SKILLS FOR SUCCESS: VALIDATION STUDY

FINAL REPORT

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Executive Summary

As Canada's economy, labour market, and workplace demands continue to evolve, foundational skills have become increasingly critical for success in work, learning, and living. In response to these shifting demands, the Office of Skills for Success (OSS) introduced the *Skills for Success (SFS)* model, a modernized skills framework emphasizing essential, transferable skills. To support national adoption of this model, Bow Valley College (the College) launched the **Skills for Success: Validation Study**, a multi-year, bilingual research initiative designed to evaluate and support the model's implementation.

The College leveraged its expertise and its nationally recognized TOWES test to design, pilot, and validate new evaluations and training resources aligned with the Skills for Success. The project focused on four skill domains: Reading, Writing, Numeracy, and Digital, with integrated Document Use, and aimed to:

- Validate an evaluation tool aligned with the Skills for Success;
- Develop and assess remedial online training to support skill acquisition;
- Establish predictive validity through post-training outcomes;
- Produce open educational training resources;
- Share recommendations and best practices for national implementation.

The project was delivered across three major phases:

- Development: The project created new evaluation and training tools mapped to the skills framework, integrating Document Use across domains and refining Writing and Digital skill domains.
- Piloting: Over 1,600 Canadians participated across 29 partner organizations. Evaluations and training were tested, with three piloting groups validating skills evaluations, measuring training impact, and comparing outcomes.
- Analysis: The results confirmed strong reliability and validity of the new tools. Reading and Numeracy showed high precision, while Writing and Digital content performed well. Online training demonstrated statistically significant skill gains across all domains, particularly amongst lower-skilled participants.

Outcomes and Impact

- Significant increases were demonstrated in post-training evaluation scores across all domains.

- Document Use noted to be effectively integrated into Reading and Numeracy.
- High engagement with online training; 9,000+ training lessons completed.
- Positive and constructive feedback from both learners and facilitators.
- Some improvements across education and employment outcomes.

Challenges & Lessons Learned

The project faced recruitment challenges, particularly for the Comparison Group, and lower-than-expected longitudinal survey participation. Despite this, the Training Group exceeded participation targets, and francophone engagement surpassed expectations.

Recommendations for future implementation include refining tools for accessibility, supporting facilitators with clearer guidance, enhancing learner engagement through motivational features, and allowing extended access to training resources.

Conclusion and Next Steps

The Skills for Success Validation Study confirmed the validity and effectiveness of the new evaluation and training tools, aligned with the updated skills framework. The resources may be used more broadly, particularly Reading and Numeracy tools, with continued development recommended for Writing and Digital domains to attain a similar level of validity. Sustained support from Employment and Social Development Canada (ESDC) is critical for full national adoption, including funding for further research, tool refinement, and broad implementation.

A suite of open educational resources and dissemination materials, including videos and training content, have been made available to support continued uptake and integration of the skills model across Canada. The project is successful in further contributing research to support a modern, inclusive national skills model that meets the evolving needs of Canadian learners, educators, and employers.

Background

As Canada's workplace, labour market and economy continue to evolve, it is critical to ensure that all Canadians have the foundational skills needed to succeed. To meet emerging demands, Employment and Social Development Canada's (ESDC) Office of Skills for Success (OSS) introduced the **Skills for Success** (SFS) model; a modernized skills framework to support learners, workers, educators, employers, and service providers across Canada. This updated model emphasizes the essential, transferable skills that enable adaptability, resilience, and full participation in work, learning, and life.

A core objective of OSS is to support the national adoption of this model through applied research and training. In alignment with this mandate, **Bow Valley College (the College)** launched the **Skills for Success: Validation Study** to evaluate and support the model's implementation.

The College, located in Calgary, Alberta, has extensive expertise in adult literacy and foundational skills. It is the sole owner, long-time developer and distributor of TOWES (Test of Workplace Essential Skills), a nationally recognized and validated tool for assessing foundational skill proficiencies. With over twenty years of data, research, and field application, TOWES has been widely used in education, employment, and career development across Canada.

By leveraging its experience, historical data and research infrastructure, the College was well-positioned to support the transition to the Skills for Success model and contribute to national efforts to strengthen the foundational skills of Canadians.

Project & Research Objectives

To support the national adoption of and transition to the new Skills for Success model through validated applied research, the **Skills for Success: Validation Study** focused on the following key objectives:

- Develop, validate and provide reliable research-based evidence of the evaluation tool aligned with the Skills for Success framework, within the skill domains of Reading, Writing, Numeracy, Digital, and integrated with Document Use;
- Develop and evaluate remedial training resources in aligned with the Skills for Success framework, within the skill domains of Reading, Writing, Numeracy, and Digital Skills, to

assess the suitability and effectiveness of online curricula for lower-skilled learners and provide research-based evidence on their impact;

- Establish predictive validity of Skills for Success evaluations through the piloted online skills development training and subsequent education and labour market outcomes with reference to four key skill domains under the Skills for Success model;
- Produce a series of skills training materials available as an open educational resource (OER) post project; and
- Report on findings, recommendations and best practices for the adoption of and transition to the new Skills for Success model using timely research results and findings.

Project Team, Consultants & Partners

The College was proud to lead the project, a large-scale, bilingual national research initiative that leveraged the College's expertise, historical data, and a network of national partners and consulting experts. The project aimed to evaluate and support the implementation of the modernized Skills for Success model across Canada.

The College **Project Team** brought together members from across the institution, each contributing their unique expertise and experience. Their creativity, adaptability and collaboration were critical to the project's success.

Project Consultants played a key advisory role throughout the project, offering valuable insights from diverse fields such as education, assessment design, instructional design, research, and educational technology. Their objective perspectives helped guide the project, ensure compliance with standards, mitigate risks, and drive innovation.

To further strengthen the project, an **Advisory Committee** was established, composed of literacy, essential skills, and research experts. Meeting quarterly, the committee provided ongoing guidance, recommendations, and feedback across project phases, enhancing the quality and relevance of outcomes.

Pilot Partners from across Canada were instrumental in testing and refining piloting activities, resources, and tools. Their real-world insights and feedback helped shape the project deliverables and ensured that outcomes were practical, user-centered, and aligned with the needs of diverse learners and stakeholders.

See *Appendix A* for complete list of Project Team, Consultants and Partners.

Key Project Activities

The Skills for Success Validation Study was a multi-year initiative involving several key phases of work. The first phase of the project, *Development*, sought to create new evaluation and instructional resources, prepare the research and evaluation framework, and secure project partners for piloting. The second phase, *Piloting*, involved key stakeholders from across the country testing the resources and collecting data. The third phase of the project, *Analysis*, reviewed the data and findings from the project and evaluated the effectiveness of the resources at improving skills.

Phase 1: Development

Planning, preparation, and research were essential to setting up the project for success. This included clarifying the project's goals, scope, and timelines. This also included proactively identifying risks, resource needs, and potential challenges.

Domain Development & Mapping

The launch of the Skills for Success framework resulted in changes to the skills domain framework to add new skills domains formally not included in the Essential Skills and modify some of the established skills domains, such as embedding Document Use into other domains and expanding Digital skills.

As a result of these significant changes, an important early step in this project was to build out and clearly delineate the specific skills, competencies, and performance indicators within the new or revised skills domains.

The project focused on four of the nine Skills for Success: Reading, Numeracy, Writing, and Digital Skills based on the understanding that:

- These domains could be objectively, formally, and reliably measured at varying proficiencies;
- These domains represent foundational skills that support, overlap and transfer, into other skill areas; and
- Historical and reliable research data could be leveraged to support the project's overall research analysis objectives.

In this phase of the project, the Project Team reviewed existing research and participated in discussions with experts in the field, to leverage knowledge, experience, expertise, and guide the project. This included reviewing:

- *Bow Valley College Studies on the Psychometric Evaluation of the TOWES Summary Report*. (Kline, 2007).
- *Do Adults Have the Skills They Need to Thrive in a Changing World?: Survey of Adult Skills 2023*. (OECD, 2024a)
- *Establishing a Common Framework for Digital Skills in Canada Recommendations Report*. (Bow Valley College, 2023).
- *Literacy and Essential Skills. TOWES - Canada's Essential Credential*. (Bow Valley College, 2021)
- *Literacy, economy and society: Results of the first international adult literacy survey. International Adult Literacy Survey (IALS)*. (Organization for Economic Co-operation and Development & Statistics Canada, 1994)
- *Research report to support the launch of Skills for Success: Structure, evidence, and recommendations*. (Palameta et al., 2021)
- *Scaling TOWES and Linking to IALS. SkillPlan and Bow Valley College*. (Yamamoto & Kirsch 2002).
- *Skills for Success proficiency levels development: Final report*. (Kaufmann et al. 2024)
- *Skills in Canada: First results from the Programme for the International Assessment of Adult Competencies (PIAAC)*. (Council of Ministers of Education Canada et al., 2013)
- *Survey of Adult Skills – Reader's Companion: 2023, OECD Skills Studies*. (OECD 2024b)
- *The Skills for Success model* (Government of Canada, 2021).
- *What is the Essential Skills Research Project?* (Government of Canada, 2004).

While the new Skills for Success model features many similarities to literacy and essential skills, the integration of Document Use, now as an embedded subcomponent of Reading, Numeracy and Writing skill domains (Government of Canada, 2021; Palameta et al., 2021), was a significant change.

Like many other tools, TOWES evaluated and reported on Reading, Numeracy and Document Use as independent skill proficiencies, linked to the Government of Canada's previous essential skills framework. The Project Team conducted a series of mapping activities to explore how Document Use could successfully be integrated across the other domains. This work guided further categorization of evaluation content, with

developers assigning existing document use items and reclassifying them where possible and relevant into reading, writing, and numeracy domains. The Project Team also leveraged historical data from over 165,000 TOWES cases to validate the integration.

See *Appendix B* for Document Use Map

The Project Team also further explored how best to evaluate and training within the domain Digital. Digital skills, under the new Skills for Success model includes the ability to use, apply, and integrate technology at varying levels of proficiency (Government of Canada, 2021; Palameta et al., 2021). The Project Team leveraged the "Establishing a Common Framework for Digital Skills in Cananda Recommendations Report" (Bow Valley College, 2023) and the Digital Skills Tool Kit to guide both evaluation and training content develop work.

Evaluation and training within the domain of Writing was also new to this project. A series of mapping activities were completed, comparing Writing frameworks across various standardized tools, to enhance the development work in this domain. From here, competency tables that aligned with the Skills for Success informed a rubric of criteria for evaluation items. The underlying components of Writing and how best to evaluate this domain were slightly adjusted as needed throughout the project.

See *Appendix C* for Writing Map

Development of the evaluations began with a mapping activity that compiled criteria for each of the Skills for Success domains, with historical TOWES data and other skills and competency frameworks. Evaluation items were developed in alignment with this criteria, and existing TOWES evaluation items also updated as needed. The process was iterative, with adjustments made throughout the project.

Development of the online training included a larger group of evaluation and media developers, and subject matter experts, to create an overarching framework, themes, and a standards document to guide the development. This was also aligned with the evaluation mapping. Content was initially developed in paper format with media developers translating and enhancing the content for online delivery.

Research & Evaluation Framework

The Project Team worked collaboratively with Social Research and Demonstration Corporation (SRDC) to establish the project's research evaluation and validation plan, results measurement indicators, and key performance metrics. This work was critical to guiding the project's design, development, piloting, and data collection activities to facilitate analysis and ensure key project objectives were met.

SRDC's extensive experience and expertise in supporting, leading, delivering, and analyzing successful national skills applied research initiatives was indispensable, given the project's national scale and scope. SRDC has also led several Skills for Success initiatives which provided this project with a foundation in which to work from.

Once the Evaluation Framework was established, the Project Team secured formal Research Ethics approval from the College and subsequently additional Ethics Approval Boards as required by Pilot Partners.

Technology

Technical solutions were required for several aspects of the project, including:

- Assessment platform for hosting and administering the evaluation tools;
- Learning management system to host and deliver the learning content;
- User interface to access the evaluation and learning platform and track user information;
- Content authoring tools to develop the online learning resources;
- Research tools to support data collection and research administration;
- Application to distribute honorariums to participants across the country;
- Database and test scoring software to score evaluations and distribute results; and
- Website to share information, resources, and training related to the project.

Identifying technical requirements and securing technical resources was a primary activity of the project and was critical to meeting the project objectives.

A team comprised of instructional designers, media developers, researchers, Information Technology Services (ITS) Project Manager, ITS developers, and SMEs, established a series of project specific technology requirements. The requirements focused on how to collect research data, the design and delivery of the web-based evaluation and training, and the end user experience.

The technology requirements identified the need to procure design software, a learning management system (LMS), an application to manage user access, an online assessment platform and a data collection application.

Technology selections were based on multiple factors, including:

• Affordability	• Technical support
• English and French language availability	• Integration with existing institutional applications
• Application functionality	• Data collection and privacy terms
• End user ease of access, use and experience	• Institutional cybersecurity approvals

Power Learning Solutions was instrumental in this process and provided recommendations specifically for the design, development and delivery of online training, in consideration of these factors.

Collectively, the technology specifications led to the procurement and use of the following technology applications:

D2L Brightspace - Learning Management System (LMS)	✓ Host and deliver training content and tracks user information
D2L Course Merchant	✓ Support user account creation and facilitate raining access
Assess.ai	✓ Support online evaluation development and delivery
SurveyMonkey	✓ Support online survey development and collect online consent and survey responses
eGifter	✓ Distribute participant honouraia electronically
Articulate 360	✓ Content development software for online learning
Shutterstock	✓ Download copyright compliant imagery for project and content development
RegisterBlast	✓ Scheduling software to coordinate piloting sessions with Pilot Participants

Project & Pilot Partner Websites	✓ English & French website pages to share information and host access to applications

Existing College custom applications were also enhanced and adapted to support piloting activities. This included updating the College's custom assessment database, to account for the changes to the skills model, to ensure system compatibility, to collect data and deliver results.

Tools Development

The Skills for Success are teachable, learnable and assessable (Government of Canada, 2021; Palameta et al., 2021), which aligned with the project's design and delivery approaches. Based on targeted research analyses, and the project's research priorities, the Project Team developed an extensive suite of resources to support **skills evaluation and training**. These resources were shaped by evidence, feedback, best practices, and designed to be authentic representation of skill usage.

Much of the evaluation and training content development worked in parallel, as recommended in Palameta et al., 2021, to align evaluation and learning objectives and mapping activities.

Development of the skills evaluation and training aimed to align with the following design specifications:

- Alignment with findings and best practices from collective research reviews and analyses;
- Content to represent skills in authentic workplace scenarios, at varying levels of proficiency and highlighting the transferability of skills across contexts;
- Content targeted the lower end of the proficiency scale, representative of the perceived targeted user audience;
- Content relied on constructed response to simulate cognitive skills application;
- Content representation to support equity, diversity, and inclusion, to ensure relevancy and applicability; and
- Universal design for learning (UDL) to optimize accessibility.

More specifically, the evaluations:

- Leveraged existing (TOWES) items with valid scoring parameters;

- Included existing (TOWES) Document Use items, repurposed across Reading, Writing and Numeracy domains;
- Included an extensive suite of new items, across targeted skill domains;
- Included a significant number of items across the four skills domains at varying levels of complexity, to ensure adequate coverage, to support new item validation and to generate estimated levels of ability;
- Targeted the lower levels of complexity, as those with skills below Level 3 are significantly more likely to encounter challenges in the modern workplace;
- Adhered to Item Response Theory (IRT), which supports measuring cognitive abilities;
- Were made available in paper and online delivery modalities to facilitate access;
- Underwent multiple rounds of beta testing and analyses, followed by updates as needed; and
- Required minor item adaptations to account for paper or online deliveries, and English and French language differences.

The evaluation had a proposed time limit of 3 hours for completion. While not ideal, the length of the evaluation was based on the number of domains included, with each domain requiring an adequate selection of evaluation items at each of the targeted levels. This was coverage was especially important for the validation process.

Specific training design elements included:

- Content representative of four skill domains, within the workplace context of Communication, Safety and Teamwork, and representative of varying levels of ability;
- Supplemental materials, targeting the foundational components of each lesson;
- The integration of technology platforms, media, and digital tools to enhance accessibility, while supporting flexible, self-directed learning;
- Access through online learning platform, conducive to asynchronous, interactive, scenario and simulation-based learning;
- Multiple practice opportunities, to support a strengths-based approach to learning and recognition that repetition supports skill development (Palameta et al., 2021);
- Beta piloting of new training content, followed by updates as needed; and
- Translation and adaptations to account for English and French language differences.

While content was to adhere to the design standards, this was adjusted throughout the development process based on feedback from developers, SMEs, the Advisory Committees and end users.

The evaluation and training content were first developed in English and then translated to French, as the goal was to develop identical tools in both official languages. The translation process faced challenges with this process, such as direct translations losing the intended context or meaning, having multiple translations with conflicting opinions on the language suitability. Additionally, because French text is naturally longer in length, it often did not fit within the design of English activities, requiring developers to make design adjustments. Other challenges included ensuring the content maintained its relevancy amongst Francophone speakers. Again, developers were required to adapt some content to accommodate for this.

This work led to the finalization of the following piloting tools:

Workplace Essentials Evaluation To identify and measure skills	• Paper and online delivery options • Reading, Writing, Numeracy, Digital skills • Targeting skills from Level 1 to Level 3
	• 3 English paper versions • 2 English online versions • 2 French paper versions • 1 French online version[1]
Workplace Essentials Training To support skill acquisition and growth	• Online, asynchronous delivery • Reading, Writing, Numeracy, Digital skills • Targeting skills from Level 1 to Level 3 • Video content enhancements
	• 60 independent lessons • 20 Strategies for Success (also available as OER www.sfs-towes.com) • Additional 9 lessons focused on skills of Adaptability, Collaboration, Problem Solving[1] • Additional Career Planning & Goal Setting Resource[1]

[1] Some resources were not piloted due to development and piloting time constraints.

Data Collection To collect research data throughout piloting for analyses	• Paper and online consent form • Paper and online surveys • Evaluation result reports • Training access • Focus Group and Key Informant Interview Scripts • Feedback Questionnaire

While Digital Skills cannot be fully assessed through a paper-based evaluation, knowledge-based questions were included to gauge perceived ability level and comfort with digital technologies.

See *Appendix D* for complete list of Workplace Essentials Training content.

Data Collection

Aligned with the objectives of the Research Evaluation Framework, both quantitative and qualitative research data was collected throughout piloting. This included:

- **Consent form**
  As approved by the College's Research Ethics Board, all Pilot Participants were required to provide informed and voluntary consent to participate in the research. The consent highlighted the project purpose, piloting activities, data management, participation benefits and risks, and optional withdraw processes.
- **Evaluation results** (pre, or pre/post)
  Evaluation results included estimated scores for each of the four skill domains measured: Reading, Writing, Numeracy and Digital. Additional data included the score's standard error, and the number of evaluation items attempted.
- **Survey responses** (pre, or pre/post)
  Survey responses, highlighting Pilot Participants' background, main activity at time of participation, self assessment of proficiency and attitude towards learning. Pilot Participants were also asked for feedback about their experiences in the pilot.
- **Longitudinal survey responses**
  Longitudinal survey data (led by SRDC) was collected four to nine months following Pilot Participants' piloting activities. The intent was to connect evaluation results and training activities with longer term key performance indicators, such as education and labour market outcomes, to better establish predictive validity of the evaluations.

- **Training access data**
  The project collected data regarding Pilot Participants' access to the training through the LMS. This included the type and number of lessons accessed, duration of access and record of completion.
- **Pilot Partner feedback survey**
  Pilot Partners were provided an opportunity to provide feedback about their experiences through a survey shared following the completion of each piloting cohort. This included identifying aspects of the pilot and tools that were beneficial and flagging other areas for improvement.
- **Pilot Partner interview responses**
  Optional interviews (led by SRDC) with Pilot Partners were conducted to gain further insight into their delivery of the pilot, along with further identifying successes and challenges.
- **Focus Group responses**
  Pilot Participants were invited to participate in optional focus group discussions (led by SRDC) about their experiences throughout their participation in the pilot. Discussions focused on their participation and experience of the evaluation and training.
- **Key Informant feedback**
  Interviews (led by SRDC) with key Project Team members and Consultants were conducted to gain insight into the development process.

Pilot Partner & Participant Resources

The Project Team provided Pilot Partner Facilitators with training and resources customized for piloting groups, and offered ongoing support throughout, from the initial piloting planning stages to final wrap-up.

An extensive suite of guides, webinars and videos were developed and distributed through project websites, to support Pilot Partner Facilitators and Pilot Participants through the various research activities and piloting delivery.

Guides, Webinars & Videos To support the facilitation and access of tools	**Pilot Partner Facilitators**	https://sfsproject.towes.com/ https://sfsproject.towes.com/fr/skills-for-success-project-partners-fr
		• Collaboration Agreement & Statement of Work Template • Resources to support Pilot Participant Recruitment • Research & Evaluation Guides, Webinars for paper and online deliveries • Workplace Essentials Training Guide, Webinar (Piloting Only) • Workplace Essentials Training Guide (Synchronous and Asynchronous)
	Pilot Participants	https://sfstest.towes.com/ https://sfstest.towes.com//fr/workplace-essentials-evaluation-fr
		• Evaluation Preparation Guide, Video for paper and online deliveries • Evaluation Results Overview
		https://sfstrain.towes.com/ https://sfstrain.towes.com/fr/workplace-essentials-training-fr
		• Workplace Essentials Training Handout, Video

Communications & Marketing

Recognizing the importance of national reach and awareness, the project worked closely with Changemakers (*formally ACI Argyle Communications Inc.*) a communications specialist, to establish project communications plan, draft marketing materials, establish a national piloting strategy and develop a strategic dissemination plan.

The project engaged in a variety of strategic communication and marking initiatives to enhance project awareness, recruit Pilot Partners and disseminate preliminary findings, of which included:

- Public project announcement;

- Email referrals and outreach campaigns, leveraging existing networks of the College, Advisory Committee Members and Pilot Partners;
- Producing and distributing project piloting brochures;
- Posting recruitment ads in relevant organizational newsletters, including:
    - Calgary Employment Bulletin
    - Canadian Apprenticeship Forum
    - Skills/Compétences Canada
    - Colleges and Institutes Canada (CICan)
    - Community Adult Learning **Program**
    - Polytechnic Canada
    - Academia;
- Hosting informational webinars;
- Exhibitor at CICan Conference (April 2023, April 2024);
- Presenting at:
    - Bow Valley College's Employee Engagement events
    - ESDC's Skills for Success Program, Recipients Sharing Sessions
    - Government of Alberta Community Resource Meeting;
- Establishing a Project Website to share updates;
- LinkedIn paid advertising campaign; and
- Producing videos for Pilot Partner recruitment and project dissemination

See *Appendix E* for Marketing samples.

Phase 2: Piloting

While the research, planning and subsequent evaluation and training content development were important first steps in the project, it was equally important that these findings, new designs and tools were validated.

Piloting the evaluations and training tools was the next critical phase of the project. Piloting, particularly on a large scale, supports the collection of data and feedback to establish reliable research data; to demonstrate short and long term validity, reliability, and efficacy of the tools to further advance research aligned with the new Skills for Success model.

Through the various marketing and recruitment activities, the project sought Pilot Partners from across Canada, representing post secondary institutions, training service providers, government, and employers.

Pilot Partners were offered the opportunity to participate in one of the three piloting groups, each targeting different research objectives, and requiring varying degrees of commitment.

Validation Group	To validate skills and evaluation content through: • Survey & Evaluation • Optional Longitudinal Survey, 4 - 9 months following
Training Group	To determine success of remedial training intervention through: • Pre Survey & Evaluation • Online Remedial Training, 8 – 12 weeks • Post Survey & Evaluation • Optional Focus Group participation • Optional Longitudinal Survey, 4 - 9 months following
Comparison Group	To serve as a baseline to compare training outcomes through: • Pre Survey & Evaluation • Post Survey & Evaluation, 8 – 12 weeks following • Optional Longitudinal Survey, 4 - 9 months following

The **Validation Group** was focused primarily on collecting a data associated with the skills and the evaluation content. A significant number of data cases were required to establish reliable response data. Multiple evaluation versions were designed to expand the scope of content exposure. This validation also relied on formal and standardized testing conditions, to ensure the reliability of data collected. Survey responses, highlighting Pilot Participants' background, main activity, self assessment of proficiency and attitude towards learning were also collected.

The objective of the **Training Group** was to demonstrate the efficacy of the training in skill acquisition and growth. Following completion of the pre survey and the evaluation to identify skills, Training Group Pilot Participants, with gaps in one or more skill domains, were provided with access to the online training over the course of 8 -12 weeks. The training was designed to provided flexibility and autonomy to self direct the learning experience, based on needs and interests. An extensive suite of interactive and independent lessons facilitated this. Following the training period, Training Group Pilot Participants completed a post survey and evaluation, to demonstrate skill gain. Survey responses were also compared as it related to self assessed proficiency and learning attitudes. Training Group

Pilot Participants were also offered an opportunity to complete a longitudinal survey 5 - 9 months later, to demonstrate long term sustainability.

The intent of the **Comparison Group** was to serve as a baseline in which to compare against Training Group findings. Comparison Group Pilot Participants were provided the opportunity to complete the pre survey and evaluation. After 8 -12 weeks with no project training access, Comparison Group Pilot Participants then completed the post survey and evaluation. They were also offered an opportunity to complete a longitudinal survey 5 - 9 months later.

Inclusion in either the Validation, Training or Comparison Group was based on the Pilot Partners' ability to offer and support participation over the course of 3 to 4 months, alongside the expressed interest of Pilot Participants. Pilot Participants that were not part of a Training Group were provided with complementary access to the training upon request, following the completion of their respective piloting activities.

To support the inclusion of a broad sample, **Pilot Participant Eligibility** criteria included:

- Students, trainees, clients or employees already affiliated with the Pilot Partner;
- Canadian citizen or have a permanent residence status in Canada (status included but were not limited to work, study, refugee, and other newcomer statuses);
- At least 18 years old to provide informed consent;
- Some English Language proficiency. A minimum CLB level of 6/7 (Canadian Language Benchmark 3) was recommended; and
- Contribute to the research within one cohort and one associated pilot group. Pilot Participants were not eligible to participate across multiple cohorts, nor within more than one pilot group.

Some Training Group Pilot Participants were ineligible for the training based upon their evaluation results. The training targeted skills below level 3, therefore those with skills at or above this level would not benefit from the training.

Beta Piloting & Preliminary Analyses

A small-scale beta pilot with was run prior to engaging the larger network of Pilot Partners. Data and feedback collected were analyzed, resulting in some modifications to content and processes prior to launching the first Pilot Partner cohort in September 2023. Additional beta pilots were run for each new evaluation iteration, with data used make minor scoring adjustments. Additional preliminary research analyses were conducted

throughout to ensure alignment with the research objectives was maintained. Revisions and updates were made as required.

Pilot Participation

The project aimed to secure 3000 data cases across the three piloting models. A pilot of this magnitude was important to provide the research needed to support the adaptation and transition of the new Skills for Success model. An additional benefit of this size was an increased national exposure of the new model to all participating members (advisory members, pilot partners, stakeholders), further promoting and facilitating the adoption of and transition to the new Skills for Success model.

Despite varying recruitment activities, the project was unsuccessful in obtaining the targeted number of cases, with Pilot Partner and Pilot Participant commitment being one of the biggest challenges. Even with significant interest, some potential Pilot Partners were unable to participate due to one or more of the following:

- Challenges in securing organizational buy-in;
- The burden of administrative processes including securing agreement and REB approvals;
- Lack of internal capacity and time to support all project activities;
- Piloting timelines not aligned with organization and program timelines and activities;
- Funding was not sufficient to outweigh anticipated administrative delivery costs;
- Minimal funding and work to secure additional resources specifically for the project;
- Inability to deliver the evaluation remotely;
- Inability to use evaluation results for purpose outside of the research; and
- Lack of interest amongst potential Pilot Participants.

When Pilot Partner capacity was identified as the only issue, the Project Team and other Pilot Partners offered to assume the responsibility to lead or support the delivery. This approach allowed for an additional three Pilot Partners to participate.

The project was also unable to obtain approval for a project extension, which had the potential to enabled further data collection.

Despite these challenges, the project was able to secure a significant amount of data during the 18-month piloting period, including:

29	Pilot Partners across Canada	
124	Pilot Participant groups/cohorts	
1635	Pilot Participants	1,042 Validation Group 533 Training Group 60 Comparison Group
2228	Evaluations completed	
664	Pilot Participants accessing the online remedial training in one or more skill domains	
425	Longitudinal surveys completed	
16	Pilot Partner and Key Information interviews, with 21 interviewees.	
5	Pilot Participant Focus Groups, with 35 Pilot Participants interviews.	

Le Centre de recherche et d'expertise en multilittératie des adultes (CREMA), a subsidiary of Le Collège Lionel-Groulx, led all Francophone piloting across Canada, including securing partners, delivering training, coordinating piloting activities and providing first level of support. Their commitment was instrumental to exceeding target francophone participation numbers.

While the overall numbers of Pilot Participants recruited are lower than initially planned, the project surpassed the target for Training Group Pilot Participants, and for Francophone participation.

However, the project also struggled to recruit specifically for the Comparison Group, as many Pilot Partners wanted to provide their Pilot Participants with access to the training, despite the post pilot access offer. This resulted in a larger number of Training Group Pilot Participants and smaller Comparison Group sample.

Response rates to the longitudinal survey were also lower than anticipated, resulting in limited samples for quantitative analysis. Recognizing that Comparison Group sample was small, the project opted to offer Validation Group Pilot Participants an opportunity to complete the longitudinal survey, recognizing that their data may further enhance the research analysis. Despite this addition, the longitudinal survey response rate remained low.

Overall, Pilot Participant self-reporting demographics identified:

35	average age.	58%	self-identified as woman.
48%	newcomers to Canada with less than 5 years since immigration.	56%	spoke English or French most at home.
18%	identified as Caucasian.	28%	identified as Black.
11%	identified as South Asian.	10%	identified as Indigenous.
51%	held university degree.	17%	some post-secondary education.
24%	high school diploma.	55%	Household income under $40,000.
39%	were studying.	28%	neither studying nor working.
33%	were working.		

