EQUITY IN EDUCATION
Evidence Based Program & Policy Design

REDEFINING LEARNING AFTER COVID-19

FULL REPORT

A Comparative Study of Hybrid and Online Learning Models for Newcomers and English Language Learners in the Greater Toronto Area

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EXECUTIVE SUMMARY

The COVID-19 pandemic has reshaped our lives and how organizations serve their communities, especially newcomers to Canada. In response to these challenges, organizations in the Greater Toronto Area, including Catholic Cross-cultural Services (CCS), have moved their services online. This move has created further opportunities for newcomers to participate in Occupation-Specific Language Training (OSLT) programs from the comfort of their homes.

CCS has introduced both fully online and hybrid (a mix of in-person and online) programs to continue supporting their clients effectively. Yet, the effectiveness of these new teaching methods for newcomers remained uncertain. To understand this better, CCS partnered with researchers from the University of Toronto - Scarborough to test the effectiveness of both online and hybrid OSLT programs in two domains:

1. **Enhanced language training (ELT) specifically designed for healthcare professionals; and**

2. **Programs for clients with careers in childminding and food handling.**

This report looks at how these programs help clients improve their English skills, integrate into the Canadian job market, rate their job placements, and value the support services provided.

Our research found significant results. We found notable differences in learning outcomes between the hybrid and online formats. **Specifically, clients in hybrid programs were more likely to see improvements in their language scores, with 85% showing progress in at least two areas, compared to only 35% in online-only programs.** This finding was particularly strong among childminding and food-handling participants, suggesting that these groups benefit more from a hybrid setting than from online only. Both delivery formats showed similar benefits for ELT healthcare professionals, indicating that online-only programming may boost language skills at the same rate for clients with higher language scores at the start of programming. Most clients also self-reported gains in their English proficiency, networking, and understanding of the Canadian job market, although these improvements were somewhat below CCS's target of 80%. Despite this, the fact that 45% to 60% of clients reported progress after only between 100 to 150 hours of instruction is significant. Regarding client satisfaction, most found the support services, such as technology loans and training, to be very helpful. They also felt that their work placements were meaningful and met their expectations.

In conclusion, our study highlights the success of hybrid learning models in enhancing newcomers' language and job market skills, particularly those in the childcare and food handling sectors. Newcomers with higher English language levels benefit equally from online and hybrid learning formats.

BACKGROUND & OVERVIEW

Organizational Context

Catholic Cross-cultural Services (CCS) is a non-profit organization based in the Greater Toronto Area that provides services to assist immigrants and refugees in settling and integrating. CCS serves immigrants and refugees of all religions, ethnicities, immigration statuses, sexual orientations, or political affiliations, helping them acquire the necessary information, skills, and knowledge to settle, integrate, and succeed in Canada.

Founded in 1954, CCS believes in the power of diversity and inclusion to foster change, nurture progress, and move society forward. Thus, CCS delivers programs and services in thirty languages, assisting clients to confidently navigate their integration into Canadian society, including the labour market, school, and health care system. CCS' vision is to create a Canada where newcomers thrive and feel at home.

Project Context

The COVID-19 pandemic has redefined how we live and deliver important services to our stakeholders, particularly the most vulnerable groups, including newcomers. For CCS, the pandemic prompted a swift transition to online services, including occupation-specific language training (OSLT) programs, opening new opportunities and presenting barriers, particularly for newcomers seeking access. There is no clear evidence on which service delivery method—online or a blend of in-person and online (hybrid)—best serves newcomers with diverse backgrounds. Access to this evidence can support policymakers and service-delivery organizations in making more informed decisions based on evidence of what achieves the best outcomes for the clients.

To address this knowledge gap, our project embarked on an analysis of the effectiveness of hybrid and online language programming by utilizing the existing Enhanced Language Training (ELT) programs offered by CCS for healthcare, as well as OSLT training for food handling (FH) and childminding (CM) professions. Therefore, this study targeted two distinct participant groups:

1. **Internationally trained healthcare professionals** who possess a high level of education and a Canadian Language Benchmark (CLB) level of 6 or higher; and

2. **Newcomers with a lower level of education and English language proficiency** (CLB levels 2 to 4) in food handling and childminding professions.

Project Partners & Deliverables

Funded by Immigration, Refugees and Citizenship Canada (IRCC), the 'Effectiveness of Online and In-Person Delivery for Occupation-specific Language Training (OSLT) Project' was a three-year collaboration between Catholic Cross-cultural Services (CCS) and the University of Toronto Scarborough Campus (UTSC) from December 2021 to March 2024.

The University of Toronto Scarborough Campus (UTSC) research team, collaborated with CCS to design and implement a study to examine the effectiveness of online and hybrid service delivery in OSLT programs for clients with a diverse range of characteristics, such as language proficiency, educational backgrounds and levels of digital literacy.

Our objectives were to examine:

- The effectiveness of online and hybrid OSLT program delivery in achieving the targetted[1] learning outcomes across various types of cohorts.
- The effectiveness of online versus hybrid training overall.
- Program effectiveness regarding client knowledge, skills, and connections needed in the Canadian labour market.
- Clients' satisfaction with training and supports provided to facilitate training.

