



# The Employability Skills Assessment Tool (ESAT)

Interim Evidence Report

March 2024

**Blueprint**

This report was produced as part of a project funded by the Future Skills Centre (FSC), with financial support from the Government of Canada's Future Skills Program.

FSC is a forward-thinking centre for research and collaboration dedicated to preparing Canadians for employment success. We believe Canadians should feel confident about the skills they have to succeed in a changing workforce. As a pan-Canadian community, we are collaborating to rigorously identify, test, measure, and share innovative approaches to assessing and developing the skills Canadians need to thrive in the days and years ahead. The Future Skills Centre was founded by a consortium whose members are Toronto Metropolitan University, Blueprint ADE, and The Conference Board of Canada

The opinions and interpretations in this publication are those of the author(s) and do not necessarily reflect those of the Future Skills Centre or the Government of Canada.



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# Acknowledgements

## About the Future Skills Centre

The [Future Skills Centre](#) (FSC) is a forward-thinking centre for research and collaboration dedicated to driving innovation in skills development so that everyone in Canada can be prepared for the future of work. We partner with policymakers, researchers, practitioners, employers and labour, and post-secondary institutions to solve pressing labour market challenges and ensure that everyone can benefit from relevant lifelong learning opportunities. We are founded by a consortium whose members are Toronto Metropolitan University, Blueprint, and The Conference Board of Canada, and are funded by the Government of Canada's Future Skills Program.

Le Centre des Compétences futures (CCF) est un centre de recherche et de collaboration avant-gardiste qui se consacre à l'innovation dans le domaine du développement des compétences afin que toutes les personnes au Canada soient prêtes pour l'avenir du travail. Nous travaillons en partenariat avec des personnes chargées de l'élaboration des politiques, des personnes chargées de la recherche, des spécialistes, des employeurs et des travailleuses et travailleurs, ainsi qu'avec des établissements d'enseignement postsecondaire, afin de résoudre les problèmes urgents du marché du travail et de veiller à ce que chacun puisse bénéficier de possibilités pertinentes d'apprentissage tout au long de la vie. Nous sommes fondés par un consortium dont les membres sont l'Université métropolitaine de Toronto, Blueprint et le Conference Board of Canada, et nous sommes financés par le Programme du Centre des compétences du gouvernement du Canada.

## About Blueprint

[Blueprint](#) was founded on the simple idea that evidence is a powerful tool for change. We work with policymakers and practitioners to create and use evidence to solve complex policy and program challenges. Our vision is a social policy ecosystem where evidence is used to improve lives, build better systems and policies and drive social change.

Our team brings together a multidisciplinary group of professionals with diverse capabilities in policy research, data analysis, design, evaluation, implementation and knowledge mobilization.

As a consortium partner of the Future Skills Centre, Blueprint works with partners and stakeholders to collaboratively generate and use evidence to help solve pressing future skills challenges.



# Preface

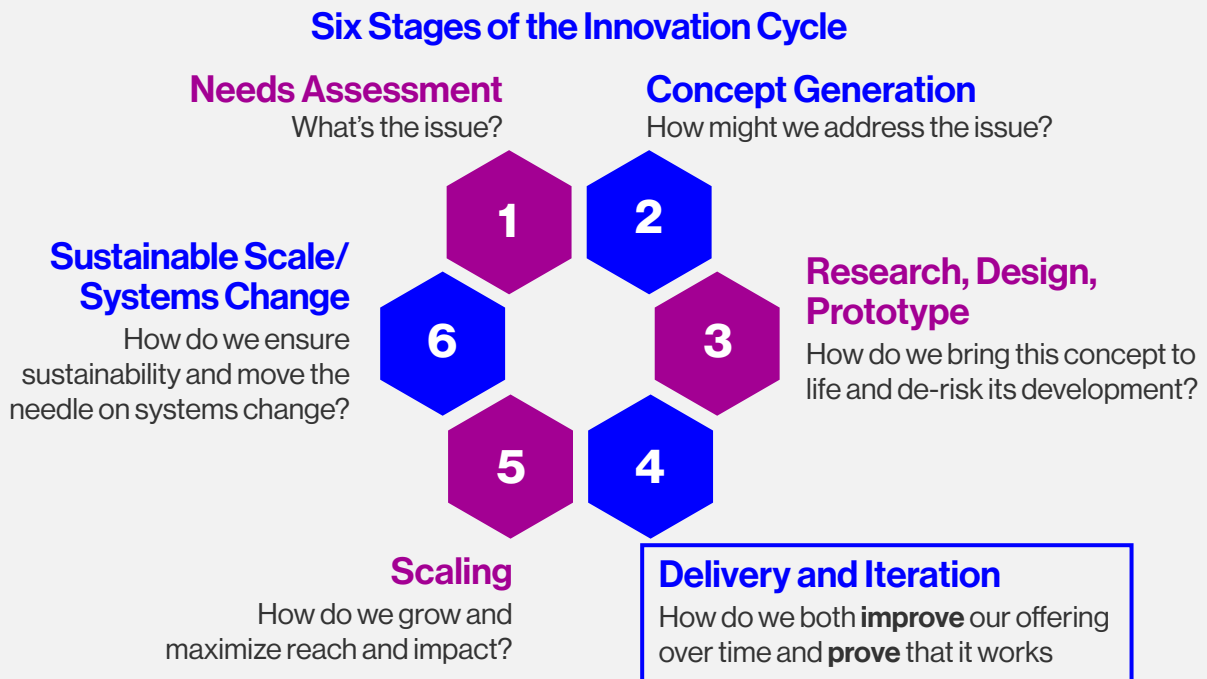
Canada’s labour market is rapidly changing. To keep pace with these changes, Canadians need skills development opportunities that respond to demands and apply evidence-informed practices. Many skills development innovations have emerged to meet these needs, but they often face barriers to scaling their interventions beyond a pilot stage.

**To address this challenge, the Future Skills Centre (FSC) and Blueprint have launched the Scaling Up Skills Development Portfolio.**

In the [Scaling Up Skills Development Portfolio](#), FSC is partnering with ten organizations with promising skills development interventions that have moved toward scaling up their impact. As part of the FSC consortium, Blueprint is working closely with each grantee organization to generate evidence to support their scaling journey. This is an opportunity to disrupt the current “one study at a time” approach to evidence building in favour of continuous evidence generation and program improvement. The hope is that this approach will better produce the quality and quantity of evidence needed to help promising interventions progress in their scaling journey. For more information about Blueprint’s approach to scaling, see our [Scaling Social Innovation](#) webpage. see our [Scaling Social Innovation](#) webpage.

Blueprint’s evidence generation approach is aligned with the innovation cycle (**Figure 1**). Our focus for the Scaling Portfolio is to work alongside partner organizations to generate evidence that helps move their interventions through **Stage 4 to Stage 5** with the ultimate goal of supporting sustainable scale and systems change (Stage 6) in our sights.

**Figure 1 | Innovation Cycle**



# About this report

Blueprint is working with each partner organization in the [Scaling Up Skills Development Portfolio](#) to continuously collect and monitor data about their intervention, capturing implementation and participant outcomes along the scaling journey.

**This report shares interim findings from our evaluation of the Employability Skills Assessment Tool (ESAT), an online training tool that assesses and develops individuals' social and emotional skills to meet growing labour market demand.**

This report presents early insights about ESAT's suitability, and the implementation conditions needed, for a more rigorous test of the tool's effectiveness. A future report will focus on the relationship between participants' social and emotional skills and employment outcomes, ESAT's validity and potential for scalability.

This report is organized in five sections:

- **Section 1: Introduction** (pp. 9-10) provides background on ESAT and the present study.
- **Section 2: About ESAT** (pp. 11-15) describes the design and delivery of the ESAT model.
- **Section 3: Methodology** (pp. 18-20) shares Blueprint's evidence generation approach and learning agenda, the research design for the project and data sources used in this report.
- **Section 4: Early findings** (pp. 21-24) shares what we've learned so far related to our research questions on ESAT's validity, participant experiences and outcomes and the effects of variation in delivery settings and implementation approaches.
- **Section 5: Conclusion and next steps** (pp. 30-31) summarizes our early findings and future directions.



# Executive Summary

In today's labour market, employers value social and emotional skills (SES), such as adaptability, collaboration and creativity. These skills provide a foundation for developing other job-specific skills and support individuals to thrive in learning and at work. They are also important for supporting longer-term employment outcomes and adapting to future labour market changes.

While there are many programs in place to help individuals develop SES, they overwhelmingly target children and youth and face limitations in observer bias, inaccurate self-assessments and an inability to consider context. To address these gaps, Futureworx developed the Employability Skills Assessment Tool (ESAT), an online tool that supports the assessment and development of SES. ESAT's approach is grounded in the belief that individuals who understand their competency and consistency in SES levels will be more self-aware and motivated to build on their strengths and close their skills gaps.

Since 2014, ESAT has been widely used by delivery partners across Canada. In 2021, Futureworx received funding from the Future Skills Centre to work with Blueprint to generate evidence on ESAT's implementability, validity and utility across fifteen sites. At this stage in ESAT's scaling journey, there are four lines of inquiry that are necessary to grow our understanding of how ESAT can fill the gap in SES development and assessment in Canada:

- 1. Validity:** Is ESAT a valid assessment of SES?
- 2. Value and effectiveness:** Is ESAT valuable to its participants and staff and effective in achieving SES outcomes?
- 3. Setting:** Does the delivery setting affect ESAT's value and effectiveness?
- 4. Adaptability:** Is high fidelity to recommended implementation principles required to maintain ESAT's value and effectiveness?

This interim report presents early insights on these lines of inquiry to assess readiness and support next steps in ESAT's evidence generation and scaling journey. A future report will dive deeper to assess the relationship between participants' SES and employment outcomes and ESAT's validity and potential for scalability.

## Key findings

### **ESAT is a valid tool for assessing SES.**

The results of our face validity and inter-item reliability testing suggest that ESAT uses clear language, aligns with skills definitions from other frameworks in the literature and reliably assesses its core SES areas.

### **Participants and staff are highly satisfied with ESAT and see its value in the employment journey.**

Eighty-one percent of participants are satisfied or very satisfied with ESAT. A large majority of participants reported that ESAT helped them understand which skills they need to develop for advancing their career (77%) and feeling confident they can reach their employment and education goals (72%). Staff found ESAT straightforward and easy to navigate and appreciated the structure and clarity it added to discussions around SES.

### **Following ESAT, participants perceive improved awareness of their SES and staff are observing SES increases among participants.**

Most participants reported that after using ESAT, they are more aware of their SES (83%) and more comfortable discussing their SES (78%). At the end of the program, staff reported increases in participant SES, with 72% of participants' scores improving across all skills areas and the largest gain in teamwork. Participants' self-assessed scores showed minimal change, however, this is not unexpected for self-assessment data and requires further analysis.

### **ESAT is being implemented in a variety of settings and formats and with adaptations to meet site-specific needs – and positive outcomes are maintained even with these variations.**

ESAT's positive outcomes were consistent across diverse settings (college programs, essential skills programs and technical skills programs) and formats (in-person, virtual and hybrid). While implementation practices varied across delivery partners, key SES outcomes were highly positive regardless of fidelity to recommended implementation principles.

