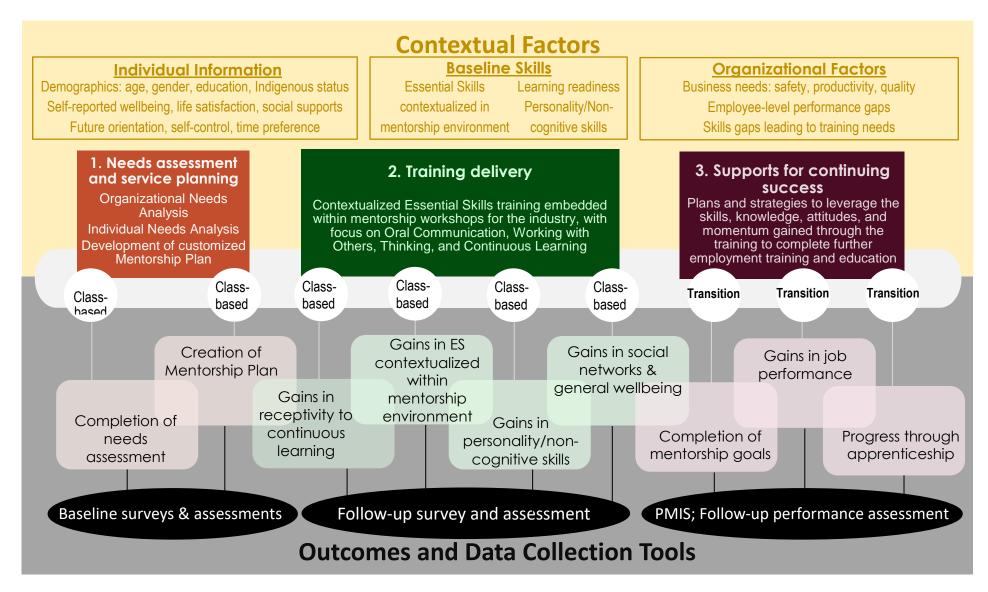
Program staff then **deliver the training**. The mentorship workshops focus on key steps to become effective mentors and mentees on the job. The training emphasizes the importance of Oral

Communication, Thinking, Working with Others, and Continuous Learning – the fundamental skills needed to develop strong mentoring relationships at work. Equipped with the skills to become more effective learners and teachers on the job, participants become more receptive to continuous and lifelong learning. Furthermore, with an enhanced understanding of their own skills and with a better-defined pathway toward enhanced job performance, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their career and attachment to the trades. They may also see their social support network expanded as they cultivate stronger working relationships with their mentors and coworkers. As well, they may develop habits, perceptions, attitudes and personality traits that make them more conscientious and reliable workers. Indicators of success at this stage are gains in Essential Skills contextualized in the mentorship environment of construction jobsites, gains in receptivity toward continuous learning, gains in general wellbeing, as well as gains in personality/non-cognitive skills indicative of enhanced workability.

In the final stage of the program, program staff provide **supports to ensure continuing mentoring success**. They work with individual participants to devise a plan to incorporate mentorship principles into their daily job tasks, creating weekly goals and practice exercises to gain more positive mentorship habits. Participants also leverage the skills, knowledge and momentum gained through mentorship training to improve their job performance, addressing gaps in key areas that have been identified in the needs assessment stage and contributing to improve the organizational outcomes of their employers. At this stage, staff monitors participants' completion of weekly mentorship goals and exercises for the next six months. At the 6-month follow-up, staff also administers a post-program assessment of job performance, recording any improvements in safety, productivity and quality after the mentorship training. Finally, staff conducts a 12-month follow-up to see if participating apprentices have successfully moved to the next levels of their apprenticeship.

Finally, Figure 8 captures the contextual factors, program activities, program outcomes and associated data collection tools. It also serves as a useful example of how a milestone-based workplace training program model can be depicted.





7.0 Tailoring the measures to key populations

In this section, we will build upon Section 6 and illustrate how to customize the sample models and measurement frameworks to align with the needs of target populations. Particularly, we will describe a pre-employment program targeting youth, aiming to boost their labour market prospects by encouraging their participation in post-secondary education. We will also describe two employment programs, one designed specifically for newcomers and the other aligned with the needs of Indigenous jobseekers. No example of targeted workplace program will be described, as the priority of workplace training is to align with the *aggregate* needs of the entire workforce instead of *specific* needs of a group of employees.

7.1 Pre-employment program for youth

Overview

In this example, we will describe a pre-employment program aiming to enable disadvantaged youth to earn a university degree and improve their career opportunities. Typically, youth from families within the lower brackets of the income distributions, and/or with low parental educational attainment are more disadvantaged than others in terms of university enrollment and completion (Côté et al., 2008). Other criteria that define the target population of this program are youth being out of school, being unemployed, and having expressed a desire to participate in university but lacking the basic skills to take the first step. The program focuses on providing training on the transferrable aspects of Numeracy, Reading and Document Use to prepare youth to participate and succeed in university. Other components of the program include transitional supports and assistance that help with application, enrollment and graduation.

A key element to highlight in this measurement framework is the type of indicators that can capture participants' perceived costs and benefits to a university education. Multiple studies have documented that in general, Canadians tend to inaccurately estimate the returns on investment from a university degree (Canada Millennium Scholarship Foundation, 2006; Côté et al., 2008). Most people substantially overestimate the short-term costs of university in the relation to the long-term benefits – by a factor of five (Junor & Usher, 2004; Usher, 2005). This lack of accuracy is even more pronounced among respondents from lower-income families, to the point where they inaccurately think the costs outweigh the benefits (Usher, 2005).

Furthermore, there seems to be increasing evidence that there are non-monetary costs to university attendance as well, particularly among those from disadvantaged backgrounds (Côté et al., 2008). Issues of identity, the tensions associated with identity change and dislocation from familiar comfort zones are often highlighted as barriers to university participation. These barriers are prominent among Indigenous youth, who reported that "personal reasons" are more likely to be a reason for dropping out of university than all other financial factors (Malatest and Associate, 2004).

Importantly, perceptions play a critical role in youth's decision to participate and complete university education. Côté et al. (2008) found that perceived costs and benefits are significant

predictors of university attendance, even after controlling for parental education, gender, as well as academic engagement and grades in high school. Peterson and Delmas (2001) found that students who believe in the benefits of higher education, and who associate a university education with better employment opportunities are more likely to complete their studies. When the longer-term benefits of education is perceived as a worthy investment that pays back in the form of improved career opportunities, students are more likely to persist through their studies (Frymier & Shulman, 1995). Given its critical role, perception of costs and benefits of a university education is included in the measurement framework of this program. The rest of this section illustrates the recommended measurement menus aligned with this pre-employment context.

Contextual factors

For this program model, the key contextual factors are at the individual level, summarized in Table 9. In addition to the contextual factors already discussed in Section 6.1, information on perceived returns on investments to university is also collected. The recommended scale has been validated and widely used in various projects targeting youth (Côté et al., 2008; Palameta & Voyer, 2011). The measure contains subscales that capture: i) monetary benefits to university, ii) nonmonetary benefits to university, iii) debt avoidance, iv) identity anxiety, v) indecision concerns, and vi) belief in alternatives to university. The scale is particularly relevant to this program context because the measures are contextualized in the form of perceived future employment benefits. The full instrument is included in Appendix I.

The rest of the factors in the measurement framework is similar to the ones collected for the general pre-employment training program. To reiterate, **demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

Future orientation is a personal trait that plays a key role in the design, implementation and evaluation of pre-employment training programs. As previously discussed, future orientation predicts participants' persistence and performance within the training program, as well as their future educational and employment achievements. Collecting information on the starting level of future orientation among participants helps program staff design training activities that aligns with participants' abilities, attitudes and interests. It also helps them make appropriate plans to minimize attrition, especially among participants with low future orientation, by making the link between the current training and their later employment success especially salient.

Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Understanding baseline Essential Skills help staff adjust the level of difficulty and complexity of their training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness and personality enrich staff's understanding of participants' pre-conditions that support and enable their attainment of later learning and employment milestones.

Factors	Details	Data collection tools		
INDIVIDUAL INFORMATION				
Demographic characteristics	Age, gender, education, marital status, immigration status, Indigenous status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey		
Personal characteristics	Self-reported Mental Wellbeing, Life Satisfaction, and Social Networks (see Appendix D)	Baseline survey		
Future orientation	Assessments to reveal if respondents prefer receiving a larger reward later or a smaller reward sooner (see Appendix E for further details)	Baseline survey		
Perceived returns on investments in PSE	Measures to capture i) monetary benefits to university, ii) non- monetary benefits to university, iii) debt avoidance, iv) identity anxiety, v) indecision concerns, vi) belief in alternatives to university (see Appendix I for further details).	Baseline survey		
BASELINE SKILLS				
Generic Essential Skills	Reading, Document Use, Numeracy	TOWES General Series (see SRDC Phase I Report for more details)		
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey		
Personality	The Big Five (see Appendix C)	Baseline survey		

Table 9 Contextual factors for a pre-employment program for disadvantaged youth

Program activities, associated milestones, outcomes, and suggested measurement tools

To reiterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each stage, as well as their associated milestones, targeted outcomes, and recommended measurement tools. Again, standard elements that have been discussed in previous sections are highlighted in grey, whereas the elements that are unique to the pre-employment program context are highlighted in yellow in Table 10.