This report summarizes findings from the empirical research study, the goal of which was to provide high quality, evidence-based recommendations for best practices, which will inform the development of future online, in-person and hybrid services to facilitate labour market access for newcomers.

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[1] IRCC funding requires CCS to set targets for each outcome area. Targets were established prior to the commencement of the research project and based on comparisons with similar programs and feedback from other service delivery organizations.

Program Design

Delivery of Online and Hybrid Programs

The initial goal of this project was to *compare* the effects of online and in-person service delivery, however, this goal was modified after the launch of the project. Due to the social distancing guidelines in place for COVID-19, the initial cohorts were all conducted online. Based on the evolving public health situation and feedback regarding clients' preferences, it was determined that a fully in-person version of the course was not feasible, resulting in the creation of the hybrid delivery format. Clients' indicated a preference for being able to choose when they attend the program online and in-person, which provided them with more flexibility, and made their attendance more manageable given their constraints.

The Design

Defining Hybrid

A hybrid offering for this research is defined as a combination of online and in-person classes where clients choose whether to come to the CCS office to attend the classes in-person or online. In the hybrid format, the instructor was always present on-site.

Sample Size & Client Characteristics

The total number of cohorts was broken down into five cohorts per year: two childminding (CM), one food handling (FH), and two ELT for healthcare professionals for each fiscal year: FY2022-23 and FY2023-2024.

The final enrolment in the project was 175 clients:

- **92 hybrid**
- **83 online**

The CM & FH had lower language requirements with CLB scores ranging from 2-4, compared to the ELT for Healthcare Professionals which required CLB scores to be 6+. The language instruction duration for CM & FH was 102 hours, and 150 hours for ELT for Healthcare Professionals. The length of placement was 36 hours for CM & FH, and 100 hours for ELT for Healthcare Professionals.

DATA SOURCES AND DATA COLLECTION PROCEDURES

Sources of Data

Pre-program Registration and Intake Forms: The pre-program questionnaires consist of regularly collected intake and registration information that clients must provide to register for the program. Data were collected on clients' demographics, educational background, personal information, and interest in the program. At this stage, CCS staff completed the following forms:

- Assessment Registration Form: This form collected clients' demographics and personal information.
- Employment and Intake Form: This form collected clients' interest in the program and work experiences.

CLB Scores: The CLB scores required at enrolment were provided by the YMCA language assessment centres for clients living in Toronto. Clients outside of Toronto were assessed by other language assessment centres that were authorized by the IRCC. At the end of the program, course instructors assessed the clients' scores during the program's final session.

Baseline Surveys: An online survey was distributed to clients during the first session to obtain baseline scores of their knowledge of their learning behaviors and digital literacy. Baseline surveys consisted of five domains:

1. Digital Literacy:
   - Basic technology skills that measured fundamental skills required to use digital devices, for example, opening and closing programs.
   - Functional technology skills that measured their ability to use digital devices to achieve certain goals, for example, searching for information online.
   - Higher-order technology skills that measured clients' overall assessments of their ability to work with technology.

2. **Attitudes toward technology:** A measure of clients' comfort and enjoyment with using digital devices.

3. **Learning with technology:** A measure of clients' ability to achieve learning goals with the help of digital devices and factors that may hinder learning.

4. **Learner characteristics:** A measure of clients' learning abilities, for example, their ability to set learning goals and manage their time.

5. **English and labor market skills self-evaluation:** Clients were asked to rate their proficiency in listening, speaking, writing, reading, pronunciation, networking and their knowledge of the Canadian labor market

In-Session Data: Ongoing and regular attendance data were collected when the programs were in session. In addition, utilization of different support services that the clients were receiving was tracked, including childcare, transportation assistance, technology loans, and technology training.

End of Program Survey: The end-of-program survey consisted of two components: overall program feedback and self-evaluation of their skills/performance. The program feedback component asked the clients about their experiences in the program, including the program structure, program delivery, instructors, staff, and program curriculum. The self-evaluation component assessed clients on three topics repeated from the baseline survey: attitudes toward technology, learning with technology, and their ratings of their English and labor market skills.

Post-program Follow-ups: A series of post-program follow up surveys were collected over four time periods:

- Six (6) weeks
- Three (3) months
- Six (6) months
- One (1) year

These surveys collected information on clients' post-program experiences regarding their employment status, the program's impact on their career, and their ability to utilize their skills in the labour market.

Data Collection Procedure

The research team collaborated with the CCS employment access liaison (EAL) to ensure a smooth and accessible data collection and reporting process. The data collection schedule is shown in Figure 1.