**Overall, these findings are very promising. Interim results suggest that ESAT can help produce individuals with strong SES and awareness thereof across a variety of settings and implementation approaches. There are also early indications that participants using ESAT experience positive employment outcomes. This demonstrates the value and readiness of ESAT to continue its journey in evidence generation and scaling.**



# 1. Introduction

In today's labour market, employers value social and emotional skills (SES), such as adaptability, collaboration and creativity. Also known as "soft skills," SES provide a foundation for developing other job-specific skills and help individuals thrive in learning and at work.<sup>12</sup> Recent Canadian surveys demonstrate that most businesses focus on SES while hiring – prioritizing skills like willingness to learn and problem-solving – and many organizations feel SES contribute to better employment outcomes, especially through skills like communication, teamwork and time management.<sup>34</sup> There is also evidence that SES are important for supporting longer-term labour market outcomes and adapting to future labour market changes and disruptions.<sup>5 6</sup>

While there are many programs in place to help individuals develop SES, there are two notable gaps in the ecosystem: (1) existing SES programs overwhelmingly target children and youth and (2) there is no suitable way to assess SES skill development.<sup>7</sup> Existing SES assessments are limited by observer bias, inaccurate self-assessments and their inability to consider context (e.g., strong communication skills will look different in a warehouse versus a care home). These limitations are exacerbated for groups facing systemic or cultural barriers to the labour market – their cultural contexts and understandings may differ from a specific workplace expectations. Validated personality assessments do exist, but these are not designed to capture SES.

To address these gaps, Futureworx developed the Employability Skills Assessment Tool (ESAT), an online tool that supports the assessment and development of SES. Since 2014, ESAT has been used by 137 different service delivery partner organizations across various contexts.

In 2020, Blueprint conducted research with Futureworx and the Future Skills Centre (FSC) to understand the implementation process and participant outcomes of ESAT. There was variability in how the tool was implemented across organizations and the research identified several implementation factors as key to success. Staff perceived positive outcomes for participants, especially related to improvements in self-awareness of SES.

1 Government of Canada. (2021). *Learn about the Skills*.

<https://www.canada.ca/en/services/jobs/training/initiatives/skills-success/understanding-individuals.html>

2 Futureworx. (n.d.). *Employability Skills Assessment Tool*. <https://futureworx.ca/employability-skills-assessment-tool/>

3 Express Employment Professionals. (2021). *New Survey: Looking for a Job? Employers Value Soft Skills More than Ever Before*. <https://www.expresspros.com/CA/Newsroom/Canada-Employed/New-Survey-Looking-for-a-Job-Employers-Value-Soft-Skills-More-than-Ever-Before.aspx>

4 Futureworx. (2018). *Sharing Perspectives on 'Soft Skills': A Canada-wide Survey of Key Stakeholders*. <https://futureworx.ca/wp-content/uploads/2018/09/Final-Report-Sharing-Perspectives-on-Soft-Skills-Survey-06-11-2018.pdf>

5 Heckman, J. & Kautz, T. (2012). *Hard Evidence on Soft Skills*. National Bureau of Economic Research. <https://www.nber.org/papers/w18121>

6 Conference Board of Canada. (2020). *The Future Is Social and Emotional: Evolving Skills Needs in the 21st Century*. [https://www.conferenceboard.ca/wp-content/uploads/woocommerce\\_uploads/reports/24357\\_10628\\_FSC\\_SES\\_Impact\\_Paper\\_EN.pdf](https://www.conferenceboard.ca/wp-content/uploads/woocommerce_uploads/reports/24357_10628_FSC_SES_Impact_Paper_EN.pdf)

7 Ibid.

In 2021, Futureworx received additional funding from FSC to work with Blueprint to generate evidence on ESAT's implementability, validity and utility as part of the Scaling Up Skills Development Portfolio. At this stage in ESAT's scaling journey, there are four lines of inquiry necessary to grow our understanding of how ESAT can fill the gap in adult SES assessment in Canada:

- 1. Validity:** Is ESAT a valid assessment of SES?
- 2. Value and effectiveness:** Is ESAT valuable to its participants and staff and effective in achieving SES outcomes?
- 3. Setting:** Does the delivery setting affect ESAT's value and effectiveness?
- 4. Adaptability:** Is high fidelity to recommended implementation principles required to maintain ESAT's value and effectiveness?

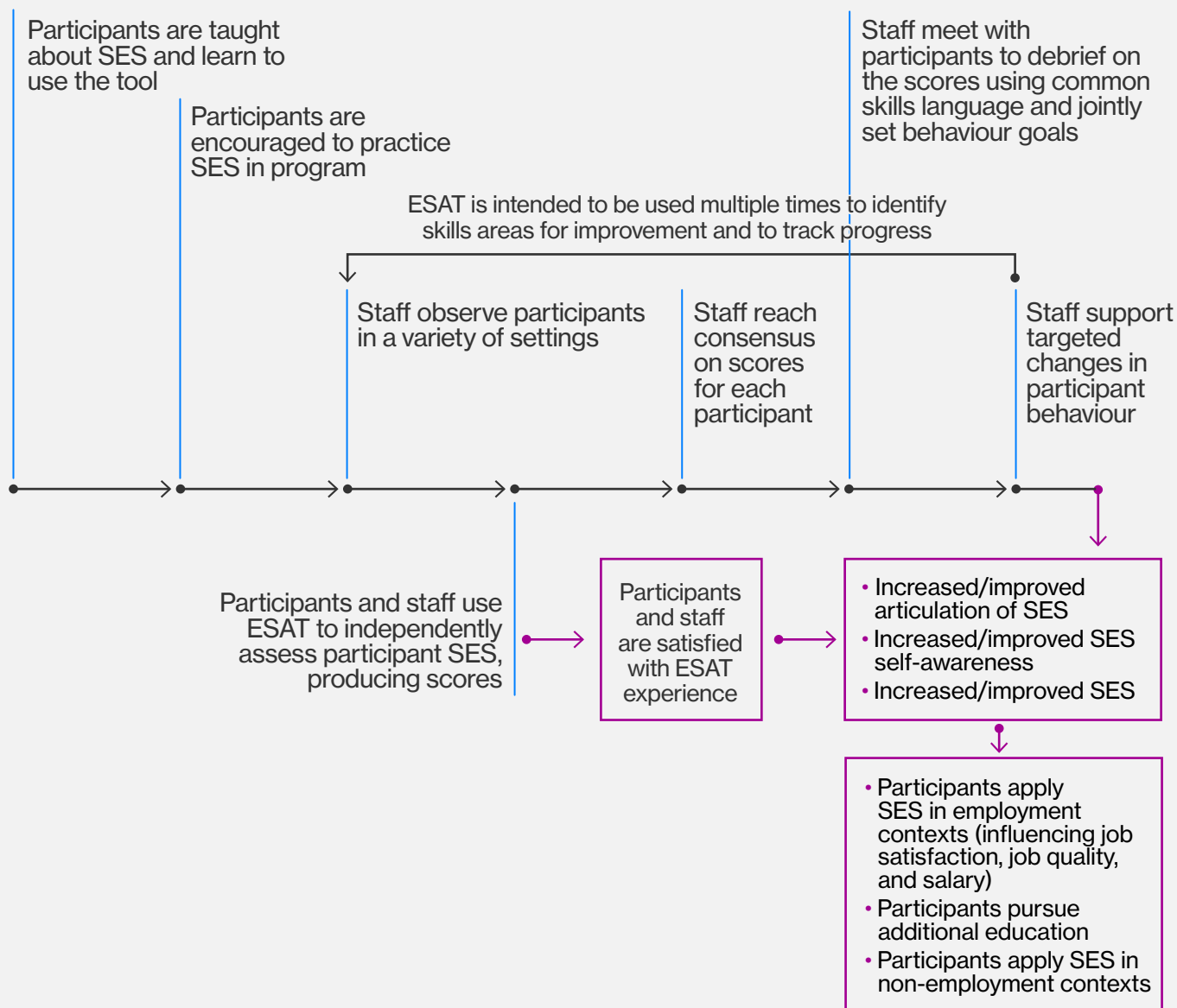
This report presents early insights on these lines of inquiry to assess readiness and support next steps in ESAT's evidence generation and scaling journey. A future report will dive deeper to assess the relationship between participants' SES and employment outcomes and ESAT's validity and potential for scalability.

# 2. About ESAT

## 2.1 Participant journey

ESAT is an online tool that supports individuals to develop and assess their SES. It is used by participants who are enrolled in a training or employment service program. Figure 2 provides a simplified model of the participant journey in ESAT, to support with conceptualizing this report's evidence generation activities and insights. This is not to be considered as ESAT's theory of change, which is being developed in collaboration with Futureworx and will be shared in the final report.

**Figure 2 | Simplified ESAT participant journey**



ESAT's approach is grounded in the belief that individuals who understand their competency and consistency in SES will be more self-aware and motivated to build on their strengths and close their skills gaps. By building stronger SES, individuals will be more likely to achieve their goals in employment, further education and other aspects of their lives. In employment settings, applying SES can lead to employment, job satisfaction and increased job quality and salaries.

There are many moderating implementation factors that may influence how participants articulate, increase their self-awareness of and/or increase their skills. These include but are not limited to adherence to recommended implementation approach, setting type (e.g., college program, essential/life skill training, technical training) and delivery format (in-person, virtual, hybrid)

## 2.2 Tool design

ESAT is designed around nine core SES (**Box 1**), but administrators can also add additional skills. It provides a consistent way to evaluate SES and allows individuals to compare their self-assessments over time and with assessments by program staff. Participant self-awareness of strengths and skill gaps are fostered through an observation-based, timely and respectful team coaching process.

| **Box 1** | **Nine core skills assessed by ESATs**

- **Accountability.** A person's willingness to admit mistakes, accept responsibility and learn from them, take constructive feedback, monitor the quality of their work unsupervised; and display an honest and ethical approach to work and others in the workplace.
- **Adaptability.** A person's ability to react constructively to both anticipated and unanticipated changes in the workplace, take responsibility to adapt to changes and adjust so as to positively interact with others in a variety of situations.
- **Attitude.** The way an individual expresses their feelings about a person or work activity. They show their feelings verbally (through tone) or behaviourally (through body language). The focus is on how these feelings are expressed.
- **Confidence.** Having a belief in one's own competence and the ability to express one's own point of view to others. It includes being able to function in uncertain situations, being appropriately assertive and taking reasonable chances.
- **Motivation.** The desire to set and achieve high standards on the job. The desire to be an excellent employee and showing a willingness to put forth the effort to excel. This can include striving for specific goals, showing initiative and self direction without supervision.
- **Presentation.** The way a person appears to others in terms of dress and adornments, hygiene, etiquette, manners and language. Having an awareness of and showing appropriate verbal and nonverbal behaviour.
- **Stress Management.** A person's ability to experience workplace stress without it impacting their performance or coworkers. It also includes the ability to keep personal stress out of the workplace. It requires that an individual seek help for stress issues in a timely manner.
- **Teamwork.** A person's ability to work cooperatively with others, handle conflict and anger appropriately, communicate effectively, be empathetic and respect differences (of culture, religion, gender, and so forth).
- **Time Management.** A person's ability to set and follow priorities, properly follow schedules for arrival, breaks, lunch, departure etc. and stay on task in an efficient manner. This includes planning appropriately and meeting deadlines.