During the **needs assessment and service planning** stage, program staff administers baseline survey and assessment to collect data on learners' initial skill levels. Because the training focuses

on generic, transferrable Essential Skills, a generic Essential Skills assessment tool is used.⁸ Program staff then works with participants to develop a Learning plan that aligns with their initial skill levels and training needs. The plan details the steps participants need to take to achieve their ultimate goals of participation in university, outlining the classroom-based milestones and postprogram milestones that participants aim to achieve along their pathway. At this stage, indicators of success are completion of the baseline survey and assessment, and creation of the Learning Plan that aligns with participant's initial skills and abilities. These can be documented through an administrative database or a PMIS monitored by program staff.

Program staff then **delivers the training**. Training focuses on learning readiness; career pathfinding skills; as well as generic Reading, Document Use and Numeracy – the three core Essential Skills that are transferrable to multiple learning and employment contexts. Another key component of the training is to help participants see the benefits of investing the time and efforts in acquiring more skills and competencies now, as it will help them get better employment outcomes in the future. Incorporating in the training exercises that make the benefits of learning more salient to participants is one way to strengthen their future-oriented mindset.

Participants also receive services and supports that help get a more accurate picture of the costs and benefits of a university education. This training component starts with research conducted under the guidance of program staff to help participants understand the variety of financial supports available to them, including repayable loans as well as non-repayable grants. This strengthens their understanding of the upfront financial burden of a university education. Staff also helps participants build customized portfolios of possible careers that align with their individual strengths and interests. By constructing these portfolios, participants get a chance to explore the required educational credentials to work in these occupations, as well as the salary scales related to each educational level. These activities aim to improve participants' understanding of the benefits of a university education, making their perceived returns on investment in a university degree more accurate.

⁸ For the purpose of illustration, we choose the TOWES General Series in this example. See SRDC Phase I report for the full inventory of assessment tools to help select the tools that best align with future program's assessment needs.

Table 10Activities, milestones, outcomes, and data collection tools for a pre-employment
training program

Program activities	Milestones	Outcomes	Data collection tools
1. NEEDS ASSESSMENT AND SERVICE	PLANNING		
Participants complete baseline survey and assessment to measure baseline Essential Skills, learning readiness, career pathfinding skills, general wellbeing, future orientation, perceived returns on investments in a university education, and personality factors indicative of their receptivity toward university education.	Completion of needs assessment	Record of completion	Baseline assessment and survey; Administrative database/PMIS
Participants work with project staff to create customized Learning Plans. These plans sketch out a pathway to university enrolment and completion based on participants' starting skills and competencies. They also give the details of the milestones participants hope to achieve as a result of the training program, outlining the steps they need to take to achieve their final learning goals.	Creation of a Learning Plan	Record of creation	Administrative database/PMIS
2. TRAINING DELIVERY			
Program staff delivers learning readiness training, providing participants with a better understanding of the labour market. They also equip participants with the basic skills to navigate the job market and find industry-relevant information themselves, including information on skills requirements and credentials to plan the next education or training programs they need.	Gains in learning readiness	Increases in Receptivity toward Continuous Learning scale scores between baseline and post- training	Follow-up survey
Program staff delivers Essential Skills training, focusing on the core literacy skills that are transferrable to multiple learning and employment contexts: Reading, Document Use, and Numeracy.	Gains in Essential Skills	Increases in Essential Skills scores and/or levels between baseline and follow-up	TOWES General Series

Program activities	Milestones	Outcomes	Data collection tools
Staff continues to reinforce the values of additional training and education, linking to realistic career opportunities and benefits in the future for youth.	Gains in future orientation	Increases in scale scores measuring Future Orientation and related concepts such as Self- Control and Time Preference between baseline and post-training (see Appendix E for details)	Follow-up survey
Staff conducts exercises to help participants gain a more accurate understanding of the costs and benefits of a university education.	Gains in perceived returns on investment to university education	Increases in self-reported perceptions of the monetary benefits and non- monetary benefits of university education, accompanied by decreases in self-reported identity anxiety, debt aversion, indecision concerns, and belief in university alternatives	Follow-up survey
With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post- training	Follow-up survey
greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also become more future- oriented and may develop habits, perceptions, attitudes and personality traits that contribute more positively to their employability.	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post-training	Follow-up survey
3. SUPPORTS FOR CONTINUING EMPLO	YMENT SUCCESS		
Staff works with learners to leverage the skills, knowledge, attitudes, perceptions	Enrollment in university	Record of enrollment	Administrative database/PMIS
and mindsets gained from the program to achieve continuing success.	Persistence and completion of a university degree	Record of completion	Administrative database/PMIS

With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also become more future-oriented and may develop habits, attitudes and personality traits that contribute more positively to their employability. At this stage, indicators of success are gains in learning readiness, career pathfinding skills, Essential Skills, general wellbeing, future orientation, perceived returns on investment in a university education, and personality/non-cognitive skills measured through follow-up survey and assessment.

In the final stage of the program, program staff provides **supports to ensure continuing learning success**. They work with learners to design plans and strategies to help them leverage what they have learned in class to continue to achieve success in university. For example, staff can help participants complete a financial aid application to secure necessary funding for their education. Staff can also help participants navigate the support systems available in school, making sure they have the skills and confidence to seek additional academic help at school when necessary. At this stage, staff needs to conduct long-term follow up with participants to track indicators of success, which are enrollment, persistence, and completion of university education.

Finally, Figure 9 captures the contextual factors, program activities, program outcomes and associated data collection tools for this pre-employment training example. It also serve as a useful illustration of how a pre-employment training program model can be summarized and depicted.

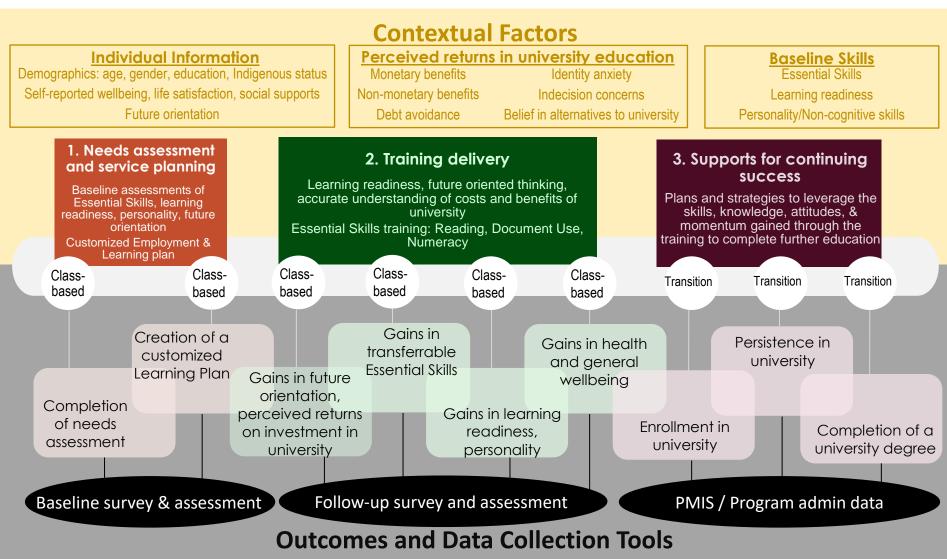


Figure 9 Sample model for a pre-employment program aiming to increase university participation of disadvantaged youth

7.2 Employment training program for newcomers

Overview

In this section, we will describe an employment training program designed for newcomers to Canada. Besides skills and competencies, sense of belonging and acculturation attitudes are important for this target group. This is because enhanced sense of belonging as well as strengthened acculturation profiles are crucial to improve the overall sense of wellbeing of newcomers in Canada (Hou et al., 2016). These factors capture not only their willingness and ability to engage with the receiving country (Canada) but also their preservation of own-group heritage culture (home country). Studies from other countries have found that stronger sense of belonging is linked to higher levels of self-esteem, life satisfaction, and social competence (Nguyen & Benet-Martinez, 2013). In Canada, evidence has emerged to suggest that sense of belonging is closely related to employment outcomes and income levels (Gariba, 2009).

As previously stated, a key objective of employment training programs is to help participants meet the skills requirements and performance standards to work in their chosen sector or industry. Using a sector-based approach to develop employment training programs helps ensure that sectorspecific skills requirements and performance standards are integrated into the model, curricula and evaluation tools. This means the resulting program model aligns with not only the training needs of jobseekers but also the skills needs of employers who are looking to hire workers whose skills and competencies meet their expectations and standards.

To make it easy to compare across different examples, we will use the same employment training structure developed for the manufacturing sector previously described. The program trains participants to help them gain sustained employment as sewing machine operators. Program staff works closely with one manufacturing employer to uncover industry performance benchmarks. Aligning industry-specific performance standards with the Essential Skills framework, the resulting program model contextualizes Essential Skills training within the performance framework of the manufacturing industry, focusing on the types of skills that can boost jobseekers' ability to meet job performance benchmarks.