FIGURE 1: DATA COLLECTION SCHEDULE


Registration — Intake Form — Baseline — Program in Session — End of Program Survey / CLB Scores — Six Weeks Survey — Three Months Survey — Six Months Survey — One Year Survey

● Collected by CCS Staff
● Client self-report surveys
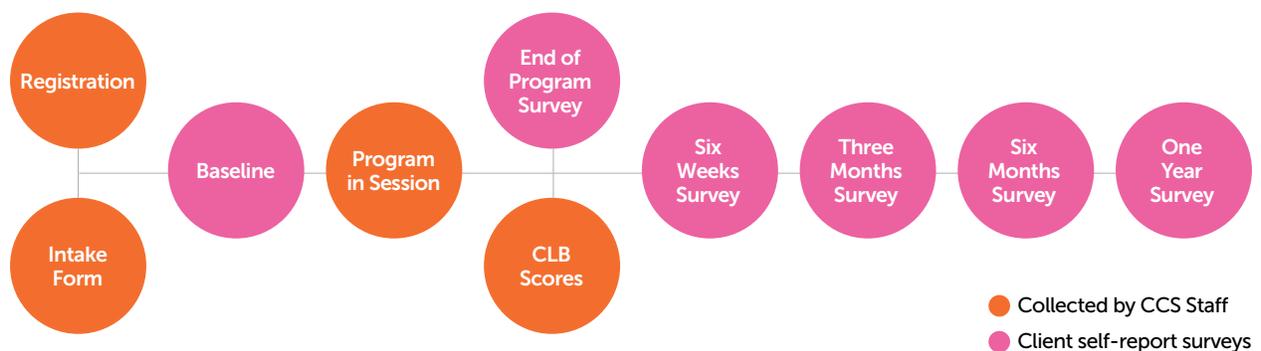
Data were collected across three pathways:

Pre-program: The EAL collected pre-program surveys (registration and intake) in person as clients enrolled in the program. Once data was collected, the EAL removed clients' identifying information and entered data into SurveyMonkey. The research team downloaded the data and collated it into a master file. This pathway is shown in Figure 2 below.

FIGURE 2: PREPROGRAM DATA COLLECTION PATHWAY

Intake and Registration → De-identified and entered on SurveyMonkey → Downloaded, collated, added to master file in shared directory

● Collected by EAL in person
● Research Team
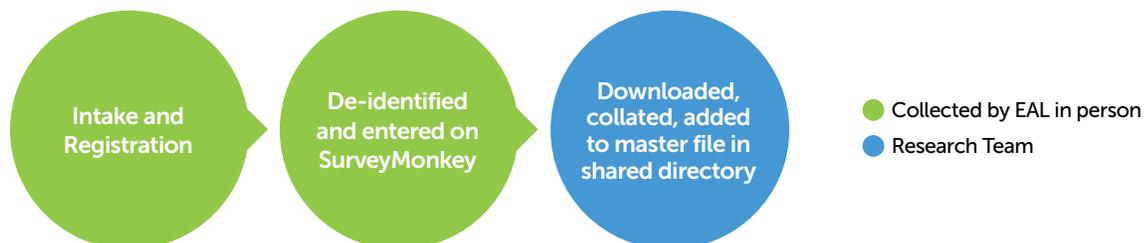
In-Session: When the programs were in session, the instructors of respective sessions collected the clients' attendance and support service needs. The required supports included childcare, transportation, technology loans, and technology training. Once data was collected, the EAL removed identifying information and uploaded it into the collaborative shared directory between CCS and the research team. Then, the research team downloaded the data and merged it into the master data file. Figure 3 shows this pathway.

FIGURE 3: IN-SESSION DATA COLLECTION PATHWAY

Attendance and Supports → De-identified and uploaded to shared directory → Collated, added added to master file in shared directory

● Collected by Instructor
● EAL
● Research Team
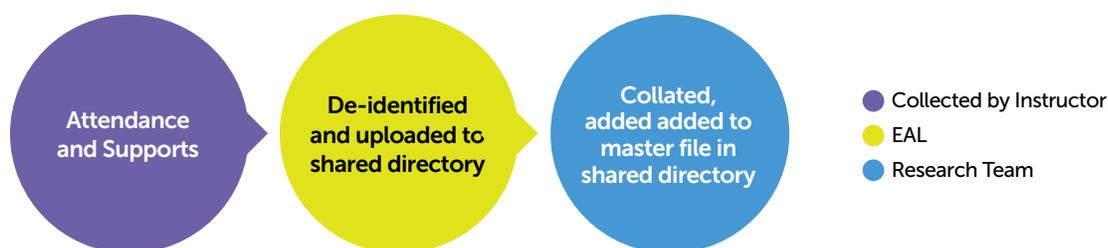
Client Surveys (Baseline, End of Session, Follow-up): All client self-report surveys were administered using SurveyMonkey. The baseline survey was administered during the first session of the program. CCS staff (the instructor and EAL) distributed the survey link and guided the clients through the survey questions and assisted them with completing the survey as needed. Upon completion, the EAL de-identified the data and uploaded it to the shared directory.

The end-of-session survey was administered in the last week of the program, typically after the final exam. Similar to the baseline survey, CCS staff guided the clients through the completion process. Once completed, the EAL de-identified and uploaded the data into the shared directory. Figure 4 below shows the pathway of this process. At this time instructors also conducted post-program CLB assessments.

CCS staff administered the longitudinal survey and program follow-up survey after the program ended at the following intervals: six weeks, three months, six months, and one-year post-session. CCS staff personally contacted the clients to send the surveys and regularly reminded them to complete them. Once the survey was completed, the EALs de-identified it and uploaded it to the shared directory for the research team to utilize.