## 2.3 Delivery approach

ESAT can be applied in any training or educational setting where the development of SES is relevant to the long-term success of the program participant. Organizations can purchase ESAT through a subscription to use in their programs (usually cohort-based).

To date, ESAT has been used in a variety of contexts (e.g., post-secondary education, adult literacy programs, various employment services) and across several provinces. The tool has been part of programs as short as three weeks, where the aim is to create awareness of potential skills gaps and suggest actions for improvement, as well as programs of 12 weeks or more, which are designed to support achievement of more significant behavioural changes.

**Drawing from their expertise in delivering ESAT, Futureworx recommends that organizations meet the following implementation criteria:**

- Staff provide information to all ESAT participants to explain the purpose of the tool and how it works.
- A minimum of two people associated with the program (e.g., program delivery staff, case counsellors/managers, employers) support participants to strengthen their SES by providing feedback and documenting observations within the assessment for each participant.
- Participants are observed across a variety of program delivery formats and contexts, including work placements if applicable, to observe a range of behaviours across situations.
- Observer assessments do not begin until a minimum of two weeks after the start of the program, to ensure they have a reasonable amount of time to observe participant behaviour.
- Observers and participants use ESAT a minimum of three times within the program, meaning there will be at least three assessment timepoints.
- Observers meet and compare notes and assessment scores at the end of each assessment cycle to determine a “consensus” score for each skill and decide on a debriefing strategy with participants about their strengths and opportunities for improvement.
- A program staff member hosts a debrief session/process at the end of each assessment cycle for participants to review and interpret their ESAT scores.

# 3. Methodology

## 3.1 Blueprint's evidence generation approach

To support the scaling up of promising interventions, Blueprint developed a novel approach to evidence generation that fits within the stages of the innovation cycle (see above, p. 4). By understanding an intervention's stage of development, we can determine the most appropriate tools to advance it to the next stage. More details on our evidence generation approach can be found in **Box 2** and the [Scaling Design Report](#).

### | **Box 2** | Common Outcomes Framework

Our measurement approach includes indicators that are specific to an intervention as well as a set of common indicators that are measured for every intervention in the Portfolio.

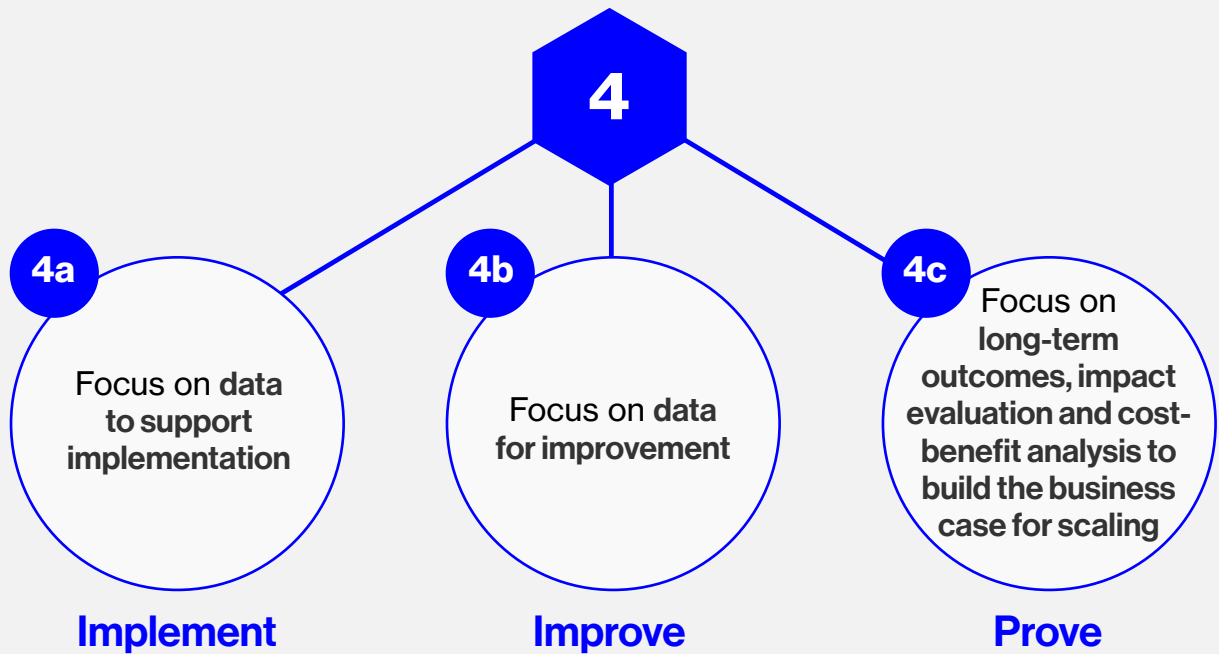
These common indicators are drawn from Blueprint's Common Outcomes Framework, which was developed in consultation with our partners and was informed by review of employment-related outcomes frameworks and measurement approaches both within Canada and internationally.

They include:

- **Intermediate outcomes** that reflect 'in-program' participant experiences and gains (e.g., program satisfaction and skills development).
- **Long-term outcomes** such as employment and educational attainment.

Using a consistent approach to measuring outcomes is part of our commitment to understanding how each intervention in the Portfolio is reaching people across Canada and allows us to measure long term outcomes using Statistics Canada's Social Data Linking Environment. For more information on Blueprint's Common Outcomes Framework see **Appendix A**.

Like all other interventions in the Scaling Up Skills Development Portfolio, ESAT is in Stage 4 of the innovation cycle, **Delivery and Iteration**. Stage 4 is further broken down into three levels of delivery maturity: Implement, Improve and Prove (**Figure 3**). Because ESAT has already been delivered, we categorized it at Stage 4b of the innovation cycle, **Improve**, where evidence generation is focused on data to support continuous improvement. Our research on ESAT is also focused on determining the intervention's readiness for Stage 4c, where the focus is on proving causal impact.

| **Figure 3** | Phases of delivery maturity

## 3.2 Learning agenda

At this stage of ESAT’s scaling journey, we are researching the conditions for ideal implementation, validity and utility. Ultimately, this research will illuminate how to move to stage 4c of delivery maturity, Prove. In this next stage, the focus would be on testing ESAT’s effectiveness in supporting participants achieve better long-term outcomes. For this current stage, our four lines of inquiry are:

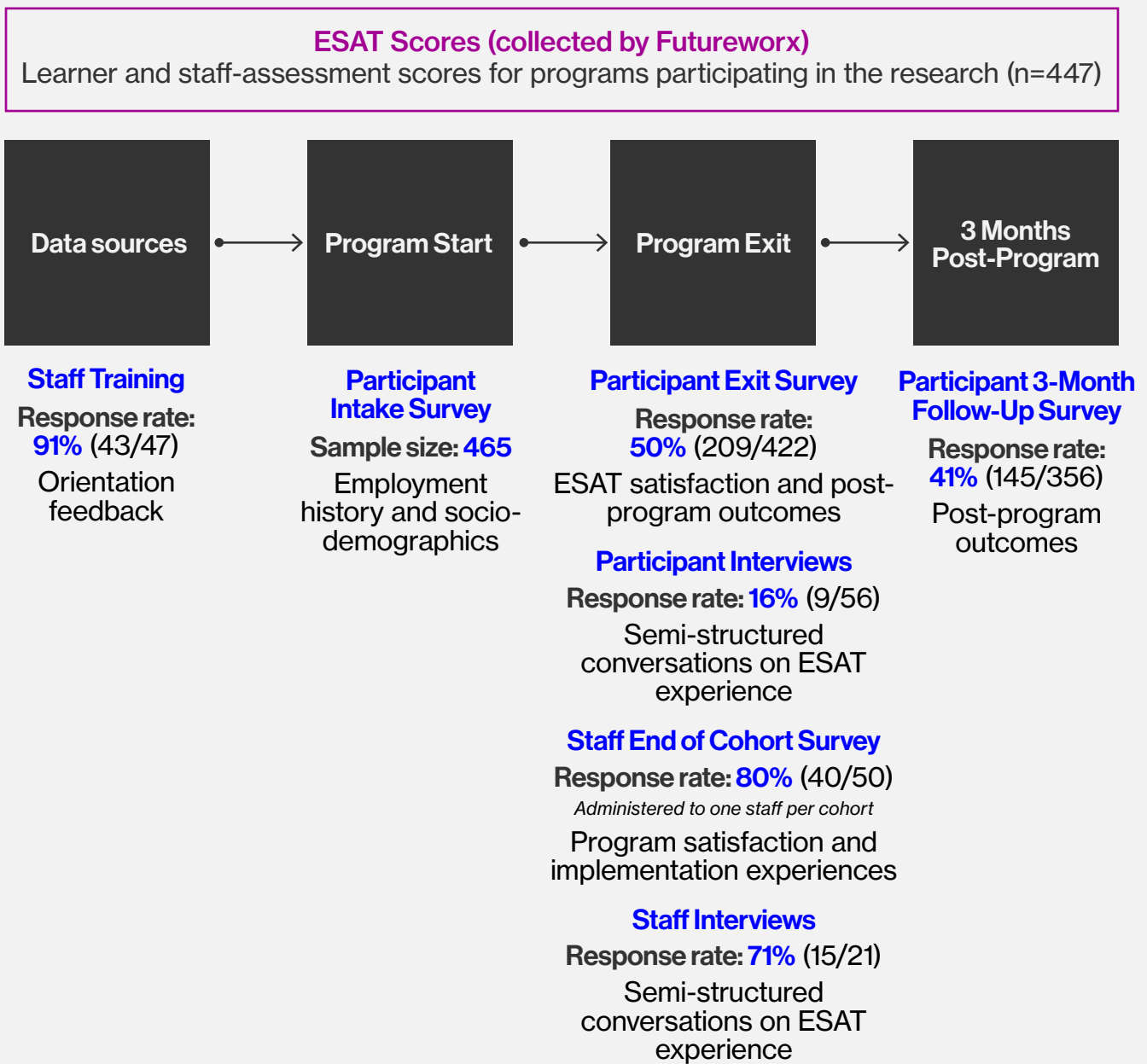
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- 4. Adaptability:** Is high fidelity to recommended implementation principles required to maintain ESAT’s value and effectiveness?



### 3.3 Research design and data

This report includes data collected from September 2021 to October 2022. We use a mixed-methods approach, engaging participants and staff in a pre-post research study as described in **Figure 4**. We are also measuring the validity of ESAT to ensure it is a valid assessment of SES.

**Figure 4 | Data sources**



## Survey data

We measure participant characteristics and outcomes at intake and measure outcomes again at exit as well as three months after exit. Note that the denominator of the surveys decreases over time because not all participants reached the exit or three-month stage by October 2022. Additional data, including nine-month survey data, will be included in future reports.