Pilot Partners were remunerated for their time across various piloting activities, with many also contributing in-kind time, space and resources to the project.

Honorariums, in the form of eGift cards, were distributed to Pilot Participants in recognition of their contributions to the project.

Piloting concluded March 2025, with longitudinal data collection running until the end of the project.

Phase 3: Analysis

Following the completion of piloting, the Project Team worked closely with the consulting psychometrician and SRDC to commence the data analyses process. Quantitative and qualitative data, project documentation and project progress discussions were analyzed, reviewed and compared, with the objective of establishing and validating:

- The reliability and suitability of the evaluation and training tools;
- The alignment with the new skills model, including reading, writing, numeracy, digital, and the integration of Document Use;
- The research findings;
- The implementation model; and
- The long-term predictability of skills as related to education and labour market outcomes.

SRDC adopted the GBA+ approach to analyze various intersectionality effects on evaluations and training to ensure the tools measured the intended constructs while minimizing the impact of construct-irrelevant barriers related to linguistic, communicative, cognitive, cultural, physical, or other factors.

Research Findings

The following section presents an overview of key research findings and includes selected excerpts from the following reports:

- **Item and Scale Analyses**
  Theresa Kline, Ph.D.
  See Appendix F for full report
- **Bow Valley College – Skills for Success Validation Study, Final Report**
  Taylor Shek-Wai Hui, Xiaoyang Luo, Masashi Miyairi, SRDC
  See Appendix G for full report

Evaluations & Skill Domains

Research data analyses report the project evaluations to demonstrate acceptable to excellent reliability, whereas reliability refers to the precision of the evaluation tool.

Overall, the domains of Reading and Numeracy were the most robust, demonstrating high precision, and high standard performance. The new Digital Skills and Writing domains and items were also noted to be performing at a good psychometric level despite having far fewer historical items on which to base any conclusions. The approach to developing the items was working well and the psychometric properties of these scales is expected to improve as more items are added, and refinements are made.

Scores based on these scales can be considered valid for use in evaluating the proficiency in the four domains of Reading, Writing, Numeracy and Digital.

Item Analyses

Further IRT analyses noted that the evaluation items as functioning properly, resulting in appropriate scoring parameters.

Item development is a standardized, lengthy, and detailed process, especially since all items require a produced/constructed response from Pilot Participants. Thus, when combined with a standardized method of data collection (i.e., supervised) resulting scores

are sensitive to differences in proficiency at a much greater degree than through a multiple-choice format, and are far superior to assessing proficiencies via self-report, which can provide self-inflated proficiency.

Document Use Item Integration

Document Use, previously an independent essential skill, was noted to be successfully integrated into Reading and Numeracy, with partial success demonstrated in Writing. This aligns with the new Skills for Success model, where Document Use is defined as a subcomponent of the other domains.

The analyses indicated that the project's approach to Document-Use item integration worked well across the Numeracy and Reading domains. Despite a few item revisions and ongoing monitoring, the majority of the integrated items were reported to be satisfactory.

The Document Use integration with the Writing scale was not as successful. There were limited new Writing items with which to compare the fit of the Document Use integrated items. The analyses also identified a few Document Use items that statistically aligned better with the Reading domain. It has been noted that there will likely always be a fairly high correlation between Reading and Writing skills as these both fit within the broader construct of verbal ability.

Feedback from some key informants expressed disappointment that Document Use was integrated into other domains, suggesting that for the purpose of evaluating and training, it remain an independent, stand-alone skill to be explicitly addressed.

Evaluation Language

Further analyses revealed minor differences between the English and French evaluations. While these differences were not statistically significant, they were consistent across both pre- and post- evaluations. Several factors may account for this variation.

Notably, language fluency was neither assessed nor controlled during piloting. A significant portion of Francophone Pilot Participants identified as newcomers to Canada and may not have been fully fluent in French, potentially impacting their performance. Additionally, some Francophone Pilot Participants did not complete all evaluation items, further influencing results given the relatively small size of the Francophone sample. Comparisons between the English and French groups were therefore based on a limited number of items.

In some cases, it was later identified that some Francophone Pilot Partners had deviated from the standardized administration protocols, introducing further inconsistencies that complicate interpretation of the results.

French versions of the pre-evaluation also showed a higher rate of missed responses compared to English versions. Although French-speaking Pilot Participants differed in demographic background (such as education level, language spoken at home, and immigration status) these factors do not fully explain the higher rate of missing data. Even within these subgroups, missing responses were more frequent among French Pilot Participants.

Finally, the development team noted the translation process from English to French as particularly challenging. Further analyses conducted to detect item-level bias revealed a few items appeared to favor the English version. This may be attributed to the translation process, as all content was originally developed in English. The Project Team also noted translation challenges, including the need to adapt certain items to maintain meaning across languages. French translations tend to be longer, which may have affected Pilot Participant comprehension and completion. Feedback from some Pilot Participants indicated that certain questions felt vague or unclear, suggesting a need to improve linguistic clarity and cultural neutrality.

These findings underscore the importance of reviewing and refining the evaluations to ensure they measure skills consistently and equitably across both language versions.

Evaluation Modality

Analyses findings noted score differences amongst the two evaluation modalities, with the online evaluations, on average, demonstrating lower scores than the paper versions across all the domains.

Many Pilot Participants who completed the online evaluations were identified to be younger, more likely to be born in Canada, more likely to speak English or French at home, less educated, had less work experience and were more likely to be students. That being said, differences cannot be completely explained by these characteristics given they can be presumed to have both positive and negative factors.

While the Project Team strived to keep evaluation items identical across modalities, some adaptations were required to accommodate for different formatting and technology limitations.

Some Pilot Participants reported technical challenges during the online evaluation, which may require additional platform and item refinement to ensure that the mode of evaluation does not impact delivery and results.

Subsequent further analysis noted that the pre-testing difference between the English paper and English online evaluation disappeared in the post-testing situation. This may be explained by test situation familiarity, which is known to influence scores.

Evaluation Implementation

Through feedback, surveys, interviews and focus group discussions, implementation of the evaluation was analyzed. Some key findings included:

- **Evaluation Administration and Format**
  Evaluations were typically administered on-site at the training organization in a single three-hour session, following a standardized research protocol, in both paper and digital formats. While facilitators found the paper versions well laid out, some Pilot Participants encountered technical challenges with the online versions, particularly with different response fields.
- **Participant Experience**
  Most Pilot Participants found the evaluation instructions clear and easy to understand. However, experiences with the allocated evaluation time varied. Some Pilot Participants finished within the limit, while others found it either too short or too long, with a few unable to complete. Some Pilot Participants reported improved post-evaluation performance after becoming more familiar with the evaluation structure and length. Facilitation practices also differed across Pilot Partner organizations, contributing to varied participant experiences.
- **Barriers to Completion**
  Pilot Participants with lower English or French proficiency faced additional difficulties, particularly with unfamiliar vocabulary and Canadian terminology. These challenges, along with the fixed structure of evaluations, contributed to varied participant experiences.
- **Use and Understanding of Evaluation Results**
  Pilot Partner Facilitators and Pilot Participants found the evaluation results useful for identifying skill gaps and supporting personalized learning. However, the interpretation and use of results varied widely. Some Pilot Partner Facilitators reviewed results individually with Pilot Participants, while others shared scores by email without explanation. Pilot Participants also received inconsistent guidance.

Some were directed to focus on specific training lessons based on their results, while others were encouraged to complete as much training as possible to qualify for incentives. Varying levels of familiarity with Essential Skills and Skills for Success was also noted.

Many of the observed score differences by participant characteristics align with previous findings from the Essential Skills framework. Research findings noted expected correlations between skill levels and age, educational attainment, work experience, language at home, and household income.

The evaluations demonstrated strong validity, with positive correlations between assessed skill levels and Pilot Participants' self-reported confidence, particularly with digital skills. Reading and digital skills also showed alignment with frequency of use in daily life, consistent with findings in broader literature therefore reinforcing the reliability of the tools. Additionally, the evaluations showed expected correlations with education, income, and language proficiency. However, some construct-irrelevant barriers, such as language challenges, cultural context, and difficulties with the digital interface, were noted amongst newcomers and Indigenous Pilot Participants.

Despite these challenges, the evaluations upheld psychometric integrity, though further refinement is recommended. As outlined in the planning phase, the evaluation design was intentionally aligned with the skill proficiency descriptors, informed by the Project Team's collective experience with established frameworks, research, and real-world workplace contexts. This alignment was especially important given that the Skills for Success proficiency levels had not yet been finalized. While no major issues have been identified with the current skill scales, minor adjustments may be considered in the future as further evidence emerges.

GBA+ Analysis on Evaluation

Results of the GBA+ analysis specifically for the evaluations noted:

- The evaluations demonstrated valid correlations with education, income, and language proficiency;
- Some construct-irrelevant barriers (e.g., language, cultural context, digital interface) were identified, particularly affecting newcomers and Indigenous Pilot Participants; and
- Overall, the evaluations maintained psychometric integrity, with some recommendations for further refinement.

Training Implementation

Research data analyses for the online training examined multiple aspects of its development and implementation, acknowledging that both successes and challenges may influence results.

Pilot Partner Facilitator Training

The Project Team provided resources and training webinars to all Pilot Partners, with CREMA serving as the Francophone liaison. While some Pilot Partners found the training guides detailed and easy to follow, others felt the volume of materials was overwhelming and difficult to navigate. As a result, some facilitators created their own simplified checklists to support implementation.

Training Delivery

Minimal guidance was offered to Pilot Partner Facilitators on how to implement the training, promoting flexibility to self-direct the learning experience. This approach intended to reflect common practices in online learning. As a result, the training was integrated into programs in varied ways. Some Pilot Participants were provided with time during class to complete lessons, while others worked on them independently at home. Expectations also varied, with some Pilot Partners setting minimum requirements for hours spent or lessons completed, while others left it open-ended. Similarly, Pilot Partner Facilitator involvement ranged from actively encouraging participation and emphasizing the training's relevance, to taking a more hands-off approach with little integration into their primary programming.

Training Engagement

The delivery of the online training showed strong potential, with high lesson completion rates. Overall, the Pilot Participants in the Training Group:

- Logged approximately 9,000 training sessions, across all skill domains, with an average lesson completion rate of 90%;
- Spent an average of 30 minutes to complete a single lesson;
- Were active, with at least 60% completing at least one training lesson for each domain;
- Had varied levels of engagement, with 25% Pilot Participants completing at least 8 lessons for reading, while another 25% of the Pilot Participants completing only 3 lessons in each domain; and

- Demonstrated no difference in the number of lessons completed based on pre-evaluation skills.

Training Feedback

Feedback about the Training Group experience was shared by Pilot Partners and Pilot Participants. This included:

Strengths & Benefits	Challenges & Areas for Improvement
• Improved accessibility through the online format, which also supported digital skill development; • In-class support helped Pilot Participants complete lessons more effectively; • Training design was generally user-friendly, well-structured, and easy to navigate; • Flexibility for Pilot Partner Facilitators to adapt training for individual needs; • Self-guided format worked well for many Pilot Participants; • Engaging, real-world content increased motivation and relevance; • Lessons and activities were clear, varied, and aligned with employer training and integration programs; • Practical skill support included resume writing, email communication, and job applications; • Newcomers benefited from vocabulary development and cultural knowledge;	• Some lessons were too long, wordy, or overwhelming for certain Pilot Participants; • Language barriers, cultural differences, and assumed prior knowledge posed challenges, especially for newcomers and individuals with cognitive or learning disabilities; • Additional support was needed despite existing guides and videos; • Self-directed learning was difficult for lower-skilled Pilot Participants, who required more structured facilitation; • Low evaluation scores demotivated some Pilot Participants, impacting their training engagement; • Limited access post-study hindered continued learning—extended access was recommended; • Inconsistent clarity and accessibility for learners with lower language proficiency or learning challenges; • Recommendations included clearer lesson pathways and stronger alignment with learner goals;

Overall, there was great interest in the online training, resulting in the project providing 200+ users and facilitators with access to the training post piloting. This access was not included in the research.

Skill Outcomes Post Training

Comparing data before and after training participation identified the impact and effectiveness of the training through changes to Pilot Participants' skills. The evidence collected strongly supports the conclusion that the online skills training significantly improved the evaluation scores of Pilot Participants.

Changes in Skills Evaluation Results

Comparing evaluation results of the Training Group Pilot Participants before and after training shows statistically significant (at 1% level) improvements in average scores across all four domains.

- The average skill scores increased by:
    - 10pts for reading
    - 6pts for writing
    - 7pts for numeracy
    - 15pts for digital
- The proportion of Pilot Participants in skill level 1 decreased across all four skill domains:
    - 4 % for reading
    - 4 % for writing
    - 5 % for numeracy
    - 11 % for digital
- The proportion of Pilot Participants in skill level 3-5 increased across all four skill domains:
    - 5 % for reading
    - 4 % for writing
    - 6 % for numeracy
    - 13 % for digital

- The proportion of training group Pilot Participants demonstrated substantial increases in evaluation results:

	25 pt increase	50 pt increase
Reading	26 %	6 %
Writing	28 %	7 %
Numeracy	24 %	5 %
Digital	34 %	11 %

Changes in Skills Self-Assessment

Training Group Pilot Participants also demonstrated improvements in their self-assessed confidence in skill use and skill usage frequency, following the completion of the training.

- Pilot Participants demonstrated increased confidence in skill use and skill usage frequency across all four skill domains.
- These gains were sustained at the time of the longitudinal survey.

Despite further analyses comparing training engagement and the results of the small comparison group, the training participation results still demonstrate the skill training's effectiveness.

As the training targeted lower skilled individuals, the analyses examining whether the training may have affected Pilot Participants differently based on their skill levels. Results indicate that the most notable gains were among Pilot Participants who began at the lowest skill level, with substantial increases in all domains, especially digital skills (+34 points). This highlights the training's particular effectiveness for lower-skilled individuals.

Training & Labour Market Outcomes

Analysis of longitudinal survey data showed that more Training Group Pilot Participants were studying or working at follow-up compared to pre-evaluation. Improvements were also observed in job quality, job satisfaction, and attitude toward learning. While the online training had a modest positive effect on education and employment outcomes, similar improvements were seen in the small comparison group. This suggests that broader influences, such as labour market trends or external supports, may be contributing to the results. Therefore, while the training shows promise, its specific impact remains unclear without a larger sample size and further research.

GBA+ Analysis on Training

Score gains are similar among Pilot Participants across different personal characteristics. If any, the improvement in writing among Indigenous people or those with lower education attainment who completed some training lessons appear to be higher compared to those who did not.

Response to Research Objectives

Overall, the Skills for Success Validation Study was successful in achieving the objectives of the research.

- **Develop, validate and provide reliable research-based evidence of the evaluation tool aligned with the Skills for Success framework, within the skill domains of Reading, Writing, Numeracy, Digital, and integrated with Document Use**.

  The project confirmed the psychometric validity of evaluations in Reading, Numeracy, Writing, and Digital Skills, with Document Use effectively integrated across relevant domains. Reading and Numeracy assessments showed strong reliability, while Writing and Digital demonstrated acceptable reliability but require further refinement. Validity was supported by correlations with self-reported confidence and skill use. While these results remain promising, the evaluations will still require some additional minor adjustments to respond to issues identified in computer-based delivery, French versions, and construct-irrelevant barriers.

- **Develop and evaluate remedial training resources in aligned with the Skills for Success framework, within the skill domains of Reading, Writing, Numeracy, and Digital Skills, to assess the suitability and effectiveness of online curricula for lower-skilled learners and provide research-based evidence on their impact**.

  The project's remedial training resources were found to support skill improvement in all four domains, and particularly amongst Pilot Participants with lower starting competencies. These findings support the premise that the Skills for Success evaluations measure trainable cognitive. Some challenges were noted in curriculum development and delivery process that may be revised for future iterations.

- **Establish predictive validity of Skills for Success evaluations through the piloted online skills development training and subsequent education and labour market outcomes with reference to four key skill domains under the Skills for Success model.**

Evidence from the skills training pilot suggests the online training had a modest positive impact on Pilot Participants' education and employment outcomes, although similar to the comparison group. Broader factors, such as labour market conditions or other supports, may also be influencing results. While the training shows promise, its specific contribution remains uncertain without further research, and a larger sample size.

Project Dissemination

Project dissemination is essential for sharing results, lessons learned, and recommendations for with stakeholders, funders, and the broader Skills for Success community. Knowledge generated through this project may be positioned to inform future initiatives, support evidence-based decision-making, and foster collaboration.

Lessons Learned & Recommendations

- **Skills Evaluation**
    - Additional field testing is needed for Writing and Digital domains to build on existing findings and further enhance reliability and validity;
    - Evaluation content should continue to be reviewed for accessibility, delivery mode, and cultural/language neutrality;
    - Explore adaptive testing and alternative formats to increase evaluation efficiency and inclusivity;
    - Require practice test opportunities to support optimal performance, particularly for online testing;
- **Facilitation and Training**
    - Ensure facilitators understand the Skills for Success framework and evaluation results. Support facilitators transition to the new model, including the successful integration of document use;
    - Provide standardized training guidelines and consider facilitator-led training models;
    - Maintain consistent facilitator engagement throughout implementation;
- **Communication and Guidance**
    - Clearly connect evaluation results to training activities for both facilitators and learners;

  - Offer more guidance for learners and align training content with their learning goals;
  - Avoid overwhelming users by balancing the amount of implementation guidance and resources;
- **Training Design and Engagement**
  - Extend access to training to support deeper learning;
  - Build in motivational elements (e.g., reminders, certificates of completion) to enhance engagement;
  - Share user success stories to highlight training benefits;
- **Language and Accessibility**
  - Develop separate but equivalent English and French versions to ensure linguistic and cultural relevance;
- **Technology and Development**
  - Consult with Educational Technology experts early and begin software approval processes promptly;
  - Use activity templates that could be modified to improve interactive resource development time;
- **Implementation and Logistics**
  - Allow ample time for Pilot Partner recruitment, onboarding, and training;
  - Consider alternative strategies to encourage Comparison Group participation;
  - Encourage user commitment throughout all phases, including longitudinal surveys; and
  - Ensure Pilot Partners have sufficient resources and support for successful implementation.

The project concluded with the last dissemination activities:

- Producing and publishing a final project webpage highlighting preliminary findings, report links, dissemination videos and access to skills resources;
- Preparing and delivering project wrap up webinars with over 40 attendees to highlight key project activities and share preliminary findings; and
- Preparation and distribution of the final report.

Response to Project Objectives

- **Produce a series of skills training materials to be publicly accessible as an open educational resource (OER) post project.**

  The project produced an extensive series of skills training materials, called the **Strategies for Success**. These resources focus on basic strategies related to one of the four skill domains and include several practice activities. Each strategy also includes a short video introduction.

  In addition to this, the project developed a series of videos highlighting the transition from the Essential Skills model to the new Skills for Success. Videos further explaining each of the nine skills were also produced.

- **Report back on findings, recommendations and best practices for the adoption of and transition to the new Skills for Success model using timely research results and findings.**

  The project also committed to reporting back on validated research findings, best practices and recommendations to support the adoption of and transition to the new Skills for Success.

  This report, along with the project's dissemination video, and highlighted dissemination activities fulfills this commitment. Further to this, the project will continue to share access to the report, videos and accompany resources on https://sfs.towes.com/

The Future of Skills for Success

Research findings conclude that the Skills for Success evaluations and online training are progressing well toward full maturity. Reading and Numeracy tools are ready for broader implementation, while Writing and Digital Skills tools require some refinement. The training has proven to be particularly effective for lower-skilled learners and shows strong potential to strengthen the foundational skills needed for workforce participation.

To fully realize the benefits of the Skills for Success model, sustained investment and support from Employment and Social Development Canada (ESDC) are critical. Priorities include ongoing validation research, expanded access to validated tools, support for diverse delivery models, and the development of a national skills ecosystem aligned with current labour market needs.

Pilot Partner & Participant Success Quotes

“The training was a great success, with many students eagerly engaging and completing a significant portion of the material early on. We allocated one hour per day of class time for SFS, and the students were incredibly appreciative of the opportunity to enhance their skills. It was especially rewarding to see measurable improvements in every student from pre-evaluation to post-training.” - *Pilot Partner Facilitator*

“...not only did I receive additional training that will help me in the future, but I also bought this winter jacket with the appreciation gift card from Bow Valley.” - *Pilot Participant*

“While overall feedback was positive, some students found the material repetitive, while others felt it was too easy and wished for a greater challenge. Given that our group consists of adults with prior workforce experience, this could be a reflection of our class demographic. This was the most common feedback we received. Thank you again for your support and collaboration. We appreciate the opportunity to work together and look forward to future partnerships.” - *Pilot Partner Facilitator*

“I really like the training course of all the things you will need for the work environment, and feel that I am more prepared now than before.” - *Pilot Participant*

“I appreciate the opportunity afforded to our college to participate. This project was close to our hearts as we want to see high quality information, training and assessments in place for our students. The financial component for our students is wonderful. The financial component for the college is wonderful as well and has enabled us to update some of our technology.” - *Pilot Partner Facilitator*

“I learned many new things through this project, but I think this cause is very short for me. It show me the direction of future development, and I know what major I want to learn. It is very useful new immigrants” - *Pilot Participant*

“I appreciated the improvements of results and growth the participants showed in completing the training and post training evaluation.” - *Pilot Partner Facilitator*

“I really like the training course of all the things you will need for the work environment, and feel that I am more prepared now than before.” - *Pilot Participant*

“We are thrilled to be included and recognized as a part of the adult learning system. We hope that future projects driven by any post-secondary will continue to include the rural, remote and foundational adult learner perspective and participation. Thank you.” - *Pilot Partner Facilitator*

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Appendix A Project Team, Consultants & Partners

Project Team	
Project Sponsor	Hana Taleb Imai
Project Director	Krista Medhurst
Project Manager	Alisa Foreman
Project Officers	Taryn Kromm Whitney Norris
Instructional Designers	Kaesy Russnak Lusine Harutyunyan Melissa Gardner Wendy Magahay Veena Zarour-Murthy
Media Designers	Emma Foster Magno (Walter) De Vasconcelo
Administrative Assistants & Evaluation Markers	Ayse Tuzlak Fatma Suleiman Kathleen Shore Kristen Ingram-cotton Mifra Lafir Madani Tonya Intawongsa
Research Facilitators	Vanessa Lodermeier Beatrice Onwuka

Additional institutional support included the following departments:

- Bow Valley College Executive
- Campus Services: Procurement, Shipping & Receiving, Legal, Facilities
- Finance
- Information & Technology Services
- Marketing & Recruitment
- People & Culture
- Strategy, Risk and Project Management

Project Consultants		
Subject Matter Experts	Power Learning Solutions Dr. Rob Power	Power Learning Solutions is an excerpt in educational technology. Power Learning Solutions was instrumental in helping the project establish

		technology specifications and secure appropriate solutions.
	Health & Safety R.McKendry	R.McKendry, is an experienced Occupational Health Nurse and Safety Professional, who provided ongoing consultation during the development of authentic occupational training materials.
	University of Calgary, Professor Emerita Dr. Theresa Kline	Dr. T. Kline, University of Calgary, Professor Emerita, Psychology, is the project's psychometrician. With years of experience measuring and evaluating essential skills, Dr. Kline was instrumental in supporting the design, delivery and validation of the skills evaluation tools.
Advisory Committee	College of the North Atlantic Clara McCue	Advisory Committee members consisted of organizational leaders, directors, managers and consultants across Canada, all of whom are longtime Essential Skills/Skills for Success supporter, and with varying experience and expertise in adopting and promoting the skills. The Advisory Committee met quarterly to discuss and establish key project activities, progress and provide ongoing feedback and recommendations.
	Workplace Education Manitoba Kara Finney	
	Le Centre de recherche et d'expertise en multilittératie des adultes (CREMA) Michel Simard	
	Community Business Development Corporation (CBDC), Restigouche Georges Bourdages Andre Doiron	
	Hospitality Workers Training Centre Ghazal Niknazar Mandie Abrams	
Research Evaluator	Social Research and Demonstration Corporation (SRDC) Taylor Shek-wai Hui	Taylor Shek-wai Hui, Research Director and Chief Data Scientist at SRDC, along with several SRDC Researchers were key contributors to the project research plan and

		evaluation. This included leading the research plan design, developing data collection tools, providing ongoing research data analyses and evaluating the success of the research. The SRDC team also provided guidance and expertise as it related to their Essential Skills/Skills for Success research portfolio.
Lead Francophone Partner	Le Centre de recherche et d'expertise en multilittératie des adultes (CREMA), a subsidiary of Le Collège Lionel-Groulx Michel Simard Marie-Andree Garant	CREMA was a key partner in the recruitment and engagement of Francophone pilot partners across Canada. CREMA was also instrumental in delivering training, coordinating piloting activities and supporting piloting Francophone partners and Pilot Participants. CREMA also supported translation quality control, managed research ethics approvals and was the projects Francophone liaison.
Translators	All Languages	All Languages provided primary support for French translation services for an extensive suite of skills training content, project resources and partner communications.
	Centre FORA	Centre FORA provided primary support for French translation services for assessment content, relying on years of translation experience in the field. Centre FORA also provided translation review services to ensure linguistic style aligned across key materials.

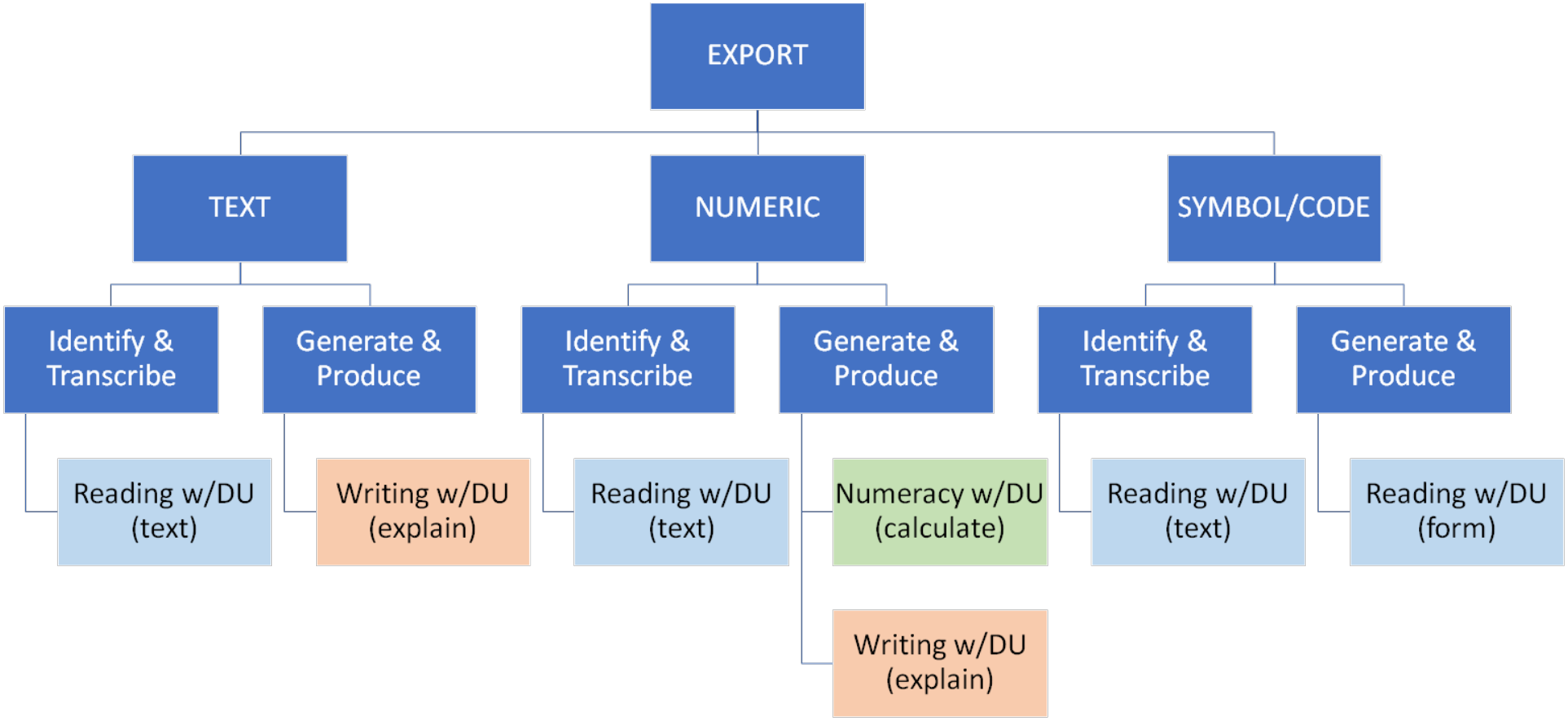
Videographer	V Strategies	VStrategies led the development, design and production of all project related communication and training content videos to further enhance engagement across all stakeholder groups.
Communication Specialist	ChangeMakers (previously Argyle Communications)	ChangeMakers supported a national communications plans, including project announcements, updates, recruitment and dissemination. ChangeMakers also led preliminary designs for project icons and marketing resources.