The program is designed with two Essential Skills training components. Participants start with generic Essential Skills training, upgrading the foundational skills necessary to achieve later industry-contextualized training success as well as employment milestones. At a later stage of the training, participants receive occupation-specific Essential Skills training, acquiring the competencies to meet or exceed industry performance benchmarks. Together both Essential Skills training components help jobseekers transition to a state of work-readiness, equipping them with the necessary skills and competencies to successfully carry out job tasks and become meaningfully contributing employees in their target sector.

Contextual factors

For this program context, the key contextual factors are both at the individual and organizational levels, as shown in Table 11.

Factors	Details	Data collection tools	
INDIVIDUAL LEVEL FACTORS			
INDIVIDUAL INFORMATION	l		
Demographic characteristics	Age, gender, education, marital status, immigration status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey	
Personal characteristics	Self-reported Mental Wellbeing and Life Satisfaction (see Appendix D). Social Networks in this case are measured along two different dimensions: with people who have the <u>same</u> culture, ethnic background or language as the respondents; and with people who have <u>different</u> culture, ethnic background or language (see Appendix J)	Baseline survey	
Sense of belonging	Self-reported Sense of Belonging (see Appendix K)	Baseline survey	
Acculturation attitudes	Self-reported Acculturation Attitudes (see Appendix L)	Baseline survey	
BARRIERS TO EMPLOYME	NT		
Barriers to employment	Participants are asked to indicate if they have faced one or more barriers on the list of common barriers that challenge their ability to find and keep a job (see Appendix B)	Baseline survey	
BASELINE SKILLS			
Generic Essential Skills	Numeracy	TOWES General Series (see SRDC Phase I Report for more details)	
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey	
Career Adaptability	Career Planning, Career Decision-making Self-efficacy, Job Search Clarity, Job Search Self-efficacy (see Appendix C)	Baseline survey	
Personality	The Big Five (see Appendix C)	Baseline survey	

Table 11 Contextual factors for an employment training program

Factors	Details	Data collection tools		
ORGANIZATIONAL FACTO	ORGANIZATIONAL FACTORS			
PERFORMANCE STANDARDS				
Performance standards	Through interviews and consultations with senior managers and Human Resource managers of the company, program staff identifies key performance benchmarks that employer expects prospective employees to demonstrate to become meaningfully contributing workers of the organization. These performance benchmarks are based on job tasks that employees complete on a daily basis (see Appendix F).	Documentations by project staff		

To reiterate, **demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

We suggest a modified version of the measure of Social Networks to gain a deeper understanding of participants' diversity in social capital. Particularly, the modified measures ask participants how easily they can get help in different areas of life from not only from people who have the same culture, ethnic background, or language as they do, but also from those who have different cultures, ethnic backgrounds, and languages (see Appendix J for the full scale). In addition, measures of sense of belonging and acculturation attitudes are also captured (see Appendices K and L for the full scales).

Information on **barriers to employment** is important to understand the breadth and depth of the employment challenges participants face. Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Understanding baseline Essential Skills help staff adjust the level of difficulty and complexity of their training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness, career adaptability, and personality enrich staff's understanding of participants' preconditions that support their attainment of later employment and retention milestones.

At the organizational level, **performance standards** are what employers expect workers to do in order to meaningfully contribute to key underlying business outcomes. To uncover these performance standards, program staff conducts interviews and consultations with senior managers and human resource specialists at the company. The team jointly define major performance areas covering key job tasks workers should be doing to achieve business results. Achieving these performance standards is one of the key training milestones for participants. Program staff then designs and develops the training around these goals, contextualizing their training activities within the framework of job performance.

Program activities, associated milestones, outcomes, and suggested measurement tools

To iterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each of the stages and the associated milestones, targeted outcomes, as well as the recommended tools to measure these outcomes. Table 12 provides a summary of this alignment.

During the **needs assessment and service planning** stage, program staff administers baseline survey and assessment to collect data on learners' initial skill levels. At this stage, staff administers the generic assessment to document baseline generic Essential Skills.⁹ Program staff then works with participants to develop an Employment and Learning plan that aligns with their initial skill levels and training needs. The plan details the steps participants need to take to achieve their ultimate employment goals, outlining the classroom-based milestones and post-program milestones that participants aim to achieve along their pathway. At this stage, indicators of success are completion of the baseline survey and assessments, and creation of the Employment and Learning Plan that aligns with participant's initial skills and abilities. These can be documented through an administrative database or a PMIS monitored by program staff.

Table 12 Activities, milestones, outcomes, and data collection tools for an employment training program

Program activities	Milestones	Outcomes	Data collection tools
1. NEEDS ASSESSMENT AND SERVICE PLANNING	ì		
Participants complete baseline survey and assessment to measure baseline Essential Skills, learning readiness, career pathfinding skills, general wellbeing, and personality factors indicative of their employability.	Completion of needs assessment	Record of completion	Baseline assessments and survey; Administrative database/PMIS
Participants work with project staff to create customized Employment and Learning Plans. These plans sketch out a pathway to employment based on participants' starting skills and competencies. They also give the details of the milestones participants hope to achieve as a result of the training program, outlining the steps they need to take to achieve their learning and/or employment goals.	Creation of Employment and Learning Plan	Record of creation	Administrative database/PMIS

⁹ For the purpose of illustration, we choose the ESG assessment in this example. See SRDC Phase I report for the full inventory of assessment tools to help select the tools that best align with future program's assessment needs.

Program activities	Milestones	Outcomes	Data collection tools	
2. TRAINING DELIVERY				
Program staff delivers learning and work readiness training, providing participants with a better understanding of the labour market. They also equip participants with the basic skills to navigate the job market and find industry-relevant information	Gains in learning readiness	Increases in Receptivity toward Continuous Learning scale scores between baseline and post-training	Follow-up survey	
themselves, including information on skills requirements and credentials to plan the next education or training programs they need.	Gains in career pathfinding skills	Increases in Career Adaptability scale scores between baseline and post- training	Follow-up survey	
Program staff delivers Essential Skills training, focusing on the core literacy skills that are transferrable to multiple learning and employment contexts: Document Use and Numeracy.	Gains in generic Essential Skills	Increases in Essential Skills scores and/or levels between baseline and follow-up	ESG generic Essential Skills assessments	
Program staff delivers training that embed Essential Skills within employer-defined performance standards, focusing on the aspects of Essential Skills that align with the performance expectations the employer has for their prospective employees.	Meeting industry- specific Essential Skills requirements,	Meeting the minimum score threshold on the Occupation-Specific Essential Skills assessment. This assessment is developed jointly by the employer and program staff based on employer-defined benchmarks of Essential Skills in the workplace (see Appendices F and G)	Occupation- specific Essential Skills Assessment	
Program staff delivers a workshop to introduce participants to Canadian workplace cultures, which include tips on how to use non-verbal communication in the workplace, basic communication skills such as small talks, understanding and respecting deadlines and schedules.	Enhanced understanding of Canadian workplace culture	Record of completion of the orientation session on Canadian workplace culture	Administrative database/PMIS	

Program activities	Milestones	Outcomes	Data collection tools
Successful participation and engagement in a training program that is relevant to their career can enhance participants' sense of belonging to their new community, reducing feelings of isolation. This may also enhance their perceptions and respect toward the values and traditions of other ethnic and cultural groups, enhancing their acculturation attitudes.	Gains in sense of belonging and acculturation attitudes	Increases in measures capturing sense of belonging and acculturation attitudes to Canada, as well as no decreases in measures capturing sense of belonging and acculturation attitudes toward home country	Follow-up survey
With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post-training	Follow-up survey
career path and attachment to the labour market. They may also become more future-oriented and may develop habits, perceptions, attitudes and personality traits that contribute more positively to their employability.	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post-training	Follow-up survey
3. SUPPORTS FOR CONTINUING EMPLOYMENT S	UCCESS		
Staff works with learners to leverage the skills, knowledge, attitudes, perceptions and mindsets gained from the program to achieve continuing success.	Participation in significant work experience co-op in targeted industry and occupation	Achievement of 10% productivity, based on internal employer assessment	Administrative database/PMIS
	Completion of further industry- specific technical training	Achievement of 20% productivity, based on internal employer assessment	Administrative database/PMIS
	Employment placement in targeted industry and occupation	Employment in target occupation identified in Employment Learning Plan	Administrative database/PMIS

Program activities	Milestones	Outcomes	Data collection tools
	Retention at 3 months	Record of continuing employment. Participants must work a minimum of 20 hours per week over each of	Administrative database/PMIS
	Retention at 6 months		Administrative database/PMIS
	Retention at 12 months	the three follow-up periods identified.	Administrative database/PMIS

Program staff then **delivers the training**. Training focuses first on learning readiness; career pathfinding skills; as well as generic Reading, Document Use and Numeracy – the three core Essential Skills that are transferrable to multiple learning and employment contexts. In addition, program staff prepares participants to succeed in Canadian workplaces by delivering a workshop introducing the basic principles of Canadian workplace cultures. This workshop familiarizes newcomers with the unwritten rules of Canadian workplaces, such as respect for personal space, appropriate small talk topics, and respect for deadlines and schedules.