## Interview data

Interview participation was by invitation at program exit. For staff interviews, we invited 21 lead facilitators and staff members that were deemed to play an important role in the ESAT implementation (as indicated by lead facilitators) and conducted 15 interviews. For participant interviews, we invited three participants per cohort (selected through stratified sampling on demographic characteristics, i.e. gender, race, Indigenous identity, disability) (n=56) and conducted nine interviews. Due to the low response rate among participants in this phase of data collection, we adjusted our recruitment approach to inviting five to seven participants per cohort in the next phase and then all participants in the final phase. These later rounds of interviews will be reported on in the final report.

## ESAT scores data

Blueprint has a data-sharing agreement with participating organizations that allows analysis of all ESAT scores, not just those from participants who consented to the research. To be included in the analysis, participants needed to have minimum two sets of skills scores, recorded at different times. This means that the sample for the participant intake survey (n=465) is slightly different from the sample of the participant self-assessed and staff-report ESAT scores (n=447), because some participants had missing scores (e.g., only one timepoint). Given that individuals were in the same programs, we expect the ESAT data to be generally representative of consented individuals. For the final report, we aim to analyze the ESAT data of participants who completed the intake survey (i.e., who consented to research participation) separately.

## Measuring validity

At this stage of research, we have assessed two measures of validity: **face validity** (which measures whether the test appears to measure what it claims to via an assessment of the language) and **inter-item reliability testing** (the degree to which the self-assessment items are strongly correlated among each other for all items that aim to measure the same skill). Inter-item reliability testing used data from Futureworx from beyond the current study, assessing correlation using ESAT participant self-report scores from 2012 to 2020 (N=5862).

In our final report, we will report on **predictive validity**, which will be key to showing that as scores change, outcomes improve – and that optimally, these two occurrences are correlated. To see the strength of this correlation, we will compare ESAT scores with participant outcomes collected

through other data points and discuss the extent to which assessment scores predict participant outcomes. We will also test **divergent validity** (the relationship between employability and hard essential skills), conduct a **factor analysis** (i.e., we will test the hypothesis that the ESAT items are a good fit within each skill area) and re-assess **face validity and inter-item reliability**.

## 3.4 Data limitations

**High survey attrition rate:** We see high attrition rate among participants for the exit and three-month follow-up surveys, with 50% and 41% of participants having responded to each survey, respectively. This attrition rate limits our ability to generalize participants' experiences and outcomes after using ESAT at this interim reporting stage.

**Implementation variability reported in qualitative data only:** In this research, Blueprint used qualitative data collected from an open-text survey question and staff interviews to investigate the full range of implementation variability. This data was helpful to generate information on the ways in which staff were unable to meet implementation criteria, but it does not provide a quantitative measure of the proportion of staff who did meet each criterion. We have added new quantitative survey questions to mitigate this limitation in future reporting.

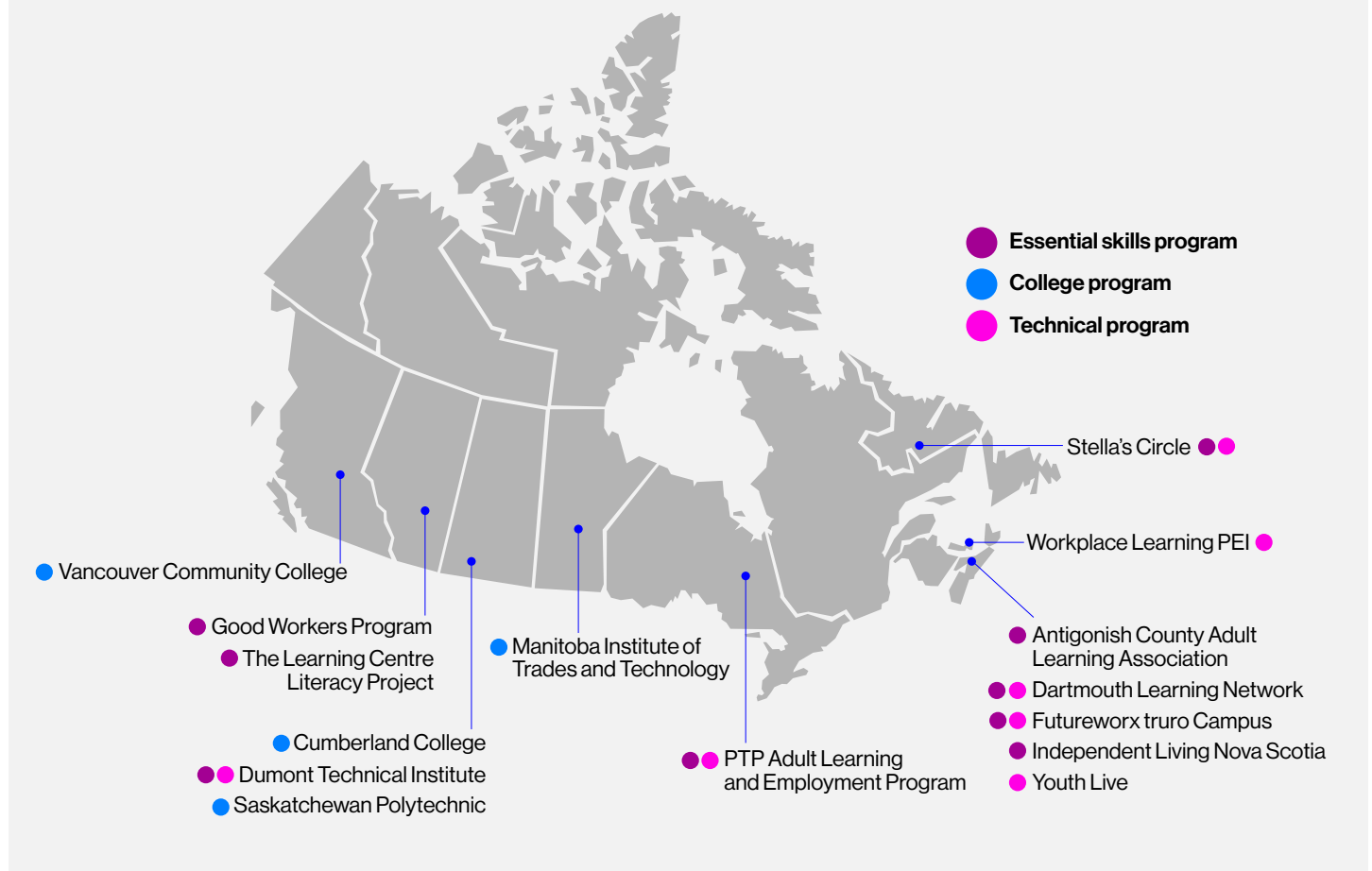
**Generalizability of inter-item reliability:** The data used for testing the correlation among questions within each skill area were limited to participant self-assessment scores. This was due to data quality challenges (e.g., missing data, data entry errors). During the assessment, ESAT randomly selects three positively worded and three negatively worded questions for each skill area. This randomness limits our ability to generalize the inter-item reliability results to each individual self-assessment, since we cannot assess the extent to which the questions in each individual survey are correlated.

## 3.5 Delivery partners and participants

### Delivery partners

All organizations using ESAT were invited to participate in this phase of research. Fifteen organizations signed up to participate in the project as delivery partners (Figure 5). These organizations delivered ESAT in three program settings (essential skills programs, college programs and technical programs) and three formats (in-person, virtual and hybrid) (Table 1). ESAT was not originally designed for virtual delivery but offered this format because of the COVID-19 pandemic.

**Figure 5 | ESAT delivery partners**



**Table 1 | ESAT delivery setting types and formats**

Program types	% of program (N=29)
Essential / life skills training program	38% (11/29)
College program	35% (10/29)
Technical / sector-specific skills training program	28% (8/29)
Cohort formats	% of program cohorts (N=40)
Entirely in-person	50% (20/40)
Entirely virtual	25% (10/40)
Hybrid	25% (10/40)

**Note:** Program type captures program-level data. Program delivery format may change the format between cohorts, which explains why it is counted separately.

## Research participants

Research participants reflect a diverse set of demographics (Table 2). Seventy-three percent of participants hold a high school diploma or less, 62% are women and 26% are racialized. Participant age varies, with the largest share (23%) of respondents under the age of 25. Intersectional analysis of participants, including variations in outcomes across intersecting identities, will be explored in the final report.

**Table 2 | Snapshot of ESAT participant socio-demographic data**

Socio-demographic characteristics		Share (%) of respondents (N = 465)
Age	Under 25	23% (105/465)
	25-35	31% (146/465)
	36-50	28% (132/465)
	50+	17% (79/465)
	Unknown	1% (3/465)
Born in Canada	Yes	69% (276/401)
	No	31% (125/401)
Disability	Yes	32% (150/465)
	No	68% (315/465)
Gender	Woman	62% (290/465)
	Man	32% (151/465)
	Gender non-binary (including gender fluid, genderqueer and androgynous)	2% (10/465)
	Two-spirit	2% (7/465)
	Unknown	2% (7/465)
Racialized	Yes	26% (54/205)
	No	74% (151/205)
Highest education	Less than high school diploma or equivalency certificate	25% (116/465)
	High school diploma or equivalency certificate (e.g., GED)	48% (224/465)
	Registered Apprenticeship or other trades certificate or diploma	3% (15/465)
	College, CEGEP, or other non-university certificate or diploma	13% (59/465)
	University certificate, diploma, or degree below bachelor level	4% (17/465)
	University Bachelor's degree (e.g., B.A., B.A. (Hons.), B.Sc., B.Ed., LL.B.)	4% (20/465)
	University certificate, diploma, or degree above bachelor level	3% (14/465)

# 4. Early findings

## 4.1 Validity

What we're investigating	Is ESAT a valid assessment of SES?
What we're learning	ESAT uses clear language, aligns with skills definitions from other frameworks and reliably assesses its core SES areas.

For ESAT to support skill assessment and development, it must accurately and reliably assess SES. An inaccurate tool could lead to misperceptions of SES and indeed less awareness and worse articulation.

We're measuring the validity of ESAT in several ways. At the beginning of the project, we conducted face validity and inter-item reliability testing and the results of these tests informed our suggested modifications to the tool before launching this phase. Findings from these tests are presented below. Face validity will be revisited in the final report after receiving additional feedback from staff.

### Face validity

**What this measures:** Face validity measures whether a test appears to measure what it claims to via an assessment of the language. A tool without face validity may not actually measure or assess the skills it intends to.

### The language in ESAT is clear and aligned with similar skills definitions used elsewhere in the literature.

To assess face validity, we reviewed ESAT's clarity, conciseness and internal consistency, as well as its alignment with skills definitions from other frameworks such as the Government of Canada's *Skills for Success* framework.<sup>8</sup> These features were reviewed for the skills definitions, the observation rubrics used by staff and the self-assessment questionnaire used by participants. Staff feedback about the tool's clarity from the previous phase of research was also considered. This report shares our preliminary assessment of face validity and a follow-up assessment will be presented in the final report.

<sup>8</sup> The *Skills for Success* framework outlines skills that help people in Canada to participate and thrive in learning, work and life, especially in a rapidly evolving labour market.