Pilot Partners	
Pilot Partners (English)	• Anderson Career Training Institute • Association for New Canadians • Ballad Group • Bow Valley College • Change Makers' Education Society • Douglas College • Exportech (Cégep Garneau) • Futureworx • International Brotherhood of Electrical Workers Local Union 625 • Kneehill Adult Learning Society • Lynks Community • Mohawk College • Northern Albera Institute of Technology • NorQuest College • Progressive Intercultural Community Services Society • Prospect Human Services • Red River College Polytechnic • Saskatchewan Polytechnic • Suncrest College • Trade Pathways • Vancouver Island University • YMCA BC

Pilot Partners (French)	• ALINOV (le Cégep de Trois-Rivières) • Carrefour jeunesse emploi de l'Outaouais • Collège communautaire du Nouveau-Brunswick • Cégep Gérald-Godin • Collège Lionel-Groulx • Collège Mathieu • Le Groupe C.P.O. (1998) • O'Bois International (le Cégep de l'Outaouais) • Propulsion Carrière

Appendix B Document Use Integration Maps

Document Use Integration - Export

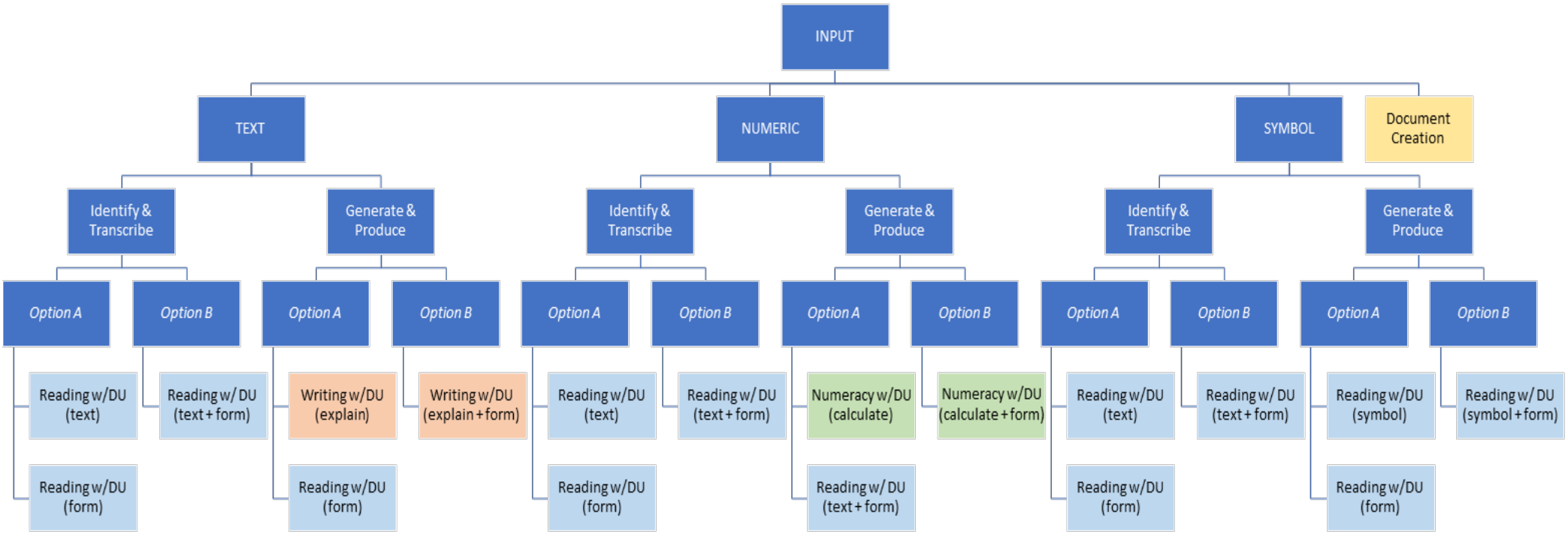


Requested	Question	Process	Given	Response	Domain	Complexity Estimate
Text-based response	Who... What... Where... When... Why... How...	Identify & Transcribe	Source text directly matches requested information OR Source text indirectly matches requested information	Response(s) can be copied from the source Relies on reading to identify response(s) Writing is only a mechanism to indicate a response **Response is text-based to identify**	**Reading w/ DU**	Less Complex
		Generate & Produce (to explain)	Source text requires the integration of multiple pieces of text (direct and/or indirect matches) to generate new information/explain	Response(s) is generated based on information from the source Relies on writing required to convey/explain/generate response. Reading is an underlying component. Key components: - generate text that cannot be directly copied from the source (must be novel) - includes sentences, and paragraphs, to describe, summarize, explain; **Response is text-based to explain**	**Writing w/DU**	More Complex
				Response(s) is generated based on information from the source Relies on writing required to convey/explain/generate response. Reading is an underlying component. Key components: - generate to visually display/organize/categorize/sort information (eg. table, list) that cannot be directly copied from the source; -must be novel; - visual response to describe, summarize, explain; **Response is a visual display to identify or explain**	**Writing w/DU**	More Complex
Numeric based response	What amount... How much...	Identify & Transcribe	Source text (numeric value) directly matches requested information OR	Response(s) can be copied from the source Relies on reading to identify response(s) Writing is only a mechanism to indicate a response	**Reading w/ DU**	Less Complex

Requested	Question	Process	Given	Response	Domain	Complexity Estimate
(quantitative value)	How many…		Source text (numeric value) indirectly matches requested information	**Response is numeric-based to identify (no calculation required)**		
		Generate & Produce (to explain through calculation)	Source text (numeric value) requires the integration of multiple pieces of text (direct and/or indirect) to generate (calculate) new information	Response(s) is generated based on a calculation of information from the source Relies on numeracy to convey/explain/generate response. Reading is an underlying component. Writing is only a mechanism to indicate a response Key components: - generate numeric value that cannot be directly copied from the source; - must be novel; - calculate; **Response is numeric-based to generate (calculation required)**	**Numeracy w/ DU**	More Complex
			Source text (numeric value) requires the integration of multiple pieces of text (direct and/or indirect) to generate (calculate) new information Response requires a visual display to identify or explain	**Part A: Numeracy** Response(s) is generated based on a calculation of information from the source Relies on numeracy to convey/explain/generate response. Reading is an underlying component. Key components: - generate numeric value that cannot be directly copied from the source; - must be novel; - to describe, summarize, explain; **Response is numeric-based to generate (calculation required)** *Linked to Writing (Part B)*	**Numeracy w/ DU**	More Complex
				Part B: Writing Response(s) is generated based on how to visually represent calculation of information from the source Relies on writing required to convey/explain/generate response.	**Writing w/DU**	More Complex

Requested	Question	Process	Given	Response	Domain	Complexity Estimate
				Reading is an underlying component. Key components: - generate to visually display/organize/categorize/sort information (eg. table, list) that cannot be directly copied from the source; -must be novel; - visual response to describe, summarize, explain; **Response is a visual display to identify or explain** *Linked to Numeracy (Part A)*		
Symbol or Code (no quantitative value)	What…	Identify & Transcribe	Source text directly matches requested information OR Source text indirectly matches requested information	Response(s) can be copied from the source Relies on reading to identify response(s) Writing is only a mechanism to indicate a response **Response is symbol or code to identify**	**Reading w/ DU**	Less Complex
		Generate & Produce (to explain)	Source text requires the integration of multiple pieces of text (direct and/or indirect) to generate new information	Response(s) is generated based on information from the source Relies on reading to understand context/criteria to generate a symbol or code Writing only mechanism to demonstrate a response Key components: - generate text that cannot be directly copied from the source: - must be novel; - includes symbols or codes, to describe, summarize, explain; **Response is symbol or code to explain**	**Reading w/ DU**	More Complex

Document Use Integration – Input



Requested	Question	Process	Given	Response		Domain	Complexity Estimate
Text-based response	Who... What... Where... When... Why... How...	**Identify & Transcribe**	Source text directly matches requested information OR Source text indirectly matches requested information	**Option A**	**Part 1: Reading** Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify response(s)** Writing is only a mechanism to indicate a response **Response is text-based to identify** *(Linked to Reading - Part 2)*	**Reading w/ DU**	Less Complex
					Part 2: Reading (form) Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify location for response submission** Writing is only a mechanism to indicate a response **Response is to identify the correct location** *(Linked to Reading - Part 1)*	**Reading w/ DU**	Less Complex
				Option B	Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify response(s) AND location for response submission** Writing is only a mechanism to indicate a response **Response is text-based to identify in the correct location** *(Must have BOTH components: Correct text and correct location)*	**Reading w/ DU**	More Complex

		Generate & Produce (to explain)	Source text requires the integration of multiple pieces of text (direct and/or indirect matches) to generate new information/explain	**Option A**	**Part 1: Writing** Response(s) is generated based on information from the source (document or question task/scenario) Relies on writing required to convey/explain/generate response. Reading is an underlying component. Key components: - generate text that cannot be directly copied from the source (must be novel) - includes sentences, and paragraphs, to describe, summarize, explain; **Response is text-based to explain** *(Linked to Reading - Part 2)*	**Writing w/DU**	Less Complex
					Part 2: Reading (form) Relies on reading to identify location for response submission Writing is only a mechanism to indicate a response **Response is to identify the correct location** *(Linked to Writing- Part 1)*	**Reading w/ DU**	Less Complex
				Option B	Response(s) is generated based on information from the source (document or question task/scenario) **Relies on writing required to convey/explain/generate response in the correct location** Reading is an underlying component. Key components: - generate to visually display/organize/categorize/sort information (eg. table, list) that cannot be directly copied from the source; -must be novel; - visual response to describe, summarize, explain; **Response is text-based to explain in the correct location** (Must have BOTH components: Correct explanation and correct location; Cannot separate)	**Writing w/DU**	More Complex

Numeric based response (quantitative value)	What amount... How much... How many...	**Identify & Transcribe**	Source text (numeric value) directly matches requested information OR Source text (numeric value) indirectly matches requested information	**Option A**	**Part 1: Reading** Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify response(s)** Writing is only a mechanism to indicate a response **Response is numeric-based to identify (no calculation required)** *(Linked to Reading - Part 2)*	**Reading w/ DU**	Less Complex
					Part 2: Reading (form) Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify location for response submission** Writing is only a mechanism to indicate a response Response is to identify the correct location *(Linked to Reading - Part 1)*	**Reading w/ DU**	Less Complex
				Option B	Response(s) can be copied from the source **Relies on reading to identify response(s)** Writing is only a mechanism to indicate a response **Response is numeric-based to identify (no calculation required) in the correct location** (Must have BOTH components: Correct text and correct location; Cannot separate)	**Reading w/ DU**	More Complex

		Generate & Produce (to explain through calculation)	Source text (numeric value) requires the integration of multiple pieces of text (direct and/or indirect) to generate (calculate) new information	**Option A**	**Part 1: Numeracy** Response(s) is generated based on a calculation of information from the source (document or question task/scenario) **Relies on numeracy to convey/explain/generate response.** Reading is an underlying component. Writing is only a mechanism to indicate a response Key components: - generate numeric value that cannot be directly copied from the source; - must be novel; - calculate; **Response is numeric-based to generate (calculation required)** *(Linked to Reading - Part 2)*	**Numeracy w/ DU**	Less Complex
					Part 2: Reading (form) Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify location for response submission** Writing is only a mechanism to indicate a response Response is to identify the correct location (Linked to Numeracy - Part 1)	**Reading w/ DU**	Less Complex

				Option B	Response(s) is generated based on a calculation of information from the source (document or question task/scenario) **Relies on numeracy to convey/explain/generate response.** Reading is an underlying component. Writing is only a mechanism to indicate a response Key components: - generate numeric value that cannot be directly copied from the source; - must be novel; - calculate; **Response is numeric-based to generate (calculation required) in the correct location** (Must have BOTH components: Correct text and correct location; Cannot separate)	**Numeracy w/ DU**	More Complex
Symbol or Code (no quantitative value)	What…	**Identify & Transcribe**	Source text directly matches requested information OR Source text indirectly matches requested information	**Option A**	**Part 1: Reading** Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify response(s)** Writing is only a mechanism to indicate a response **Response is symbol/code-based to identify** *(Linked to Reading - Part 2)*	**Reading w/ DU**	Less Complex
					Part 2: Reading (form) Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify location for response submission** Writing is only a mechanism to indicate a response **Response is to identify the correct location** *(Linked to Reading - Part 1)*	**Reading w/ DU**	Less Complex

				Option B	Response(s) can be copied from the source (document or question task/scenario) **Relies on reading to identify response(s) AND location for response submission** Writing is only a mechanism to indicate a response **Response is symbol/code-based to identify in the correct location** *(Must have BOTH components: Correct text and correct location)*	**Reading w/ DU**	More Complex
		Generate & Produce (to explain)	Source text requires the integration of multiple pieces of text (direct and/or indirect) to generate new information	**Option A**	**Part 1: Reading** Response(s) is generated based on information from the source (document or question task/scenario) Writing is only a mechanism to indicate a response Reading is an underlying component. Key components: - generate text that cannot be directly copied from the source (must be novel) - includes sentences, and paragraphs, to describe, summarize, explain; **Response is symbol or code to explain** *(Linked to Reading - Part 2)*	**Reading w/ DU**	Less Complex
					Part 2: Reading (form) Relies on reading to identify location for response submission Writing is only a mechanism to indicate a response **Response is to identify the correct location** *(Linked to Reading - Part 1)*	**Reading w/ DU**	Less Complex

				Option B	Response(s) is generated based on information from the source (document or question task/scenario) **Relies on writing required to convey/explain/generate response in the correct location** Reading is an underlying component. Key components: - generate to visually display/organize/categorize/sort information (eg. table, list) that cannot be directly copied from the source; -must be novel; - visual response to describe, summarize, explain; **Response is symbol or code to explain in the correct location** (Must have BOTH components: Correct explanation and correct location; Cannot separate)	**Reading w/ DU**	More Complex
DOCUMENT CREATION TBD	Who… What… Where… When… Why… How…	**Generate & Produce (to explain)**	Source text requires the integration of multiple pieces of text (direct and/or indirect) to display/generate or collect new information	TBD		**Reading w/ DU**	Complexity to Vary
			Source text (numeric value) requires the integration of multiple pieces of text (direct and/or indirect) to display/generate/ collect numerical data	TBD		**Numeracy w/ DU**	Complexity to Vary

			Source text requires the integration of multiple pieces of text (direct and/or indirect) to display/generate or collect new information	TBD	**Writing w/DU**	Complexity to Vary

Appendix C Writing Map

ESRP **Writing (Canada 2000)**		**ESDC, Skills for Success** **(SRDC report)**		**Write Forward** **(Bow Valley College, 2016)**		**Blooms Taxonomy**	**CELPIP Writing** **(Canada)**		**IELTS** *International English Language Testing System*		**Canadian Language Benchmarks** **(Canada, 2005)**			
Readers' guide to essential skills profiles - Canada.ca (2015).pdf		SRDC SFS Research Report		Write Forward Competency & Skills Progression		https://www.teachthought.com/learning/what-is-blooms-revised-taxonomy/	CELPIP Level Descriptors https://www.celpip.ca/		IELTS Proficiency Task 1 ielts_task_2_writing_band_descriptors.pdf		ES & CLB report			
The original Essential Skills model		*To be anchor for WR work moving forward*		*Focuses on L1 - L3 (with various sub-levels within each)* *See Chart for specific details at each level and sub-level*		*Iteration of Bloom's Taxonomy of Learning*	*Canadian English Language Proficiency Index Program (CELPIP) Test* *This does not include CAEL (Canadian Academic English Language) - as scores related more to academic writing and not the lower levels of ability*		*Two streams:* *Academic & General - only difference is the topic for Writing Task 1* *Writing Task 1: requires approx 150 words (eg. short report for Academic; Letter to friend for General)* *Writing Task 2: requires approx 250 words (Longer essay for both streams)* *Proficiency Characteristics for Writing Task 1 & 2 (very similar in criteria)*		*Work completed in 2005 to align CLB & ES levels*			
Level	**Characteristics**	**Level**	**Characteristics**	**Level**	**Characteristics**	**Characteristics**	**Level**	**Characteristics**	**Band**	**Characteristics**	**ES Level**	**Characteristics**	**CLB Benchmark**	**Description**
Level 5	Creates original, effective writing of any length, often synthesizing multiple sources, with appropriate tone, mood, and complex organization.	**Level 5**	Produce original, effective writing of any length with suitable tone, mood, and creativity.	**N/A**		**Create** To produce new or original work.	**12**	Advanced proficiency in workplace and community contexts Write complex texts for diverse purposes and audiences, formal or informal, using precise language, clear organization, and a wide range of grammar to convey ideas effectively and appropriately.	**9**	Fully addresses the task with a well-developed position, clear cohesion, effective paragraphing, and sophisticated use of vocabulary and grammar, with only occasional minor slips.	**ES Level 5**	Produces original, effective writing—often longer pieces with evaluation or critique—using appropriate tone, complex organization, and content created or synthesized from multiple sources.	**CLB Benchmark 10+**	Writes complex, original formal texts for demanding academic or professional contexts, including reports, proposals, persuasive essays, and summaries. Synthesizes information from multiple sources, adapts style for purpose and audience, and independently revises and edits work.

Level 4	Produces longer texts with substantial information, often involving analysis, comparison, or recommendations, and may adapt existing formats like proposals or reports.	**Level 4**	Write extended texts conveying substantial information, often including analysis or comparison.	**N/A**		**Evaluate** To justify decisions by evaluating based on criteria and standards.	**11**	Advanced proficiency in workplace and community contexts Write formal and informal texts for various purposes, using appropriate tone, precise language, and clear organization, with strong grammar and accurate communication for diverse audiences.	**8**	Effectively addresses all task parts with a well-organized response, rich vocabulary, strong cohesion, and mostly accurate grammar.	**Level 4**	Produces detailed, organized texts with analysis or recommendations, adapting content and format for audiences and using specialized vocabulary, often simplifying technical material for non-specialists.	**Benchmark 9**	Writes formal and informal texts for complex tasks in demanding contexts, summarizes multiple sources, presents researched views, and revises effectively, showing good grammar and organization despite occasional errors.
						Analyze To connect ideas and show how each part relates to the overall structure or purpose.	**10**	Highly effective proficiency in workplace and community contexts Write short formal and informal texts of moderate complexity, using precise language, clear connections, varied grammar, and appropriate tone for a defined audience and purpose.	**7**	Fully addresses the task with a clear position, logical organization, varied vocabulary, and complex structures, showing good grammar and cohesion despite minor errors.				
							9	Effective proficiency in workplace and community contexts Write short formal and informal texts with clear organization, precise language, and varied grammar. Support ideas with relevant details, maintain good spelling and punctuation, and use appropriate tone for a defined audience and context.						
Level 3	Writes varied-length texts to inform, explain, request, or express opinions, following established formats with structured elements and using readily available content.	**Level 3**	Write either longer or shorter pieces to inform, explain, request information, express opinions or give directions.	**Level 3A**	Writes varied-length texts to inform, explain, request, or express opinions, following established formats with structural elements. Content may be extensive, non-routine, and sourced from established materials.	**Apply** To use information in new situations such as models, diagrams, or presentations.	**8**	Good proficiency in workplace and community context Write short, moderately complex texts with clear main ideas and supporting details, using appropriate vocabulary, organized paragraphs, and strong grammar. Convey ideas with a suitable tone for a familiar or defined audience.	**6**	Addresses all task parts with a relevant but sometimes unclear position. Presents main ideas coherently, though development varies. Uses cohesion and paragraphing with some flaws, adequate vocabulary with occasional inaccuracies, and mixed sentence structures. Errors occur but rarely hinder communication.	**Level 3**	Writes varied-length, non-routine texts to inform, explain, request, or express opinions, following established formats with structural elements and using extensive content from reliable sources.	**Benchmark 8**	Links paragraphs coherently to express ideas on familiar topics with audience awareness. Writes routine business and social letters, completes complex forms, and summarizes texts. Shows good control of common grammar and mechanics, with occasional challenges in complex structures and style.

							7	Adequate proficiency in workplace and community contexts Write short, moderately complex factual texts with clear main ideas and supporting details, organized into paragraphs. Use appropriate vocabulary and grammar, follow common writing conventions, and address a familiar or defined audience.						
Level 2	Writes brief paragraphs for various purposes with appropriate tone, often formal for external audiences, covering routine content with little variation.	**Level 2**	Writes brief, routine texts of a paragraph or more for various purposes with little variation.	**Level 2B**	Writes brief, formal texts of a paragraph or more for various purposes, using appropriate tone, standard grammar, and established templates for routine content.	**Understand** To explain ideas, concepts, or construct meaning from written material or graphics.	**6**	Developing proficiency in workplace and community contexts Write short, coherent texts with a clear main idea and some supporting details, using common vocabulary, organized paragraphs, and basic grammar, spelling, and punctuation. Use an often appropriate tone for a familiar or defined audience.	**5**	Partially addresses the task with sometimes inappropriate format. Expresses a position unclearly, with limited and underdeveloped ideas, occasional irrelevant details, and weak organization. Uses cohesion poorly, with possible repetition and inadequate paragraphing. Employs limited vocabulary and structures, frequent errors in spelling, grammar, and punctuation, which may hinder reader understanding.	**Level 2**	Writes varied-length, non-routine texts for various purposes using established formats and reliable content. Produces brief, formal texts with appropriate tone and standard grammar, often using templates for routine content with little variation.	**Benchmark 6 & 7**	E Conveys familiar information using standard formats, writes short letters and compositions, constructs coherent paragraphs on familiar topics, fills out job forms, summarizes oral or visual information, interprets data from charts, writes routine personal and business letters, and records phone messages and notes.
							5	Acquiring proficiency in workplace and community contexts Write short, simple to moderately complex texts expressing a main idea with related details, using common vocabulary and phrases. Connect ideas with basic grammar, adequate spelling and punctuation, and appropriate tone for familiar audiences.	**4**	Responds minimally or off-topic with unclear position. Presents poorly supported, repetitive, or irrelevant ideas lacking coherence and progression. Uses basic, repetitive vocabulary and cohesion inaccurately. Paragraphing may be absent or confusing. Shows limited control of spelling, word formation, grammar, and punctuation, with frequent errors.				

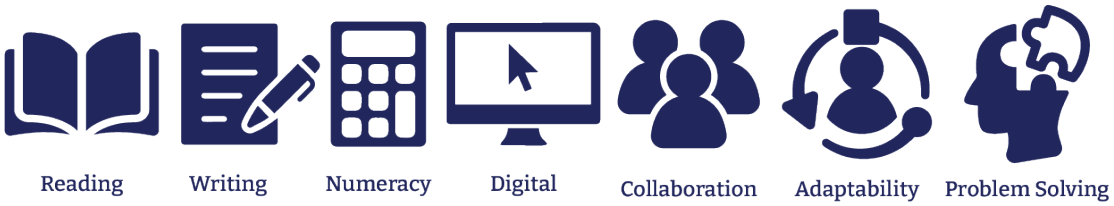
				Level 2A	**Word** Writes multiple sentences conveying a single idea using paragraph, letter, or email formats, with or without templates. **Sentence** Independently writes accurate simple and compound sentences. **Text** Writes several sentences expressing one idea using templates and develops ideas with graphic organizers.		**4**	Adequate proficiency for daily life activities Write simple sentences and short paragraphs to communicate personal information using common words, basic grammar, capitalization, punctuation, and appropriate common phrases for familiar audiences.						
Level 1	Writes brief informal notes or messages for familiar audiences, using preset or flexible formats, focusing on concrete, everyday matters.	**Entry**	Write less than a paragraph to organize, remind, or inform	**Level 1 C**	Brief informal text, under a paragraph, for organizing, reminding, or informing familiar audiences, using preset or flexible formats about immediate, everyday matters.	**Remember** To recall facts, basic concepts, or retrieval of material	**3**	Some proficiency in limited contexts Write short, simple sentences with common words, basic grammar, capitalization, and punctuation to share personal information with a familiar person.	**3**	Fails to address the task or present a clear position. Offers few undeveloped or irrelevant ideas with poor organization and cohesion. Uses limited vocabulary with frequent spelling and grammar errors that severely obscure meaning.	**Level 1**	Brief informal text, under a paragraph, for organizing, reminding, or informing familiar audiences, using preset or flexible formats about immediate, everyday matters.	**Benchmark 4 & 5**	W Writes simple descriptions, narrations, messages, and letters on familiar topics. Fills out basic forms, takes slow dictation, and reproduces simple oral or visual information. Demonstrates growing control in note-taking and routine reports, though language remains simple with frequent errors in complex structures and phrasing.
				Level 1B	**Word** Able to independently and accurately write common 1 to 2 syllable words **Sentence** Able to write simple sentences with guidance, using cloze or sentence starters		**M**	Shows minimal writing ability; uses very short, simple sentences or phrases with common words, limited grammar, and basic personal information for a familiar person.	**2**	Barely responds to the task with no clear position. Presents undeveloped ideas, lacks organization, uses very limited vocabulary, poor spelling, and relies on memorized phrases.				
				Level 1A	**Word** Able to copy accurately				**1**	Completely off-topic response with no clear message, using only isolated words and no sentence structure.				

Appendix D Piloting Tools

Workplace Essentials Training – Lesson List

Lessons available in the **Workplace Essentials Training** are listed on the following pages. The lessons are organized into four main workplace themes:

Within these themes each 20-minute lesson focuses on a single topic from one of the following skill domains: reading, writing, numeracy, digital, collaboration, adaptability, or problem solving.



All lessons are designed to support foundational skill building in all workplaces, regardless of occupation or sector of interest. Some lessons are framed within the context of specific sectors (such as energy, healthcare, hospitality, or manufacturing) although the content is transferable and beneficial in building Skills for Success.

Communication

Domain	Lesson Name	Overview
Digital	**Digital and Computer Skills**	How digital tasks are used in jobs across the energy sector.
Digital	**Digital and Media Literacy**	How to develop your digital and media literacy skills for work.
Digital	**Digital Skills in Hospitality**	How digital tasks are used in jobs across the hospitality and tourism sector.

Digital	**DOJ Home Health Care Aide**	How digital tasks are used in jobs in the health and human services sector.
Digital	**DOJ Warehouse**	How digital tasks are used in some warehouse occupations.
Digital	**Internet Searches**	How to search effectively for information online.
Digital	**Online Identity Awareness**	How to create and monitor your online identity to enhance work opportunities and reduce the possibility of identity theft.
Digital	**Online Job Applications**	How to apply for an online job posting.
Digital	**Spreadsheets**	How to use spreadsheets to complete basic job tasks.
Digital	**Videoconferencing Etiquette**	How to professionally present yourself when communicating online as part of a videoconference.
Digital	**Videoconferencing Tools**	How to navigate videoconferencing tools to communicate effectively in online meetings.
Numeracy	**Calculations**	How calculations are a key part of costing projects at work.
Numeracy	**Calculations and Planning**	How calculations are a key part of planning at work.
Numeracy	**Calculations in Health Care**	How calculations are a key part of ensuring you are appropriately paid when using personal equipment.
Numeracy	**Charts and Graphs**	How to interpret and communicate information presented in charts and graphs.
Numeracy	**Conversion**	How converting between measurement systems is an important skill in many occupations.
Numeracy	**Estimation in Budgeting**	How estimation is a key part of budgeting.
Numeracy	**Invoices**	How to accurately complete invoices for your business.
Numeracy	**Personal and Occupational Finances**	How to manage finances at work and at home.
Numeracy	**Statistics**	How to interpret & communicate statistical information.
Reading	**Care Plans**	How to coordinate communication when many people are working from and adding to the same document.
Reading	**Event Plans**	How to use planning tools to meet event goals.
Reading	**Flowcharts**	How to understand processes presented in flowcharts.
Reading	**Shipping**	How to read and apply the information in entry forms commonly used in the logistics of moving goods from one location to another.

Reading	**Understanding Charts and Graphs**	How to read and quickly understand information presented in charts and graphs.
Writing	**Complete Checklists**	How to complete and use checklists to organize & track work, equipment, or activities.
Writing	**Digital Writing**	How to write and communicate in digital form.
Writing	**Effective notes**	How to create effective notes using different writing elements.
Writing	**Email Communication**	How to create an effective email using different writing elements.
Writing	**Email Communication in Health Services**	How to write an effective email in the health and human services sector.
Writing	**Instructions**	How to write clear instructions for work tasks.
Writing	**Notes in Hospitality**	How to write effective notes.
Writing	**Resume**	How to write a resume for a specific job posting.
Writing	**Using Punctuation**	How correct capitalization and punctuation help others understand the intent of your writing.

Safety

Domain	Lesson Name	Overview
Digital	**Online Privacy**	How to maintain online privacy and protect online data.
Digital	**Online Security**	How to use secure passwords at work to help prevent cyberattacks.
Digital	**Secure Transactions**	How to protect yourself and your employer when using online financial services and purchasing platforms.
Numeracy	**24-hour Clock**	How the 24-hour clock is used to reduce confusion and enhance accuracy in the workplace.
Numeracy	**Calculation in Logistics**	How calculation is a key part of ensuring workers who load and/or drive trucks maximize efficiency in their jobs.
Numeracy	**Estimation**	How estimation is key for planning and time management at work.
Numeracy	**Statistics in Workplace Safety**	How being able to interpret and communicate statistical information keeps workplaces safe.
Reading	**Hazards Safety Data Sheets (SDS)**	How to find information about hazardous products & manage the hazards.
Reading	**Importance of Codes and Regulations**	How codes & regulations keep workers & customers safe.

Reading	**Manuals**	How to find information in manuals.
Reading	**Policies and Procedures**	How to understand the importance of following policies and procedures to keep people safe.
Reading	**Safety Data Sheets (SDS)**	How to use and interpret Safety Data Sheets (SDS).
Reading	**Understanding Codes and Regulations**	How understanding & following codes and regulations keep people safe.
Reading	**WHMIS Labels**	How WHMIS labels help you recognize hazardous chemicals and work with them safely.
Reading	**Workplace Symbols and Icons**	How understanding workplace symbols and icons can keep you safe.
Writing	**Incident Reports**	How to complete an incident report and understand what information to include to prevent future issues.
Writing	**Logbooks**	How to correctly enter detailed and accurate information into a logbook.
Writing	**Notetaking**	How to write short notes that accurately capture information you are reading, hearing, or watching.
Writing	**Worker Injury Reports**	How to complete an injury report form and understand what information is important to know.
Writing	**Write Non-Conformance Reports**	How to complete a non-conformance report and understand what types of information to include.

Teamwork

Domain	Lesson Name	Overview
Digital	**Digital Tasks in Pharmacy**	How digital tasks are used in some pharmacy occupations.
Numeracy	**Scheduling**	How scheduling is a key part of planning and time management at work.
Numeracy	**Sequencing**	How to sequence job tasks to maintain good time management.
Reading	**Incident Reports in Hospitality**	How to read and understand the information collected in an incident report to prevent hazardous situations.
Reading	**Work Orders and Logs**	How to understand the importance of following work orders and using logs to keep project teams on track.
Writing	**Checklists in Hospitality**	How to complete and use checklists.