FIGURE 4: CLIENT SURVEY DATA COLLECTION PATHWAY

Client Surveys on SurveyMonkey → De-identified and uploaded to shared directory → Collated, added added to master file in shared directory

● Distributed by Instructor and CCS
● EAL
● Research Team

Response Rates

This study included ten cohorts with 175 clients. Of those, 92 were enrolled in the hybrid and 83 in the online programs. Out of 175 clients, 139 completed the baseline surveys, a response rate of 79%. Table 1 below summarizes the baseline survey response rates by cohort.

TABLE 1. BASELINE SURVEY RESPONSE RATES

Cohort	Number of Students Enrolled	Hybrid Enrollment	Online Enrollment	Number of Responses	Response Rate (%)
CM-1 2022	12	4	8	12	100%
FH 2022	16	12	4	7	44%
CM-2 2 2022	21	10	11	7	33%
ELT Healthcare Evening 2022	11	5	6	11	100%
ELT Healthcare Weekend 2022	11	5	6	11	100%
CM-1 2023	23	14	9	19	82%
ELT Healthcare Evening 2023	12	6	6	8	67%
FH 2023	22	13	9	18	81%
CM-2 2023	27	15	12	26	96%
ELT Healthcare Weekend 2023	20	8	12	20	100%
Total	**175**	**92**	**83**	**139**	**79%**

Our end-of-program survey response rates were lower than those of baseline surveys (Table 2). We sent the end-of-program survey to 165 clients, but only 113 completed it, a response rate of about 68%.

Unfortunately, we received a very low completion rate for program follow-up surveys, with an average completion rate of 23%. We did not get the opportunity to collect follow-up surveys for all cohorts because some of the cohorts ended in February 2023, thus not allowing enough time to collect follow-up surveys as this was beyond the allotted timeline for the project. Our analysis therefore focuses on the data collected prior to the follow-up surveys.

Challenges with Response Rates

To address the low response rate for our surveys, on August 14th, 2023, we implemented an incentive to encourage clients to complete the surveys in a timely manner. From the Healthcare ELT Evening 2023 cohort onwards, clients who completed surveys were entered into lucky draws to have a chance to win gift cards. A $50 gift card incentive (per survey) was utilized for the baseline and end-of-program survey, and a $25 gift card (per survey) incentive was used for the four longitudinal follow-ups. After this invention was implemented, survey response rates were, on average, 84% across those cohorts. Therefore, the gift card incentive played an important role in obtaining higher survey completion rates.

TABLE 2. END-OF-PROGRAM SURVEY RESPONSE RATES

Cohort	Number of Students Enrolled	Hybrid Enrollment	Online Enrollment	Number of Responses	Response Rate (%)
CM-1 2022	12	4	8	11	92%
FH 2022	16	12	4	8	50%
CM-2 2022	21	10	11	9	43%
Healthcare ELT Evening 2022	11	5	6	7	64%
Healthcare ELT Weekend 2022	11	5	6	4	37%
CM-1 2023	23	14	9	14	61%
Healthcare ELT Evening 2023*	12	6	6	10	83%
FH 2023*	22	13	9	18	82%
CM-2 2023*	22	11	11	21	95%
Healthcare ELT Weekend 2023*	15	5	10	11	73%
Total	165	85	80	113	68%

*These cohorts received the gift card incentive

RESULTS

Overview

The research team was able to analyze several outcomes related to CCS programming. The outcome measures of interest were primarily related to the following topics:

- **Supports provided to clients**
- **English language acquisition**
- **Canadian labour market knowledge**

We were able to estimate the difference in programming delivered in online or hybrid formats on several of these outcomes.

OUTCOME 1:
Clients are provided with support to access online and hybrid sessions.

Supports provided to clients, as needed

At intake, clients were asked if they required the following supports to facilitate their access to the program: childcare, transportation, technology borrowing, and technology training. CCS staff tracked client utilization of these supports as the course progressed. CCS also conducted regular checks to assess clients' needs throughout the program.

CCS Target: 90% of clients who required supports were provided direct or indirect support to access the program.

Results: CCS assessed clients' needs during registration, where clients provided information on whether they needed different supports. Some clients noted that they needed no support services during these first assessments. Forty-eight requests for supports were made during the initial registration. CCS supported 100% of those requests (Table 3).

CCS also assessed clients' needs on an ongoing basis by conducting regular check-ins to ensure they were aware of and could access support as their needs change. For example, a client might not indicate that they need transportation support at registration. However, through regular check-ins conducted by CCS, transportation needs were identified. By the end of the program, 96 transportation supports were provided to clients as a result of these regular check-ins.

Overall, including supports requested after intake, 128 supports were provided (Table 3). Our finding that the number of supports requested increased as the course progressed highlights the importance of regular follow-ups during service delivery as clients' initial assessments of their needs might prove inadequate.

TABLE 3. SUPPORTS REQUESTED AND PROVIDED

Support Requested	Number of Supports Requested at Intake	Number of Supports Provided
Childcare	11	10
Transportation	0	96
Technology borrowing	18	20
Technology training	19	22

Note: Data as of February 25, 2023 (clients)

Client ratings of the usefulness of supports

During the end-of-program survey, clients were asked to rate the degree to which the supports provided enabled them to participate in sessions.