Overall, we found that ESAT is clear in its skill definitions and well aligned with other common frameworks. Our initial assessment identified four opportunities for ESAT’s face validity to be improved: (1) further differentiation between skills; (2) clearer wording in some self-assessment items; (3) amended observation rubric design; and (4) amalgamating skills constructs to further align with Skills for Success. More details about these opportunities are found in **Appendix B**.

Prior to this phase of research, Futureworx made improvements to self-assessment language and standardized the number of assessment items per skill area. Other changes were to be revisited upon seeing the final results from this phase of work. We do not believe any of the outstanding opportunities for improvement represent a significant threat to face validity.

### Inter-item reliability

**What this measures:** Inter-item reliability in this context measures the degree to which the self-assessment items are strongly correlated amongst each other for all items that aim to assess the same skill. The testing measures how reliable ESAT is in assessing each employability skill included in its questionnaire.

### ESAT items are reliably assessing their intended SES.

Using ESAT participant self-report scores from 2012 to 2020 (N=5862), we compared items within each of ESAT’s nine skill categories (see **Box 1** on pg. 12) to test the extent to which items within a skill area are correlated with one another.

To do this, we derived Cronbach’s alpha as an estimator for each skill. Cronbach’s alpha provides a measure of the internal consistency of a test or scale: the extent to which all the items in a test measure the same concept or construct. We ran tests to investigate how the estimator changes according to which items are included in the scale. Cronbach’s alpha<sup>9</sup> is expressed as a number between 0 and 1, with 0.7 or above generally seen as acceptable threshold within the social sciences for indication of good reliability.<sup>10</sup>

We used participants’ de-identified ESAT score data<sup>11</sup> from an eight-year period for initial assessments. There was positive correlation among seven of the nine skill areas. Adaptability and time management were just below that benchmark (with alpha values of 0.6 and 0.68, respectively), though time management is still reliably above concerning levels. This suggests that the items for assessing these skills may need greater differentiation from other skills’ constructs or to be combined with other skills under an expanded definition. **Table 3** shows the Cronbach’s alpha scores for each skill area.

9 In general, Cronbach’s alpha is a measure of correlation with 0 indicating no correlation and 1 indicating strong correlation. A higher value indicates a strong correlation between variables that are being tested.

10 Taber, Keith S. “The Use of Cronbach’s Alpha When Developing and Reporting Research Instruments in Science Education.” *Research in Science Education* 48, (2017): 1273–1296.

11 Sample includes 5862 self-assessment participant responses in ESAT between 2012 and 2020.

**Table 3** | Inter-Item Reliability Testing Results Using ESAT Score Data

Skill area	Cronbach's alpha
Confidence	0.86
Motivation	0.78
Attitude	0.77
Teamwork	0.77
Stress	0.75
Presentation	0.74
Accountability	0.70
Time management	0.68
Adaptability	0.60

## 4.2 Value and effectiveness

<b>What we're investigating</b>	Is ESAT valuable to its staff and participants and effective in achieving SES outcomes?
<b>What we're learning</b>	Participants and staff report positive experiences and outcomes from ESAT. ESAT is seen as a valuable tool in the employment journey and contributes to improvements in SES awareness.

When effective, using ESAT is thought to lead to three short-term outcomes: (1) participant and staff satisfaction with the tool; (2) skills awareness; and (3) skills improvements. We examine these short-term outcomes (as an indication of value and effectiveness) before moving to a more rigorous test of ESAT and its relationship with longer-term labour market outcomes.



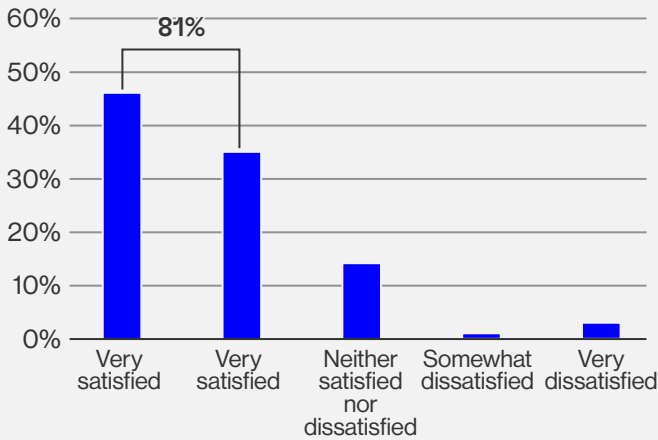
## Satisfaction

**Participants are highly satisfied with ESAT and see its value in the employment journey.**

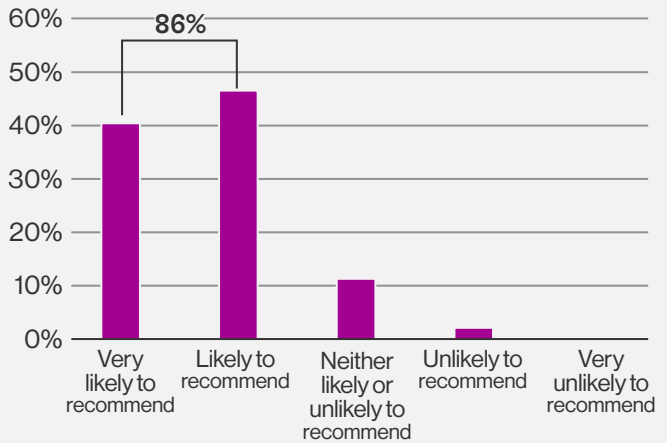
In exit surveys, 81% of participants reported being satisfied or very satisfied with ESAT (Figure 6). Eighty-six percent were likely or very likely to recommend ESAT to others and 75% found it easy or very easy to use. Participants found the debrief sessions especially valuable because it gave them a structure for regular check-ins with program staff about their skills; 82% reported having meaningful discussions with staff about their ESAT results.

**| Figure 6 | Participants' experience with ESAT**

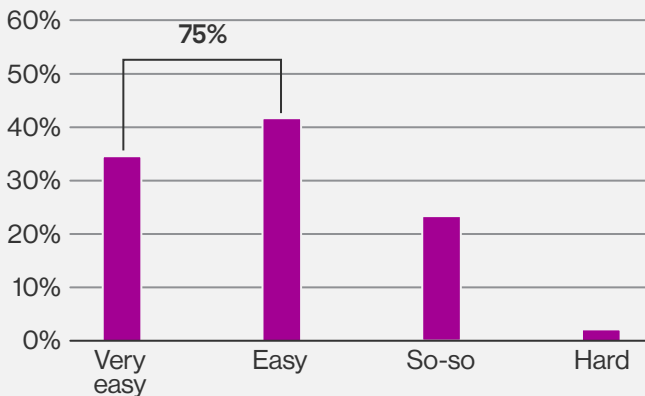
**Overall satisfaction with ESAT (N=209)**



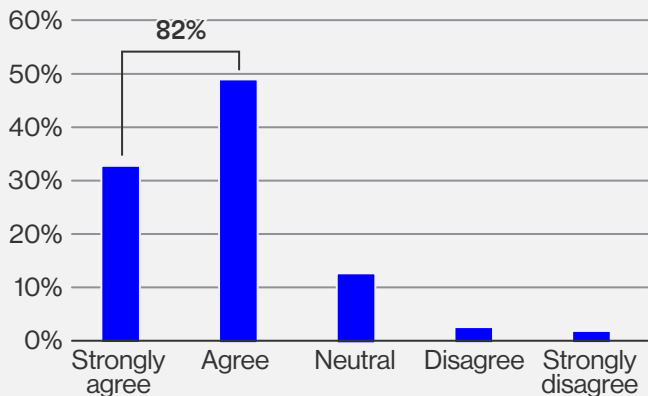
**Likelihood to recommend (N=209)**



**Whether it is easy to use (N=209)**



**Staff had meaningful discussions with me about my ESAT results (N=208)**

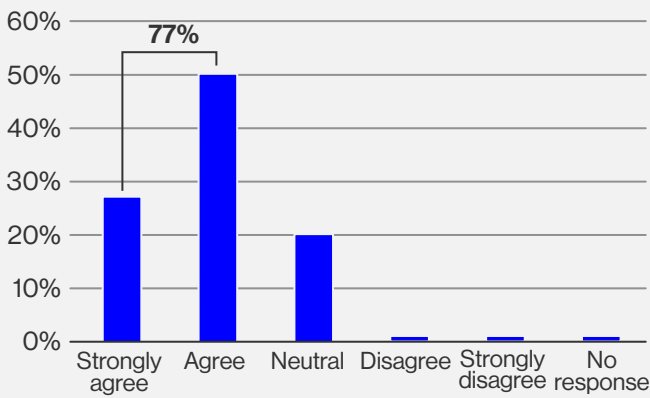


In a survey at the end of the program, we asked participants whether ESAT helped them understand what skills they need to advance their career. Seventy-seven percent agreed or strongly agreed (Figure 7). Further, 72% feel more confident that they can reach their employment and education goals because of ESAT.

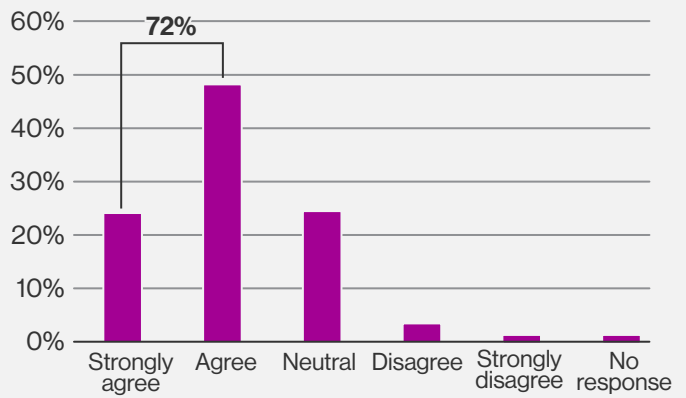
*“They showed me what to look forward to in getting in the workplace and skills I need to be in a job.” – Participant*

**Figure 7 | Participants’ self-perceived value of ESAT in employment journey**

**ESAT helped me understand what skills I need to advance my career (N=208)**



**I feel more confident that I can reach my employment or education goals because of EAST (N=208)**



### Staff appreciated ESAT’s clarity and utility.

Staff appreciated that ESAT provides structure and clarity to support discussions about SES, including among program staff, which allows for multiple perspectives on the same participant. Most staff interviewed spoke about ESAT being straightforward and easy to navigate. Staff also noted that they are using ESAT in several ways within their programs and 66% (N=29) of cohorts have had ESAT as a mandatory component, signalling its value across different program needs (see **Box 3**).

*“The conversations with participants [were] beneficial for their growth and motivation. The exemplars are useful for making observations and having conversations.”*

– Staff

#### | **Box 3** | How are staff using ESAT in practice?

- More than two-thirds (67%) report using ESAT to inform conversations with participants about their employability skills and almost half (46%) say they use ESAT to support decisions about participants’ next steps in their career journey (**Table 4**).
- A minority say they use it to support the decision to issue qualifications or credentials, or to help determine participants’ grades.
- Other uses reported by a few staff include highlighting participants’ strengths in reference letters or as a screening tool (i.e., participants’ ESAT results from a previous program help them determine which participants might benefit most from joining their current program).