Agility

Domain	Lesson Name	Overview
Adaptability	**Adaptability in Healthcare**	How important it is to be adaptable in a healthcare setting.
Adaptability	**Adaptability in Hospitality**	How important it is to be adaptable in a hospitality setting.
Adaptability	**Adaptability in Manufacturing & Supply Chain**	How important it is to be adaptable in a manufacturing and supply chain setting.
Collaboration	**Collaboration in Healthcare**	How important it is to collaborate in a healthcare setting.
Collaboration	**Collaboration in Hospitality**	How important it is to collaborate in a hospitality setting.
Collaboration	**Collaboration in Manufacturing & Supply Chain**	How important it is to collaborate in a manufacturing and supply chain setting.
Problem Solving	**Problem Solving in Healthcare**	How important it is to solve problems in a healthcare setting.
Problem Solving	**Problem Solving in Hospitality**	How important it is to solve problems in a hospitality setting.
Problem Solving	**Problem Solving in Manufacturing & Supply Chain**	How important it is to solve problems in a manufacturing and supply chain setting.

Strategies for Success

Domain	Lesson Name	Overview
Writing	**Bulleted Text**	How to use bullet points to highlight key information.
Writing	**Capitals and Punctuation**	How to use capital letters and punctuation when writing.
Numeracy	**Charts and Graphs**	How to read different types of charts, and present information in a visual format.
Numeracy	**Conversions**	How conversions work to change numbers from one system to another.
Numeracy	**Decimals, Fractions, and Percentages**	How to use and understand decimals, fractions, and percentages.
Digital	**Digital Communication at Work**	How digital communication is used in the workplace such as: emails, messaging apps, and social media.
Digital	**Digital Terminology**	How to understand key terms relating to digital devices, using technology, and the internet.
Writing	**Editing and Proofreading**	How to edit your writing to ensure a clear message.

Reading	**Entry Forms**	How to identify common features on forms to help you find and fill information correctly.
Digital	**Evaluating Content**	How to identify trusted sources on the internet based on facts and critical thinking.
Reading	**Formatting Clues**	How to identify different formatting clues to find key information.
Reading	**Keywords and Phrases**	How to look out for important keywords in a document.
Numeracy	**Mathematical Symbols**	How to use different symbols in mathematics such as addition, subtraction, and multiplication.
Reading	**Navigating Regulations**	How to recognize common structures of regulations in paper and online documents.
Digital	**Organizing Content**	How to organize digital content to make storing information easier.
Writing	**Plain Language**	How to use plain language to communicate.
Writing	**Planning to Write**	How to make a plan when writing to understand your purpose, topic, audience, goal, and format.
Numeracy	**Rounding, Whole Numbers, and Decimals**	How to round numbers and make rough calculations or estimates.
Digital	**Safe and Responsible Use**	How to protect yourself and your equipment.
Reading	**Skimming and Scanning**	How to review a document to find the most important information.

Notions essentielles au travail

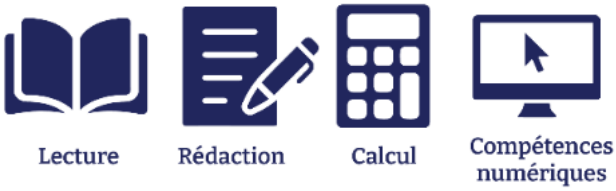
Les leçons disponibles dans la formation « **Notions essentielles au travail** » sont énumérées sur la page suivante.
Les leçons sont organisées en trois principaux thèmes en milieu de travail :

Communication

Sécurité

Travail d'équipe

Dans le cadre de ces thèmes, chaque leçon de 20 minutes porte sur un seul sujet dans l'un des domaines de compétences suivants : la lecture, la rédaction, le calcul et les compétences numériques.



Toutes les leçons sont conçues pour faciliter l'acquisition des compétences de base dans tous les lieux de travail, quel que soit le métier ou le secteur d'intérêt. Certaines leçons sont spécifiques à un secteur particulier (par exemple l'énergie, l'hôtellerie ou les soins de santé), mais le contenu est transférable et bénéfique pour le développement des Compétences pour réussir.

Communication

Domaine	Nom de la leçon	Aperçu
Calcul	**La budgétisation**	Comment l'estimation est un élément clé de la budgétisation.
Calcul	**La facturation**	Comment préparer les factures de votre entreprise avec précision.
Calcul	**Les calculs**	Comment les calculs sont-ils un élément clé de l'évaluation des coûts des projets au travail.
Calcul	**Les calculs dans le secteur de la santé**	Pourquoi les calculs sont un élément clé pour que vous soyez correctement payé lorsque vous utilisez un équipement personnel.

Calcul	**Les calculs et prévisions**	Comment les calculs sont-ils un élément clé de la planification au travail.
Calcul	**Les diagrammes et graphiques**	Comment interpréter et communiquer les informations présentées dans les diagrammes et les graphiques.
Calcul	**Les finances liées aux activités personnelles et professionnelles**	Comment gérer les finances au travail et à la maison.
Calcul	**Les statistiques**	Comment interpréter et communiquer des données statistiques.
Calcul	**Les tables de conversion**	Comment la conversion entre systèmes de mesure est-elle une compétence importante dans de nombreuses professions.
Compétences numériques	**La gestion de l'entreposage**	Comment les compétences numériques sont-elles utilisées dans certains emplois du secteur de l'entreposage.
Compétences numériques	**La littératie numérique et médiatique**	Comment développer vos compétences numériques et médiatiques pour le travail.
Compétences numériques	**La nétiquette**	Comment vous présenter de manière professionnelle lorsque vous communiquez en ligne au cours d'une vidéoconférence.
Compétences numériques	**La protection de l'identité numérique**	Comment créer et surveiller votre identité numérique pour améliorer les possibilités de travail et réduire les risques de vol d'identité.
Compétences numériques	**La recherche en ligne**	Comment rechercher des informations en ligne de manière efficace.
Compétences numériques	**Les compétences numériques dans le secteur de l'hôtellerie et restauration**	Comment les compétences numériques sont-elles utilisées dans les emplois du secteur de l'hôtellerie et du tourisme.
Compétences numériques	**Les compétences numériques et informatiques**	Comment les tâches numériques sont-elles utilisées dans les emplois du secteur de l'énergie.
Compétences numériques	**Les demandes d'emploi en ligne**	Comment postuler à une offre d'emploi en ligne.
Compétences numériques	**Les outils de vidéoconférence**	Comment naviguer dans les outils de vidéoconférence pour communiquer efficacement lors de réunions en ligne.
Compétences numériques	**Les soins de santé à domicile**	Comment les compétences numériques sont-elles utilisées dans les emplois du secteur de la santé et des services à la personne.
Compétences numériques	**Les tableaux de calcul**	Comment utiliser des tableaux de calcul pour effectuer des tâches professionnelles de base.
Lecture	**Comprendre les diagrammes et graphiques**	Comment lire et comprendre rapidement les informations présentées dans les diagrammes et les graphiques.

Lecture	**La gestion d'événements**	Comment utiliser les outils de planification pour atteindre les objectifs d'un événement.
Lecture	**La logistique de transport**	Comment lire et appliquer les informations contenues dans les formulaires de saisie couramment utilisés dans la logistique du transport de marchandises d'un endroit à un autre.
Lecture	**Les organigrammes**	Comment comprendre des processus présentés dans un organigramme.
Lecture	**Les plans de soins**	Comment coordonner la communication lorsque de nombreuses personnes travaillent à partir du même document et y ajoutent des éléments.
Rédaction	**Le courriel**	Comment créer un courriel efficace en utilisant plusieurs outils de rédaction.
Rédaction	**Le courriel dans le secteur de la santé**	Comment rédiger un courriel efficace dans les emplois du secteur de la santé et des services à la personne.
Rédaction	**Le curriculum vitae**	Comment rédiger un curriculum vitae pour une offre d'emploi spécifique.
Rédaction	**L'écriture numérique**	Comment écrire et communiquer sous forme numérique.
Rédaction	**Les directives**	Comment rédiger des instructions claires pour les tâches professionnelles.
Rédaction	**Les listes de vérification détaillées**	Comment établir et utiliser des listes de contrôle pour organiser et faire le suivi de travaux, d'équipements ou d'activités.
Rédaction	**Les notes efficaces**	Comment prendre des notes efficaces en utilisant plusieurs outils de rédaction.
Rédaction	**Les notes en hôtellerie et restauration**	Comment rédiger des notes efficaces.
Rédaction	**L'usage de la ponctuation**	Comment l'utilisation correcte de la ponctuation et des majuscules aide les autres à comprendre l'intention de votre texte.

Sécurité

Domaine	Nom de la leçon	Aperçu
Calcul	**Le calcul en matière de logistique**	Comment le calcul est un élément clé pour garantir que les travailleurs qui chargent et/ou conduisent des camions maximisent l'efficacité de leur travail.
Calcul	**Les statistiques en matière de sécurité sur le lieu de travail**	Comment la capacité d'interpréter et de communiquer des informations statistiques est un élément important de la sécurité sur le lieu de travail.
Calcul	**L'estimation**	Comment l'estimation est-elle un élément clé de la planification et de la gestion du temps au travail.
Calcul	**Une journée de 24 heures**	Comment les horloges de 24 et de 12 heures sont utilisées pour réduire la confusion et améliorer l'exactitude au travail.
Compétences numériques	**La protection de la vie privée en ligne**	Comment préserver la confidentialité en ligne tout en protégeant les données en ligne.

Compétences numériques	**La sécurité en ligne**	Comment utiliser des mots de passe sécurisés au travail afin de prévenir les cyberattaques.
Compétences numériques	**Les transactions sécurisées**	Comment protéger votre employeur et vous-même quand vous utilisez des services financiers et des plateformes d'achat en ligne.
Lecture	**Comprendre la réglementation**	Comment la compréhension et le respect des codes et des règlements permettent-ils d'assurer la sécurité des travailleurs et des clients.
Lecture	**La communication des risques : la fiche de données de sécurité (FDS)**	Comment trouver des informations sur les produits dangereux et comment gérer les risques.
Lecture	**La fiche de données de sécurité (FDS)**	Comment utiliser et interpréter les fiches de données de sécurité (FDS).
Lecture	**Les étiquettes du SIMDUT**	Comment les étiquettes du SIMDUT vous aident-elles à reconnaître les produits chimiques dangereux et à les utiliser en toute sécurité.
Lecture	**Les manuels techniques**	Comment chercher des informations dans un manuel.
Lecture	**Les politiques et procédures**	Comment comprendre l'importance du respect des politiques et des procédures pour assurer la sécurité des travailleurs et des clients.
Lecture	**Les symboles et pictogrammes au travail**	Comment la compréhension des symboles et des icônes au milieu de travail vous aide-t-elle à travailler en toute sécurité.
Lecture	**Les manuels techniques**	Comment chercher des informations dans un manuel.
Lecture	**L'importance de la réglementation**	Comment les codes et les règlements contribuent-ils à la sécurité des travailleurs et des clients.
Rédaction	**La prise de notes**	Comment rédiger de courtes notes qui saisissent avec précision les informations que vous lisez, entendez ou regardez.
Rédaction	**La rédaction de rapports de non-conformité**	Comment remplir un rapport de non-conformité et les types d'informations à inclure.
Rédaction	**Les journaux de bord**	Comment remplir correctement un journal de bord avec des informations détaillées et précises.
Rédaction	**Les rapports d'incident**	Comment remplir un formulaire de rapport d'incident et comment déterminer quelles informations sont importantes.
Rédaction	**Les rapports sur les accidents de travail**	Comment remplir un formulaire de rapport d'accident et comment déterminer quelles informations sont importantes.

Travail d'équipe

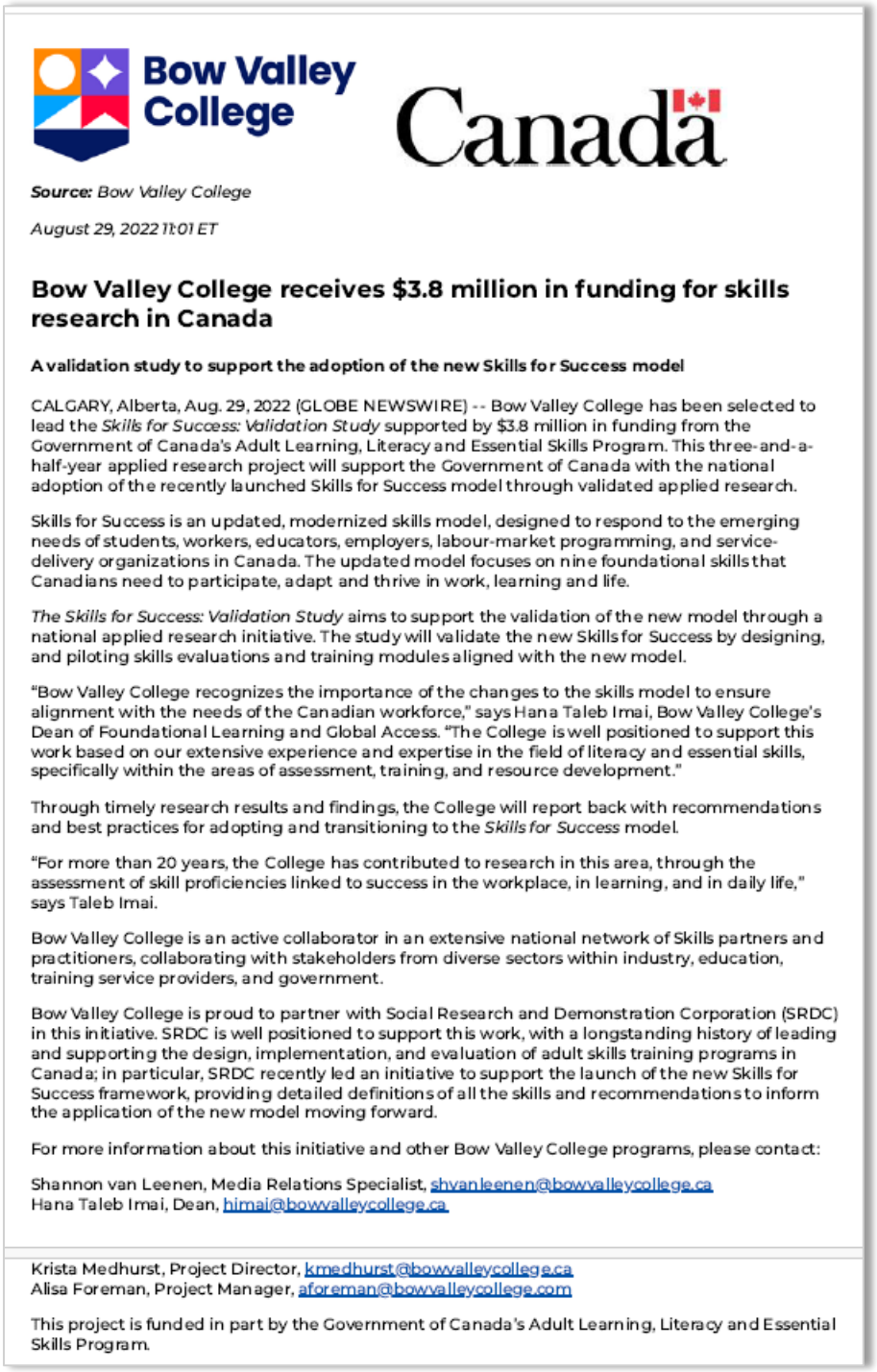
Domaine	Nom de la leçon	Aperçu
Calcul	**La planification**	Comment la planification est-elle un élément clé de la gestion du temps au travail.
Calcul	**L'ordonnancement**	Comment ordonner les tâches professionnelles pour bien gérer votre temps.
Compétences numériques	**Les tâches numériques dans le secteur de la pharmacie**	Comment les tâches numériques sont-elles utilisées dans certaines professions pharmaceutiques.
Lecture	**Les bons de travail et journaux de bord**	Comment comprendre l'importance de suivre les bons de travail et l'utilisation des journaux de bord pour maintenir les équipes de projet sur la bonne voie.
Lecture	**Les rapports d'incidents en hôtellerie et restauration**	Comment lire et comprendre les renseignements recueillis dans un rapport d'incident pour empêcher des situations dangereuses.
Rédaction	**Les listes de vérification détaillées en hôtellerie et restauration**	Comment remplir et utiliser les listes de vérification.

Les Stratégies de la réussite

Domaine	Nom de la leçon	Aperçu
Calcul	**Arrondissement, nombres entiers et décimales**	Comment arrondir des nombres et faire des calculs approximatifs ou des estimations.
Calcul	**Conversions**	Comment les tables de conversion permettent-elles de passer d'un système à un autre.
Calcul	**Décimales, fractions et pourcentages**	Comment utiliser et comprendre les décimales, les fractions et les pourcentages.
Calcul	**Diagrammes et graphiques**	Comment lire les différents types de diagrammes et présenter les informations sous forme visuelle.
Compétences numériques	**Évaluer le contenu**	Comment déterminer des sources fiables sur l'Internet en s'appuyant sur des faits et en faisant preuve d'esprit critique.
Lecture	**Formulaires de saisie**	Comment cerner les caractéristiques communes dans des formulaires pour vous aider à trouver et à inscrire les informations correctement.
Lecture	**Indices de mise en page**	Comment identifier les différents indices de mise en page pour trouver les informations clés.
Compétences numériques	**La communication numérique au travail**	Comment la communication numérique est-elle utilisée au travail, p. ex., les courriels, les applications de messagerie et les médias sociaux.

Rédaction	**Langage clair**	Comment utiliser le langage clair pour communiquer.
Lecture	**Lecture rapide et balayage**	Comment réviser un document pour en extraire les informations les plus importantes.
Rédaction	**Majuscules et ponctuation**	Comment utiliser les majuscules et la ponctuation dans la rédaction.
Lecture	**Mots clés et phrases**	Comment repérer les mots clés importants dans un document.
Compétences numériques	**Organiser le contenu**	Comment organiser le contenu numérique pour faciliter le stockage de l'information.
Rédaction	**Planifier la rédaction**	Comment faire un plan de rédaction pour comprendre son objectif, son sujet, son public, son but et son format.
Rédaction	**Révision et relecture**	Comment réviser votre rédaction pour assurer que votre message est clair.
Lecture	**S'y retrouver dans les règlements**	Comment reconnaître les structures communes des règlements dans les documents papier et en ligne.
Calcul	**Symboles mathématiques**	Comment utiliser les différents symboles mathématiques tels que l'addition, la soustraction et la multiplication.
Compétences numériques	**Terminologie numérique**	Comment comprendre les termes clés des appareils numériques, en utilisant la technologie et l'Internet.
Rédaction	**Texte à puces**	Comment utiliser les puces pour souligner les informations clés.
Compétences numériques	**Utilisation sécuritaire et responsable**	Comment protégez-vous et votre équipement.

Appendix E Marketing Samples



Source: *Bow Valley College*

August 29, 2022 11:01 ET

Bow Valley College receives $3.8 million in funding for skills research in Canada

A validation study to support the adoption of the new Skills for Success model

CALGARY, Alberta, Aug. 29, 2022 (GLOBE NEWSWIRE) -- Bow Valley College has been selected to lead the *Skills for Success: Validation Study* supported by $3.8 million in funding from the Government of Canada's Adult Learning, Literacy and Essential Skills Program. This three-and-a-half-year applied research project will support the Government of Canada with the national adoption of the recently launched Skills for Success model through validated applied research.

Skills for Success is an updated, modernized skills model, designed to respond to the emerging needs of students, workers, educators, employers, labour-market programming, and service-delivery organizations in Canada. The updated model focuses on nine foundational skills that Canadians need to participate, adapt and thrive in work, learning and life.

The Skills for Success: Validation Study aims to support the validation of the new model through a national applied research initiative. The study will validate the new Skills for Success by designing, and piloting skills evaluations and training modules aligned with the new model.

"Bow Valley College recognizes the importance of the changes to the skills model to ensure alignment with the needs of the Canadian workforce," says Hana Taleb Imai, Bow Valley College's Dean of Foundational Learning and Global Access. "The College is well positioned to support this work based on our extensive experience and expertise in the field of literacy and essential skills, specifically within the areas of assessment, training, and resource development."

Through timely research results and findings, the College will report back with recommendations and best practices for adopting and transitioning to the *Skills for Success* model.

"For more than 20 years, the College has contributed to research in this area, through the assessment of skill proficiencies linked to success in the workplace, in learning, and in daily life," says Taleb Imai.

Bow Valley College is an active collaborator in an extensive national network of Skills partners and practitioners, collaborating with stakeholders from diverse sectors within industry, education, training service providers, and government.

Bow Valley College is proud to partner with Social Research and Demonstration Corporation (SRDC) in this initiative. SRDC is well positioned to support this work, with a longstanding history of leading and supporting the design, implementation, and evaluation of adult skills training programs in Canada; in particular, SRDC recently led an initiative to support the launch of the new Skills for Success framework, providing detailed definitions of all the skills and recommendations to inform the application of the new model moving forward.

For more information about this initiative and other Bow Valley College programs, please contact:

Shannon van Leenen, Media Relations Specialist, shvanleenen@bowvalleycollege.ca
Hana Taleb Imai, Dean, himai@bowvalleycollege.ca

Krista Medhurst, Project Director, kmedhurst@bowvalleycollege.ca
Alisa Foreman, Project Manager, aforeman@bowvalleycollege.com

This project is funded in part by the Government of Canada's Adult Learning, Literacy and Essential Skills Program.

Bow Valley College

Bow Valley College's Post

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Building workplace skills for success.

Join Bow Valley College and help your teams build the skills needed for work with our Skills for Success Validation Study.

Skills for Success provides Canadians with everyday skills needed for work, learning and life. Skill improvement supports success across our ever-evolving workplaces and changing labour markets. Bow Valley College's Skills for Success Validation Study aims to validating four key skills Canadians need to participate, adapt and thrive across all contexts: Reading, Numeracy, Digital Literacy, Writing.

Our project is seeking partners across Canada to pilot a suite of evaluations and training resources with their teams. All materials are representative of the workplace and the skills needed to be successful. Funding to support partners and participants is available.

Reach out to join us.

Accroître le succès avec des compétences pour réussir.

Joignez-vous au Bow Valley College et aidez vos équipes à acquérir les compétences nécessaires à la réalisation de leurs tâches professionnelles grâce à notre Étude de validation sur les compétences pour réussir.

Le programme Compétences pour réussir permet aux Canadiennes et Canadiens d'acquérir les aptitudes nécessaires au travail, aux études et aux activités de la vie courante. Le rehaussement des compétences favorise la réussite dans nos milieux de travail en constante évolution ainsi que nos marchés du travail changeants. L'Étude de validation de l'initiative Compétences pour réussir de Bow Valley College vise à vérifier quatre compétences essentielles pour participer, s'adapter et s'épanouir dans tous les contextes : la lecture, le calcul, les compétences numériques et la rédaction.

Nous sommes à la recherche de partenaires à travers le Canada pour piloter une série d'évaluations et offrir des ressources de formation à leurs équipes. Tous les contenus sont issus de situations de travail réelles en lien avec des compétences cléspour bien réussir. Nous offrons des contributions financières intéressantes pour soutenir nos partenaires et leurs participants.

Contactez-nous dès aujourd'hui.

Skills for Success
bowvalleycollege.ca

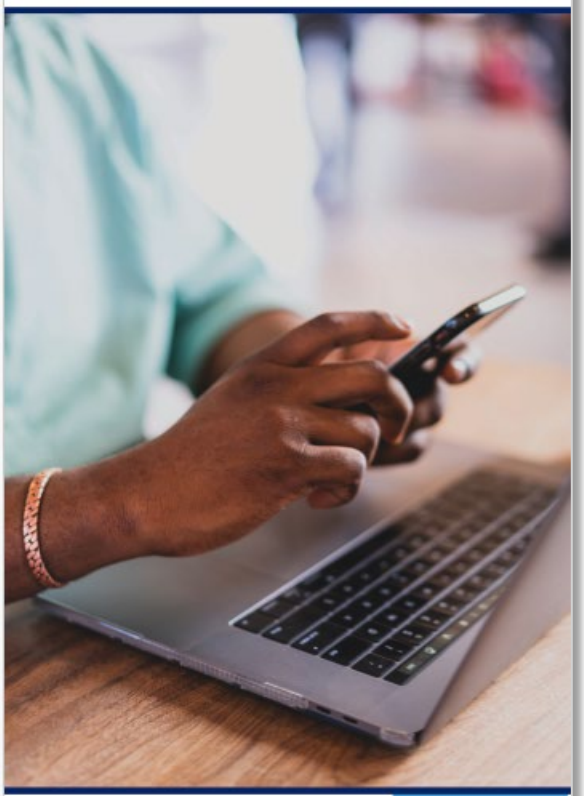
Bow Valley College

Bow Valley College

Canada

Skills for Success

sfs@bowvalleycollege.ca



Bow Valley College

Canada

Compétences pour réussir

sfs@bowvalleycollege.ca

Bow Valley College

Skills for Success Partner Opportunity

Skills for Success is an updated and modernized skills model recently released by the Government of Canada's Office of Skills for Success Program to respond to the emerging needs of students, workers, educators, employers, labour-market programming, and service-delivery organizations across Canada.

Bow Valley College's "Skills for Success: Validation Study" aims to support the transition to the new model by validating four key Skills for Success Canadians need to participate, adapt and thrive in work, learning, and life:

The project is seeking Pilot Partners across Canada to pilot a suite of evaluations and training resources aligned with the new skills model.

> **"Skills for Success** provide Canadians with everyday skills needed for work, learning and life. Improving them will help you succeed in today's and tomorrow's workplace"
>
> -Government of Canada
> Office of Skills for Success

Reading | Numeracy | Digital | Writing

What to Expect

Timeframe:
Piloting begins in the spring of 2023 and will run over the course of 18 months, with Partners participating at any time(s) throughout this period.

Activities:
Partners will support the pilot by facilitating the delivery of evaluations and training to existing students or employees.

Support:
Partners receive support from the Bow Valley College project team throughout their piloting participation.

Resources:
Partners benefit from training and access to resources to facilitate delivery, in addition to funding to support the costs associated with their involvement.

Why get Involved?

- Past research shows positive impacts and long-term benefits of Skills for Success evaluation and training, extending well beyond the context of work.
- Participating organizations benefit from easy access to Skills for Success evaluations and training at no cost.
- Practitioners can efficiently and effectively integrate Skills for Success into current training and learning programs.

Interested?

Use the QR code to sign up for an informational webinar or learn more by contacting sfs@bowvalleycollege.ca

This project was funded in part by the Government of Canada's Skills for Success Program.

Canada

Bow Valley College

Bow Valley College

Compétences pour réussir
Occasion de partenariat

Le programme **Compétences pour réussir** est un modèle de compétences actualisé et modernisé récemment publié par le Bureau des Compétences pour réussir du gouvernement du Canada afin de satisfaire aux nouveaux besoins des étudiants, des travailleurs, des éducateurs, des employeurs, des programmes du marché du travail et des organismes de prestation de services dans l'ensemble du Canada.

« Compétences pour réussir : étude de validation » de Bow Valley College vise à soutenir la transition vers le nouveau modèle en évaluant quatre compétences clés dont les Canadiens ont besoin pour participer, s'adapter et s'épanouir au travail, dans l'apprentissage et dans la vie : la lecture, l'écriture, le calcul et les compétences numériques.

Le projet vise à trouver des partenaires pilotes dans tout le Canada pour diriger une série d'évaluations et de ressources de formation adaptées au nouveau modèle de compétences.

> "Les **Compétences pour réussir** permettent aux Canadiens d'acquérir les compétences nécessaires au quotidien pour travailler, apprendre et mieux vivre. L'amélioration de ces compétences vous aidera à réussir dans le milieu de travail d'aujourd'hui et de demain. "
>
> - Gouvernement du Canada
> Bureau des Compétences pour réussir

Lecture | Calcul | Compétences numériques | Rédaction

À quoi s'attendre

Calendrier : Le projet pilote sera lancé au printemps 2023 et se déroulera sur une période de 18 mois. Les partenaires pourront participer à tout moment au cours de cette période.

Activités : Les partenaires soutiendront le projet pilote en facilitant la réalisation des évaluations et la formation des étudiants ou des employés existants.

Soutien : Les partenaires seront soutenus par l'équipe du projet du Bow Valley College tout au long de leur participation au projet pilote.

Ressources : Les partenaires bénéficieront d'une formation et d'un accès aux ressources pour faciliter la mise en œuvre, ainsi que d'un financement pour couvrir les coûts liés à leur participation.

Pourquoi participer?

- Les recherches antérieures démontrent les effets positifs et les avantages à long terme de l'évaluation et de la formation des Compétences pour réussir, qui vont bien au-delà du contexte du travail.
- Les organisations participantes pourront accéder facilement et gratuitement aux évaluations et à la formation du programme Compétences pour réussir.
- Les praticiens pourront intégrer les Compétences pour réussir de manière efficace aux programmes de formation et d'apprentissage actuels.

Intéressé(e)?

Utilisez le code QR pour vous inscrire à un webinaire d'information, ou contactez sfs@bowvalleycollege.ca pour en apprendre davantage.

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Canada

Appendix F Item and Scale Analyses Report

Item and Scale Analyses

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April 2025

The purposes of these analyses were to assess the psychometric properties of the scales used in the Skills for Success Project. Two new skills were introduced as part of the project – Digital Skills and Writing Skills. In addition, integrating some Document Use items into the skills of Numeracy, Reading, and Writing was also part of the project. The psychometric properties of the scales speak to the validity of using them as in assessing the results of the overall project goals.

Pre-Testing Data Analyses

The analyses were conducted on the same whole scale Data Sets that were used for estimating parameters (slopes and thresholds) of the items. Only Pre-test scores were used due to there being inconsistency of time passage as to when post-tests were taken by participants. This provides a "cleaner" assessment of the parameter estimation and also, then, of the descriptive characteristics of the items. It is not necessary to have all participants complete all items for these analyses, which makes them useful insofar as all the data can be used to inform the assessment.

Findings

1. The items functioned properly in the IRT analyses resulting in appropriate slopes and thresholds. Scale empirical reliabilities ranged from acceptable to excellent. These reliabilities are based on the standard errors of the estimated scores of participants. The small number of items in the Digital Skills scale suggests that this scale will improve over time with additional similar items.