The second component of the training is industry-specific Essential Skills training, with the focus on key aspects of Essential Skills that align with specific performance requirements of sewing machine operators. An Occupation-Specific Essential Skills (OSES) assessment is developed based on the performance benchmarks jointly defined by program staff and employers. In this project, the OSES assessment is an employer-rated, industry-contextualized tool that embeds assessments of Essential Skills within a set of sector-specific job tasks to document progress toward industry-standardized competencies. It provides indication of learners' readiness to meet employer–defined performance benchmarks as they transition from classroom-based training to work placements. Employer trainers observe and evaluate each participant on a scale from 1 to 5 on fourteen job performance areas as they deliver technical training to provide learners with the fundamental technical skills to be employed in this occupation (see Appendices F and G as well as SRDC Phase I report for further details).

Other outcomes are also collected at this stage. Specifically, with an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also develop habits, attitudes and personality traits that contribute more positively to their employability.

In addition, sense of belonging and acculturation attitudes may also be enhanced. Indeed, multiple initiatives across Canada focusing on human capital development and labour force participation have reported increases in social engagement, community participation, and sense of belonging among participants from multi-barriered groups, including newcomers (Toye & Downing, 2006). Successful participation in a meaningful and relevant training program can increase the sense of

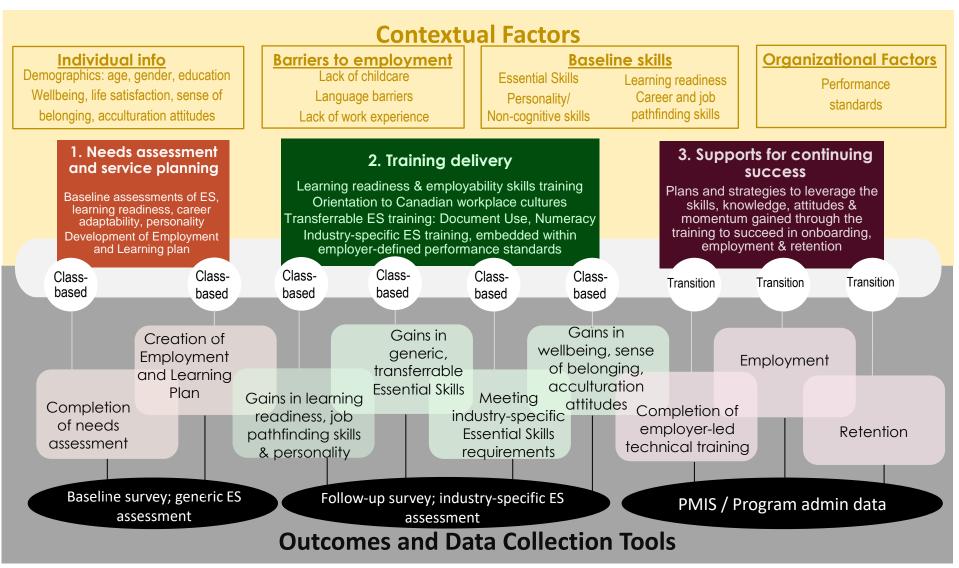
social inclusion, which are often accompanied by important perceptional and attitudinal changes reflected through an enhanced sense of community and pride in a local identity. This allows participants to feel more attached to their community and experience reduced feelings of isolation. As social contact increases and the perception of support from fellow residents increases, sense of belonging to the communities in Canada increases while sense of belonging to home country stays the same or also increases. It also helps with their acculturation attitudes, enhancing their perceived values in keeping in contact with others in Canada who are not from the same ethnic or cultural group, while encouraging them to learn and practice the values and traditions of people in Canada. At the same time, it helps preserve their values toward people from their same ethnic or cultural group in Canada, as well as the traditions of their homeland.

At this stage, indicators of success are gains in learning readiness, career pathfinding skills, generic Essential Skills, meeting the minimum score on the industry-specific Essential Skills assessment, as well as gains in general wellbeing, sense of belonging, acculturation attitudes, and personality/non-cognitive skills measured through survey and assessments.

In the final stage of the program, program staff provides **supports to ensure continuing learning and employment success**. They work with learners to design plans and strategies to help them leverage what they have learned in class to continue to achieve success in learning and employment contexts beyond the program. In this case, staff works with participants to develop a learning transfer plan, giving them concrete strategies to translate what they have learned in class to what they need to do on the shop floor. Staff continues to provide supports as possible and monitor participants' achievements of milestones that indicate successful transition to the workplace.

These transition milestones start with successful participation in work experience co-op with the employer. At this stage, program staff makes pre-arrangements with the participating employer to provide a basic work experience program that includes the equivalent of 40 hours of work. Each participant receives participation orientation/workshop, training/employment plan developed with the employer, regular supervision and feedback from employer supervisors, as well as check-in with formal and informal feedback and coaching from program staff. The milestone at this stage is linked to an employer-defined performance benchmark – 10% productivity rate. Participants who achieve this milestone are then enrolled in industry-specific technical training provided by the employer. At this stage, employer expect participant to achieve 20% productivity rate in order to be hired. Once participants are hired, program staff continues to check in with participants at 3-, 6-, and 9-month follow-ups to monitor retention.

Finally, Figure 10 captures the contextual factors, program activities, program outcomes and associated data collection tools. It also serves as a useful example of how a milestone-based employment training program model can be depicted.





7.3 Employment training program for Indigenous populations

Overview

This employment training program is designed to serve Indigenous jobseekers who are unemployed, or underemployed in "survival jobs," seeking assistance to get a job that is better aligned with their skills and interests. Customized to align with the needs of Indigenous participants, this program encompasses culturally and socially relevant design, implementation and evaluation strategies. Particularly, the model is designed in close partnerships with local First Nations, Métis and Inuit communities to ensure a holistic, culturally-centred approach. The delivery methods include the use of narrative, art and music, allowing participants to explore Essential Skills within the context of traditional activities such as fishing, trapping, painting and storytelling, based on best practices recommended in the field (Klinga, 2012). As well, instructional methods focus on experiential approaches are adopted. Learning is hands-on, interactive and has direct application to workplace tasks, incorporating authentic workplace documents and materials in the curricula. Program staff also reach out the families and communities to ensure that all aspects of the participant's life are considered, particularly if participation requires the individuals to be absent from their home community. This is because based on best-practice documents in the field. this step provides both the family and the program participant with a peace of mind, cultivating trust and enhancing motivation to persist through the training (MNP LLP, 2012).

Though we will be seeking to further develop a culturally-centred approach, in this section, we present a more generic framework incorporating measures that have performed well in training programs that have included Indigenous participants. These measurement options will serve as a starting point to facilitate further development of culturally-contextualized assessments and data collection tools that are more tightly aligned with the measurement needs of programs designed specifically for Indigenous learners.

As described in the previous section, one of the key objectives of employment training is to help participants meet the skills requirements and performance standards to work in their chosen sector or industry. Using a sector-based approach to develop the program helps ensure that sector-specific skills requirements and performance standards are integrated into the model, curricula and evaluation tools. This means the resulting program model aligns with not only the training needs of jobseekers but also the skills needs of employers who are looking to hire workers whose skills and competencies meet their expectations and standards.

To make it easy to compare across sample models, we will use the same employment training structure developed for the manufacturing sector described in the previous section, with further customization to culturally contextualize it for Indigenous jobseekers. Program staff works closely with one manufacturing employer to uncover industry performance benchmarks. Aligning industry-specific performance standards with the Essential Skills framework, the resulting program model contextualizes Essential Skills training within the performance framework of the manufacturing industry, focusing on the types of skills that can boost jobseekers' ability to meet job performance benchmarks.

The program is designed with two Essential Skills training components. Participants start with generic Essential Skills training, upgrading the foundational skills necessary to achieve later industry-contextualized training success as well as employment milestones. At a later stage of the training, participants receive occupation-specific Essential Skills training, acquiring the competencies to meet or exceed industry performance benchmarks. Together both Essential Skills training components help jobseekers transition to a state of work-readiness, equipping them with the necessary skills and competencies to successfully carry out job tasks and become meaningfully contributing employees in their target sector.

Contextual factors

For this program context, the key contextual factors are both at the individual and organizational levels, as shown in Table 13.

To reiterate, **demographic and personal characteristics** are important because they give the profiles of the participants. These provide program staff with a basic understanding of the unique factors and characteristics that influence their participants' training needs.

Factors	Details	Data collection tools	
INDIVIDUAL LEVEL FACTORS			
INDIVIDUAL INFORMATION			
Demographic characteristics	Age, gender, education, marital status, immigration status, Indigenous status, individual and household income, current employment status, length of time period receiving Employment Insurance or Income Assistance (if any), and length of latest bouts of unemployment	Baseline survey	
Personal characteristics	Self-reported Mental Wellbeing, Life Satisfaction, and Social Networks (see Appendix D)	Baseline survey	
BARRIERS TO EMPLOYMEN	т		
Barriers to employment	Participants are asked to indicate if they have faced one or more barriers on the list of common barriers that challenge their ability to find and keep a job (see Appendix B)	Baseline survey	
BASELINE SKILLS			
Generic Essential Skills	Reading, Document Use and Numeracy	TOWES General Series (see SRDC Phase I Report for more details)	

Table 13 Contextual factors for an employment training program

Factors	Details	Data collection tools		
Learning Readiness	Receptivity to Continuous Learning (see Appendix C)	Baseline survey		
Career Adaptability	Career Planning, Career Decision-making Self-efficacy, Job Search Clarity, Job Search Self-efficacy (see Appendix C)	Baseline survey		
Personality	The Big Five (see Appendix C)	Baseline survey		
ORGANIZATIONAL FACTORS				
PERFORMANCE STANDARDS				
Performance standards	Through interviews and consultations with senior managers and Human Resource managers of the company, program staff identifies key performance benchmarks that employer expects prospective employees to demonstrate to become meaningfully contributing workers of the organization. These performance benchmarks are based on job tasks that employees complete on a daily basis (see Appendix F).	Documentations by project staff		

Information on **barriers to employment** is important to understand the breadth and depth of the employment challenges participants face. Data on **baseline skills and competencies** enable program staff to customize training activities to align with participants' skills needs. Understanding baseline Essential Skills help staff adjust the level of difficulty and complexity of their training curricula. It also provides crucial information on the gaps between participants' current skill levels and the skill levels required to succeed in the next steps. As well, baseline measures of learning readiness, career adaptability, and personality enrich staff's understanding of participants' preconditions that support their attainment of later employment and retention milestones.