#### | **Table 4** | Uses of ESAT in practice

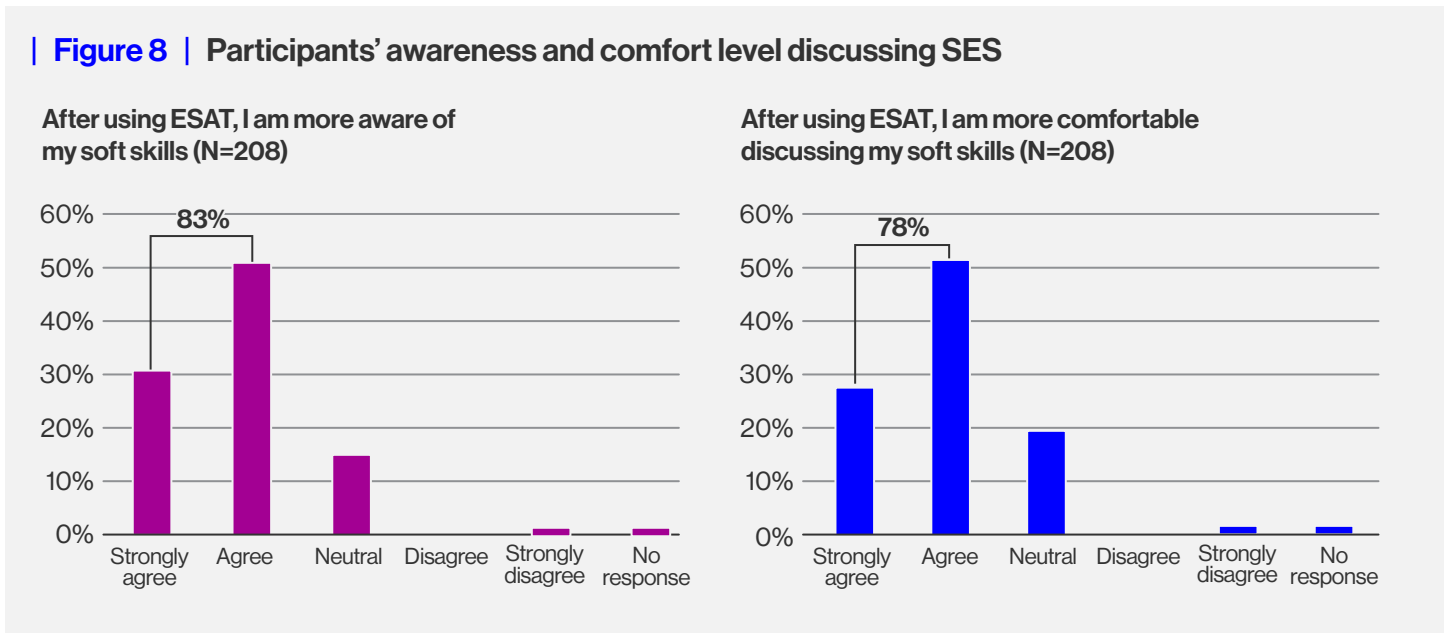
Uses of ESAT in programs (N = 39)	Percent	N
To inform conversations with participants about their employability skills	67%	26
To support decisions about next steps for participants (e.g., career transitions, further training, etc.)	46%	18
To support the decision to issue qualifications or credentials (including micro-badges or micro-credentials) to participants	13%	5
To help determine participants’ program grades	5%	2
Other	3%	1

Note: Use of ESAT in a program is not mutually exclusive.

## Skills awareness

### Participants' awareness of their SES and gaps increased.

As shown in **Figure 8**, participants indicated that after using ESAT, they are more aware of their SES (83%) and more comfortable discussing their SES (78%). Many participant interviewees agreed that ESAT provides greater self-awareness, allowing them to measure progress and reflect on skills changes over time. Staff agreed with this reflection and noticed improved awareness of SES and behavioural demonstrations among participants.



## Skills improvements

Since using ESAT involves SES assessment from both participants and staff, we can explore skills improvements with two sets of scores. Interim data show that staff observed increases in participants' SES, while participants perceived limited changes in their own skills. Interpreting these results together and in the context of what we know about self-report data suggests that SES may be improving over time, but further analysis is needed to better understand these findings.

*“Student behaviours did change...The students worked to improve their scores, and I think it was a success.”*

– Staff

### Staff perceived participants' SES improving over time.

To assess participants, staff provide a score on a scale of 1-6, with 1 being the desired behaviour is never observed and 6 being the desired behaviour is always observed. As shown in **Table 5**, at the end of program, staff reported all participant skills increasing over time. In fact, 72% of participants' scores improved across all nine skills areas. Participants saw the largest gain in teamwork with 79% improving the skill by 0.54 on average.

**Table 5 | Staff-assessed consensus ESAT scores of participants in participating programs**

Skill	1. Baseline score	2. Mean change score	3. % whose score increased
Accountability (N = 75)	4.02	0.29	72%
Adaptability (N = 85)	3.97	0.40	66%
Attitude (N = 110)	4.16	0.45	76%
Confidence (N = 75)	3.94	0.46	75%
Motivation (N = 85)	4.17	0.29	65%
Presentation (N = 75)	4.09	0.41	72%
Stress (N = 110)	3.96	0.44	72%
Teamwork (N = 100)	4.16	0.54	79%
Time (N = 85)	3.93	0.47	71%
<b>Overall</b>	<b>4.04</b>	<b>0.42</b>	<b>72%</b>

### Participants' self-assessed scores show minimal change in SES over time.

Participants self-assess their skills by giving themselves a score on a scale of 1 to 6, with 1 being *the statement never applies* and 6 being *the statement applies in all circumstances*. On average, 44% of individuals reported increases in their skills over time. Individual skills scores changed only minimally, with close to no change in scores for accountability, confidence and stress management, and small decreases in scores for adaptability, motivation, presentation, teamwork and time management (**Table 6**). The largest increase was in attitude (average of +0.16) and the largest decrease was in presentation (average of -0.14).

Observing only a minimal change may be explained by the Dunning-Krueger Effect<sup>12</sup> in which individuals systematically over-estimate their skill levels. Simultaneously, as individuals' skills improve, their increased awareness can make them more critical of their capabilities, leading to lower scores. This means that participants may overestimate their scores at baseline (due to lower skills awareness) and underestimate their scores at subsequent timepoints (due to higher skills awareness). Together, we are not surprised to see minimal change in self-assessed skills scores for short programs. In the final report, we will explore further analysis of this result. For example, we may analyze score changes by participants' initial scores, program length, or different timepoint comparisons, where possible, to better understand the roles of these factors in skills improvements.

12 Kruger, J., and Dunning, D. (1999). Unskilled and unaware of it: how difficulties in recognizing one's own incompetence lead to inflated self-assessments. *J. Pers. Soc. Psychol.* 77, 1121-1134.

**Table 6 | Self-assessed ESAT scores of participants in participating programs**

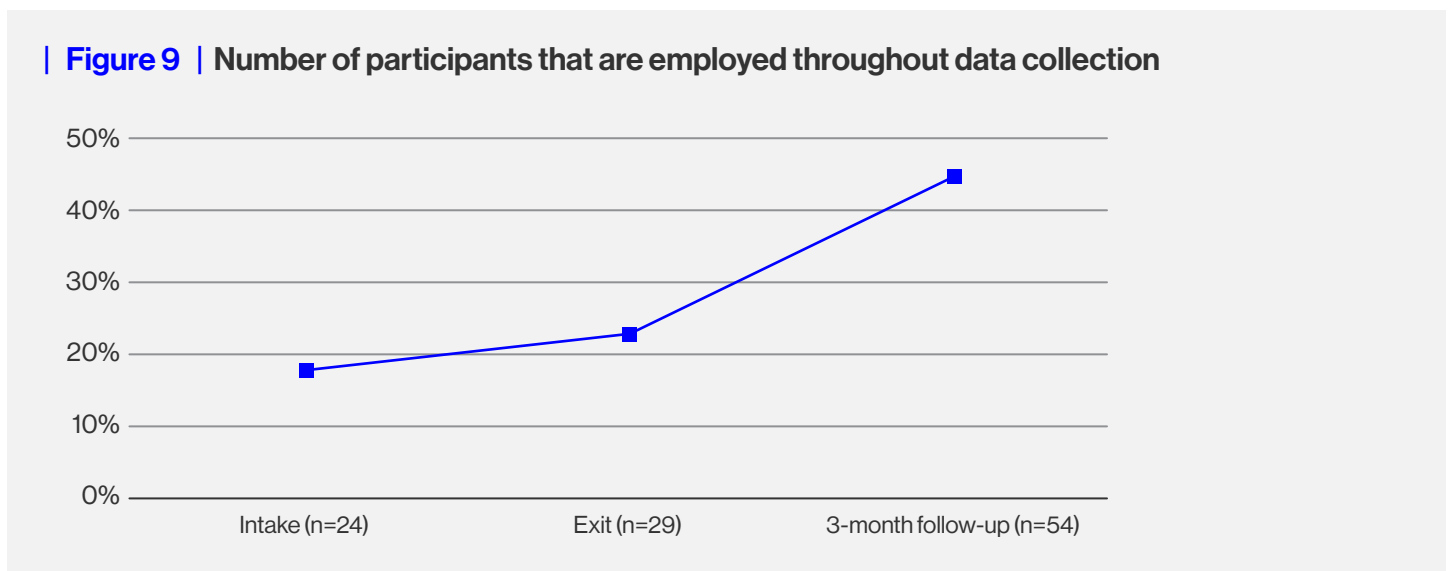
Skill	1. Baseline score	2. Mean change score	3. % whose score increased
Accountability (N = 75)	5.00	0.02	43%
Adaptability (N = 85)	4.41	-0.11	39%
Attitude (N = 110)	4.61	0.16	52%
Confidence (N = 75)	4.32	0.01	49%
Motivation (N = 85)	4.56	-0.02	38%
Presentation (N = 75)	4.78	-0.14	39%
Stress (N = 110)	4.18	0.02	48%
Teamwork (N = 100)	5.03	-0.04	42%
Time (N = 85)	4.62	-0.03	44%
<b>Overall</b>	<b>4.61</b>	<b>-0.01</b>	<b>44%</b>

### Looking ahead: Employment outcomes

There are early indications that participant employment rate increases following ESAT.

Employment outcomes for participants using ESAT increased between program start dates and three-months post-program (Figure 9). Among those who completed all three surveys (n=125), the number of participants employed grew substantially between baseline (18%), exit (23%) and three months post-program (45%). The connection between ESAT use and employment outcomes will be further explored in the final report when there is a larger sample size.

**Figure 9 | Number of participants that are employed throughout data collection**



Note: The sample is limited to participants who completed baseline, exit and three-month follow-up survey (N=125)

In summary, we are seeing high satisfaction among both participants and staff, indicating that both groups understand the value of using ESAT in the employment journey. Participants are increasing their awareness of their SES and gaps and staff reported that participants' SES are improving. While sample sizes are small, data signals that participants' employment rate increases following ESAT.