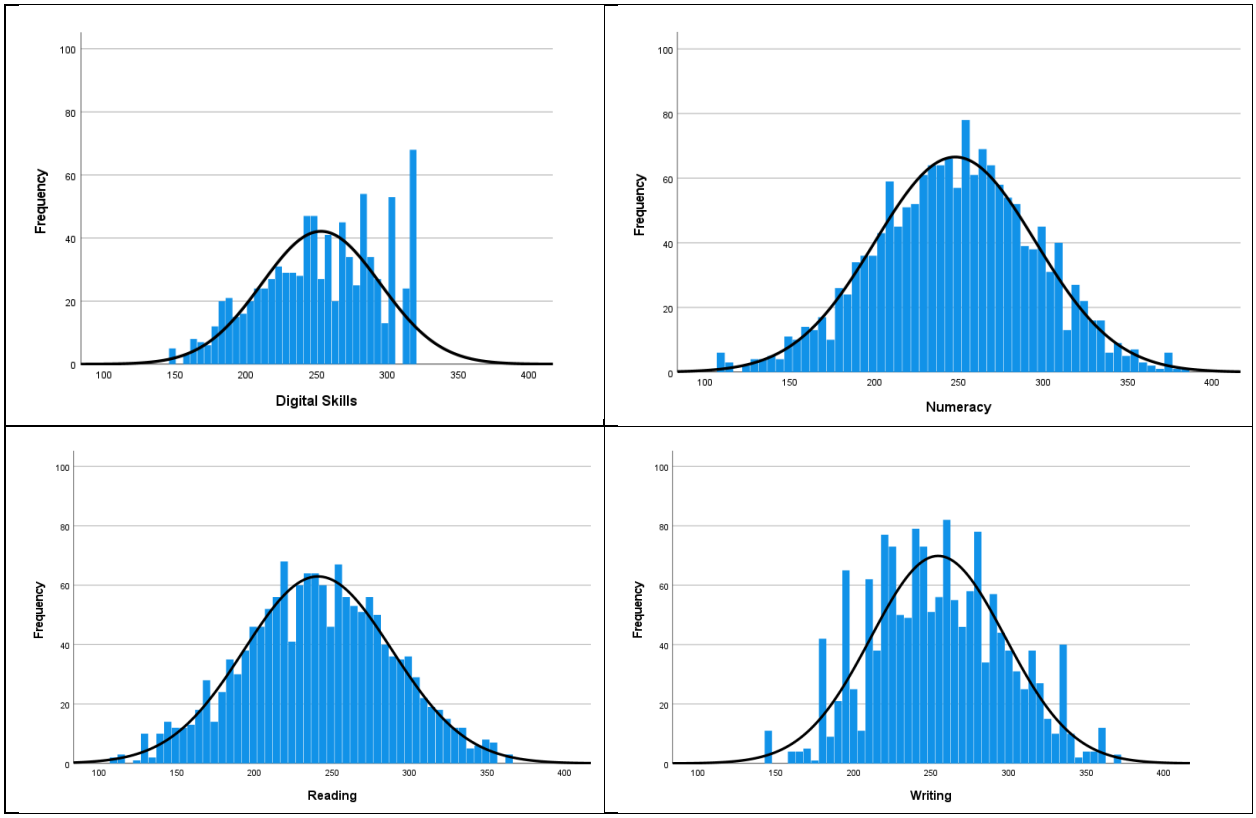
2. Empirical Reliabilities, Means, Standard Deviations, Standard Errors, and distribution shape were appropriate for all scales. No significant skew or kurtosis were observed for any of the domains.

Table 1. Pre-test Scale Descriptive Statistics

Domain	Number of cases responding (see Note)	Number of Items	Empirical Reliability	Mean	Standard Deviation	Standard Error
Digital Skills	911	19 (all new)	0.780	253	42	20
Numeracy	1636	47 (19 established, 28 new)	0.898	248	47	15
Reading	1636	70 (22 established, 48 new)	0.919	241	48	13
Writing	1636	42 (all new)	0.803	254	43	19

Note: Not all cases respond to all items.

Figure 1: Pre-test Frequency Distributions



3. Correlations between the overall IRT-based scale scores were relatively high, suggesting an underlying cognitive general skill. Prior studies have shown that there is often a high relationship between the subscales (ranging from 0.30 – 0.90)

Table 2. Pre-test Correlations Between Domains

	Digital Skills	Numeracy	Reading	Writing
Digital Skills	--			
Numeracy	0.696	--		
Reading	0.743	0.820	--	
Writing	0.609	0.695	0.731	--

Item/Scale Summary

The Numeracy and Reading Scales are performing at an excellent standard. The new scales of Digital Skills and Writing are performing at a good psychometric level with promise going forward. Both of the latter scales have far fewer items on which to base any conclusions, but the current approach to developing the items is working well. The psychometric properties of these scales would be expected to improve as more items are added and refinements are made to them.

Scores based on these scales can be considered valid for use in evaluating the proficiency of individuals in the four domains of Digital Skills, Numeracy, Reading and Writing. Item development for the TOWES scales is a standardized, lengthy and detailed process. All items on the scales require a produced response from test-takers. Thus, when combined with a standardized method of data collection (i.e., supervised) resulting scores are sensitive to differences in proficiency at a much greater level than that which would be assessed multiple-choice format, and are far superior to assessing proficiencies via self-report, which would provide highly suspect proficiency levels.

Document Use Item Integration

The purpose of this section is to provide information regarding the degree of success in integrating former "Document Use" items into one of three scales: Numeracy, Reading or Writing.

Pre-Testing Data Analyses

The Numeracy, Reading and Writing scales had all had a number of former "Document Use" items integrated into them. First an examination of the correlations between the pre-test scores for scales made up ONLY of NON-Document Use integrated items. Note that these scores are summed totals, rather than IRT-based (as only total scores using all items provide an IRT-based score). These correlations are shown in Table 3.

While there was little change in the relationships between Digital Skills and the other domains, the correlations were higher with the additional Document Use items in them (Table 2) than without them (Table 3), particularly for the Writing scale.

Table 3. Pre-test Score Correlations Between Domains Made Up of Items without Inclusion of Document Use Items

	Digital Skills	Non-DU/Numeracy	Non-DU/Reading	Non-DU/Writing
Digital Skills	--			
Non-DU/Numeracy	0.714	--		
Non-DU/Reading	0.764	0.774	--	
Non-DU/Writing	0.615	0.546	0.624	--

As a follow-up to the correlations in Table 3, the relationships between the Document Use Integrated domain scores with those made up of non-integrated domains were investigated. It was expected that the highest correlations would be observed between Document Use integrated/non-Document Use integrated *within* each domain. This occurred for Numeracy and Reading. However, for Writing, the highest correlation was between the Document Use integrated Writing and the non-Document Use Reading scales (0.624).

Table 4. Pre-test Correlations Between Domains Made Up of Domains without Inclusion of Document Use Items

	Non-DU/Numeracy	Non-DU/Reading	Non-DU/Writing
Numeracy/DU	**0.744**	0.717	0.553
Reading/DU	0.780	**0.828**	0.573
Writing/DU	0.533	0.624	**0.568**

Pre-/Post-Testing Data Analyses Within Each Version

In the next set of analyses only data sets with full responses to all items are necessary. Thus, data sets based on the different versions of the tests were used (see Tables 5 and 6). Each of the analyses were conducted on the different versions. Both Pre- and Post-test data were used in these analyses, as the point of these analyses was to examine how the items relate to one another and are not adversely affected by any difference in timing of the post-testing process.

Table 5. Items Used in Pre-/Post-Testing Analyses

	Total Items	Non-Document Use Integrated	Document Use Integrated
Numeracy	47	23	24
Reading/DU	70	35	35
Writing/DU	42	17	25

Table 6. Data Sets and Sizes Used in Pre-/Post-Testing Analyses

Data Set(s)	Sample Size
NET1A NET1B	448
NET2A	185
OWEV1A OWEV1B	390
OWEV2A	21
WEV1A WEV1B	612
WEV2A WEV2B and WEVBETA2	400
WEV3A WEV3B	177

Analyses Conducted

1. Cronbach's Alpha Analyses. Provides information on overall internal consistency of the integrated scale of items (should be above 0.80). Corrected item-to-total correlations (should be above 0.25) and Alpha if item deleted (should be LOWER if the item contributes positively to the scale). Document Use integration items that do not contribute to the scale are highlighted if both corrected item-to-total correlations and alpha if item deleted are problematic.

2. Principal Components Analysis. Extracts a primary (single) component that indicates how well the items are "holding together" in a single construct. Items with less than 0.30 component loadings are assumed to not belong to the underlying component and are highlighted.

3. Correlations of Document Use integration items with the domains of Numeracy, Reading and Writing Total Scores. These analyses were conducted for items flagged as potentially problematic in the Cronbach's Alpha and/or the Principal Components analyses. The total scores were calculated ***Using Only non-Document Use integrated items,*** to ensure that the relationships were assessed using totals based on pre-existing constructs. The correlation with the scale on which the Document Use item was integrated should be higher than on the other domains. For example, if a DU item was integrated into the Numeracy domain, there should be a higher correlation with the Numeracy-only scale than with the Reading-

only or Writing-only scales. Items that did not show the expected relationships are highlighted.

4. Because the Writing scale is new, Correlational Analyses (#3 above) were carried out for all items in the scale. This was to provide more general information regarding this new scale.

Findings

Weighted Cronbach's Alphas for each of the domains are reported in Table 7.

Table 7. Weighted (by sample size) Cronbach's Alphas for Each Domain

	Digital Skills	Numeracy	Reading	Writing
Weighted Alpha	0.770	0.885	0.908	0.743

Numeracy/Document Use Integration: Two items, 107205N and 402404, showed issues with more than one data set. These items should be reviewed for relevance to the Numeracy construct. The item 119111N showed a mild issue and should likely be retained for further consideration. Items 402404N and 402404N should be reviewed to determine if these should be continued to be associated with Numeracy.

Reading/Document Use Integration: Three items, 105201R, 105301R, 107204R, all showed issues with more than one data set. These items should be reviewed for relevance to the Reading construct. Items 118302R, 118303R, 402102R, and 402315R showed issues with one data set each and should be reviewed to determine if these should be continued to be associated with Reading.

Writing/Document Use Integration: There were only two items that demonstrated lower than expected psychometric properties: 401901W and 402003W. However, many of the Writing items were more highly correlated with the other domains of Reading or Numeracy. This finding, though, needs to take into account that there were many Writing/Document Use items in the scales relative to just "Writing" items.

Integration Summary

The analyses indicate that the Document-Use item integration worked well with the Numeracy and Reading Scales. Although a few items require removal/shifting (or continued review as more data come in), the majority of the integrated items were satisfactory.

The Document Use integration with the Writing scale was a somewhat less positive one. The analyses brought to light a couple of the Document Use items that would fit better with the Reading scale. There will likely always be a fairly high correlation between Reading and Writing skills insofar as these both tap into the broader construct of verbal ability. In addition, for purposes of this project, because there were so few “completely” new Writing items with which to compare the fit of the Document Use integrated items, it would be more appropriate at this point to: 1) develop additional Writing items and 2) continue to monitor the items that have been integrated with additional test-takers.

Document Use has traditionally been a strong scale for assessing test-taker essential skill and it is helpful to retain the value of the items that have been developed. Retaining these items going forward, within the Skills for Success framework, by incorporating them into other domains - Reading, Numeracy, Writing and potentially Problem Solving – is a useful approach. This action does require monitoring for the next while, but the data and analyses from this work suggest that it is possible to do so successfully.

Appendix G Validation Study Final Report

Bow Valley College – Skills for Success Validation Study Final Report

Taylor Shek-Wai Hui, Xiaoyang Luo, Masashi Miyairi,
Social Research and Demonstration Corporation (SRDC)

July 2025

Bow Valley College - Skills for Success Validation Study

Final Report

July 2025

Taylor Shek-Wai Hui | Xiaoyang Luo | Masashi Miyairi

SRDC SINCE 1991 DEPUIS SRSA
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The Social Research and Demonstration Corporation (SRDC) is a non-profit research organization, created specifically to develop, field test, and rigorously evaluate new programs. SRDC's two-part mission is to help policy-makers and practitioners identify policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and to raise the standards of evidence that are used in assessing these policies.

Since its establishment in December 1991, SRDC has conducted over 450 projects and studies for various federal and provincial departments, municipalities, as well as other public and non-profit organizations. SRDC has offices located in Ottawa and Vancouver, and satellite offices in Calgary, Hamilton, Montreal, Regina, Toronto, and Winnipeg.

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EXECUTIVE SUMMARY

INTRODUCTION

The *Skills for Success Validation Study*, led by Bow Valley College (BVC) in partnership with the Social Research and Demonstration Corporation (SRDC), aimed to validate new competency evaluations and online training curricula for foundational skills in Reading, Numeracy, Writing, and Digital Skills. This initiative supports the Government of Canada's updated *Skills for Success* framework, which replaces the former Essential Skills model to better reflect evolving labour market demands.

STUDY OBJECTIVES AND DESIGN

The study had three primary objectives:

1. Validate the implementation and reliability of BVC's competency evaluations in four key skill domains.
2. Assess the effectiveness of online training curricula for lower-skilled learners.
3. Establish predictive validity by linking evaluation results to education and labour market outcomes.

The study involved two major components:

- An evaluation validation pilot with over 1,600 participants completing paper- or computer-based evaluations.
- A skill training pilot, where over 500 lower-skilled participants received 12 weeks of online training.

KEY FINDINGS

Evaluation Validity and Reliability

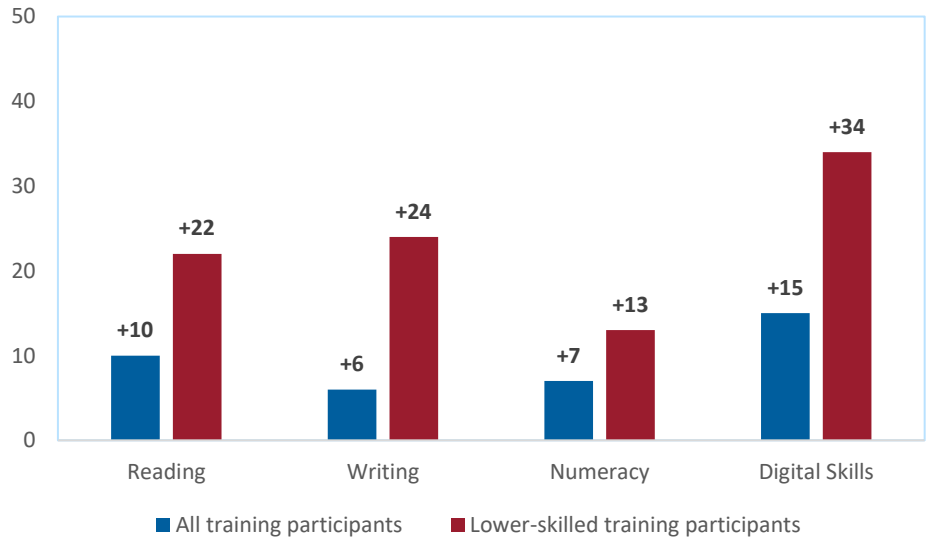
- The competency evaluations demonstrated acceptable to excellent reliability. Reading and Numeracy evaluations were the most robust, while Writing and Digital Skills require further refinement.

- Document Use, a key component of the former Essential Skills model, was successfully integrated into Reading and Numeracy, with partial success in Writing.
- Participants using computer-based evaluations scored lower than those using paper-based formats. Some participants reported technical issues during the computer-based evaluation, suggesting a need for further troubleshooting.
- Evaluation scores were also correlated with self-assessed confidence and frequency of skill use.

Training Implementation and Impact

- The online training was generally well-received, with high lesson usage rates and positive feedback on content clarity and relevance.
- Participants reported statistically significant skill gains across all domains, and the most substantial improvements were observed among participants starting at skill level 1 (Figure ES.1)

Figure ES.1 Skill gains after the skill training pilot



Equity and Inclusion (GBA+ Analysis)

- The piloted evaluations demonstrated valid correlations with education, income, and language proficiency as expected.

- Some construct-irrelevant barriers (e.g., language, cultural context, digital interface) were identified, particularly affecting newcomers and Indigenous participants.
- Despite these, the evaluations largely maintained psychometric integrity, with recommendations for further refinement.

LESSONS LEARNED AND RECOMMENDATIONS

- Further field-testing is needed, especially for Writing and Digital Skills evaluations.
- Facilitator training should be enhanced to improve interpretation and use of evaluation results.
- Communicate more explicitly the connections between evaluation results and training activities.
- Separate development of English and French content is recommended to ensure cultural and linguistic relevance.
- Adaptive testing and more accessible formats could improve evaluation efficiency and inclusivity.

CONCLUSION

The study confirms that BVC's competency evaluations and online training are on a strong path toward maturity under the Skills for Success model. While Reading and Numeracy tools are mature and ready for broader deployment, Writing and Digital Skills require further refinement. The training demonstrated effectiveness, particularly for lower-skilled learners, and holds promise for improving foundational skills critical to workforce participation.

To fully realize the potential of the Skills for Success framework, continued investment and support from Employment and Social Development Canada (ESDC) are essential. This includes supporting continued validation research, expanding access to validated tools, supporting diverse delivery models, and fostering a national ecosystem of skill development aligned with modern workplace demands.

INTRODUCTION

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. This successor to the Essential Skills framework reflects changing skill needs and is designed to be more sustainable over time. Following the recommendations of the development process detailed in the *Research report to support the launch of Skills for Success: Structure, evidence, and recommendations: Final report* (Palameta, Nguyen, Lee, Que, and Gyarmati, 2021), Bow Valley College (BVC) conducted the Skills for Success Validation Study to develop competency evaluations and skill training curriculum for Reading, Numeracy, Writing and Digital Skills. The new competency evaluations and training curriculum were tested in the field with the aim to refine the proficiency descriptors, the evaluation instruments, and the training curriculum. The field testing also collected data and generated evidence to validate the evaluation. Social Research and Demonstration Corporation (SRDC) is BVC's research and evaluation partner for the Skills for Success Validation Study.

This report is SRDC's final analysis of the data collected for the validation study during the field testing of both the competency evaluations and the online skill training. Challenges and adjustments were expected for the development of competency evaluations and skill training under the new Skills for Success model despite BVC's extensive experience. As a result, the design and implementation of the validation study also evolved during the course of the project. Not all the planned research questions of the validation study are fully answered because of the shortened data collection time and the smaller than expected sample sizes in most research groups. However, we found that the competency evaluations display the expected properties and gains in measured skills were associated with training for lower skills participants. The implementation research also confirmed that the competency evaluations and skill training developed according to plan albeit delayed. Extending the study would have allowed Bow Valley College to further refine the evaluations and training while collecting more validation data.

OBJECTIVES OF THE SKILLS FOR SUCCESS VALIDATION STUDY

The project set out three major objectives for this validation study:

1) Provide evidence of valid implementation and application of BVC's competency evaluations of four key skill domains under the Skills for Success framework:
    a) Reading, embedded with Document Use;
    b) Numeracy, embedded with Document Use;

c) Writing (pre-entry/entry) embedded with Document Use; and
d) Digital Skills (pre-entry/entry).

2) Evaluate the suitability and efficacy of skill development curriculums and online training of four key skill domains under the Skills for Success framework for lower skill learners:

a) Reading (Levels 1 to 3[1]), embedded with Document Use;
b) Numeracy (Levels 1 to 3), embedded with Document Use;
c) Writing (pre-entry/entry) embedded with Document Use; and
d) Digital Skills (pre-entry/entry)

3) Establish predictive validity of the revised Skills for Success competency evaluations through the piloted online skills development training and subsequent education and labour market outcomes with reference to four key skill domains under the Skills for Success model:

a) Reading;
b) Numeracy;
c) Writing;
d) Digital Skills.

The project field tested the Skills for Success evaluations in two modes (paper-based and computer-based) and selected participants were provided with an online skills development training to see whether it could improve their skills with meaningful outcomes.

RESEARCH QUESTIONS

SRDC derived a set of research questions in order to meet the project's three objectives of validation. These research questions were used to design the validation study's data collection protocol and instruments. The first set of questions addresses the validity of the competency evaluations while the second set addresses skill training. Together, they provide evidence that the competency evaluations are able to measure meaningful foundational skills that can be improved through training.

For the competency evaluations of Reading, Numeracy, Writing, and Digital Skills:

1. How is each competency evaluation's reliability?

[1] There are five levels of competency for Reading and Numeracy. However, the evaluations focus only on the first three levels, as adults with skills below Level 3 are significantly more likely to encounter challenges in the modern workplace. Additionally, the length of the competency evaluation increases with the number of levels and domains included during the development phase. The evaluation reached its practical maximum length when all four domains and the first three levels were covered.

2. How is each competency evaluation implemented? How long does it take to complete each competency evaluation? Are there any issues affecting the competency evaluation's measurement?

3. Could "Document Use" under the Essential Skills framework be seamlessly integrated into the competency evaluations of Reading, Numeracy, and Writing under the Skills for Success model? [2]

4. For Reading, Numeracy, and Writing competency evaluations, is there any difference between paper-based evaluation and computer-based evaluation?

5. How does each domain's competency evaluation correlate to the related individual characteristics or outcomes (as measured in project surveys and longitudinal data)?

6. How does each domain's competency evaluation result relate to the corresponding provisional proficiency descriptors? How should the proficiency descriptors be revised to strengthen the linkage between the competency evaluation and individuals' performance in the modern workplace?

7. Are these competency evaluations minimizing the impact of construct-irrelevant barriers related to linguistic, communicative, cognitive, cultural, physical or other factors? [3]

For the online skills development training:

8. How does the curriculum and training development affect the competency evaluation development? [4]

9. How is the delivery of the online skills development training? Are there any barriers affecting participation and completion of the training?

---

[2] Since the development is based on Bow Valley College's experience in TOWES, the analysis will leverage existing historical data, including Bow Valley College's psychometrician's analysis to compare new and existing reading and numeracy item values.

[3] The is related to the Gender Based Analysis Plus (GBA+) when the effects of intersectionality are examined quantitatively (through correlational analysis) and qualitatively (through supplementary evidence of stakeholder interviews). It also examines the evaluations' validity in terms of its accuracy free from irrelevant factors.

[4] This research question should have been phrased as: "How do curriculum and training development and competency evaluation development influence each other?" The intent was to explore how the development of both components could align with competencies that are trainable. This study reviewed available project documents and conducted interviews with project staff to understand the interaction between the two development processes. However, this question was not explicitly included in the interview protocols to avoid skewing the results.

10. From the perspective of the participants, is the training content clear? Does the curriculum appropriately address their skills development needs?

11. Does the online skills development training improve the competency evaluation scores of the participants?

12. Does the online skills development training lead to improved education and labour market outcomes?

13. Is there any difference in the training impacts between men and women, between immigrants and Canadian born people, or between Indigenous and non-Indigenous people? What are the potential reasons if there is any difference?

The above questions were answered by multiple lines of evidence. For example, data collected from the validation participants and training participants allowed SRDC to examine quantitatively how the competency evaluation results were related to various outcomes and characteristics. Implementation research provided the context of how the project was conducted and potentially the reasons for some observed phenomena.

PILOT DESIGN

The study consists of two planned pilot components:

- It started with the evaluation validation pilot study, which targeted a total of 3,000 participants to be recruited to complete the new Skills for Success evaluations of the 4 skill domains (Reading, Writing, Numeracy and Digital Skills). It was planned that half of the participants would go through the paper-based evaluations (TOWES) while the other half would go through the computer-based test. Both modes of evaluations would assess Reading, Writing and Numeracy, but the paper-based evaluations would not assess Digital Skills until the computer-based evaluation was developed. All participants would also complete a pre-survey to help the validation and evaluation. In the original plan, 925 participants in each mode of the evaluations would take the evaluation once only to validate (validation group participants) the three versions (V1, V2, and V3) of the competency evaluations. These three versions of competency evaluations were planned to include the same core items from TOWES while each version had their unique set of new items for writing, digital skills,

reading with document use, and numeracy with document use. The remaining 575 participants of each mode were designated for the second pilot component[5].

- The second component was a skill training pilot among the lower skilled participants of the evaluation validation pilot study. In the study plan, about 575 participants from each mode of competency evaluations were expected to have the skill levels 1-2 in Reading and Numeracy, entry/pre-entry level for Writing, or entry/pre-entry level for Digital Skills. In the original plan, over half of these lower skilled participants would be offered to participate in a free 12-week online skills development training to address their skills gap (training group participants), while the remaining will serve as the comparison group.[6] After twelve weeks, the program and the comparison participants were assessed again on their skills using a re-ordered iteration of the same version of evaluations. Because of the two modes of competency evaluations, there would be 500 participants in the program group and 500 in the comparison group if the recruitment were carried out as planned. There would be a short post-survey at the time of the second competency evaluations. They would also be invited to complete a 9-month (6-month after the training) longitudinal survey to collect information about their labour market and education outcomes[7].

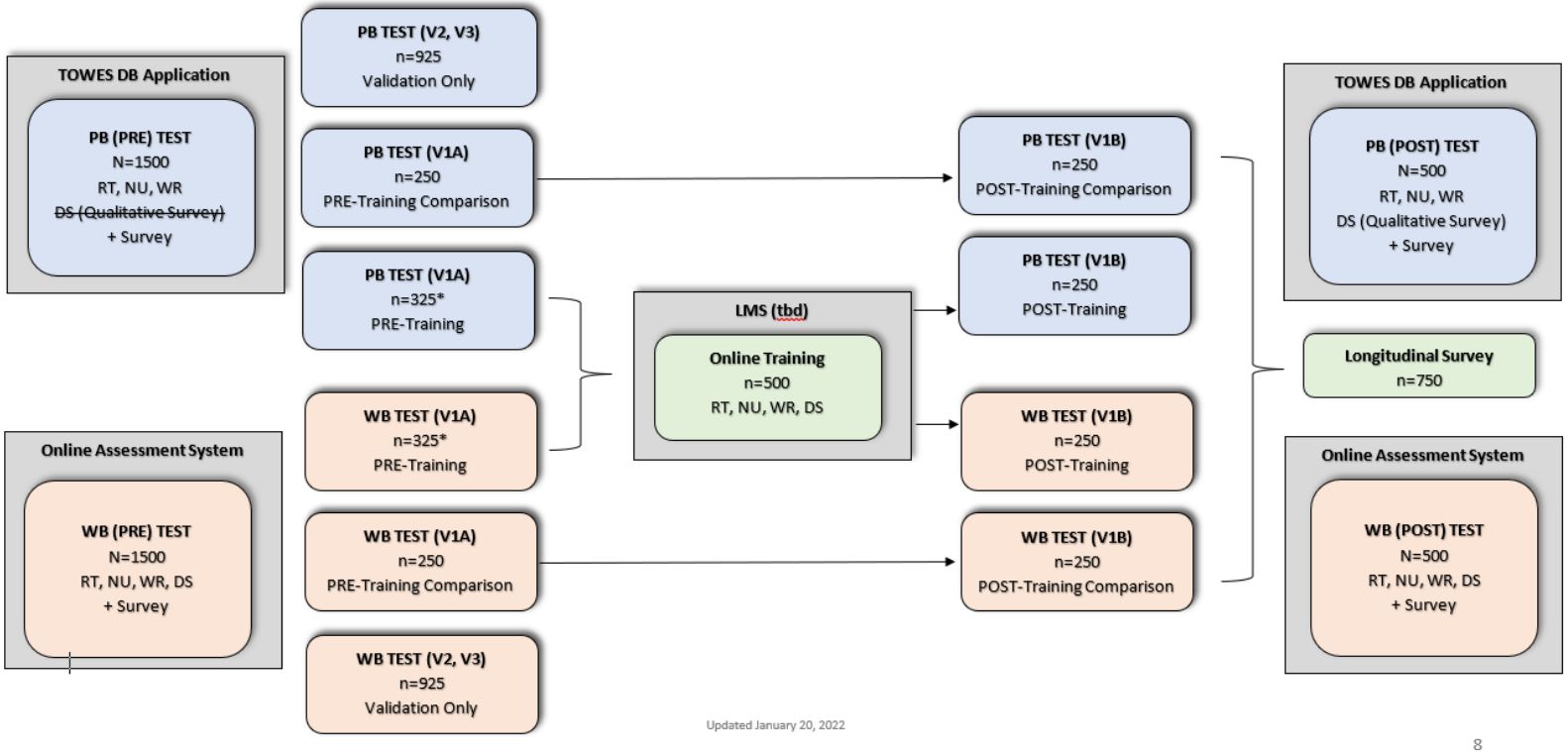
The pilot's original design can be summarized in the following figure from BVC's design document:

5 The original plan included two iterations of evaluations—V1A and V1B—for pre- and post-testing of participants in the skills training pilot. As the project progressed, all three versions of the paper-based evaluations in English (V1, V2, and V3) were used in the pilot. However, only V1 and V2 were used for the computer-based evaluations in English and the paper-based evaluations in French. Each version of the evaluation included two iterations. To ensure strict comparability, there were no differences in content between the two iterations of the same version, although the order of items was changed.

6 It was anticipated that pilot partners would work collaboratively with BVC to determine their availability and commitment to piloting for the purpose of comparison and training group selection. However, only a few sites recruited comparison group participants, and none used random assignment. To compensate for the small comparison group sample, additional validation-only participants were recruited to complete the longitudinal survey in 2025. Due to limitations with the comparison sample, this analysis employed multivariate statistical modelling techniques to control for as many contextual factors as possible.

7 It was expected that some participants who completed the post-evaluation and survey would not respond to the longitudinal survey, and the anticipated sample size was calculated based on this projected non-response rate. However, actual non-response rates were significantly higher—around 60%—largely because of challenges in contacting participants.

Figure 1 Original Skills for Success Validation Study Design



Source: Bow Valley College

Evaluation data collected during the pilot were used by BVC to make minor adjustments to the scoring. The SRDC research team worked closely with the BVC pilot project team to document these changes and made the necessary adjustments to the research and evaluation accordingly.

The actual numbers of participants recruited for various versions of the evaluation validation pilot study and the second component of the skill training pilot are substantially different from the original plan. The project surpassed the original target of 500 training participants. However, the project struggled to recruit for the comparison group sample, given that the training delivery partners wanted to provide all participants with access to the training. Given that the actual sample of the comparison group is very small, a decision was made to ask the "validation only" participants to complete the longitudinal survey with the hope that their information might allow the study to validate the skills development training. The response rates to the longitudinal survey were also lower than expected, resulting in limited samples for quantitative analysis. With a shorter field-testing period, the study was also limited in examining how the field experience informs revisions of the evaluation and the training. However, based on the documented project development and interviews with project staff and facilitators, there were strong signs that the evaluations and training were developing towards validity.