At the organizational level, **performance standards** are what employers expect workers to do in order to meaningfully contribute to key underlying business outcomes. To uncover these performance standards, program staff conducts interviews and consultations with senior managers and human resource specialists at the company. The team jointly define major performance areas covering key job tasks workers should be doing to achieve business results. Achieving these performance standards is one of the key training milestones for participants. Program staff then designs and develops the training around these goals, contextualizing their training activities within the framework of job performance.

Program activities, associated milestones, outcomes, and suggested measurement tools

To iterate, there are three stages of the program: 1) needs assessment and service planning, 2) training delivery, and 3) supports for continuing success. This section presents the alignment between program activities within each of the stages and the associated milestones, targeted

outcomes, as well as the recommended tools to measure these outcomes. Table 14 provides a summary of this alignment.

The **needs assessment and service planning** stage is particularly crucial to ensure the program is culturally relevant to Indigenous communities. To build strong formal relationships with all stakeholders, program staff work closely with First Nations, Inuit and Métis service providers, educational institutions and community leaders to establish an Advisory Committee, informing and enriching the design of the program. The Committee monitors and confirms the development of training model, curricula and materials, ensuring they are well-aligned with the needs of Indigenous jobseekers. The Committee may also provide valuable insights to support the outreach efforts to recruit participants for the program.

Table 14 Activities, milestones, outcomes, and data collection tools for an employment training program

Program activities	Milestones	Outcomes	Data collection tools
1. NEEDS ASSESSMENT AND SERVICE PLA	ANNING		
Project staff collaborate with all stakeholders to establish strong partnership with Indigenous community leaders, service providers and other educational institutions.	Establishment of an Advisory Committee	Record of establishment and ongoing consultations	Administrative database/PMIS
Participants complete baseline survey and assessment to measure baseline Essential Skills, learning readiness, career pathfinding skills, general wellbeing, and personality factors indicative of their employability.	Completion of needs assessment	Record of completion	Baseline assessments and survey; Administrative database/PMIS
Participants work with project staff to create customized Employment and Learning Plans. These plans sketch out a pathway to employment based on participants' starting skills and competencies. They also give the details of the milestones participants hope to achieve as a result of the training program, outlining the steps they need to take to achieve their learning and/or employment goals.	Creation of Employment and Learning Plan	Record of creation	Administrative database/PMIS

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Program activities	Milestones	Outcomes	Data collection tools
2. TRAINING DELIVERY			
readiness training, providing participants with a better understanding of the labour market. They also equip participants with the basic skills to navigate the job market and find industry-relevant information themselves, including information on skills requirements and credentials to plan the pext education or		Increases in Receptivity toward Continuous Learning scale scores between baseline and post-training	Follow-up survey
		Increases in Career Adaptability scale scores between baseline and post- training	Follow-up survey
Program staff delivers Essential Skills training, contextualizing the training of Reading, Document Use and Numeracy to align with the cultural needs of Indigenous participants.	Gains in generic, culturally- contextualized Essential Skills	Increases in Essential Skills scores and/or levels between baseline and follow-up	ESG Essential Skills assessments for Indigenous learners
Program staff delivers training that embed Essential Skills within employer-defined performance standards, focusing on the aspects of Essential Skills that align with the performance expectations the employer has for their prospective employees.	Meeting industry- specific Essential Skills requirements	Meeting the minimum score threshold on the Occupation- Specific Essential Skills assessment. This assessment is developed jointly by the employer and program staff based on employer-defined benchmarks of Essential Skills in the workplace (see Appendices F and G).	Occupation- specific Essential Skills Assessment
With an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector,	Gains in general wellbeing	Increases in Mental Health, Life Satisfaction, and Social Networks scale score between baseline and post-training	Follow-up survey
participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also become more future-oriented and may develop habits, perceptions, attitudes and personality traits that contribute more positively to their employability.	Gains in personality/non- cognitive skills	Increases in the Big Five scale scores between baseline and post-training	Follow-up survey

Program activities	Milestones	Outcomes	Data collection tools					
3. SUPPORTS FOR CONTINUING EMPLOYMENT SUCCESS								
Staff works with learners to leverage the skills, knowledge, attitudes, perceptions and mindsets gained from the program to achieve continuing success.	Participation in significant work experience co-op in targeted industry and occupation	Achievement of 10% productivity, based on internal employer assessment	Administrative database/PMIS					
	Completion of further industry- specific technical training	Achievement of 20% productivity, based on internal employer assessment	Administrative database/PMIS					
	Employment placement in targeted industry and occupation	Employment in target occupation identified in Employment Learning Plan	Administrative database/PMIS					
	Retention at 3 months	Record of continuing employment. Participants must	Administrative database/PMIS					
	Retention at 6 months	work a minimum of 20 hours per week over each of the three follow-up periods	Administrative database/PMIS					
	Retention at 12 months	identified.	Administrative database/PMIS					

Once participants are recruited and introduced to the program, staff administers baseline survey and assessment to collect data on learners' initial skill levels. At this stage, staff administers the generic assessment to document baseline generic Essential Skills.¹⁰ Program staff then works with participants to develop an Employment and Learning plan that aligns with their initial skill levels and training needs. The plan details the steps participants need to take to achieve their ultimate employment goals, outlining the classroom-based milestones and post-program milestones that participants aim to achieve along their pathway.

The **needs assessment** stage is well-aligned with the learner-centred approach identified as a best practice in the field (Klinga, 2012). Particularly, the learner-centred approach emphasizes the use of needs assessment to assist participants in identifying their skills and knowledge, pinpoint skill gaps, set goals and establish an action plan that lays out a clear strategy for successfully meeting

¹⁰ We choose the ESG assessment tailored to Indigenous learners in this example. (For more information please refer to their website: <u>https://www.essentialskillsgroup.com/projects/aboriginalskills-group/</u>)

these needs and goals. This helps participants feel in control of the program, putting them in the driver's seat in terms of program planning, development and delivery. At this stage, indicators of success are record of establishment of an Advisory Committee, completion of the baseline survey and assessments, and creation of the Employment and Learning Plan that aligns with participant's initial skills and abilities. These can be documented through an administrative database or a PMIS monitored by program staff.

Program staff then **delivers the training**. According to best practices documented in the field, training for Indigenous participants should apply a holistic approach, taking into account and meeting their unique and multiple needs, including the need for healing and empowerment (Harrison & Lindsay, 2009). This means training not only focuses on individuals' learning readiness, career pathfinding skills and transferrable Essential Skills – Reading, Document Use and Numeracy – but also illustrates how these skills are profoundly tied to individual and community identities. To establish and strengthen this link, the delivery methods include the use of narrative, art and music, allowing participants to explore Essential Skills within the context of traditional activities such as fishing, trapping, painting and storytelling. As well, instructional methods focus on experiential approaches: doing, talking then reading, rather than reading, talking and then doing (Nunavut Literacy Council & Northwest Territories Literacy Council, 2007).

The second component of the training is industry-specific Essential Skills training, with the focus on key aspects of Essential Skills that align with specific performance requirements of sewing machine operators. An Occupation-Specific Essential Skills (OSES) assessment is developed based on the performance benchmarks jointly defined by program staff and employers. In this project, the OSES assessment is an employer-rated, industry-contextualized tool that embeds assessments of Essential Skills within a set of sector-specific job tasks to document progress toward industry-standardized competencies. It provides indication of learners' readiness to meet employer-defined performance benchmarks as they transition from classroom-based training to work placements. Employer trainers observe and evaluate each participant on a scale from 1 to 5 on fourteen job performance areas as they deliver technical training to provide learners with the fundamental technical skills to be employed in this occupation (see Appendices F and G as well as SRDC Phase I report for further details).

Other outcomes are also collected at this stage. Specifically, with an enhanced understanding of their own skills and with a better-defined plan toward meaningful and sustained employment in their target industry or sector, participants may also develop a greater sense of well-being, feeling more in control of their life, and less anxiety associated with their future career path and attachment to the labour market. They may also develop habits, attitudes and personality traits that contribute more positively to their employability. At this stage, indicators of success are gains in learning readiness, career pathfinding skills, generic Essential Skills, meeting the minimum score on the industry-specific Essential Skills assessment, as well as gains in general wellbeing and personality/non-cognitive skills measured through survey and assessments.