*"I think that ESAT was on one of those pieces that was sort of looked at...as being a very essential ingredient in order to provide those really strong employability skills for learners to get into the job."*

- Staff

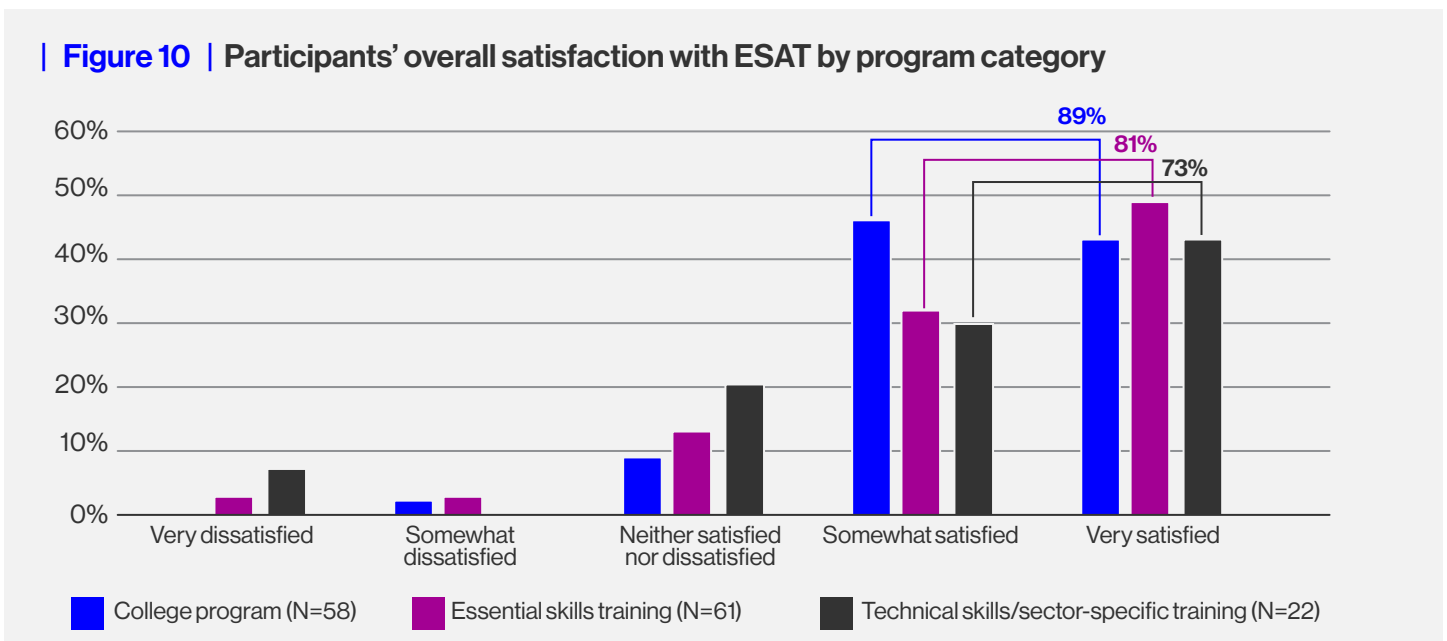
### 4.3 Setting

<b>What we're investigating</b>	Does the delivery setting affect ESAT's value and effectiveness?
<b>What we're learning</b>	Participants' positive experiences and outcomes are consistent across diverse settings.

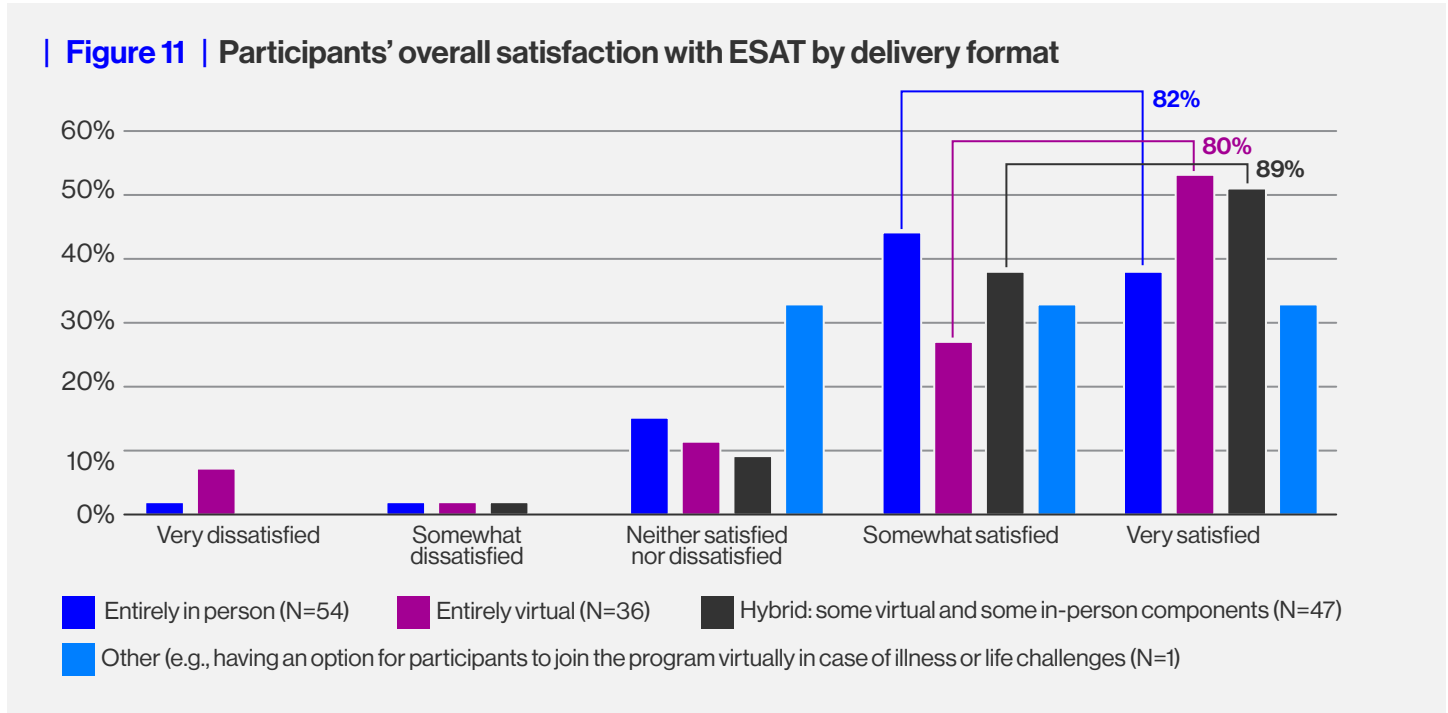
To investigate if some settings are better suited for ESAT delivery, we must test ESAT in a variety of settings. ESAT is being implemented in a range of program types (college programs, essential skills programs and technical skills programs) and formats (in-person, virtual and hybrid). For a breakdown of program types and formats and their locations, see Section 3.5.

**Across all setting types and delivery formats, participants are satisfied with ESAT.**

We observed little variation in satisfaction across setting type (Figure 10). Eighty-nine percent of respondents in college programs, 81% of respondents in essential/life skills training and 73% of respondents in technical skills/sector-specific trainings reported that they were somewhat or very satisfied with ESAT.



Similarly, across all delivery formats, participant satisfaction was 80% or higher. **Figure 11** shows that 82% of respondents who participated in-person, 80% of respondents who participated virtually and 89% of respondents who participated in a hybrid way were satisfied with ESAT.



**There is little variation in participants' perceived SES competence across setting types and delivery formats.**

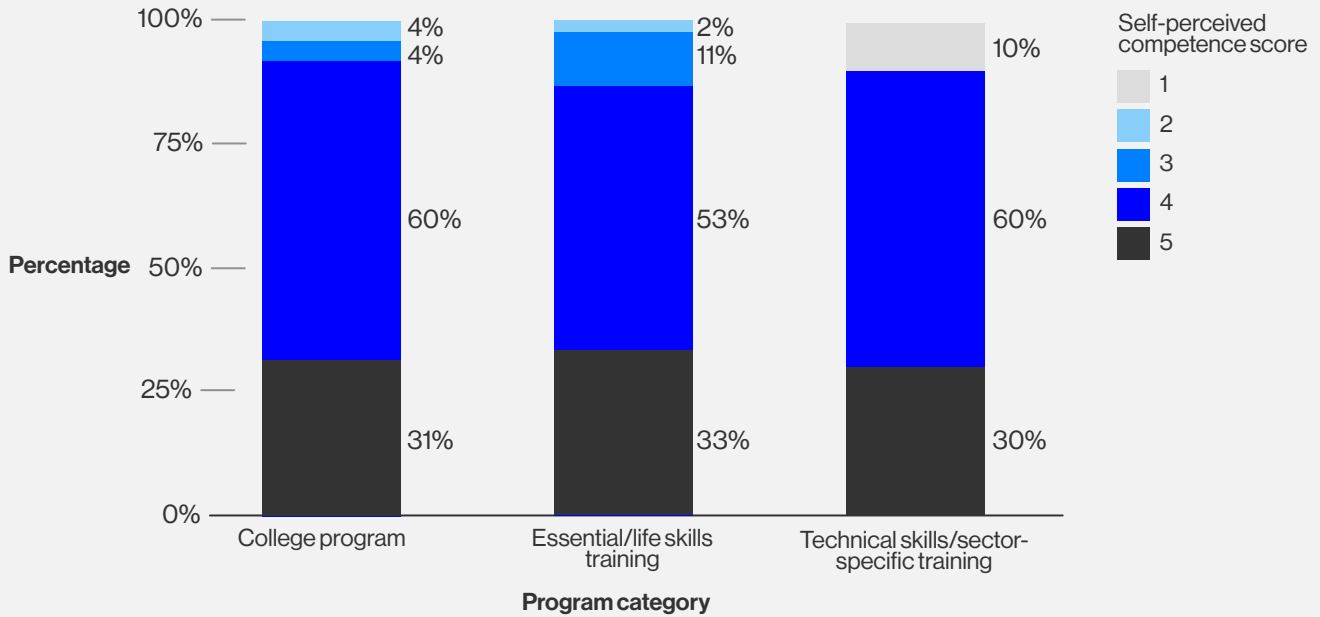
In the three-month follow up survey, we asked participants to indicate their agreement on a five-point scale (1 being “strongly disagree” and 5 being “strongly agree”) with the statement: “After using ESAT, I feel more competent with my soft skills (e.g. communication, time management, accountability, attitude, collaboration/ teamwork, etc.)”.

Ninety-one per cent of respondents in college programs, 86% of respondents in essential/life skills training and 90% of respondents in technical skills/sector-specific training programs agreed or strongly agreed with the statement (**Figure 12**), showing little variation by setting type.