REPORT ORGANIZATION

The research methods and sample characteristics are discussed in the next section. The research questions of interest are addressed in the two sections presenting the study results. Section 3 presents the evidence from the results of the evaluation validation pilot, followed by the results of the skills training pilot. The final section concludes the study with lessons learned and recommendations based on our analysis.

RESEARCH METHODS

RESEARCH COMPONENTS

To answer the research questions of interest, BVC and SRDC designed three research components into the pilot:

- A cross-sectional quantitative examination of the relation between BVC's pilot competency evaluations of reading, numeracy, writing, and digital skills results and self-reported proficiency indicators. This component relied on the pilot evaluation results and the survey responses during the evaluation validation pilot of the participants.
- A longitudinal quantitative examination of the outcomes and impacts of BVC's online skills development training pilot among lower skilled people. This component relied on the two pilot competency evaluation results, the responses to the pre-survey, post-survey, and the 9-month follow-up survey among the participants of the 12-week skill training pilot.
- An implementation study to collect contextual information about the development and delivery of BVC's pilot competency evaluations as well as the skills development training. This component relied on document reviews and semi-structured staff interviews to collect information about the implementation.

METHODS

Validation of the competency evaluations of reading, numeracy, writing, and digital skills

The evaluation validation pilot of the four Skills for Success domains relied on three analyses results. The first analysis was the evaluation developers' report on the psychometric properties of the pilot competency evaluations. It provided a general understanding of the reliability and consistency of the pilot competency evaluations as well as some of the validity properties with reference to the past competency evaluations from the Essential Skills model.

The second analysis was implementation research on the development and delivery of the competency evaluations. The research team started with a review of the documents and written materials about the development of the competency evaluations to understand the challenges

and strategies during the process.[8] After the pilot competency evaluations were being tested in the field, SRDC researchers interviewed test facilitators and pilot project staff with a semi-structured interview to understand the delivery of both modes of competency evaluations in the field, the issues that arose, and the adjustments made by the pilot project. SRDC researchers also conducted focus groups with participants to learn about their experience with the evaluations. With reference to the profiles of the competency evaluation participants, the implementation research analysis provided a comprehensive description of how the competency evaluations were delivered, their practical usability and potential fairness to various types of evaluation takers.

The third analysis was a quantitative analysis[9] on the relationship between competency evaluation results, proxy outcome indicators collected in the pre-survey, and their associated proficiency descriptors. Since there were not yet finalized proficiency descriptors for the *Skills for Success* model, the analysis was exploratory in nature and would have started with the preliminary proficiency descriptors provided in Palameta et al (2021). The research team identified survey questions of a person's application and self-efficacy of performing the corresponding level of tasks for each domain.[10] to Unfortunately, the quantitative analysis on the proficiency descriptors did not produce useful results due to the sample size. Instead, some outcome indicators (such as the general self-confidence in a skill, frequency of skill usages, academic performance and job performance) that were known to be related to the four assessed skills were included in the pre-survey and the quantitative analysis examined whether the competency evaluation results and the outcome indicators display the expected external validity relation.

Outcomes and impacts of the skill training pilot

There were three analyses involved in assessing the outcomes and impacts of the skill training pilot. The first was an impact analysis of the skill training pilot on skill gains. The impact

[8] The document review used readily available documents such as memos, reports or meeting records about the evaluation development deemed appropriate by BVC. The aim was to get an overall picture of the development process. Sensitive information such as trade secrets or personnel decisions was out of the scope.

[9] Since the study samples were not collected from a random sampling, statistical testing is not applicable as the sampling error can not be estimated. However, the quantitative analysis in this study would use the estimated "sampling error" as if it were a random sample to provide guidance of interpreting non-trivial observed patterns. i.e. because we know the actual margin of error of this study must be larger than that of a random sample, any observed pattern within the random sampling error interval is considered trivial. Readers should not interpret the "statistically significant" results as valid statistical testing of a hypothesis.

[10] It is important to ensure that the participants know that the survey is low stakes to promote honest answers, and is recommended that the survey precedes the evaluations.

analysis on skills gain would compare the 12-week[11] changes of assessed skills of the training group participants to those of the comparison group participants. If the online skills development training is effective in addressing the skills needs of the participant, the impact analysis should show significant skills gains among the training participants compared to that of the comparison group participants. A similar impact analysis would be applied to the self-efficacy of performing various skills-related tasks in the post-survey to support the notion that any gain in assessed skills is also practical. Statistical methods to adjust for non-random selection into the program and comparison groups as well as non-random program completion would be applied to ensure the result is free of composition difference between the program and comparison samples. However, as the project struggled to get the commitment of delivery partners to recruit a comparison group sample, the statistical power of the impact analysis too low to identify any true pattern beyond reasonable doubt.

The second analysis was implementation research on the development and delivery of the skill training. The research team started with a review of the documents and written materials about the development of the curriculum to understand the challenges and strategies during the process. After the pilot training was piloted in the field, SRDC researchers interviewed pilot project staff with a semi-structured interview to understand the delivery of the online training, the issues that arose, and the adjustments made by the pilot project. SRDC researchers also conducted focus groups with the training participants to understand their experience of the training. With reference to the training participation and completion, the implementation research analysis provided a comprehensive description of the context of the training to inform the quantitative analysis. The implementation research on the online training would inform the development and adjustments to the competency evaluations.

The third analysis examined the predictive validity of the Skills for Success evaluations. The online training's longer-term impacts would have been estimated by comparing the subsequent education and labour market outcomes in the 9-month follow-up survey between the program and the comparison group participants. If there were training impacts on both the assessed skills gains and the subsequent education and labour market outcomes, the results would have been strong evidence of the predictive validity of the revised Skills for Success competency evaluations. Again, the small comparison sample substantially limited the statistical power of this analysis, and the research team explored correlations of training participants' outcomes instead.

[11] Because of scheduling issue, some participants had to complete the second evaluation before the 12-week mark.

Gender Based Analysis Plus (GBA+)

Fairness is essential for any valid competency evaluations. The pilot analysis will adopt the GBA+ approach to understand various intersectionality effects on competency evaluations to make sure that the instruments measure the intended construct while minimizing the impact of construct-irrelevant barriers related to linguistic, communicative, cognitive, cultural, physical, or other factors. To the extent the sample allows, the analysis would investigate how gender, Indigenous status, and immigration status[12] affect the results of the competency evaluations and training. The implementation research collected anecdotal evidence from staff about the competency evaluations and training regarding their accessibility for various groups (people with disabilities etc.). Limitations of the competency evaluations and training were documented to ensure appropriate applications with respect to equity, diversity and inclusion (EDI). Recommendations for further development are provided if there are any limitations related to EDI.

DATA COLLECTION

This analysis made use of data collected by BVC and partners from the evaluation up to February 2025 and SRDC-collected data from the longitudinal survey, focus groups, and key informant interviews with the project team, facilitators, and participants up to May 2025. The project documents and project progress discussions in SRDC and BVC's monthly meetings provided context for the implementation analysis.

Quantitative data

The quantitative data are collected from multiple sources:

- Pre-evaluation and Pre-survey: The results of the pre-evaluation and the responses from the accompanying pre-survey asking about participants' background, main activity, self-assessment of proficiency in the four skill domains, and attitude toward learning were collected from all study participants.

[12] It should be noted that immigrants to Canada are usually highly educated. While cognitive skills are expected to increase with educational level, linguistic barriers could affect the competency evaluation results, and labour market integration issues would negatively affect the labour market outcomes. The research team attempted to isolate observable confounding factors for the GBA+ analysis but readers should be aware of the methodological limitations in this context.

- Online training activity records: The online training activities of study participants (lesson name, session completion status, and duration of the session) were recorded, and these data were made available for analysis.

- Post-evaluation and Post-survey: Training group participants re-took the competency evaluations (post-evaluation) to measure their proficiency in the four skill domains after the online training, as well as post-survey asking about their current activity, self-assessment of proficiency in the four skill domains, and attitude about learning. Post-evaluations and post-surveys were also conducted for comparison group participants.

- Longitudinal survey: About 5-9 months after the pre-evaluation, the longitudinal survey was conducted. Participants were asked again about their main activity, confidence in and frequency of skill usage, as well as attitude about learning. The longitudinal survey was originally intended for the training and comparison groups only. However, the research team found that the numbers of longitudinal survey responses from the comparison group was small due to the lower-than-expected number of comparison group participants and their lower-than-expected response rate. Therefore, the longitudinal survey was sent to validation group participants and their responses served as a comparison group in the analysis of education and labour market outcomes.

Table 1 presents the number of responses to each survey.

Table 1 Sample count

	Training group	Comparison group	Validation group
# pre-evaluation & pre-survey responses	533	60	1,042
# post-evaluation & post-survey responses	533	60	N/A
# longitudinal survey response	235	22	168

Implementation research

To learn about how the project was implemented, SRDC held 16 interviews and five focus groups with BVC project staff including content and media developers, pilot delivery partners, training facilitators, and training participants. Interviews and focus groups were conducted separately for the English and French training versions. In total, 21 project staff and delivery partners and 35 participants took part in the implementation research. Between the interviews and focus groups,

SRDC learned about the implementation of the training and evaluations at nine organizations across British Columbia, Alberta, Saskatchewan, Quebec, and New Brunswick.

DESCRIPTIVE STATISTICS

Profile of pilot participants

There are seven evaluation types that differ in multiple ways: evaluation delivery mode (paper-based vs computer-based), language used (English or French), and evaluation version. Table 2 breaks down the sample size by these characteristics. Almost a half of the participants (48%) took English paper-based evaluations, 19% took English computer-based evaluations, and 32% took French paper-based evaluations. The majority of participants (64%) were in the validation group, followed by 33% in the training group and 4% in the comparison group.

Table 2 Quantitative analysis data

	All participants	Training group	Comparison group	Validation group
English paper-based evaluations (Version 1)	378	210	24	144
English paper-based evaluations (Version 2)	280	106	12	162
English paper-based evaluations (Version 3)	133	30	13	90
English computer-based evaluations (Version 1)	295	90	5	200
English computer-based evaluations (Version 2)	21	0	0	21
French paper-based evaluations (Version 1)	344	97	6	241
French paper-based evaluations (Version 2)	184	0	0	184
Total	**1,635**	**533**	**60**	**1,042**

Participant characteristics

The profiles of the study participants are summarized as follows (see Appendix Table 21 for details):

- The average age of the participants is 35. Approximately one quarter (26%) were aged 25 or younger, while 31% were between 26 and 35 years old, 25% were between 36 and 44 years old, and 18% were 45 years old or above.

- About three-fifths of the participants (58%) were women.
- Slightly over a three-tenths (31%) were born in Canada. Close to half the participants (48%) were newcomers to Canada with less than 5 years since immigration.
- More than a half of the participants (56%) spoke English or French most at home.
- Among the participants, 18% identified themselves as Caucasian, 28% as Black, 11% as South Asian, and 10% as Indigenous.
- Over a half of the participants (51%) held university degrees, 17% had some post-secondary education, and 24% had high school diploma.
- Half the participants were married or in common-law relationships.
- Slightly under half of the participants (48%) had children in their household.
- Household income was under $40,000 for a majority of the participants (55%). The corresponding proportion is higher for newcomers, participants without a high school diploma, or participants neither working nor studying at the time of the pre-evaluation.
- A quarter of the participants (25%) had no employment in the past 3 years, while 34% of the participants were employed for 25-36 months during the same timeframe.
- At the time of the pre-evaluation, 39% of the participants were studying, 33% were working, and 28% were neither studying nor working.

As shown in the Appendix Tables 21 and 22, participant characteristics vary across evaluation type as well as piloting model. The text box below summarizes these differences. It should be noted that the pilot partner/facilitator selected the participants' evaluation delivery mode and their participation in the training or comparison group. Participants often decided their degree of participation following the pre-evaluation.

In general, neither the comparison group nor the validation group is representative of the training group participants, as they are not random samples. However, the systematic differences between the validation group and the training group can be partially addressed using regression analysis or a difference-in-differences specification in the impact analysis.

Participant characteristics by evaluation type and piloting model

Compared to participants who took the English **paper-based** pre-evaluation, those who took the English **computer-based** pre-evaluation were:

- Younger,
- More likely to be born in Canada,
- More likely to speak English or French at home,
- Less likely to have a university degree and more likely not to have graduated from high school,
- Employed less in the past three years,
- More likely to be a student.

Compared to participants who took the **English** paper-based pre-evaluation, those who took the **French** paper-based pre-evaluation were:

- Younger,
- Less likely to be born in Canada,
- More likely to speak an Official Language of Canada (English or French),
- More likely to have a university degree,
- More likely to have less income,
- More likely to be a student.

Compared to **training** group participants, **comparison** group participants were

- Younger,
- More likely to be born in Canada,
- More likely to speak an Official Language of Canada,
- More likely to be Caucasian,
- Less likely to have post-secondary education,
- Less likely to be married, less likely to have children,
- More likely to have higher income,
- Less likely to be a student.

Compared to **training** group participants, **validation** group participants were

- Less likely to be of South Asian background,
- More likely to have a higher income,
- More likely to be working.

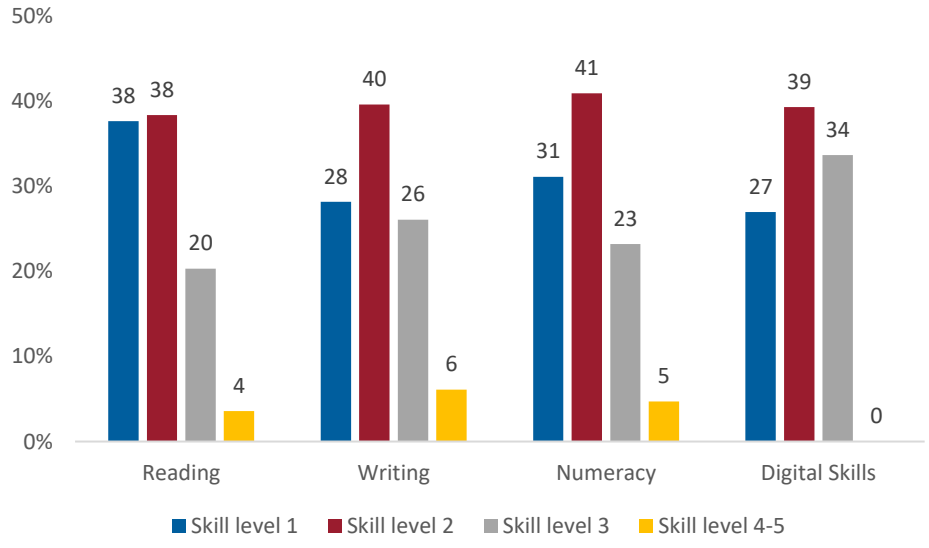
Pre-evaluation results

Table 3 and Figure 2 summarize the pre-evaluation results. Scores were unavailable for approximately 8% for reading, 7% for writing, and 3% for numeracy out of the 1,635 study participants. In addition, out of 913 study participants who took the digital evaluation, 3% of the participants were not given digital scores. All these missing values were associated with cases where the number of questions attempted was too low to generate an estimated level of competencies.

Table 3 Summary of pre-evaluation results

	Reading	Writing	Numeracy	Digital Skills
N	1,635	1,635	1,635	913
% score unassigned	7.6	6.7	2.8	3.1
Average score	241	254	248	253
Standard deviation	48	43	47	42
Skill level 1	38%	28%	31%	27%
Skill level 2	38%	40%	41%	39%
Skill level 3	20%	26%	23%	34%
Skill level 4-5	4%	6%	5%	0%

Figure 2 Skill level distributions at pre-evaluation



Taking the analysis sample as a whole, most of the participants were assessed at skill level 1 or 2 for each domain.

The four skill domains are highly correlated with each other, as shown in Appendix Table 23. The high correlations are consistent with the notion that the evaluations of the four domains are driven by the underlying general cognitive skills. The psychometrician's report also shows that the evaluations of the four domains all display appropriate means, standard deviations, standard errors and distributions.

The Appendix Table 24 presents pre-evaluation results by evaluation type. The participants who took English paper-based pre-evaluations had higher results in all the domains than those who took English computer-based or French paper-based pre-evaluations, on average. However, these differences are likely confounded by differences in individual characteristics across participants taking different evaluation types. The following section accounts for the confounding factors when assessing the differences across evaluation type using regression analysis.

The Appendix Table 25 presents the pre-evaluation results by piloting model. The comparison group were evaluated higher for all four skill domains than the training or validation group, on average, while the training group and validation group had similar pre-evaluation results, on average. The research team does not consider the comparison or validation group samples to be representative of the training group participants. However, the validation group is more similar to the training group, and applying regression analysis or a difference-in-differences specification in the impact analysis may help correct for systematic differences.

Participating organizations

Bow Valley College partnered with 29 institutions/organizations.[13] Of the 29 participating organizations:

- 20 organizations provided the English version while 9 provided the French version.
- There were 8 organizations each from Alberta and Quebec, 5 partners from British Columbia, 2 partners from Saskatchewan, and there was at least one partner in every other province.

[13] Bow Valley College is also one of the 29 participating organizations. For simplicity, this report refers to all participating organizations as BVC's partners.

- A total of 13 organizations were post-secondary institutions. The remaining partners included employers and a diverse range of organizations offering services such as literacy education, employment training, immigrant settlement, and labour union support.

The validation study successfully achieved its planned national scope. Due to the design of the recruitment process, it was not possible to obtain a statistically representative sample of the Canadian adult population. However, the findings are expected to be broadly applicable within the Canadian context.

RESULTS OF THE EVALUATION VALIDATION ANALYSIS

The results of the evaluation validation analysis are presented in the order of the 7 research questions. For each question, we first present relevant evidence from both the qualitative and quantitative research, followed by a brief summary response.

RELIABILITY

The psychometrician reported empirical reliability coefficients of 0.919 for Reading, 0.803 for Writing, 0.898 for Numeracy, and 0.780 for Digital Skills. These values range from acceptable (Digital Skills and Writing) to excellent (Reading and Numeracy). Overall, the scores derived from the developed scales can be considered valid for evaluating individuals' proficiency across the four domains. The new scales for Digital Skills and Writing are performing well psychometrically and show promise for future use, particularly as more items are added.

Beyond the overall psychometric properties, SRDC also examined the reliability of the competency evaluations in more specific contexts. As noted earlier, not all participants received pre-evaluation scores due to an insufficient number of attempted questions. Table 4 presents the proportion of missing scores for each domain by evaluation type. As shown in the table, French versions of the pre-evaluation had noticeably higher degrees of missing cases than the English versions. While study participants in French differ quite substantially from those in English in personal background such as education, language spoken, and immigration status, these differences do not explain the differences in missing cases in the pre-evaluation, as missing cases are higher for participants in French when the difference is studied within these subgroups.

Tables 5 and 6 summarize the standard errors associated with the pre-evaluation scores by evaluation type and by skill levels, respectively. These tables show:

- The average standard errors of measurement are similar across evaluation type for reading, numeracy and digital skills. It varies more for writing, ranging from 15 for the English paper-based version 3 to 26 for the English computer-based version 1 assessment.
- The standard errors of measurement are generally increasing in skill level for reading, numeracy, and digital skills, while it has a U-shape pattern for writing, with skill level 3 having the lowest value.

Table 4 Percentage of participants without pre-evaluation scores

	Reading	Writing	Numeracy	Digital Skills
English paper-based evaluations (Version 1)	4%	3%	0%	N/A
English paper-based evaluations (Version 2)	2%	1%	0%	0%
English paper-based evaluations (Version 3)	1%	2%	0%	0%
English computer-based evaluations (Version 1)	6%	6%	2%	5%
English computer-based evaluations (Version 2)	10%	14%	5%	5%
French paper-based evaluations (Version 1)	15%	14%	5%	N/A
French paper-based evaluations (Version 2)	18%	13%	10%	7%

Table 5 Average standard error of measurement by evaluation type

	Reading	Writing	Numeracy	Digital Skills
English paper-based evaluations (Version 1)	16	24	17	N/A
English paper-based evaluations (Version 2)	15	20	17	24
English paper-based evaluations (Version 3)	18	15	19	24
English computer-based evaluations (Version 1)	16	26	17	22
English computer-based evaluations (Version 2)	13	22	19	22
French paper-based evaluations (Version 1)	15	25	16	N/A
French paper-based evaluations (Version 2)	12	19	16	21

Table 6 Average standard error of measurement by skill level

	Reading	Writing	Numeracy	Digital Skills
Skill level 1	13	28	16	18
Skill level 2	14	21	15	20
Skill level 3	19	18	18	30
Skill level 4-5	27	24	23	-

After the interim data analysis in October 2024, evaluation scores went through re-scoring. To show how it affected the evaluations of the participants' skill levels, Appendix Table 26 presents the average scores and the distributions of the skill levels before and after the re-scoring among the sample used in that analysis.[14]

As shown in the table, the re-scoring affected writing and digital skill evaluations dramatically. Substantially fewer participants are in level 1 for writing after re-scoring (33% compared to 74% for those who took the version 1 evaluation, and 11% compared to 38% for those who took the version 2 evaluation). Similarly, fewer participants are in level 1 for digital skills (27% compared to 43%).

Developers found it more difficult to create questions for writing and digital skills since they had less certainty and were testing these domains for the first time. They also did not have access to the Skills for Success Measurement Framework before they started designing the evaluation and training. From interviews and focus groups, SRDC also heard from English training participants and facilitators that these two domains did not seem to reflect their actual skill level. The comments about the lack of reliability of the writing component were collected before BVC adjusted the writing scoring. SRDC did not hear the same comments specifically about the writing scores from interviews and focus groups that occurred after the scoring adjustment.

Developers also noted that French translation is usually longer than in English. Although the psychometrician's report did not identify any substantial issues related to linguistic differences, the evaluations may need further investigations and adjustments to ensure that skills measurements are consistent across English and French.

Research question #1: "*How is each competency evaluation's reliability?*"

The reliability of a competency evaluation traditionally refers to the precision of the evaluation tool. There is no universally accepted threshold for precision; instead, the minimum acceptable level depends on the usage and the impact of decisions influenced by any imprecision. However, as a rule of thumb, an empirical reliability above 0.8 is usually deemed acceptable while 0.9 is deemed excellent.

Using the modern test theory, pilot evaluations were able to estimate not only the probable competency score for each participant but also the plausible range of competency scores, factoring in the estimated standard error of measurement for each individual. The results show

[14] At the time the interim report was produced, only four evaluation types had been rolled out (English paper-based version 1, English paper-based version 2, English computer-based version 1, and French paper-based version 1, with the English paper-based version 1 accounting for more than half the pre-evaluation data. The average writing score among the participants who took the version 1 evaluation was 35 point lower than that for the version 2 evaluation.

standard errors of measurement ranging from 9 to 34, with average standard errors of 15 for Reading, 23 for Writing, 17 for Numeracy, and 23 for Digital Skills. Since each competency level spans 50 points, the pilot evaluations generally achieve a level of precision suitable for low- and medium-stakes applications. The Reading and Numeracy evaluations demonstrated better precision than the Writing and Digital Skills evaluations. The differences in precisions are expected in the process of developing the new Writing and Digital Skills evaluations with no established items from TOWES. Precision across all domains except for Writing was generally higher for levels 1 and 2 than for levels 3 to 5, which was important given the greater need for skills evaluation at lower competency levels.

The evaluations in the four competency domains demonstrate acceptable to excellent reliability, though improvements are still needed to enhance the precision of the Writing and Digital Skills evaluations. The higher percentages of no score for the French version of evaluations also suggest the need for further investigation and adjustments related to the challenges with translation.

EVALUATIONS' IMPLEMENTATION

From the interviews and focus groups with partner organizations and training participants, SRDC learned that evaluations all took place on-site at the training organization in one three-hour sitting. English evaluations were completed on paper or online, and French evaluations were completed only on paper. Because skills above level 3 were not part of the pilot's target, Bow Valley College has reported that the evaluations did not include items of higher levels in order to keep the expected length of the evaluations within three hours.

Factors impacting completion and scoring

In general, participants found the evaluation instructions easy to understand and facilitators found the paper evaluations well laid out. Most participants found that the instructions provided during evaluations were clear. While some students finished the evaluation within the allocated time, others felt the time allocated was too long, or not long enough[15]. For learners with lower educational attainment, having to complete the evaluation in one three-hour sitting was not feasible. One facilitator mentioned that many of their students simply gave up and withdrew from participating in the validation study because they did not want to complete the evaluation

[15] Based on TOWES' experience in evaluating Essential Skills, extending the evaluation time beyond 3 hours did not make any material difference in most participants' performance with the exception for those with a documented disability.

again at the end. Other participants did not complete enough questions to obtain any evaluation results.

Despite having three hours, participants also struggled to complete the entire evaluation. Many of the focus group participants were unable to finish in time. For the post-evaluation, some participants mentioned performing better partly due to the fact that they gained a better understanding of the volume of questions to expect and could manage their time better. Other challenges included issues such as one training organization not providing enough calculators for each evaluation-taker or not having enough space to write down answers on the paper evaluation[16].

Participants found some evaluation questions too vague or confusing. In particular, they identified questions related to maps and directions as challenging and unclear. They struggled to understand the instructions for these questions.

Learners with lower English or French proficiency experienced additional challenges with completing the evaluations. The focus groups had a high proportion of foreign-born participants. Although they were proficient enough to participate in the focus group, some of them struggled with new vocabulary during the evaluations[17]. In addition, newcomer participants mentioned some cultural barriers such as not being familiar with units of measurement used in Canada, such as feet and inches.

"There are some new words that may be very important to decide the whole question, so "[there might] be only one word we don't know, and…we cannot do this exercise." (Training participant)

Participants also mentioned some technical issues with the online evaluations, where they found it difficult to input numbers or select certain parts of the text. The technical issues could be a factor contributing to the differences of evaluation scores by delivery modes discussed in a later section of this report.

Understanding and use of evaluation results

Both focus group participants and training delivery partners mentioned that the evaluation results were useful to identify participants' skill levels and personalize their learning. However, some participants and facilitators would have liked more detailed information about the

16 Bow Valley College created evaluation preparation resources for participants, but it was unclear whether these resources were provided to all participants.

17 It is unclear whether these challenges with vocabulary are due to lower language proficiency or culturally specific language.

evaluation results.[18]The detail in which facilitators could explain the evaluation scores varied depending on their own understanding of and experience with Essential Skills and Skills for Success. Some facilitators felt it was challenging to explain why participants received the scores they did without access to their scored evaluations. Participants wanted more detailed explanation about how their evaluations were scored and to understand why their answers were wrong. Participants also wanted to know what specifically to work on or change to improve their evaluation results. In addition, while some facilitators explained the evaluation results individually to each participant, other participants only received their scores via email with no additional explanation or guidance.[19]

While some training participants were advised to use their evaluation results to identify the modules they should focus on in the online training, other participants relayed that they were instructed to complete the entire online training, or as much as possible, to be eligible for the study incentives. Some participants also could not recall if they received the evaluation results before or after starting the online training. This meant that the evaluation results were not always used to personalize their learning.[20]

Research question #2: "*How is each of the competency evaluation implemented? How long does it take to complete each of the competency evaluation? Is there any issue affecting the competency evaluation's measurement?*"

Despite challenges in developing the evaluations and training components—particularly with new domains that lacked prior constructs or references—the evaluations were implemented successfully in both paper and digital formats. Writing posed specific challenges, with version 1 underestimating participants' true writing competency; as a result, subsequent versions included further developed items to address the issue while the evaluation developers adjusted the scoring of version 1.

While some participants reported that the 3-hour evaluation was too long, particularly those with lower educational attainment, others found it too brief to complete all items. The long evaluation duration is partially inherent to evaluations based on real workplace tasks and partially due to the structure of paper-based evaluations, where participants must complete all questions. Computer-based evaluations could utilize adaptive methods to shorten the time, allowing participants to bypass questions based on real-time evaluation results. Adaptive

18 Bow Valley College provided a one-page summary about scores and some information in the facilitator training guide.

19 Bow Valley College encouraged facilitators to debrief their participants individually or together as a group.

20 Results were issued to facilitators prior to receiving access to the training, but it is unclear when participants received them.

methods were not incorporated into the existing evaluations, as doing so would have interfered with the pilot's objective of collecting as much data as possible to validate the evaluation scoring parameters. .

The biggest concern is the inconsistent understanding and use of the evaluation results. There were challenges in explaining participants' scores and providing guidance for skills development. There were also reports that facilitation varied substantially across partner organizations.

DOCUMENT USE'S INTEGRATION INTO READING, NUMERACY, AND WRITING

Developers described taking stock of the document use items in their existing test bank and classifying them where possible and relevant into numeracy, reading, and writing domains. They also developed new items when they did not have enough at a particular estimated level of complexity. Beta tests were conducted to see how learners performed on the new items.

The following is the conclusion from the psychometrician on Document Use's integration into the four domains during the validation of the pre-evaluations:

> *"The analyses indicate that the Document-Use item integration worked well with the Numeracy and Reading Scales. Although a few items require removal/shifting (or continued review as more data come in), the majority of the integrated items were satisfactory.*
>
> *The Document Use integration with the Writing scale was a somewhat less positive one. The analyses brought to light a couple of the Document Use items that would fit better with the Reading scale. There will likely always be a fairly high correlation between Reading and Writing skills insofar as these both tap into the broader construct of verbal ability. In addition, for purposes of this project, because there were so few "completely" new Writing items with which to compare the fit of the Document Use integrated items, it would be more appropriate at this point to: 1) develop additional Writing items and 2) continue to monitor the items that have been integrated with additional test-takers.*
>
> *Document Use has traditionally been a strong scale for assessing test-taker essential skill and it is helpful to retain the value of the items that have been developed. Retaining these items going forward, within the Skills for Success framework, by incorporating them into other domains - Reading, Numeracy, Writing and potentially Problem Solving – is a useful approach. This action does require monitoring for the next while, but the data and analyses from this work suggest that it is possible to do so successfully."* (*Psychometrician's Report).*

Some key informants expressed disappointment that document use was being integrated into other domains. They suggested that document use should be a stand-alone skill that is isolated and explicitly addressed.