In the final stage of the program, program staff provides **supports to ensure continuing learning and employment success**. They work with learners to design plans and strategies to help them leverage what they have learned in class to continue to achieve success in learning and employment contexts beyond the program. In this case, staff works with participants to develop a learning transfer plan, giving them concrete strategies to translate what they have learned in class to what they need to do on the shop floor. Staff continues to provide supports as possible and monitor participants' achievements of milestones that indicate successful transition to the workplace.

These transition milestones start with successful participation in work experience co-op with the employer. At this stage, program staff makes pre-arrangements with the participating employer to provide a basic work experience program that includes the equivalent of 40 hours of work. Each participant receives participation orientation/workshop, training/employment plan developed with the employer, regular supervision and feedback from employer supervisors, as well as check-in with formal and informal feedback and coaching from program staff. The milestone at this stage is linked to an employer-defined performance benchmark – 10% productivity rate. Participants who achieve this milestone are then enrolled in industry-specific technical training provided by the employer. At this stage, employer expect participant to achieve 20% productivity rate in order to be hired. Once participants are hired, program staff continues to check in with participants at 3-, 6-, and 9-month follow-ups to monitor retention.

Finally, Figure 11 captures the contextual factors, program activities, program outcomes and associated data collection tools. It also serves as a useful example of how a milestone-based employment training program model can be depicted.

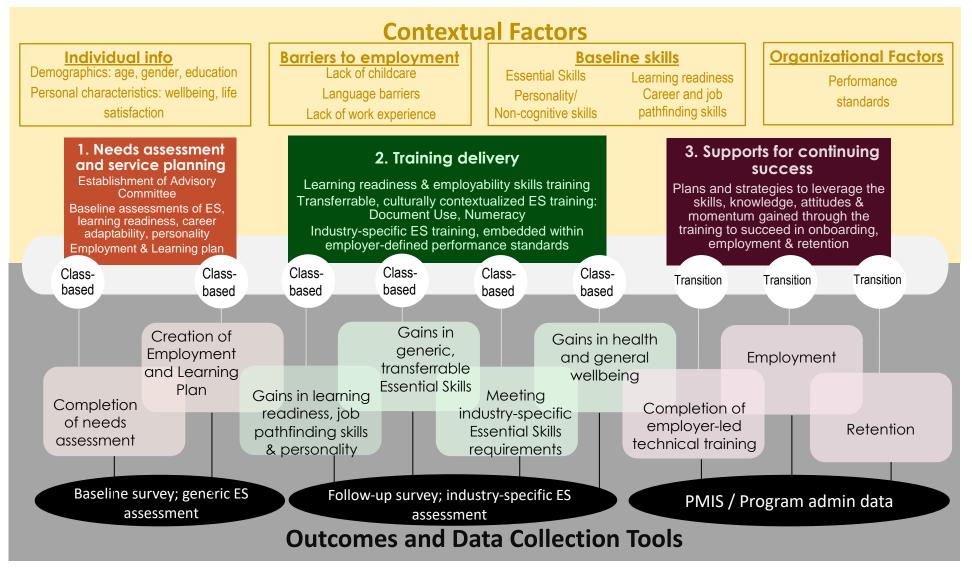


Figure 11 Sample employment training model for Indigenous jobseekers

8.0 Concluding remarks

This document serves as a guideline for practitioners and stakeholders to develop a measurement framework that is well-integrated into a milestone-based performance framework. One of the key goals of this document is to create a uniform structure to develop frameworks for performance measurements, supporting not only program evaluation but also ongoing monitoring of program progress.

The milestone-based design allows for a pathway to be created, helping both participants and service providers see the steps to take to achieve ultimate learning and employment goals. The key advantage of the milestone-based design is that it defines success both in the immediate term as participants proceed through the program, and in the medium- to long-term as participants transition from the program to later stages on their career path, achieving continuing success.

One key take-away lesson learned presented in this guideline is the use of a series of interconnected indicators of success as the target outcomes of the program, instead of focusing on a few ultimate outcomes based on a limited number of assessments. Among other things, this strategy helps ensure that both learners and trainers receive immediate feedback on training progress, seeing how efforts and time invested in achieving earlier milestones can enhance success in later milestones. It also helps participants stay engaged with the assessments and data collection tools, as they see the direct linkages between these protocols and the training activities they receive. Finally, it ties the performance of the program directly to the performance of participants, because a good indicator of strong program performance is a high rate of milestone completion among participants.

In the next phase, SRDC will undertake additional data analysis and field testing of a selected subset of key skills measures and performance indicators from the Phase 2 framework. This will help determine the statistical properties of these indicators and provide evidence of their suitability as precursors to longer-term outcomes such as employment. This effort will include extended analyses of existing SRDC data sets (e.g., Foundations, Skilling UP, ESSF, and UPSKILL), with the aim of replicating the approach of determining which indicators function best as possible milestones towards longer-term success of LES initiatives. It may also include further field testing of available instruments and measures with active LES initiatives and partners. The scope and focus of field testing will be determined in consultation with ESDC following completion of Phases 1 and 2.

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Appendix A: Recommended scales measuring key individual characteristics

A.1. Social Supports / Social Networks

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
If I need help with household activities (such as child care, household maintenance, household chores, personal care), I can easily get it.							
If I need specialized advice (such as financial, medical or legal advice), I can easily get it.							
If I need emotional support (such as encouragement, reassurance, confidential advice), I can easily get it.							
If I need help with my job or career (such as assisting with my current job or recommending me to a potential employer), I can easily get it.							

A.2. Trust

If you lost your wallet or purse that had \$200 in it, how likely do you think it is that it would be returned with the money still in it if it was found by:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
A neighbour who lives close by?					
An employee at a local business?					
A total stranger?					

A.3. Mental Wellbeing

Does an emotional condition or health problem (such as feeling depressed or anxious) reduce the amount or kinds of activities you can do at work, at home, or for recreation?

- □ Not at all
- □ Rarely
- □ Sometimes
- □ Often

A.4. Life Satisfaction

Using a scale of 1 to 10, where 1 means "very dissatisfied" and 10 means" very satisfied," how do you feel about your life as a whole right now?

A.5. Physical wellbeing

Does a physical condition or health problem reduce the amount or kinds of activities you can do at work, at home, or for recreation?

- □ Not at all
- □ Rarely
- □ Sometimes
- □ Often

Appendix B: Sample survey question to record barriers to employment

Which of the following barriers might interfere with your ability to find or keep a job?

Check off all that apply to your situation.

- Difficulty with English
- □ Learning disability
- □ Legal issues
- □ Limited work experience
- □ Lack of child care support
- □ Transportation issues
- D Physical disability, injury or illness
- □ Housing problems
- □ Family member health
- □ Education
- Drug or alcohol problems
- □ Lack of job hunting skills
- □ Family issues
- □ Credentials not recognized in Canada
- □ Other, please specify: _____

Appendix C: Recommended scales to measure noncognitive and psychosocial skills

C.1. Receptivity to Continuous Learning

Please indicate the extent to which you agree or disagree with the following statements.								
StronglyStronglyStronglyStronglydisagreeDisagreeNeutralAgreeagree								
I am more likely to get a better job if I do some learning.								
Learning new things makes me more confident.								
Getting qualifications takes too much effort.								

C.2. Career Planning

Please indicate the extent to which you agree or disagree with the following statements.								
Strongly Strongly disagree Disagree Neutral Agree agree								
I have not really decided what my career objectives should be yet.								
I have a strategy for achieving my career goals.								
I know what I need to do to reach my career goals.								

C.3. Career Decision-making Self-efficacy

For each statement, please indicate how confident you are that you can successfully do each of the following activities.

	No confidence at all	Very little confidence	Moderate confidence	Much confidence	Complete confidence
Accurately assess how well your abilities are suited for the kind of work you want to do.					
Find information about occupations you are interested in.					
Find out the employment trends for an occupation over the next ten years.					
Find out about the average yearly earnings of people in an occupation.					

For each statement, please indicate how confident you are that you can successfully do each of the following activities.								
	No confidence at all	Very little confidence	Moderate confidence	Much confidence	Complete confidence			
Talk with a person already employed in the field you are interested in.								
Find information about education or training programs in the field you are interested in.								
Select one occupation from a list of potential occupations you are considering.								
Select one education or training program from a list of potential programs you are considering.								
Choose a career that will fit your abilities and interests.								
Identify employers, firms, institutions relevant to your career possibilities.								
Change jobs if you did not like your job.								
Determine the steps to take if you are having trouble with an aspect of your job.								
Identify some reasonable occupation or career alternatives if you are unable to get your first choice.								

C.4. Job Search Clarity

Please indicate the extent to which you agree/disagree with the following statements.								
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
I have a clear idea of the type of job I want.								
I have very clear job search objectives.								
I have a clear idea of the type of company I want to work for.								
It is not very clear to me where I should be looking for a job.								

C.5. Job Search Self-efficacy

For each statement, please indicate how confident you are that you can successfully do each of the following activities.

	No confidence at all	Very little confidence	Moderate confidence	Much confidence	Complete confidence
Use social networks to obtain job leads.					
Prepare resumes that will get you interviews.					
Impress interviewers during employment interviews.					
Make "cold calls" that will get you a job interview.					
Conduct information interviews to find out about careers and jobs that are you are interested in pursuing.					
Communicate your skills and experience in a way that will attract the interest of employers.					
Plan and organize a weekly job search schedule.					
Find out where job openings exist.					
Use a variety of sources to find job opportunities.					
Search for and find good job opportunities.					