CCS Target: 80% of clients agree or strongly agree that the supports provided enabled them to participate in the sessions.

FIGURE 5: CLIENT RATINGS OF THE USEFULNESS OF SUPPORTS PROVIDED

PROPORTION OF RESPONDENTS

● Disagree   ● Neutral   ● Agree   ● Strongly Agree
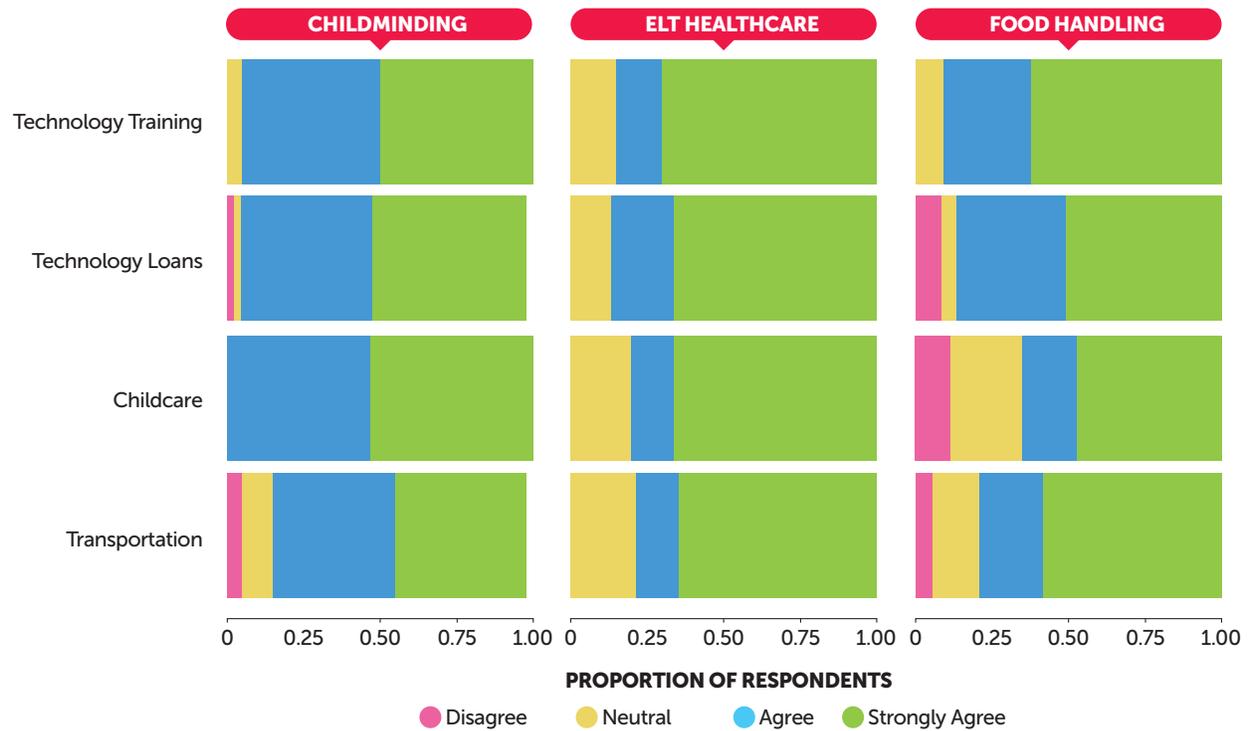
Results: Overall, in the CM cohorts, more than 92% of the clients who had utilized transportation, technology loans or technology training agreed/strongly agreed that those services were helpful, and 100% agreed that childcare services were valuable to them (Figure 5). On the other hand, the ratings of usefulness of the supports were lower in the FH and ELT healthcare cohorts. In the FH cohorts, only 64% of the clients agreed that the childcare services helped them participate in the program[2]. Other services, however, including technology loans and training, had more positive responses with about 86% and 90% of the FH clients agreeing that these supports were helpful, respectively. The ELT cohorts answered more consistently across all categories, with about 80% agreeing or strongly agreeing that supports provided were valuable or useful.

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[2]   This lower ratings might be because some clients who did not need childcare indicated that providing childcare services was not helpful to them to participate in the program instead of choosing the "Not Applicable" option. This pattern highlights the need to modify survey questions and instructions, particularly for clients with lower levels of English proficiency.

CLB scores

The YMCA provided baseline client CLB scores at registration for clients located in Toronto. Other IRCC-approved assessment locations provided CLB scores for clients outside of Toronto. The course instructors tested the clients' language proficiency again at the end of the session using the CLB assessment system. CLB scores are generated across four skill areas: listening, writing, reading, and speaking. Changes in scores across each skill area from baseline to the end of program were then examined both descriptively and statistically.

CCS Target: 80% of clients increase by at least one CLB level in at least two skill areas after completing the language training session, referred to subsequently as the "CLB target."

Results: We conducted a series of analyses to understand clients' gains in their English language skills. Our first set of analyses describes clients' results across time points and evaluates whether they met the CLB target. Our findings (Figure 6) show that overall, for the clients in the hybrid format, about 85% met the CLB target compared to about 37% of all clients in the online-only format.