> *"What makes document use unique is tables, other forms of structured reading, icons, entry forms, which are so critical to just the day-to-day, across work, learning, life… now it's buried within other things and makes both the assessment of those skills and the identification of those components more challenging than if done in isolation directly…. It's not quite as clear and explicit anymore, and it's a challenge for any curriculum." (A Key Informant).*

Research question #3: *"Could the "Document Use" under the Essential Skills framework be seamlessly integrated into the competency evaluations of Reading, Numeracy, and Writing under the Skills for Success model?"*

The work to integrate Document Use into the domains of Reading and Numeracy has largely been deemed completed. It remains a work-in-progress for Writing. There is a need to explain clearly to practitioners who were familiar with the Essential Skills framework about Document Use's integration into the respective domains to support the transition into the new Skills for Success Model.

PAPER-BASED VS COMPUTER-BASED EVALUATIONS

To examine if participants might perform differently between paper-based and computer-based evaluation, regression models are developed in which participants' pre-evaluation results in each skill domain (evaluation score, an indicator of being given skill level 1 , and an indicator for being given skill level 3-5) are regressed on a variety of baseline characteristics collected during the pre-survey as well as evaluation type. With this approach, differences across evaluation type are teased out with personal characteristics being equal.

As only the English evaluation was available in both paper- and computer-based delivery modes for piloting, this analysis uses only data from participants who took the English pre-evaluation.

The estimation results find that, on average, the computer-based versions tend to have lower scores than the paper-based versions for all the domains. For example, Table 7 presents the regression-adjusted average scores by evaluation type. These values represent the average scores predicted by the regression models for the scenario where every participant took the same evaluation type. For example, had the evaluation type been the paper-based version 1 for every participant, the average scores would have been 245 for reading, 251 or writing, 252 for numeracy according to the regression models. In contrast, the predicted average score would

have been 235 for reading, 250 for writing, and 245 for numeracy if every participant had taken computer-based version 1 evaluation.

Table 7 Regression adjusted average pre-evaluation scores by evaluation type (English evaluation)

	Reading	Writing	Numeracy	Digital Skills
Paper-based version 1	245	251	252	N/A
Paper-based version 2	257	262	258	263
Paper-based version 3	259	300	254	261
Computer-based version 1	235	250	245	252
Computer-based version 2	216	219	231	238

Research question #4 *"For Reading, Numeracy, and Writing competency evaluations, is there any difference between paper-based evaluation and computer-based evaluation?"*

There was evidence that participants scored lower when using the computer-based evaluations. Since participants who went through the computer-based evaluations were younger, more likely to be born in Canada, more likely to speak English or French at home, less educated, had less work experience and were more likely to be students, the differences cannot be explained by their characteristics since they have both positive and negative factors.[21] Since participants reported technical challenges when they completed the computer-based evaluations, we think that more work is needed to refine the computer-based evaluation and to ensure that the mode of evaluations is not a factor impacting the evaluation results.

RELATIONSHIP BETWEEN PRE-EVALUATION RESULTS AND BASELINE PERSONAL CHARACTERISTICS

As with the attempt above to uncover possible differences between paper-based and computer-based evaluations, regression models are developed to gauge how each domain's evaluation correlate to the related individual characteristics. Regressions may also help identify construct-irrelevant barriers related to linguistic, communicative, cognitive, cultural, physical or other factors. Specifically, for each skill domain, these models regress participants' pre-evaluation results (evaluation score, an indicator of being given skill level 1, and an indicator for being given

[21] Because the distributions of digital skills were similar across the two delivery modes, we do not have evidence to suggest that the lower score was driven by the digital skills difference.

level 3-5) on a variety of baseline characteristics reported in the pre-survey data as well as evaluation type. With this approach, differences across individual characteristics are teased out with other characteristics being equal.

The main statistically significant findings are listed below

- Gender: Women have lower digital results than men.
- Age: Participants in prime working age (35-44) have higher reading, writing, and numeracy scores than their younger or older counterparts. However, participant age is negatively correlated with digital score.
- Educational attainment: As expected, higher educational attainment is associated with higher scores in all skill domains.
- Work experience: The number of months employed in the past three years is positively correlated with scores in all the domains.
- Language spoken at home: The participants who speak English or French have higher results in all 4 domains.
- Household income: The individuals with higher household income have consistently higher results in all skill domains.
- Newcomers to Canada: The immigrants who immigrated to Canada less than 5 years ago have lower reading, writing, and digital results.
- Racial, ethnic, and cultural identities: Differences by race, ethnicity, and cultural background are compared relative to those who identify as Caucasian.
    - The participants who identify as Arab, Black, Southeast Asian, or Indigenous have lower results in all the skill domains.
    - The participants who identify as Latin American, South Asian, or West Asian had lower results in reading, writing and numeracy.

It should be noted that many of the observed score differences by characteristics were similar to previous findings from the Essential Skills regime. The only exceptions were the unexpected differences by race, ethnicity, and cultural background. Further data collection and analysis is needed to understand the driving factors of these differences and to ensure that the evaluations are culturally neutral.

Relationship between pre-evaluation results and self-assessment of skills

During the survey conducted before the pre-evaluation, participants were asked about their confidence in performing various tasks involving the four skill domains using a 3-point Likert scale consisting of "Yes", "Somewhat", and "No" (with these responses given numeric values of 3, 2, and 1, respectively). the numeric values are averaged within each domain to create a self-assessed proficiency indicator.

Participants were also asked how often they would perform various tasks involving the four skill domains using a 5-point Likert scale ranging from "Never", "Rarely", "Every month", "Every week", and "Everyday" (with these responses given numerical values of 1, 2, 3, 4, and 5, respectively). Another indicator of self-assessed proficiency skill level is derived from these responses by averaging the associated numeric values within each domain.

Table 8 presents the average values of these measures by skill level determined by pre-evaluation. It should be noted that self-reported measures are inherently subjective and prone to error, although participants are likely to have some awareness of their own skill levels when responding to these measures. As a result, we expect that the evaluation scores and the self-assessed proficiency or usage frequency are positively correlated if the evaluation is valid.

On a 5-point scale, both self-assessed skill measures show high average values. However, the differences in average self-assessed proficiency and usage frequency across the objectively assessed pre-evaluation skill levels are small. Despite the small differences, there are generally positive relationships between skill level and the self-assessed proficiency indicators for each skill. When the correlation between the self-assessment and pre-evaluation results are calculated, there are statistically significant (at 5%) correlations for all the domains in confidence and as well as in usage frequency measures for all the domains except for writing (Table 9). The correlations are stronger for digital skills. The observed relationship between pre-evaluation results and self-assessment of skills supports the validation of the evaluations.

Table 8 Self-assessment by pre-evaluation results

		Confidence	Usage Frequency
Reading	Skill level 1	2.65	3.95
	Skill level 2	2.76	4.16
	Skill level 3-5	2.83	4.16
Writing	Skill level 1	2.50	3.47
	Skill level 2	2.58	3.39
	Skill level 3-5	2.70	3.55
Numeracy	Skill level 1	2.59	3.22
	Skill level 2	2.70	3.32
	Skill level 3-5	2.75	3.42
Digital Skills	Skill level 1	2.68	3.76
	Skill level 2	2.83	3.99
	Skill level 3-5	2.91	4.26

Table 9 Correlation between pre-evaluation score and self-assessment of skill

	Confidence	Frequency
Reading	0.22***	0.09***
Writing	0.19***	0.04*
Numeracy	0.16***	0.08**
Digital Skills	0.32***	0.19***

Note: *** p < 0.01; ** p < 0.05; * p < 0.1.

Research question #5: *"How does each domain's competency evaluation correlate to the related individual characteristics or outcomes (as measured in project surveys and longitudinal data)?"*

Our findings indicate expected correlations between skill levels and age, educational attainment, work experience, language at home, and household income. Women scored lower in the digital skills. Newcomers have lower scores in Reading, Writing and Digital Skills compared to

Canadian-born adults after controlling for educational attainment. Since some newcomer participants with lower English or French proficiency reported additional challenges in completing the evaluations, linguistic barriers are likely an issue.

Expected correlations were observed across skill domains, with positive associations between assessed skills and self-reported confidence in these skills. Assessed reading and digital skills also positively correlated with the frequency of use in daily life. These patterns align with the existing literature on competency evaluations and provide supporting evidence of the evaluations' validity.

RELATIONSHIP BETWEEN PRE-EVALUATION RESULTS AND PROFICIENCY DESCRIPTORS

Research question #6: *"How does each domain's competency evaluation result relate to the corresponding provisional proficiency descriptors? How should the proficiency descriptors be revised to strengthen the linkage between the competency evaluation and individuals' performance in the modern workplace?"*

While some stakeholders reported challenges in interpreting evaluation results (e.g. no information about which question items were incorrectly answered were provided to facilitators and learners, interpretations of scores were not clearly provided), this appears to be an issue of deployment rather than design (e.g. transparency about the evaluation and release of supporting documents would help).

We found positive quantitative evidence that the pre-evaluation scores increase with self-reported confidence in skills for each of the four domains. We do not have sufficient outcome evidence to link each domain's competency evaluation results to the proficiency descriptors. As noted below in the description of the development of the competency evaluations and skill training curriculum, the process of the development aligned closely with the proficiency descriptors based on developers' experience with various frameworks and workplace contexts[22]. It is only reasonable to conclude that there is no substantial issue with the current proficiency descriptors though minor adjustments might be needed in the future when there is more evidence.

We think that it will take more time for practitioners to familiarize themselves with the new framework and proficiency descriptors. Additional data collection and research are needed to

[22] Since we observed that the provisional proficiency descriptors were not widely communicated, it would be difficult for this project to collect qualitative evidence from the facilitators or participants in identifying areas that need revisions to the provisional proficiency descriptors.

strengthen the linkage between the competency evaluation and individuals' performance in the modern workplace.

IMPACT OF CONSTRUCT-IRRELEVANT BARRIERS

Research question #7 *"Are these competency evaluations minimizing the impact of construct-irrelevant barriers related to linguistic, communicative, cognitive, cultural, physical or other factors?"*

As presented above, correlations between assessed skills and racial or ethnic identities persisted even after controlling for factors such as gender, education, income, and primary language spoken at home. This could indicate that fluency in English or French may confound these correlations, especially given the high percentage of newcomers in the participant sample. It should also be noted that the evaluation developers found the translation from English to French challenging. Some participants found certain questions vague or confusing, indicating that it may be beneficial to review language clarity and cultural neutrality.

With the observed differences in proficiency scores between paper-based and computer-based evaluations, possibly related to technical issues in the system, and the challenges faced by some neurodivergent users in a standard test-taking setting, the competency evaluations were somewhat affected by construct-irrelevant barriers. However, since the evaluations display proper psychometric patterns properties, the impacts of the construct-irrelevant barriers are not substantial. There is a need for continued development of the evaluations to reduce the effects of any identified construct-irrelevant barriers.

RESULTS OF THE SKILL TRAINING PILOT

The results of the skill training pilot are presented in the order of the 6 research questions. For each question, we first present relevant evidence from both the qualitative and quantitative research, followed by a brief summary response.

CURRICULUM AND TRAINING DEVELOPMENT AND THE COMPETENCY EVALUATION DEVELOPMENT

The intent of the research question was to explore how the development of both components could align with competencies that are trainable. Development of the evaluations began with a mapping activity that compiled criteria for each of the Skills for Success domains. Developers referred to historical data from Test of Workplace Essential Skills (TOWES) as well as other skills and competency frameworks. Then they developed evaluation items that aligned with those criteria and also used existing evaluation items and applied the new criteria to them. Using their historical TOWES data, they scored the items based on the new criteria. The process was iterative as the team discussed how to fit existing content into the new model. The team made adjustments to the scoring as they collected more data and received more feedback during the study.

Developers found it helpful to refer to other sources of data such as the International Adult Literacy Survey, the Test of Workplace Essential Skills (TOWES), the European Digital Competence Framework, the Australian Digital Capability Framework, the UK Essential Digital Skills Framework, the Quebec Digital Competency Framework, Alberta Reading Benchmarks, the Canadian English Language Proficiency Index Program (CELPIP), and the International English Language Testing System (IELTS). From there, they created competency tables that aligned with the Skills for Success. Those tables then informed a rubric of criteria for evaluation items.

For the development of the online training, a larger group including evaluation and media developers as well as subject matter experts convened to create an overarching framework, themes, and a draft standards document. The subject matter experts developed content in paper format and the developers translated that content into an online format.

Developers received guidance from an advisory committee comprising of subject matter experts in online learning, industry, and curriculum development. Within the broader Bow Valley College organization, staff supported the team with piloting evaluation and lesson content. The development team was also part of other working groups that were working on similar projects related to Skills for Success, which created the opportunity for them to discuss and learn from others working in this space. Additionally, a lot of the content was based on real workplace documents from subject matter experts, which ensured that the training activities were relevant to the workplace.

The process of creating a design standard for the evaluation and online training was a collaborative exercise within a small team. The team developed and applied a consistent design standard across lessons and modules. They also worked with a consultant to incorporate accessibility design into the learning materials. They developed standard criteria both in the way that content was presented in terms of including review sections and key words, consistent language and messaging, and also with visual design like colour division of the different domains and consistent use of fonts. However, achieving consensus was not always fast or easy as the team was passionate about creating a high-quality product. Developers also expressed that they could have done more with more time.

Participants who completed Training Version 1 mentioned a disconnect between some of the activities in the evaluation and the training. Participants felt that the writing content in the training was too different from the writing questions in the evaluation, and thus not useful for helping them improve their evaluation results. Other examples of differences between the training and the evaluation were the map and ladder questions which only appeared in the evaluation. BVC has since launched Versions 2 and 3 of the evaluation which were revised and better align with the training.

Translation from English to French

The evaluation and training content was first developed in English and then translated to French. The goal was to develop a final product that was as similar as possible in both languages. The translation process faced challenges such as direct translations losing the intended context or meaning, having multiple translations and conflicting opinions, and applying any changes in the English version to the French version to ensure consistency. Additionally, because French is a longer language, it often did not fit within the design of the original workplace document or the English activity. Developers would then have to redesign the English activity to ensure that the content and format was consistent across both languages.

> *"Like, say, a workplace accident form or something like that. And in English it looks clean. And you know, people's sentences are written in the blocks on the form neatly. And in French, we can't fit it. And then the font gets smaller and the margins get narrower and suddenly the question becomes tougher because a student is sort of processing more material that's more compressed and I find visually that can be very difficult to parse and adds difficulty to our Francophone clients that Anglophone clients won't experience." (Content Developer)*

Other challenges that arose during the French translation process were ensuring that activities were still relevant and made sense for French speakers, and that inclusivity was prioritized. Developers suggested that using real French workplace documents may be preferable to

translating from English in order to provide a more authentic experience for French learners. There were also differences between English and French that meant some activities were not directly translatable, such as English Canada generally using a 12-hour clock and French using a 24-hour clock to tell time. Additionally, while developers prioritized gender neutrality and cultural diversity in creating the English content, some of these aspects were lost during the translation process and the names and pronouns used in the examples became more conservative and less inclusive in French. Due to time constraints, developers did not have enough time to change everything back to include more inclusive language.

Research question #8: *"How does the curriculum and training development affect the competency evaluation development?"*

The intent of the research question was to explore how the development of both components could align with competencies that are trainable. As it turned out, the competency evaluation largely shaped the curriculum and training development by providing a structured framework, informed by multiple national and international standards, that guided the creation of curriculum. The collaborative process of mapping skills, referencing historical data (like TOWES), and incorporating real workplace documents ensured that both training and evaluation reflected real-world applications. However, early versions revealed misalignments—such as differences in writing tasks and unique evaluation items not covered in training—which were addressed in later versions to improve coherence.

Additionally, the collaborative development process, including input from subject matter experts and advisory committees, helped maintain consistency and relevance. The translation process also highlighted the importance of cultural and linguistic adaptation in maintaining the integrity and inclusivity of both training and evaluation materials.

Further work may be needed to ensure closer alignment between training activities and evaluation tasks. Participants noted discrepancies—such as writing tasks and map/ladder questions—that reduced the training's effectiveness in preparing them for the evaluation. Future iterations should continue ongoing user testing and feedback loops to refine content and ensure consistency. Additionally, more time and resources should be allocated to enhancing inclusivity and cultural relevance, especially in translated materials, by incorporating authentic French-language workplace documents and ensuring gender-neutral, diverse examples. This would improve both the accessibility and authenticity of the learning experience.

DELIVERY OF THE ONLINE SKILLS DEVELOPMENT TRAINING

SRDC learned about the implementation of the training at nine organizations across British Columbia, Alberta, Saskatchewan, Quebec, and New Brunswick. Each organization incorporated

the Skills for Success training differently into their existing programs. Some programs gave participants in-class time to work on the Skills for Success training while others completed them entirely from home. Some facilitators assigned minimum numbers of hours or modules for participants to complete, while others did not. While some facilitators actively reminded and encouraged participants to complete their modules, others were more hands-off with 1-1 support. Some facilitators emphasized the benefits and relevance of the BVC training and connected it with their primary training program, while others did not. Bow Valley College intentionally provided this flexibility to pilot partners to secure their commitment. Due to the flexibility provided in the training implementation, pilot partners may not have implemented each component as intended.

Facilitator training

Bow Valley College provided orientation workshops and a training guide to the English training delivery partners. The Centre de recherche et d'expertise en multilittératie des adultes (CREMA) acted as a liaison and recruited and trained the French training delivery partners. Facilitators were provided with a detailed training guide. While some facilitators appreciated the level of detail in the training guide and found it easy to follow, others found the amount of materials overwhelming and difficult to use efficiently. Some facilitators developed their own simplified checklists of tasks that needed to be done for each training cohort since they could not review the training guide every time.

Facilitators and barriers to completion

The virtual format of the training made it easier for learners to participate in the training. It also helped students practice and improve their digital skills. Most participants who received in-class time to work on the training also indicated that this made it easier for them to complete modules. In general, participants found the training easy to navigate, well structured, and user-friendly. Participants also noted that the activities were varied and the content was interesting. Despite the project providing user guides and videos, some participants mentioned that more technical support for navigating the platform would have been helpful.

For some participants, obtaining lower than expected scores on the evaluations was demotivating and facilitators had to spend time working with participants for them to feel

motivated again. Additionally, a facilitator suggested that offering a certificate of completion could have motivated participants more.[23]

Some participants found the courses too lengthy, wordy, and were sometimes overwhelmed by the number of options. Without specific guidance on which lessons to focus on within a domain, participants found it difficult to select which lessons to do. Some participants also took double the suggested 20 minutes to complete a lesson[24]. While there was a way to avoid starting over, it was not clear for all participants how to save their work in the middle of a module. Some participants mentioned that when they didn't finish a module, they had to start all over again instead of picking up from where they left off.

Many participants and facilitators expressed that they would have liked to have access to the online training for a longer period of time. Participants who were encouraged to complete as many modules as possible mentioned that they felt rushed and did not have enough time to better understand and absorb the information. In addition, several participants mentioned password and login issues which delayed their access to the training.

Participants had competing responsibilities during the training, such as work and parenting responsibilities. Some participants also had additional assignments from their training course. The timing for a few cohorts also overlapped with the December holiday season and some participants did not have as much time to dedicate to the training.

While the training was designed to be self-guided, some participants with lower skills reached a limit in terms of the level of difficulty for the activities they could complete on their own. These learners would have benefited from more facilitator support to work through the activities together.[25]

Some participants did not see the relevance of the Skills for Success training in relation to their primary training program and goals but were motivated by the study incentives.

Other implementation challenges

While recruiting partners to deliver the training, CREMA noted that the compensation offered to training partners was not sufficient for everyone who was interested to be able to participate, as they did not have the internal resources available to allocate a dedicated person to the project. For some organizations, participating would have only been possible if the budget for the study

[23] Bow Valley College provided certificates of participation in the validation study for participants who requested them, though these were different from certificates indicating completion of a training.

[24] Optional videos may have increased the duration needed to complete the modules.

[25] The project anticipated this issue and brought it to the attention of facilitators early on.

were increased by 50%. Additionally, the ethics approval process also took too long for some partners to be able to participate by the time they were approved to do so.

Facilitators also mentioned that many participants with lower digital literacy skills had difficulties accessing the online gift cards and that a lot of time was spent supporting them to do so. Having an option to provide physical gift cards for these learners would have been appreciated.

Training activities

The training group participants logged approximately 9,000 training sessions in total (2,450 reading lessons, 3,036 writing lessons, 2,648 numeracy lessons, and 2,836 digital lessons). Table 10 presents statistics related to completed lesson sessions.

- Of these individual sessions, 91% of the reading, writing, and numeracy lessons, and 88% of the digital skills lesson were completed.
- The completion rates were higher for the English training version than the French training version (by 4 percentage points for reading and numeracy, 5 percentage points for writing, and 2 percentage points for digital lessons.)
- It took a majority of participants more than the expected length of lesson completion (20 minutes) to complete a single lesson (the median length to lesson completion is 35 minutes for reading, 31 mins for writing and numeracy, and 28 minutes for digital skills lessons.

Table 10 Lesson completion rate and median length to complete

	Language of training	% completed	Median minutes to complete
Reading	All	91%	35
	English	92%	32
	French	88%	42
Writing	All	91%	31
	English	92%	28
	French	87%	41
Numeracy	All	91%	31
	English	92%	29

	French	88%	35
Digital Skills	All	88%	28
	English	88%	29
	French	86%	24

Table 111 summarizes the training lesson activities of training group participants. At least 60% training group participants completed at least one training lesson for each domain. For each skill domain, the median number of lessons completed ranged from 5 to 7 among participants who completed at least one lesson. Generally, there is no difference in the number of lessons completed by pre-evaluation skills levels.

The level of engagement in lesson varies widely among participants. For example, 25% participants completed at least 8 lessons for reading, while another 25% of the participants had at most 3 lessons in each domain.

Table 11 Training activities – the number of lessons completed

Skill Domain	Subgroup description	% at least one completed lesson	Number of lessons completed			
			Average	25th percentile	Median	75th percentile
Reading	All	61%	5.6	2	5	9
	Pre-evaluation reading level 1-2	60%	5.6	2	5	9
Writing	All	68%	6.3	3	7	9
	Pre-evaluation writing level 1-2	66%	6.0	2	6	8
Numeracy	All	64%	5.8	2	6	9
	Pre-evaluation numeracy level 1-2	65%	5.6	2	5	9
Digital Skills	All	70%	5.4	2	6	8
	Pre-evaluation digital level 1-2	80%	5.8	2	6	8

Research question #9: *"How is the delivery of the online skills development training? Are there any barriers affecting participation and completion of the training?"*

The delivery of the online skill training showed strong potential, with high lesson completion rates and generally positive feedback on content quality and usability. However, implementation varied significantly across the nine participating organizations, affecting learner experience. Some programs offered structured in-class time and active facilitator support, while others relied on self-directed learning with minimal guidance, leading to inconsistent engagement and outcomes.

Key barriers included technical difficulties (e.g., login issues, saving progress), limited access time, and challenges for learners with lower digital literacy. Participants also struggled with motivation when they didn't see the training's relevance or received low scores. Facilitators noted that the training materials were sometimes overwhelming, and some learners found the content too lengthy or complex without clear direction on what to prioritize.

The pilot's results highlight the importance of consistent facilitator engagement, clearer guidance for learners, and extended access to the training. Providing more technical support, simplifying navigation, and aligning the training more closely with learners' goals can enhance participation and completion. These are minor adjustments needed for typical online self-directed training. Future implementations should also consider resource constraints and provide adequate support for delivery partners.

TRAINING CONTENT AND SKILLS DEVELOPMENT NEEDS

In general, participants found that the training content was appropriate for their level of comprehension, as it offered a range of lessons and activities of varying levels of difficulty. However, it should be noted that some groups of participants experienced additional challenges. These groups include newcomer participants with lower official language proficiency and participants with additional learning needs including learning and cognitive disabilities.

Language and cultural barriers created a challenge for newcomers in understanding some of the training content. A focus group participant mentioned that some sections of the training assumed a certain level of foundational knowledge and it would have been helpful to have more explanations. Some participants with additional learning needs would have preferred more facilitator-led instruction to be able to better understand the content.[26]

[26] Bow Valley College mentioned this in the facilitator training guide.

Participants were able to apply the training in their work placements, jobs, and daily life. Participants reported using the success strategies at work placements and in their work. They also reported gaining a better understanding of Canadian employers and skills that are needed in the Canadian labour market. The training also helped their job search skills since the lessons incorporated activities related to resume, cover letter, and professional email writing. Participants also saw similarities between the training content and employer training. Additionally, participants learned skills such as paying more attention to details and scanning for keywords. Participants who were job seekers mentioned that the skills they developed helped them with other online and recruitment tests.

> *"I got a new job and after getting a new job and training, I realized that there's the same kind of training and skills [that] we required here, and I feel like that I'm glad to take that course." (Training participant)*

> *"And for me it helps because… there is also a production area, where we have welders, assemblers and general labourers. And I can better understand some operations they are involved in. So for me it helped." (Training participant)*

In their daily lives, participants benefited from getting more familiar with units of measurement that are more commonly used in Canada, such as inches and feet. They also enjoyed the practical aspects of the activities that were related to calculating taxes and bills. Participants also felt that they improved their digital literacy skills. For participants who were immigrants, the training was also a good source of new vocabulary and knowledge about life in Canada.

In some cases, the training was also well aligned with programs that facilitators were already delivering. One facilitator offered the online training as additional practice for one cohort of students preparing to write the TOWES. The facilitator stated that that cohort had better results than most other classes. Participants who completed the training as part of a settlement and integration program also felt the content was relevant to their primary training. For programs that provided more individualized support to learners, facilitators appreciated that the training could be personalized to each person's level and could "meet them where they're at."

Research question #10: *"From the perspective of the participants, is the training content clear? Does the curriculum appropriately address their skills development needs?"*

From the perspective of participants, the training content in the online foundational skills pilot was generally clear and appropriate for their skills development needs. Most participants found the lessons and activities well-matched to their comprehension levels, appreciating the variety in difficulty and the practical relevance to their work, job search, and daily life. They reported successfully applying the skills learned—such as resume writing, understanding workplace expectations, and improving digital literacy—in real-world contexts like job placements and personal tasks. The training also helped participants, particularly immigrants, gain familiarity

with Canadian workplace norms, vocabulary, and everyday concepts like measurement units and taxes.

However, the clarity and accessibility of the content were not uniform across all participant groups. Newcomers with lower official language proficiency and individuals with learning or cognitive disabilities faced additional challenges. Language and cultural barriers sometimes hindered understanding, and some content assumed prior foundational knowledge that not all participants had. These groups expressed a need for more detailed explanations and facilitator-led instruction. Despite these challenges, the training's adaptability and alignment with other educational programs were seen as strengths, especially when facilitators could tailor the experience to individual learner needs.

SKILL CHANGE AFTER TRAINING

Table 12 compares the evaluation results of the training group participants before and after training and shows that there are statistically significant improvements in average scores for all four domains. Specifically,

- The average scores increased by 10 for reading, by 6 for writing, by 7 for numeracy, and 15 for digital skills, with all the increases being statistically significant at the 1% level.
- The proportion of participants in skill level 1 decreased for all four skill domains (by 4 percentage points for reading and writing, by 5 percentage points for numeracy, and 11 percentage points for digital skills).

Table 12 Change in evaluation score and skill level after the skill training pilot

		Before training	After training	Change
Reading	Average score	242	251	+10***
	Skill level 1	35%	31%	-4pp
	Skill level 2	41%	40%	-1pp
	Skill level 3	21%	25%	+4pp
	Skill level 4-5	3%	4%	+1pp
Writing	Average score	254	259	+6***
	Skill level 1	27%	23%	-4pp
	Skill level 2	41%	41%	0pp

		Before training	After training	Change
	Skill level 3	29%	31%	+2pp
	Skill level 4-5	4%	6%	+2pp
Numeracy	Average score	247	255	+7***
	Skill level 1	32%	27%	-5pp*
	Skill level 2	38%	37%	-2pp
	Skill level 3	25%	29%	+4pp
	Skill level 4-5	5%	7%	+2pp
Digital Skills	Average score	253	269	+15***
	Skill level 1	25%	14%	-11pp***
	Skill level 2	42%	40%	-2pp
	Skill level 3	33%	46%	+13pp***
	Skill level 4-5	0%	0%	0pp

Note: *** p < 0.01; ** p < 0.05; * p < 0.1. pp stands for percentage points, the unit of change in percentages.

Moreover, the proportion of participants in skill level 3-5 increased for all four skill domains and the increases are statistically significant for reading (by 5 percentage points), numeracy (by 6 percentage points), and digital skills (by 13 percentage points), as presented in Table 13.

Table 13 Proportion of participants attaining skill level 3-5 after the skill training pilot

	Before training	After training	Change
Reading	24%	29%	+5pp*
Writing	32%	36%	+4pp
Numeracy	29%	36%	+6pp**
Digital Skills	33%	46%	+13pp***

Note: *** p < 0.01; ** p < 0.05; * p < 0.1. pp stands for percentage points, the unit of change in percentages.

In addition, a sizeable proportion of training group participants experienced substantial increases in evaluation results, as shown in Table 1414. The values in this table present the proportions of the participants who obtained 25- and 50-point increases in each skill domain.

Table 14 Proportion of participants with significant gains in skill score after the skill training pilot

	25-point score increase	50-point score increase
Reading	26%	6%
Writing	28%	7%
Numeracy	24%	5%
Digital Skills	34%	11%

Change in skill self-assessment

Corresponding to these positive changes in score, training participants gained improvements in their self-assessed confidence in skill use and skill use frequency, as shown in Table 15:

- The indexes of self-assessed skill proficiency described earlier show an increased confidence in skill use and skill usage frequency in each skill domain after the training.
- These gains were sustained at the time of the longitudinal survey.

Table 15 Changes in self-assessed confidence and usage frequency in skills after the skill training pilot

	Pre-training	Post-training increase	Pre-training	9-month increase
Confidence				
Reading	2.72	+0.05***	2.72	+0.10***
Writing	2.57	+0.05**	2.58	+0.16***
Numeracy	2.63	+0.09***	2.62	+0.18***
Digital Skills	2.76	+0.08***	2.78	+0.10***
Frequency				
Reading	4.06	+0.18***	3.97	+0.28***
Writing	3.43	+0.21***	3.35	+0.40***
Numeracy	3.27	+0.21***	3.20	+0.41***
Digital Skills	3.97	+0.24***	4.03	+0.28***

Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Relationship between training activities and change in score

As shown earlier, the extent of training activity engagement varied across training group participants. To see whether higher training activity level is associated with a larger change in evaluation score, training group participants are divided into two groups based on whether participants completed at least one lesson for each skill domain, and average score changes are calculated for both groups (Table 16).