C.6. Personality/Non-cognitive skills

The following questions are about how you see yourself as a person. Please choose the number which best describes how you see yourself, using a scale from 1 to 7 where 1 means "does not apply to me at al" and 7 means "applies to me perfectly."

	Does not apply to me at all 1	2	3	4	5	6	Applies to me perfectly 7
(Emotional Stability)							
I see myself as someone who worries a lot.							
I see myself as someone who gets nervous easily.							
I see myself as someone who is relaxed, who handles stress well.							
(Extraversion)							
I see myself as someone who is talkative.							
I see myself as someone who is outgoing and sociable.							
I see myself as someone who is reserved.							
(Openness to Experience)							
I see myself as someone who is original, comes up with new ideas.							
I see myself as someone who values artistic, aesthetic experiences							
I see myself as someone who has an active imagination.							
(Agreeableness)							
I see myself as someone who is sometimes rude to others.							
I see myself as someone who has a forgiving nature.							
I see myself as someone who is considerate and kind to almost everyone.							
(Conscientiousness)							
I see myself as someone who does a thorough job.							
I see myself as someone who tends to be lazy.							
I see myself as someone who does things efficiently.							

Appendix D: Recommended scales to measure other psychosocial attributes and wellbeing

D.1. Social Supports / Social Networks

Please indicate the extent to which you agree/disagree with the following statements.								
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
If I need help with household activities (such as child care, household maintenance, household chores, personal care), I can easily get it.								
If I need specialized advice (such as financial, medical or legal advice), I can easily get it.								
If I need emotional support (such as encouragement, reassurance, confidential advice), I can easily get it.								
If I need help with my job or career (such as assisting with my current job or recommending me to a potential employer), I can easily get it.								

D.2. Trust

If you lost your wallet or purse that had \$200 in it, how likely do you think it is that it would be returned with the money still in it if it was found by:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
A neighbour who lives close by?					
An employee at a local business?					
A total stranger?					

D.3. Mental Wellbeing

Does an emotional condition or health problem (such as feeling depressed or anxious) reduce the amount or kinds of activities you can do at work, at home, or for recreation?

- □ Not at all
- □ Rarely
- □ Sometimes
- □ Often

D.4. Life Satisfaction

Using a scale of 1 to 10, where 1 means "very dissatisfied" and 10 means" very satisfied," how do you feel about your life as a whole right now?

Appendix E: Future orientation measures

SRDC has used choice experiments to elicit time preferences, future orientation, and self-control in previous projects (Palameta & Voyer, 2010). In these choice experiments, participants are asked to make a number of choices between various amounts of money (for example, between \$2,000 and \$4,000) received at a later time (for example, one month from today) and a significant but much smaller amount of cash (for example, from \$300 to \$700) received immediately. Those who choose the larger, later rewards are said to be more future oriented than those who prefer the smaller, sooner rewards.

While these choice experiments have been extensively used in the literature to measure time preferences, future orientation and self control, one disadvantage is that they involve at least 25 choice questions and take up too much survey time (Burks et al., 2012). Other instruments have been developed in the field to reliably measure future orientation while minimizing response burden. For example, the following one-indicator measure of future orientation was used in the longitudinal study by Golsteyn et al. (2013) and has been shown to be a significant predictor of educational attainment, income, employment status, welfare take-up, and other lifetime health outcomes

Future orientation measure

If you had to choose between SEK 900 [USD 130] now versus SEK 9000 [USD 1300] in five years, which would you choose?

- □ 1 Certainly SEK 900 now
- □ 2 Probably SEK 900 now
- □ 3 Cannot choose
- □ 4 Probably SEK 9000 in five years
- □ 5 Certainly SEK 9000 in five years

Source: Golsteyn et al., 2013.

Golsteyn et al. (2013) used this measure both as an indicator of respondents' levels of future orientation (with those choosing Option 1 being the least future-oriented, while those choosing Option 5 are the most future-oriented), and as a yes/no indicator of future orientation (with those choosing Options 4 and 5 being future-oriented, while those choosing the remaining options are not future oriented). Golsteyn et al. (2013) did the study on Swedish participants and used Swedish currency in 2012 year's price level. Some calculations need to be made to translate the amounts into Canadian currency at time of the assessment, ensuring comparable purchasing power.

Other scales

SRDC has also used other self-reported scales measuring similar concepts, such as self-control and time preference, both in the adult learning contexts and other contexts such as financial decision-making.

Self-reported Self-control 1

In general, how well does each of the following statements describe you?								
	Not at all	Not very well	Very well	Completely well				
I am good at resisting temptation.								
I find it difficult to break undesirable habits.								
I am always in control of my actions.								
I often act without thinking through all the alternatives								
I am able to work diligently toward long-term goals.								

Self-reported Self-control 2

In general, how well does each of the following statements describe you?							
	Not at all	Not very well	Very well	Completely well			
I often act without thinking through all the alternatives.							
I am good at resisting temptations.							
I am able to work diligently toward long-term goals.							

Self-reported Self-control 3

In general, how well does each of the following statements describe you?							
	Not at all	Not very well	Very well	Completely well			
I am good at resisting temptation.							
I find it difficult to break undesirable habits.							
I am always in control of my actions.							

Self-reported Time Preference

In general, how well does each of the following statements describe you?								
	Not at all	Not very well	Very well	Completely well				
I focus on the long term.								
I live more for the present day than for tomorrow.								
The future will take care of itself.								

Appendix F: Performance standards for sewing machine operators

	Reading	Writing	Document use	Numeracy	Digital Literacy	Oral Communication	Thinking Skills	Working with Others	Continuous Learning
Reads and understands posted memos in training area, and performs the directions given.	~								
Writes reminders to themselves about the sewing machine operation and stitches they use.		~							
Reads and understand bundle labels.			~						
Measures seams to ensure acceptable allowances are achieved.				~					
Demonstrates they are able to manually monitor their own performance.				~					
Recognize common angles and follow directions given by trainer to ensure desired angles are achieved.				~					
Estimate the amount of time required to complete the tasks given at their station to ensure they spend little to no off-standard time waiting for work.				~					
Asks clarifying questions when learning a new operation.						\checkmark			
Requests feedback or instruction as required and can restate what they heard.						~			
Shares resources with other learners.								~	
Is respectful and cooperative with teammates and trainers.								~	
Responds positively to the technical training process and demonstrates interest in the training sessions.									~
Remember sequence of steps for processes as demonstrated by their trainer.							~		
Is safety conscious and can apply company policy and rules to his or her own work practices.							~		

Appendix G: Occupation-specific Essential Skills Assessment for sewing machine operators

This assessment serves to identify participants' readiness to meet employer–defined performance benchmarks as they transitioned from classroom-based training to work placements. Employer trainers observed and evaluated each participant on a scale from 1 to 5 for each of fourteen job performance areas, based on the performance standards identified through collaboration between the employers and the program staff (see Figure 12). At the end of the assessment, the examiner summed up the total score and followed this evaluation scale to interpret each participant's total score:

- 0-14: Candidate does not demonstrate necessary skills
- 15-28: Candidate demonstrates a minimal amount of skill in most of the required areas
- 29-42: Candidate demonstrates progress, but still requires further development
- 43-56: Candidate is making progress, but need to work on consistency
- 57-70: Candidate has demonstrated desired occupational specific essential skills

Figure 12 Occupation-Specific Essential Skills – Sewing Machine Operator

	Reading	Writing	Document use	Numeracy	Digital Literacy	Oral Communication	Thinking Skills	Working with Others	Continuous Learning
Reads and understands posted memos in training area, and performs the directions given.	~								
Writes reminders to themselves about the sewing machine operation and stitches they use.		~							
Reads and understand bundle labels.			~						
Measures seams to ensure acceptable allowances are achieved.				~					
Demonstrates they are able to manually monitor their own performance.				~					
Recognize common angles and follow directions given by trainer to ensure desired angles are achieved.				~					
Estimate the amount of time required to complete the tasks given at their station to ensure they spend little to no off-standard time waiting for work.				~					
Asks clarifying questions when learning a new operation.						\checkmark			

A Comprehensive Review and Development of Measurement Options for Essential Skills Initiatives: Framework

	Reading	Writing	Document use	Numeracy	Digital Literacy	Oral Communication	Thinking Skills	Working with Others	Continuous Learning
Requests feedback or instruction as required and can restate what they heard.						\checkmark			
Shares resources with other learners.								~	
Is respectful and cooperative with teammates and trainers.								~	
Responds positively to the technical training process and demonstrates interest in the training sessions.									~
Remember sequence of steps for processes as demonstrated by their trainer.							~		
Is safety conscious and can apply company policy and rules to his or her own work practices.							~		

Appendix H: Assessments of Essential Skills, contextualized in the mentorship environment

Note that the references to Essential Skills are included in this version of the assessment only to illustrate the alignment between mentorship skills and Oral Communication (denoted as "C"), Thinking (denoted as "T"), Working with Others ("WO"), and Continuous Learning (denoted as "CL"). In the actual versions that participants received, references to Essential Skills were removed to enhance the readability and user-friendliness of the assessments.