Different patterns emerged when the results were split by cohort. For the CM and FH cohorts (with lower levels of English proficiency), about 91% of clients in the hybrid format met the CLB target compared to 16% of clients in the online-only format. In contrast, for the higher language-level ELT healthcare cohorts, about 65% of clients in the hybrid format met the CLB target, compared to about 77% of clients in the online-only format.

FIGURE 6: PERCENTAGE OF CLIENTS WITH INCREASE IN AT LEAST ONE CLB LEVEL IN AT LEAST TWO SKILLS AREAS
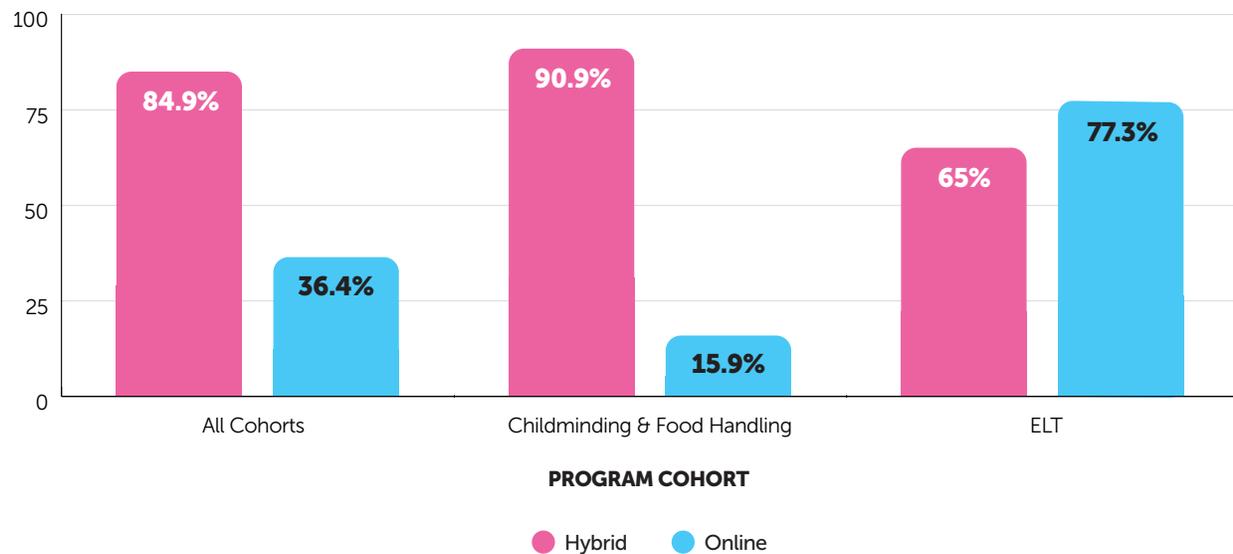
These results indicate that the program helped improve the performance of CM and FH cohorts in their English language skills, particularly when conducted in a hybrid format. While there were improvements for clients in the online format, these were substantially lower. Participating in the hybrid format with an in-person learning component may provide an added benefit to clients in the CM and FH cohorts.

On the other hand, the differences in the ELT cohorts might be explained by the fact that healthcare clients entered the program with higher education and CLB scores (6+ as opposed to the 2 - 4 CLB scores of the CM and FH cohorts).

It is worth mentioning that typically, clients need to undergo around 250 hours of English language instruction to progress by one CLB level. Nevertheless, the hours allocated for English language training with a focus on workplace skills—for instance, CM and FH programs (102 hours each) and ELT (150 hours)—fall notably short of the standard 250-hour guideline commonly applied in Language Instruction for Newcomers to Canada (LINC) programs. Despite the lower amount of instructional time, we observed significant positive gains for all clients in these programs. This is a notable accomplishment for the CCS programs.

We then investigated whether clients increased across three and four skills areas. We found that most clients in the CM and FH hybrid formats increased their CLB level by at least three (Figure 7) or all four (Figure 8) skill areas. Our most notable finding was that 91% of clients in the hybrid CM & FH increased their CLB scores in at least three skill areas, with 65% of all CM & FH hybrid clients increasing their scores across all four skill areas.