While score gains are slightly higher for training group participants who completed at least one lesson, the differences between the groups are small, with at most a 5-point difference. The score gains by training group participants who did not complete any lessons may indicate either:

- Participants gained skill outside of the Bow Valley College online training, or
- Participants became familiar with the evaluation format, which helped them attain higher evaluation scores.

Despite the unexplainable skills gain observed among training group participants who did not complete any lessons, the results of the differences by training participation level are likely better evidence of the skill training's effectiveness than the comparison between the training and comparison groups because of the sample size.

Table 16 Average score gain by training lesson completion status

	Training group who completed at least one lesson in the corresponding domain		Training group who did not complete any lessons in the corresponding domain		
	Pre-evaluation score	Pre-post score change	Pre-evaluation score	Pre-post score change	Differences in pre-post change in score
Reading	243	+10***	239	+9***	+1
Writing	255	+7***	250	+4	+3
Numeracy	248	+8***	247	+5**	+3
Digital Skills	251	+16***	261	+11***	+5

Note: *** p < 0.01; ** p < 0.05; * p < 0.1.

Differences in score gains between training group and comparison group participants

Table 17 contrasts the score gains between training and comparison group participants. Readers should note that the comparison group is very small and not representative of the training group participants. Therefore, only substantial differences should be considered as suggestive evidence of impacts—and even then, interpreted with considerable caution.

The training group and comparison group participants have similar score gains in readings (10- and 9-point increase, respectively), while the training group have slightly higher score gains for writing and numeracy though the differences are not statistically significant. The score gain for digital skills is 17 points higher for the training group, and the differences are "statistically significant".

Table 17 Score change by piloting model

	Training group		Comparison group		
	Pre-evaluation score	Pre-post score change	Pre-evaluation score	Pre-post score change	Differences in pre-post change in score
Reading	242	+10***	266	+9**	+1
Writing	254	+6***	282	+2	+4
Numeracy	247	+7***	271	+4	+3
Digital Skills	253	+15***	280	-2	+17***

Score gains by initial skill level

As the skill training pilot targeted lower skilled individuals, the training may have affected participants with different skill levels differently. Indeed, as presented in Table 18, score gains are the highest among participants with initial skill level of 1, with a 22-point increase in reading score, a 24-point increase in writing score, a 13-point increase in numeracy score, and a 34-point increase in digital skills score., The corresponding gains for participants with initial skill level of 2 are 9-points for reading, 5-points for writing, 11-points for numeracy, and 18-points for digital skills. No statistically significant score gain was observed for participants with initial skill levels of 3-5.

In addition, there are larger differences in score gain between training group participants with at least one completed lesson and training group participants with less training for participants with an initial skill level of 1. The differences for reading, writing, and numeracy ranging from 6 to 10 percentage points are statistically significant at the 10 percent level for reading and writing. These suggest that the training was effective for lower-skilled participants.

Table 18 Change in score by initial skill level

	Training group who completed at least one lesson in the corresponding domain		Training group who did not complete any lesson in the corresponding domain		Comparison group	
	Pre-evaluation score	Pre-post score change	Pre-evaluation score	Pre-post score change	Pre-evaluation score	Pre-post score change
Pre-evaluation skill level: level 1						
Reading	193	+22***	194	+15***	-	-
Writing	204	+24***	206	+14***	-	-
Numeracy	197	+13***	188	+7	-	-
Digital Skills	202	+34***	-	-	-	-
Pre-evaluation skill level: level 2						
Reading	249	+9***	248	+7***	-	-
Writing	251	+5**	250	+0	255	+6
Numeracy	250	+11***	251	+10***	250	+7
Digital Skills	251	+18***	250	+13***	-	-
Pre-evaluation skill level: level 3-5						
Reading	298	-3	303	0	306	+3
Writing	299	-3	297	-4	322	-9
Numeracy	302	-1	301	-2	312	+5
Digital Skills	297	-2	299	-1	-	-

Notes: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Statistics based on small sample sizes (less than 20) are suppressed and denoted by -.

Research question #11: "*Does the online skills development training improve the competency evaluation scores of the participants?*"

The evidence collected strongly supports the conclusion that the online skills development training significantly improved the competency evaluation scores of participants. Our results show statistically significant average score increases across all four skill domains—reading (+10), writing (+6), numeracy (+7), and digital skills (+15). Additionally, the proportion of participants at the lowest skill level (Level 1) decreased across all domains, while the proportion at higher skill levels (Levels 3–5) increased significantly, particularly in reading, numeracy, and digital skills. These findings indicate not only overall score improvements but also meaningful shifts in skill distribution toward higher competency levels.

Further supporting the training's effectiveness, a substantial number of participants achieved large score gains (25- and 50-point increases) and reported increased confidence and frequency in skill use—gains that were sustained over time. While participants who completed at least one lesson showed slightly higher score gains compared to those with less training, the differences were modest, suggesting some external factors or test familiarity may have contributed to improvements. However, the most notable gains were among participants who began at the lowest skill level, with substantial increases in all domains, especially digital skills (+34 points). This highlights the training's particular effectiveness for lower-skilled individuals. There is some evidence of greater improvement in digital skills among the training group, highlighting the added value of the program in this domain. Overall, the evidence indicates that the training was effective, especially for those with initially lower skill levels.

TRAINING AND LABOUR MARKET OUTCOMES

To examine whether the online training leads to improved education and labour market outcomes, we construct the following indicators based on participants' responses in the pre- and longitudinal survey, and then measure changes:

- Studying or working: A binary indicator taking on a value of 1 if a participant was either studying or working around the time of a given survey is derived.
- Job quality: During each survey, participants were asked whether they would agree to the statements regarding their work environment, job responsibilities and their ability to use their skills and succeed in their job on a 5-point Likert scale ranging from "strongly agree", "somewhat agree", "neither agree nor disagree", "somewhat disagree", and "strongly disagree". An indicator for job quality is constructed from the percentage of participants who reported that, on average, they strongly agree with these statements. (For participant who were not working around the time of a given survey, the indicator takes on the value of 0).

- Job satisfaction: Using the same 5-point Likert scale, participants were also asked whether they would agree to the statements about their satisfaction with various aspect of their work including field, pay, job security, seniority, support from their supervisor, opportunities for promotion or professional development, flexibility or safety at work. An indicator for job satisfaction is constructed from the percentage of participants who reported that, on average, they strongly or somewhat agree with these statements. (For participant who were not working around the time of a given survey, the indicator takes on the value of 0).

- Attitude toward learning: Similarly, using the same 5-point Likert scale, participants were asked whether they would agree to the statements regarding their attitude toward learning such as whether they would believe that learning would lead to a better job or better competency at work, whether they would understand their strengths and areas to improve, whether they would take responsibility for their own learning, or whether they would keep their skills up-to-date. An indicator for attitude toward learning is constructed from the percentage of participants who reported that, on average, they strongly agree with these statements.

Table 19 presents the changes in these indicators from the time of pre-evaluation to the time of the longitudinal survey for the training group and the comparison group. As described in the Research Methods section, the research team combined data from the validation group with the comparison group to increase the sample size of participants who did not have access to the online training. However, this combined sample is unlikely to be representative of the training group participants. The use of a difference-in-differences approach—by comparing changes over time—may help mitigate some of the inherent systematic differences. It should also be noted that the four indicators of labour market outcomes are likely influenced by many other factors unrelated to the online training. As a result, the impact of the online training is relatively small in comparison, and detecting statistically significant effects would require a very large sample size, which this pilot did not have.

Table 19 Changes in education and labour market outcomes

	Training group			Comparison & validation groups		
	Pre-survey	Longitudinal survey	Change	Pre-survey	Longitudinal survey	Change
Either working or studying	0.80	0.90	0.09***	0.74	0.86	0.13***
Job quality	0.14	0.21	0.06***	0.18	0.25	0.07**
Job satisfaction	0.16	0.26	0.10***	0.23	0.35	0.12***

Attitude toward learning	0.65	0.67	0.03	0.63	0.71	0.08***

Note: *** p < 0.01; ** p < 0.05; * p < 0.1.

As shown in the table, more training group participants were either studying or working at the time of the longitudinal survey compared to the time of pre-evaluation (by 9 percentage points). Their job quality and job satisfaction show improvement statistically at the 1% level. The improvement in attitude toward learning is not statistically significant.

Similar levels of improvement are also observed for the comparison and validation group together in these indicators, which may be expected as overall, the skill gains are similar between the two groups as presented above.

Research question #12: *"Does the online skills development training lead to improved education and labour market outcomes?"*

The evidence from the skill training pilot suggests that the online skills development training had a positive effect on participants' education and labour market outcomes, though the magnitude of improvement was modest and comparable to that of the comparison group. Notably, the benchmark group (of the combined comparison and validation group) showed a statistically significant improvement in attitude toward learning (8 percentage points), while the training group's change in this area was not statistically significant. This indicates that while the training may have had a positive effect, broader factors—such as general labour market trends or other support mechanisms—could also be influencing outcomes. Therefore, while the training shows promise, its unique contribution to improved outcomes remains somewhat inconclusive without further investigation or a more controlled experimental design.

GBA+ ANALYSIS ON TRAINING

Within the following subgroups, score changes from pre-evaluation to post-evaluation are calculated for training group participants who completed at least one lesson, training group participants who completed no training, and comparison group participants to see if there is any difference of training impacts among these groups:

- Men
- Women
- Participants whose highest education is high school diploma or less

- Participants whose highest education is PSE education
- Participants who identify as Indigenous
- Immigrants to Canada
- Canadian-born participants who do not identify as Indigenous

Table 20 presents the score gains within the subgroup. Overall, score gains are similar among participants across different personal characteristics. If any, the improvement in writing among Indigenous people or participants with lower education attainment who completed at least one training appear to be higher compared to their training counterpart without any completed training lessons, or to comparison group participants.

Table 20 Change in Score by personal characteristics

	Training group who completed at least one lesson in the corresponding domain		Training group who did not complete any lesson in the corresponding domain		Comparison group	
	Pre-evaluation score	Change	Pre-evaluation score	Change	Pre-evaluation score	Change
Men						
Reading	243	+11***	241	+8**	272	+8
Writing	257	+6***	257	0	284	+6
Numeracy	252	+7***	254	+8**	274	+2
Digital Skills	248	+16***	268	+10*	-	-
Women						
Reading	244	+9***	238	+9***	261	+9
Writing	253	+8***	245	+6*	282	-4
Numeracy	245	+10***	242	+2	267	+6
Digital Skills	253	+17***	251	+14***	-	-
Highest education: high school or less						
Reading	231	+9***	233	+8**	260	+12*
Writing	247	+6*	245	+1	270	-5

	Training group who completed at least one lesson in the corresponding domain		Training group who did not complete any lesson in the corresponding domain		Comparison group	
	Pre-evaluation score	Change	Pre-evaluation score	Change	Pre-evaluation score	Change
Numeracy	230	+7***	234	+3	265	+2
Digital Skills	244	+19***	248	+6	-	-
Highest education: post-secondary education						
Reading	250	+10***	243	+9***	273	+8*
Writing	260	+7***	253	+4	294	+5
Numeracy	257	+9***	255	+6**	278	+9**
Digital Skills	256	+15***	268	+14***	-	-
Indigenous person						
Reading	234	+4	219	+1	-	-
Writing	247	+7	233	-5	-	-
Numeracy	227	+6	221	+5	-	-
Digital Skills	241	+20***	-	-	-	-
Immigrant to Canada						
Reading	241	+13***	234	+13***	276	+13**
Writing	251	+8***	245	+7*	280	+1
Numeracy	250	+9***	246	+8***	282	+7
Digital Skills	250	+18***	270	+10**	-	-
Non-Indigenous Canadian-born participant						
Reading	264	+3	268	+3	270	+8
Writing	280	+3	272	+1	297	+2
Numeracy	257	+7**	270	-5	275	+7
Digital Skills	261	+13***	-	-	-	-

Notes: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Statistics based on small sample sizes are suppressed and denoted by -.

Research question #13: *"Is there any difference of the training impacts between men and women, between immigrants and Canadian born people, or between Indigenous and non-Indigenous people? What are the potential reasons if there is any difference?"*

Score gains are similar among participants across different personal characteristics. If any, the improvement in writing among Indigenous people or participants with lower education attainment who completed some training lessons appear to be higher compared to those who did not.

CONCLUSION

Despite challenges in development and recruitment, Bow Valley College successfully implemented the Skills for Success evaluation validation pilot study and the skill training pilot. The study established the psychometric validity of the competency evaluations in Reading, Numeracy, Writing, and Digital Skills, with Document Use effectively embedded within the Reading, Numeracy, and Writing domains. The competency evaluations for Reading and Numeracy demonstrated excellent reliability and are considered well-developed, while the Writing and Digital Skills evaluations demonstrated acceptable reliability and require further field testing and refinement.

The research team found supporting evidence for the validity of the competency evaluations through their correlations with self-reported confidence and usage in the corresponding skill areas. While the evaluations in the four domains show promise, they remain a work in progress. Minor issues were identified in the computer-based delivery, the French-language versions, and the presence of construct-irrelevant barriers.

The study also found indications of skill improvement in all four domains among participants who completed the online training, particularly those who entered the program with lower initial competency levels. These findings support the premise that the Skills for Success competency evaluations measure trainable cognitive skills rather than fixed personality traits. However, the implementation research identified several challenges in curriculum development, facilitation, and delivery—most notably, a lack of clarity in communicating evaluation results and their connection to the skills training by training facilitators.

In conclusion, Bow Valley College is on track to fully develop both the competency evaluations and effective online training in Reading, Numeracy, Writing, and Digital Skills under the new Skills for Success model by the end of the project. While the model shares similarities with the previous Essential Skills framework, the new evaluations and training are not directly transferable. Significant time and effort are required to replicate the success of the previous model. Users and stakeholders also need time to understand the nuances and interpretive frameworks of the new tools. Continued testing and development are essential to fully realize the value of investments in competency evaluation and training.

A successful Skills for Success ecosystem that supports productivity growth requires robust competency evaluations and training programs. To make the model truly effective in the Canadian workplace, businesses must have access to these tools—ideally from multiple providers. Therefore, we recommend that Employment and Social Development Canada (ESDC) continue the federal government's commitment and investment in advancing Bow Valley College's competency evaluations and training toward fully mature, scalable products.

The following section outlines key lessons learned and recommendations for future implementation that Bow Valley College and its stakeholders may consider, should further opportunities arise.

LESSONS LEARNED

Development of the evaluations and training curriculum

- Competency evaluations need more field-testing to improve reliability and validity. The evaluations for Writing and Digital Skills have yet to achieve the same level of reliability as Reading and Numeracy. There were also minor issues of construct-irrelevant factors such as the modes of delivery, language, and cultural neutrality that need further field-testing work to improve the validity of the evaluations of all four domains.

- Obtain feedback from learners and facilitators as soon as possible and continuously throughout the pilot. Hearing about issues or obstacles from the perspective of learners and incorporating that feedback would have been helpful earlier on and throughout in the pilot.

- Create separate versions of English and French content. The goal of creating two identical versions of the same product in two different languages created many time-consuming issues for developers. They described challenges fitting longer French translations into activity templates that did not account for accents or extra words. Developers suggested that creating separate training content in each language would have been more efficient instead of going through the translation process. Doing so would have allowed for the use of more natural French expressions in the content and authentic workplace documents in French.

- Recognize the need for early review and additional resources for bilingual content development. French content developers were engaged in the project after the English content was close to being finalized. This meant that there was not much flexibility to change the content to be more relevant for French learners. Additionally, the online evaluation platform that was selected to be used in the project required a lot more time to code French content because it did not recognize non-breaking spaces, which are required in French numbers but not in English ones. Developers wondered whether a different platform could have accounted for such issues, and if not, suggested that more time and resources could have been factored in to address them. Including Francophone developers or advisors at an earlier stage in the development phase may have helped to catch some of these issues earlier on.

- Start the process of software approval as early as possible. Developers could not start designing the content until they finalized which platforms, websites, and systems they were going to be using. Institutional approvals involved several reviews including undergoing procurement processes, ensuring compatibility with existing technologies, and cyber security reviews. Getting approvals for these tools ended up taking months and caused a delay in their timeline.

- Build activity templates that are easy to modify instead of using static documents. Developers built activities based on real workplace documents, which were often shared in pdf form. This made them difficult to edit during the iterative design and translation process. Developers thought it would have saved them weeks of time in the long run if they had built activity templates from scratch.

- Approach content development and translation with an inclusivity lens throughout the project. Developers worked with an accessibility consultant before creating any content. Although accessibility design informed the design standard of the project, developers encountered some software limitations which made it challenging to consistently apply this standard. For example, one could not always zoom in on small text on a workplace document or some activities included photos and graphics without providing alt-text for a screen reader. Additionally, translation staff should also be cognizant about using inclusive pronouns and diverse names when translating content from English to French.

Training delivery

- The training was intentionally implemented without strict guidelines in order to offer service providers flexibility in its delivery and participants autonomy in their learning. As a result, the level of guidance and 1-1 support that participants received across different training organizations differed. Participants were unclear about how much support they could get from their facilitator for the online training, and facilitators gave as much or as little support as they felt was appropriate. There were also differences in whether and how the evaluation results were used to inform individual learning plans and training completion. This variation could have implications for training completion and changes in evaluation scores.

- Find a balance in providing enough implementation guidance to facilitators without overwhelming them with information. Training facilitators indicated that they would have liked more detailed information in some cases[27] but that they also found the volume of information in the training guide difficult to navigate. A challenge was ensuring facilitators

[27] See Recommendations section below.

had enough information to support the research objectives and also providing appropriate background information to use the tools. Limited resources in some cases also meant limited time for partners to become familiar with all aspects of the project. More time and resources spent on facilitator training, or presenting the information in more succinct ways, may be helpful for future implementation.

RECOMMENDATIONS

Evaluations

- Extend the field-testing to improve reliability and validity. Bow Valley College is on track to complete the development of the competency evaluations and to deliver a mature skills assessment platform to support the transition to the Skills for Success model.

- More training for facilitators to understand and explain the evaluation results to learners. There was a lack of clarity among facilitators about whether the training was intended to support an increase in the evaluation scores of learners. Ensuring that facilitators understand the objective of the training is important so that they can pass along accurate information to learners and manage learner expectations.

- Communicate more explicitly the connections between evaluation results and training activities for the user. While participants received evaluation scores linked to the four assessed domains, they received no information about what aspects of that skill they executed well or less well and which specific lessons to work on to improve. Breaking down the evaluation results and linking them to specific activities in the training could have provided additional benefits to learners.

- Consider duration and accessibility of evaluation for potential learners. Both facilitators and participants expressed concerns about the duration of the evaluation. Finishing the evaluation within one three-hour session was particularly challenging for participants with lower educational attainment, lower proficiency in English or French, and additional learning needs.

- Consider preferences for online or paper evaluations. All the participants from the first round of focus group completed paper evaluations. Some expressed that they would have felt more comfortable and may have performed better had they completed it online, since they are more used to typing on the computer than writing by hand. On the other hand, one facilitator suggested that having both online and paper options would be helpful for learners, so that they could switch from one format to the other if they found certain activities easier to perform with a pen and paper.

Training

- Provide more clear guidance for facilitators and learners in navigating the training. Although the training was designed to be self-guided, some of the learners and facilitators wanted more structure and more detailed directions. For example, students wanted to know which specific lessons or activities to focus on based on their evaluation results. Facilitators also suggested providing more in-class time in the beginning to go through the strategies for success area and a few modules together before moving on with the independent learning phase. This may help create buy-in among the learners and improve their engagement with the training. Facilitators also would have liked to know what a realistic improvement in scores would have been within the training period, the minimum level of completion for participants to receive their honorarium, and how much support they should be providing to learners.

- Consider implementing a facilitator-led version of the training. Several participants and facilitators indicated a preference for a more facilitated approach to delivering the training. Both groups indicated that going through modules together in the beginning could increase buy-in and engagement from participants. Participants with lower skills or additional learning needs also indicated that they would have liked facilitator support to better understand more difficult lessons. A facilitator-led training would require more training or expertise in Skills for Success, as both facilitators and participants indicated that not all facilitators were experts in this area. After the piloting phase, Bow Valley College produced a training facilitation guide.

- Provide a timeline or workflow for facilitators to remind them of all the steps they need to prepare for each cohort. While the facilitators appreciated the level of detail of the training guide, some suggested that a single document that contained the required steps such as ordering the paper evaluations before the start of the program or scheduling the evaluation date would have been helpful so that they did not need to check multiple documents. Some facilitators created their own spreadsheets or checklists for this purpose.

- Update training with digital content, interactive components, and AI. Developers would like to add more digital content and video to the next iteration of the training. They would also have liked to make the digital content more interactive. One of the facilitators also suggested adding videos from workers in different fields and having learners listen and answer questions about the video. Participants suggested adding more components focussed on oral communication. Adding activities that teach learners how to use AI effectively was another suggestion.

- Strengthen connections between topics and activities. Developers noticed that there were some lessons where there could have been a greater breadth of activities or concepts

introduced to support learners to gain a deeper understanding of that topic. There was also some disconnect between the intended objective of the lesson and the activities, for example, if a numeracy lesson required a lot of reading comprehension.

- Build reminders and accountability into the training. In order to encourage participation, one facilitator suggested that the training could send reminders to students to engage with the lessons or create tasks that need to be completed to unlock the next task.

- Link directly from the skills training section to strategies for success section. When learners select a specific skill, it outlines what strategies that skill requires. Learners then have to leave the skills section to go to the strategies for success section if they want to read those strategies. Bow Valley College intended to have the strategies linked directly from the skills training section but was limited by the technology available at the time.

- Consider developing targeted versions of the training for different groups of learners. Many of the participants in the validation study were jobseekers or newcomers to Canada. Lessons could be grouped together or tailored to specifically address some of their learning needs, for example, to practice job search activities and interview skills or to learn more about living and working in Canada. Additionally, it could be interesting to test the utility of sector-specific versions of the training.

- Provide success stories to learners related to the training. Providing real examples of how the training helped to improve learners' skill levels, or how they have applied these skills to their career journey can help learners feel more motivated and engaged.

REFERENCES

Palameta, B., Nguyen, C., Lee, W., & Gyarmati, D. (2021) *Research Report to Support the Launch of Skills for Success: Structure, Evidence, and Recommendations: Final Report*. Ottawa: Social Research and Demonstration Corporation.

APPENDIX A: ADDITIONAL TABLES

Table 21 Participant characteristics by evaluation type

Characteristics	All participants	Paper-based English	Computer-based English	Paper-based French
Age				
-25	26%	21%	43%	22%
26-35	31%	28%	27%	38%
35-44	25%	28%	15%	27%
45-	18%	23%	16%	13%
Women	58%	57%	58%	60%
Born in Canada	31%	33%	57%	11%
English or French is spoken most at home	56%	46%	64%	66%
Caucasian	18%	21%	28%	6%
Black	28%	16%	6%	59%
South Asian	11%	20%	3%	1%
Indigenous	10%	9%	27%	1%
Highest education				
University degree	51%	51%	29%	64%
Other PSE level education	17%	18%	14%	18%
High school	24%	26%	31%	16%
Less than high school	8%	6%	26%	1%
Married or in common-law relationship	50%	54%	35%	51%
Have children in household	48%	52%	46%	44%
Household income				
Less than $20,000	33%	28%	33%	42%
$20,000 to less than $40,000	22%	21%	24%	23%
$40,000 to less than $60,000	15%	15%	15%	15%
$60,000 to less than $80,000	12%	15%	11%	9%

Characteristics	All participants	Paper-based English	Computer-based English	Paper-based French
$80,000 or more	17%	22%	16%	10%
Months employed in the past 3 years				
No employment	25%	21%	35%	25%
1-12 months	21%	19%	25%	24%
13-24 months	20%	21%	13%	21%
25-36 months	34%	38%	27%	31%
Receiving Income Assistance	25%	22%	34%	25%
Received Employment Insurance in the past year	15%	16%	13%	15%
Main Activity				
Study	39%	35%	44%	44%
Work	33%	34%	33%	31%
Neither study nor work	28%	31%	24%	26%

Table 22 Participant characteristics by piloting model

Characteristics	All participants	Training group	Comparison group	Validation group
Age				
-25	18%	15%	24%	21%
26-35	27%	27%	24%	27%
35-44	26%	34%	29%	20%
45-	29%	24%	24%	33%
Women	58%	54%	57%	61%
Born outside Canada	32%	33%	45%	30%
English or French is spoken most at home	42%	45%	50%	38%
Caucasian	20%	15%	23%	23%

Characteristics	All participants	Training group	Comparison group	Validation group
Black	11%	14%	5%	10%
South Asian	24%	33%	23%	18%
Indigenous	9%	14%	9%	5%
Highest education				
University degree	54%	55%	36%	55%
Other PSE level education	18%	18%	5%	19%
High school	21%	20%	41%	20%
Less than high school	7%	7%	18%	5%
Married or in common-law relationship	54%	58%	52%	51%
Have children in household	51%	51%	64%	50%
Household income				
Less than $20,000	33%	22%	45%	41%
$20,000 to less than $40,000	19%	20%	18%	19%
$40,000 to less than $60,000	15%	22%	9%	11%
$60,000 to less than $80,000	14%	15%	9%	14%
$80,000 or more	18%	21%	18%	16%
Months employed in the past 3 years				
No employment	23%	18%	39%	26%
1-12 months	19%	22%	17%	17%
13-24 months	17%	14%	17%	18%
25-36 months	41%	46%	28%	38%
Receiving Income Assistance	21%	20%	50%	20%
Received Employment Insurance in the past year	17%	20%	13%	15%
Main Activity				
Study	30%	25%	32%	34%
Work	34%	34%	14%	37%

Characteristics	All participants	Training group	Comparison group	Validation group
Neither study nor work	35%	41%	55%	29%

Table 23 Correlation coefficients among pre-evaluation scores

	Reading	Writing	Numeracy	Digital Skills
Reading	1			
Writing	0.73	1		
Numeracy	0.82	0.66	1	
Digital Skills	0.74	0.61	0.70	1

Table 24 Pre-evaluation results by evaluation type

Skill domain		All participants	English Paper-based	English Computer-based	French Paper-based
Reading	N	1,510	770	297	443
	Average score	241	254	227	227
	Standard deviation	48	46	54	39
	Skill level 1	38%	25%	53%	50%
	Skill level 2	38%	41%	27%	41%
	Skill level 3	20%	30%	15%	8%
	Skill level 4-5	4%	4%	5%	1%
Writing	N	1,526	774	296	456
	Average score	254	264	245	243
	Standard deviation	43	43	47	37
	Skill level 1	28%	21%	40%	33%
	Skill level 2	40%	38%	34%	46%
	Skill level 3	26%	33%	20%	18%
	Skill level 4-5	6%	9%	6%	2%
	N	1,590	790	309	491

Skill domain		All participants	English Paper-based	English Computer-based	French Paper-based
Numeracy	Average score	248	257	238	240
	Standard deviation	47	48	50	41
	Skill level 1	31%	24%	42%	36%
	Skill level 2	41%	39%	33%	49%
	Skill level 3	23%	31%	20%	13%
	Skill level 4-5	5%	6%	5%	2%
Digital Skills	N	885	412	301	172
	Average score	253	267	245	233
	Standard deviation	42	39	41	39
	Skill level 1	27%	16%	33%	42%
	Skill level 2	39%	37%	42%	40%
	Skill level 3	34%	46%	25%	18%
	Skill level 4-5	0%	0%	0%	0%

Table 25 Summary of pre-evaluation results by piloting model

Skill domain		All participants	Training group	Comparison group	Validation group
Reading	N	1,510	508	56	946
	Average score	241	241	263	239
	Standard deviation	48	45	49	49
	Skill level 1	38%	35%	25%	40%
	Skill level 2	38%	41%	32%	38%
	Skill level 3	20%	21%	36%	19%
	Skill level 4-5	4%	3%	7%	3%
Writing	N	1,526	517	56	953
	Average score	254	253	278	254
	Standard deviation	43	39	49	45
	Skill level 1	28%	28%	14%	29%
	Skill level 2	40%	40%	39%	39%

Skill domain		All participants	Training group	Comparison group	Validation group
	Skill level 3	26%	28%	25%	25%
	Skill level 4-5	6%	4%	21%	7%
Numeracy	N	1,590	529	57	1004
	Average score	248	247	268	247
	Standard deviation	47	47	50	47
	Skill level 1	31%	33%	16%	31%
	Skill level 2	41%	38%	39%	43%
	Skill level 3	23%	24%	32%	22%
	Skill level 4-5	5%	5%	14%	4%
Digital Skills	N	885	226	30	629
	Average score	253	253	279	252
	Standard deviation	42	40	35	42
	Skill level 1	27%	25%	7%	29%
	Skill level 2	39%	42%	30%	39%
	Skill level 3	34%	33%	63%	33%
	Skill level 4-5	0%	0%	0%	0%

Table 26 Summary of pre-evaluation results – before and after re-scoring

Skill domain		Before rescoring	After rescoring
Reading	N	548	548
	Average score	241	242
	Standard deviation	50	49
	Skill level 1	36%	36%
	Skill level 2	38%	38%
	Skill level 3-5	26%	26%
Writing (Version 1)	N	516	515
	Average score	206	249
	Standard deviation	32	40
	Skill level 1	74%	33%
	Skill level 2	23%	40%

Skill domain		Before rescoring	After rescoring
	Skill level 3-5	3%	27%
Writing (Version 2)	N	37	37
	Average score	241	274
	Standard deviation	42	40
	Skill level 1	38%	11%
	Skill level 2	35%	46%
	Skill level 3-5	27%	43%
Numeracy	N	568	568
	Average score	244	250
	Standard deviation	49	49
	Skill level 1	32%	29%
	Skill level 2	40%	39%
	Skill level 3-5	28%	33%
Digital Skills	N	140	140
	Average score	232	257
	Standard deviation	47	47
	Skill level 1	43%	27%
	Skill level 2	36%	34%
	Skill level 3-5	21%	39%

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