**| Figure 12 | Self-perceived SES competence score by program category**

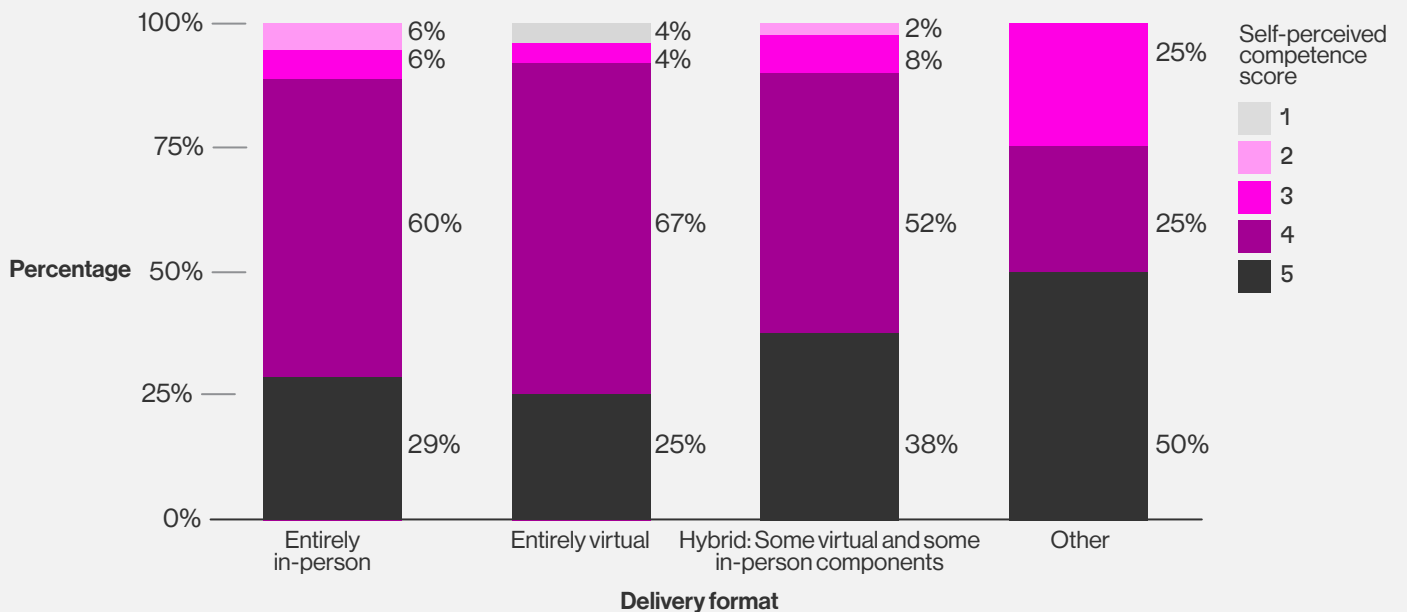
**Self-perceived SES Competence Score Breakdown by Program Category at three month follow-up**



Looking at the same question of self-perceived competence across delivery formats, we observe little variation. Eighty-nine percent of respondents who participated in-person, 92% of respondents who participated virtually and 90% of respondents who participated in a hybrid format agreed or strongly agreed that they feel more competent with their SES after using ESAT (Figure 13).

**| Figure 13 | Self-perceived SES competence by delivery format**

**Self-perceived SES Competence Score Breakdown by Delivery Format at three month follow-up**



## 4.4 Adaptability

<b>What we're investigating</b>	Is high fidelity to recommended implementation principles required to maintain ESAT's value and effectiveness?
<b>What we're learning</b>	Participants' positive experiences and outcomes are consistent across implementation approaches.

In this section, we explore the extent to which participating organizations implemented ESAT using the criteria recommended by Futureworx and whether variation in implementation is related to variation in participant experiences and outcomes.

Among the participating organizations that we interviewed, there was ample variability in how ESAT was implemented relative to the recommended practices.<sup>13</sup> Implementation varied across all seven criteria (**Table 7**). Organizations generally agreed that the implementation criteria would be helpful for generating positive outcomes, but identified factors that could affect their application in practice. For example, having insufficient time and resources and lacking buy-in from leadership could make the implementation criteria more difficult to implement, while having staff experience with SES (and related tools and training) could support their implementation.

### | **Table 7** | ESAT implementation criteria in practice

<b>Recommended Implementation</b>	<b>Implementation in Practice</b>
Staff provide information to all ESAT participants to explain the purpose of tool and how it works.	Most staff were able to discuss the purpose of ESAT and how it works with participants.
A minimum of two people associated with the program (e.g., program delivery staff, case counsellors/managers, employers) support participants to strengthen their SES by providing feedback and documenting observations within the assessment for each participant.	There was inconsistency with the number of observers who assessed participants' SES; sometimes only one observer inputted scores, as opposed to the suggested minimum of two observers.

<sup>13</sup> Implementation criteria were asked about in an open-text survey question, for staff to identify the ways in which they were not able to meet criteria. While we heard ample feedback about the inability to meet these criteria through our onboarding and email communications with staff, as well as from our interviews, the low response rate on the open-text survey question makes this difficult to accurately quantify at this stage. We will be exploring ways to get a more accurate understanding of the extent to which staff were able to meet these criteria for the final report.

Recommended Implementation	Implementation in Practice
Participants are observed across a variety of program delivery formats and contexts, including work placements if applicable, to observe a range of behaviours across situations.	Some staff found it difficult to observe certain skills (e.g., stress management) in virtual programs. In addition, one staff felt challenged to keep participants engaged with using ESAT on work placement due to employers' lack of willingness to create intentional opportunities for participants to self-assess on the job.
Observer assessments do not begin until a minimum of two weeks after the start of the program, to ensure that they have a reasonable amount of time to observe the participant behaviour.	Some staff could not wait the suggested minimum two-week period after starting their cohort before assessing participants (often due to the short duration of some programs)
Observers and participants use the ESAT a minimum of three times within the program, meaning there will be at least three assessment timepoints.	Some staff inputted their observed scores into ESAT at two separate timepoints, as opposed to the recommended three timepoints.
Observers meet and compare notes and assessment scores at the end of each assessment cycle to determine a "consensus" score for each skill and decide on a debriefing strategy with participants about their strengths and opportunities for improvement with SES.	Staff were not always able to meet to discuss consensus scores for each participant.
A program staff member hosts a debrief session/process at the end of each assessment cycle for participants to review and interpret their ESAT scores.	Staff were not always able to host debrief sessions for each participant and the format of these meetings were inconsistent even within the same program.

### **Key SES outcomes are highly positive regardless of implementation adaptations.**

Even with implementation adaptations, we observe very high average levels of participants' self-assessed confidence in skills gains and participant and staff satisfaction (see Section 4.2). Therefore, we see no evidence at this time that fidelity to the specific recommended implementation criteria is requisite for ESAT implementation. While our interim findings suggest that ESAT can be adapted to different settings and produce positive outcomes, we will investigate this more rigorously in the final report.

# 5. Conclusion and next steps

## What we're learning

- ESAT is a valid tool for assessing SES.
- Participants and staff are highly satisfied with ESAT and see its value in the employment journey.
- Following ESAT, participants perceive improved awareness of their SES and staff are observing SES increases among participants.
- ESAT is being implemented in a variety of settings and formats and adapted to meet site-specific needs – and positive outcomes are maintained even with these variations.

As an online tool to assess and develop SES, ESAT addresses a key gap in employer needs and skills development programs. Interim findings presented in this report are promising and suggest that implementing ESAT in college programs, essential/life skills trainings and technical trainings can help produce individuals with strong SES and awareness thereof.

We are seeing that ESAT is a valid assessment of SES, and at the interim stage, the tool has face validity and inter-item reliability. In the final report, we will expand on our test of ESAT's validity to include additional validity tests.

We have early indications that participant and staff outcomes are positive. There are high satisfaction rates with ESAT, and participants and staff report, respectively, increased awareness of SES and SES improvements. Positive results across settings suggest that ESAT may be successfully implemented in a variety of programs, adapting to the needs, strengths and goals of the implementation site rather than adhering to specific implementation criteria. In the final report, we will explore through quantitative measures the relationship between implementation fidelity and outcomes such as participant satisfaction. We will also discuss any difference in outcomes across sociodemographic metrics.

We are observing early indications that participants using ESAT may experience positive employment outcomes. In our final report, we will further explore the relationship between ESAT scores (and/or growth in ESAT scores) and employment and education outcomes. In 2024, Blueprint will also begin analyzing long-term outcomes using linked administrative data held by Statistics Canada.

To attribute employment outcomes (e.g., employment status, salary, employment satisfaction) directly to ESAT usage, we would need a research design including: (a) a control group receiving no intervention, (b) a program group receiving an existing skills intervention and (c) an ESAT program group receiving a combination of ESAT and the skills intervention. Ongoing evidence generation activities will allow us to assess the feasibility of such a study and, if feasible, provide

## Appendix A

### Common Outcomes Framework

	Outcome	Indicators
Socio-demographics	Sex & Gender	Sex at birth
		Self-identified gender
	Age	Age
	Location	Province
		Region & Municipality
	Marital status	Marital status
	Children & Dependents	Children Dependents Household size
	Household Income	Household income
	Education	Highest credential obtained
		Location of highest credential attainment
	Indigenous Identity	Self-identified Indigenous identity
	Francophone status & languages spoken	First language spoken
		Official languages
		Language spoken at home
		Other languages spoken (At home)
Citizenship Status	Place of birth	
	Year of arrival	
	Citizenship status	
Racial identity	Self-identification as member of racialized group	
Disability	Self-identified disability	

	<b>Outcome</b>	<b>Indicators</b>
<b>Employment status and history</b>	Employment	Employment status
		Nature of employment (permanent, temporary, full/part-time)
	Earnings	Hours worked / week
		Wages
		Annual earnings
	Industry and occupation of employment	NAICS code of job
		NOC code of job
	Work history	Time since last employed
		NOC code of job
		NAICS code of job
Income source	Income sources	
<b>Intermediate outcomes</b>	Program completion	Successful completion of planned activities
	Participant satisfaction	Satisfaction with program
		Perceived Utility of Program
		Likelihood to recommend
<b>Customized intermediate outcomes</b>	Skills gains	Measured gains in specific skills
	Program-specific credential attainment	Attainment of program-specific credentials



## Appendix B

# Recommendations to improve face validity

In addition to clear and concise language and skill differentiation, specific opportunities to improve face validity in ESAT are discussed below.

## Self-assessment questionnaire

- **Remove the distinction between home and work for each question or make this optional** – This was also reported by staff as feedback they received from participants
- **Replace items that are deemed to lower inter-item reliability** (i.e., lower Cronbach's alpha)
- **Remove double-barrelled questions**
- **Improve clarity and vocabulary for all items** (e.g., self-starter, validity, reliability)
- **Standardize and reduce the number of items per skill area** (i.e., all skills have 12 items, while 'confidence' has 20) – This will minimize the combinations of items produced for each survey and provide greater opportunity for analysis

## Observation rubrics

- **Defining variations in constructs consistently across each scoring level**
- **Removing distinctions between verbal and physical behavioural exemplars** – Distinctions between what a participant says and does appears not to be consistently relevant for all skills
- **Reversing the formatting of the rubrics so that best behaviours appear first**
- **Ensuring that rubric scoring categories are mutually exclusive**