FIGURE 7: PERCENTAGE OF CLIENTS WITH INCREASE OF AT LEAST ONE CLB LEVEL IN AT LEAST THREE SKILL AREAS
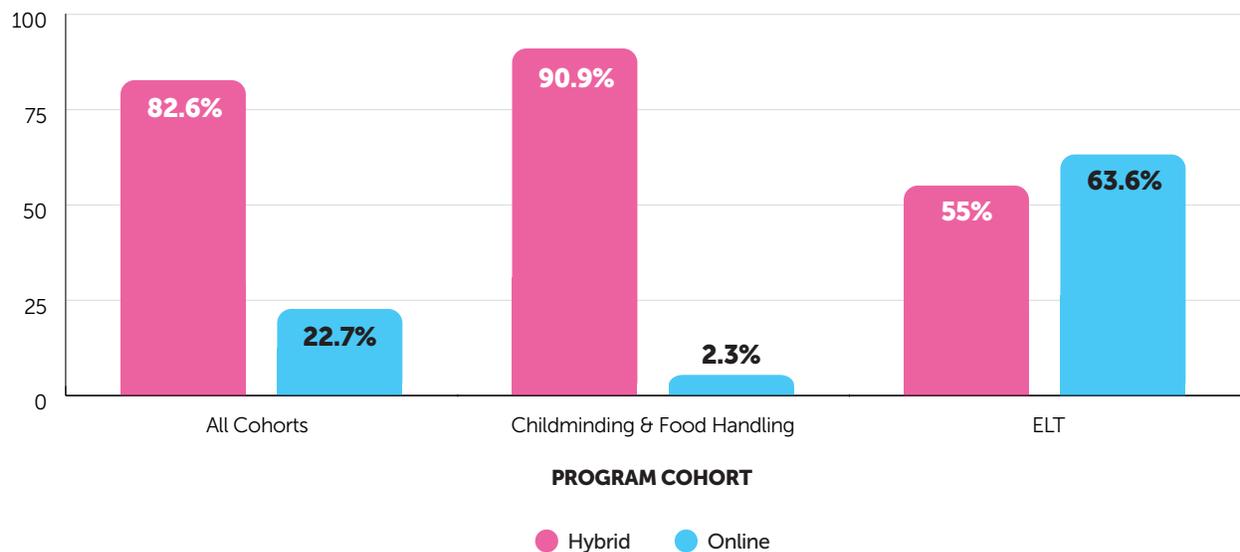
FIGURE 8: PERCENTAGE OF CLIENTS WITH INCREASE OF AT LEAST ONE CLB LEVEL IN ALL FOUR SKILL AREAS
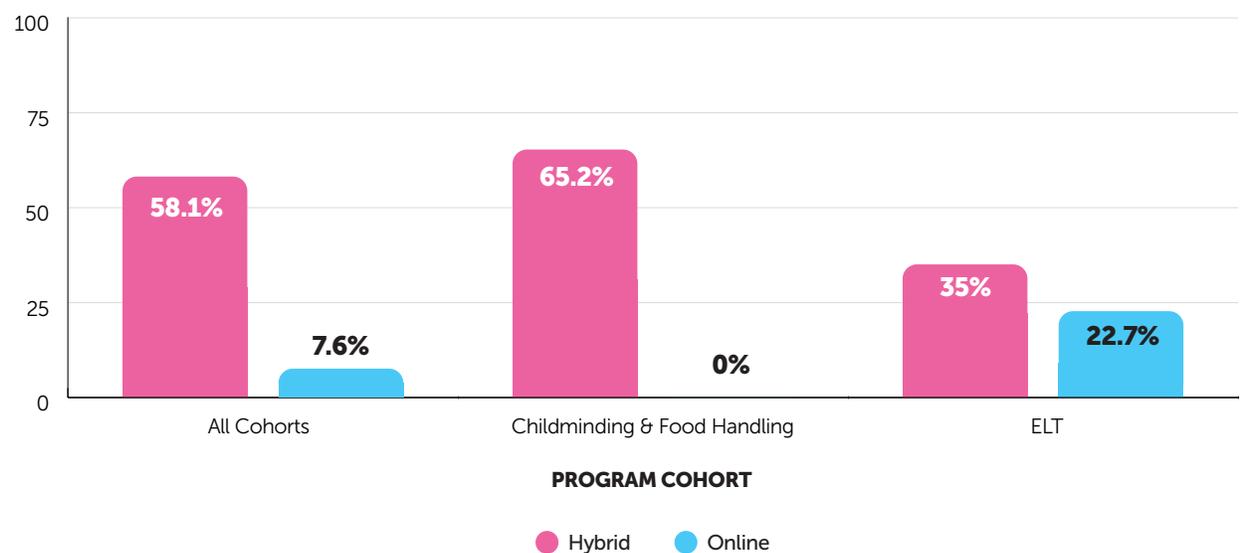
Our second set of analyses consists of an in-depth examination of changes in scores across each skill area, as shown in Table 4. Using a paired sample Wilcoxen t-test, our results show a statistically significant improvement between the pre-and post-program median scores. However, some variation exists across different cohorts.

In CM and FH cohorts, we found that more than half of the clients increased their scores in all skill areas (ranging from 51% to 69%). Similarly, at least 55% of clients in the ELT healthcare cohorts saw improvements in all skill areas (ranging from 55% to 60%). This improvement suggests that despite having higher education levels and higher CLB score requirements for entry into the program, there may still be substantial program-related benefits for ELT healthcare clients.