H.1. Assessment for mentees

In this section, we would like to ask you about how you are learning on the job.

1) Effective Communication

1. To what extent do you agree or disagree with the following statement?								
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
I am always fully engaged in work conversations (OC).								
I have no trouble voicing my opinions and providing input during work discussions (OC).								
I have no trouble asking questions and seeking clarifications when I don't understand instruction at work (WO).								

2. How confident are you that you can do the following?								
	Not at all confident	Not very confident	Somewhat confident	Confident	Very confident			
Keep my skills up-to-date (CL).								
Take responsibility for my own learning (CL).								

2) Active Listening

3. How often do you do the following at work?									
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always				
I give co-workers my full attention when they talk to me (WO).									
When I have something to contribute to a conversation at work, I interrupt the speaker to make my point (OC).									
While listening to coworkers, I summarize in my mind what they have said (T).									
After receiving work instruction, I paraphrase it back to the speaker to confirm my understanding (OC).									

3) Asking Questions

4. How often do you do the following at work?									
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always				
When I don't understand how to do a task, I ask my co-workers for help (WO).									
I ask clarifying questions to get more information at work (OC).									
I ask specific questions (e.g., about a specific step in a task) instead of general questions (e.g., about how to do the entire task) (OC).									
During a conversation, I ask good questions to encourage co-workers to elaborate on their point (7).									

4) Receiving Feedback

5. How often do you do the following when receiving feedback at work?								
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always			
I react strongly to criticisms (WO).								
I admit and accept criticisms about my performance or behaviours at work (WO).								
I make plans to correct mistakes and improve performance after receiving feedback (T).								
I ask for feedback proactively rather than avoiding it (WO).								

5) Pro-Active Learning

6. To what extent do you agree or disagree with the following?									
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree				
I enjoy learning new trade skills and new ways of doing tasks (<i>CL</i>).									
I have no trouble getting used to different supervisors and their different ways of teaching or giving instructions (<i>CL</i>).									
I am constantly thinking of ways to improve my trade skills (T).									
I am comfortable suggesting new ideas to journeyworkers and foremen if I think they will improve safety, productivity, and quality (WO).									

6) Setting Goals

7. Please indicate how well the following statements describe your behaviours at work.								
	Not at all	Very little	Somewhat	Very well	Completely			
I set short-term goals to improve my current performance at work (<i>CL</i>).								
I set long-term goals to direct my learning and monitor my apprenticeship progress (<i>CL</i>).								
I write down a plan to describe how I hope to achieve these goals (T).								
I change learning strategies when I don't make progress (7).								
I tie my own goals to the goals of the company, aiming to improve my productivity, workmanship, and safety records (T).								
I organize my time to best accomplish my goals (T).								

H.2. Assessment for mentors

In this section, we would like to ask how you think you are doing as a mentor or teacher on the job.

1) Identifying the Point of the Skill

1. As a mentor, how often do you do the following?									
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always				
I tell the apprentice the specific skills they need to learn before teaching them something new (OC).									
I make sure the apprentice knows exactly what is expected of them when teaching them something new (WO).									

2) Linking the Skill

2. As a mentor, how often do you do the following?									
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always				
I explain the "bigger picture" of the project to the apprentice – in terms of daily goals, project objectives, and company expectations (OC).									
I explain how the tasks they are assigned connect to what others are doing, and to the end result of the project (OC).									
I think about project deadlines and plan the tasks I teach the apprentice accordingly (e.g., in order of priority, by level of complexity, or by the tasks' natural sequence) (T).									

3) Demonstrating the Skill

3. How often do you do the following?								
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always			
I share the 'tricks of the trade' with the apprentice (WO).								
When teaching the apprentice a new task, I show them how to do it (WO).								
When teaching the apprentice a new task, I explain the steps involved in the process (OC).								
When teaching the apprentice a complicated task, I break it down into smaller, simpler steps (T).								
I encourage the apprentice to ask questions when I am teaching them something new (OC).								

4) Providing Opportunity for Practice

4. How often do you do the following?									
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always				
I give the apprentice challenging tasks that they can practice on their own to extend their abilities (WO).									
I build the apprentice's confidence to carry out job tasks on their own (WO).									
I encourage the apprentice to think things through for themselves (WO).									

5. To what extent do you agree or disagree with the following statements?									
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree				
I am open minded to solutions the apprentice suggests (CL).									
I provide a safe learning environment for the apprentice (T).									

5) Giving Feedback

6. How often do you do the following when giving feedback to the apprentice?								
	Never or hardly ever	Rarely	Sometimes	Often	Always or nearly always			
l pick an appropriate time and place to give feedback to the apprentice (T).								
I think of the apprentice's mistakes as valuable opportunities to teach (T).								
I provide specific, detailed information about the apprentice's behaviours or performance, without degrading them as a person (OC).								
I provide suggestions and recommendations to help the apprentice improve (T).								
After giving feedback, I check in with the apprentice to make sure they correct their mistakes and complete the work appropriately (WO).								
I let the apprentice know when they are doing a good job (WO).								

6) Assessing Progress

7. To what extent do you agree or disagree with the following statements?									
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree				
I am constantly assessing and evaluating the apprentice's trades skills and knowledge (T).									
I can accurately tell how much trades skills and knowledge the apprentice has (T).									
I am open to feedback on how to be a better mentor (CL).									
I am accepting of individual differences in learning and working styles (CL).									
I know my own strengths and limitations as a mentor (CL).									
I think being a mentor is good for my career (CL).									

Appendix I: Perceived returns on investment in a university education

I.1. Monetary benefits to university

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
People who get a university education will make more money over their lifetime than those who just get a high school education.							
Although university can be costly, I believe that I would make more money in the long run.							
I think that if I were to put the time and effort into getting a good university education, I would make a lot of money in the long run.							
The best way to get a prestigious job is through a university education.							
I am confident that a university education would lead me to a better paying job.							

I.2. Non-monetary benefits to university

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
Getting a university education will lead me to find work that I really enjoy doing.							
If you want a rewarding career these days, you need a university education.							
People who have a university education get jobs that are much more satisfying.							

I.3. Debt avoidance

Please indicate the extent to which you agree/disagree with the following statements.						
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
The costs of a university education have become so high that they outweigh any future financial benefits.						
Given the high costs of a university education and the time it takes to complete it, you are really no further ahead financially than if you get a job right after high school.						
I'm not sure that a university education would pay off even in the long run, given how costly it is these days.						
I'm hesitant to undertake a university education because of the amount of debt I'm likely to accumulate by the time I graduate.						

I.4. Identity anxiety

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
I'm hesitant to pursue a university education because it would create tensions with the people I grew up with.							
If I were to pursue a university education, my friends would think that I'm trying to be better than them.							
If I pursue a university education, I'm afraid that it would confuse me about "who I am."							
I'm hesitant to pursue a university education because it would create tensions between my parents and me.							

I.5. Indecision concerns

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
I'm hesitant to pursue a university education because I really don't know what I want to do with my life yet.							
I really haven't honed down my interests enough to know what to study if I were to go to university.							
I don't feel that I am emotionally prepared to go to university yet.							
I don't think that I have the correct mindset right now to tackle a university program.							

I.6. Belief in alternatives to university

Please indicate the extent to which you agree/disagree with the following statements.							
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
I think I could find a rewarding job with a university education.							
Good jobs can be found without a university education.							
You can learn enough about the real world without a university education.							
I don't think I would ever find fulfilling work if I didn't get a university education.							

Appendix J: Social networks – adapted for newcomers

For the next few questions, think about the people you know who have the <u>same</u> culture, ethnic background, or language as you.

Please tell us how much you agree or disagree with the following statements.

If you cannot decide whether you agree or disagree with a statement, please select "Neutral."

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
If I need help with household activities (such as child care or housework), I can easily get it.					
If I need specialized advice (for example, about money, health, or legal problems), I can easily get it.					
If I need emotional support (such as encouragement, reassurance, or confidential advice), I can easily get it.					
If I need help with my job or career, I can easily get it.					

For the next few questions, think about the people you know who have the <u>a different</u> culture, ethnic background, or language than you.

Please tell us how much you agree or disagree with the following statements.

If you cannot decide whether you agree or disagree with a statement, please select "Neutral."

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
If I need help with household activities (such as child care or housework), I can easily get it.					
If I need specialized advice (for example, about money, health, or legal problems), I can easily get it.					
If I need emotional support (such as encouragement, reassurance, or confidential advice), I can easily get it.					
If I need help with my job or career, I can easily get it.					

Appendix K: Sense of belonging

The next few questions are about your sense of belonging. Your sense of belonging is how strong you feel like you are connected to something, and feel like you are a meaningful or important part of something.

How would you describe your sense of belonging to?								
	Very weak	Somewhat weak	Somewhat strong	Very strong				
Your local community								
Your city								
Your province of residence								
Canada								
Your country of origin								

Appendix L: Acculturation attitudes

How important is it for you to?									
	Not at all important	Not very important	Somewhat important	Very important					
Keep in contact with others in Canada from the <u>same</u> ethnic or cultural group as yourself									
Keep in contact with others in Canada who are <u>not</u> from the same ethnic or cultural group as yourself									
Carry on the values and traditions of your ethnic or cultural group or your homeland									
Learn and practice the values and traditions of people in Canada									

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