TABLE 4. CLB CHANGES BY COHORTS AND SKILL AREA

Skill Area	Childminding and Food handling	Number of Supports Provided	Number of Supports Provided
Listening	1%	0%	Decrease
	30%	40%	No Change
	69%	60%	Increase
Speaking	3%	0%	Decrease
	39%	45%	No Change
	58%	55%	Increase
Reading	1%	0%	Decrease
	44%	38%	No Change
	55%	62%	Increase
Writing	0%	0%	Decrease
	49%	40%	No Change
	51%	60%	Increase

We further analyzed CLB score changes across the online-only and hybrid formats (See Table 5). The largest improvements occurred in the hybrid format of the CM and FH cohorts. In this format, more than 80% of clients in those cohorts increased their CLB scores across all skill areas, with a notable 91% of clients improving in listening skills. In the online format for these cohorts, however, we see a smaller proportion of clients showing skill improvements, with a substantial proportion showing no change. The largest increase, for about 37% of clients in this format, was for listening skills. Less than 30% of clients showed an increase in the other three skills, with about 40% to 45% showing no change.

CLB score improvements for ELT healthcare cohorts, however, were not very different when comparing the online and hybrid formats. About 55% to 60% of clients in the hybrid format increased by at least 1 CLB level in each skill area. In addition, for the online format, at least 55% of clients showed improvements across all skills areas (ranging from 55% to 64%).

TABLE 5

Hybrid			
Skill Area	**Childminding and Food handling**	**ELT Healthcare**	**Change**
Listening	1%	0%	Decrease
	8%	45%	No Change
	91%	55%	Increase
Speaking	1%	0%	Decrease
	17%	45%	No Change
	82%	55%	Increase
Reading	0%	0%	Decrease
	14%	40%	No Change
	86%	60%	Increase
Writing	0%	0%	Decrease
	20%	40%	No Change
	80%	60%	Increase

Online Only			
Skill Area	**Childminding and Food handling**	**ELT Healthcare**	**Change**
Listening	0%	0%	Decrease
	63%	36%	No Change
	37%	64%	Increase
Speaking	4%	0%	Decrease
	73%	45%	No Change
	23%	55%	Increase
Reading	2%	0%	Decrease
	91%	36%	No Change
	7%	64%	Increase
Writing	0%	0%	Decrease
	91%	40%	No Change
	9%	60%	Increase

In our third set of analyses, we used linear regression models to explain the effects of cohort type and delivery format on the CLB scores improvements achieved by our clients. In these analyses the outcome variable is the *change* in CLB scores from before to after the program, with a positive value indicating an improvement in scores. It is important to note that generally, we observed improvements across the board, however through these analyses we investigated how the *degree* of improvement was influenced by different factors.

We found statistically significant results when testing the relationship between the program delivery format and the score improvement across each skill area ($p < 0.05$). We observed a negative estimate (Table 6) for when the delivery format was online, meaning that online programs were associated with a lower degree of improvement in CLB scores when compared to hybrid programs. For listening skills, the online format was associated with a lower improvement (by 0.61 points) than the hybrid format. Similarly, clients in the online format had improvements that were 0.50, 0.62, and 0.56 points lower than those in the hybrid format for speaking, reading and writing skills respectively.

We do not see statistically significant results when we compared the CM & FH cohorts with ELT healthcare cohorts. Thus, we do not have conclusive statistical evidence to determine whether the CM & FH and ELT healthcare cohorts differ.

TABLE 6. REGRESSION OUTPUT, DIFFERENCES BETWEEN COHORTS AND FORMAT

Predictors	Listening	Speaking	Reading	Writing
Intercept	1.25 ***	1.05 ***	1.30 ***	1.15 ***
	(0.18)	(0.16)	(0.17)	(0.17)
Online	-0.61 *	-0.50 *	-0.62 *	-0.56 *
	(0.24)	(0.22)	(0.24)	(0.23)
CM&FH	0.16	-0.00	0.14	-0.12
	(0.20)	(0.18)	(0.20)	(0.19)
Online*CM&FH	-0.43	-0.36	-0.78 **	-0.36
	(0.29)	(0.26)	(0.28)	(0.27)
R^2	0.27	0.23	0.38	0.24

Note: All continuous predictors are mean-centered and scaled by 1 standard deviation. The outcome variable is in its original units. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

We then investigated whether the effect of delivery format differed by program type, by testing for an interaction between these variables. The results of this interaction varied across different skills, with only a statistically significant effect for reading. The negative coefficient indicates a dampening effect, meaning that being in the online format was associated with lower gain scores when clients belonged to the CM & FH cohorts as compared to the ELT healthcare cohorts. In other words for reading skills, specifically, clients who belonged to the CM and FH cohorts and were in the online format had lower improvements in CLB scores than clients who belonged to the ELT healthcare cohorts and were in the hybrid format. However, these effects were not observed for other CLB skills.

In addition to the combined analyses presented above, we also conducted separate sub-group analyses across CM and FH and ELT healthcare cohorts. For the CM and FH cohorts, shown in Table 7 (n = 110) we found statistically significant effects for all skill areas with regards to delivery format. The online format was associated with a lower score improvement than the hybrid format. For listening skills, online clients CLB scores increased by 1.05 fewer points than those in the hybrid format. Similarly, for speaking, reading, and writing, online clients gained CLB scores by 0.86, 1.39, and 0.92 fewer points than the hybrid cohorts. This reinforces our finding from the entire sample that the hybrid format is associated with larger improvements than the online format.

TABLE 7. REGRESSION OUTPUT, BY DELIVERY FORMAT FOR CMFH

Predictors	Listening	Speaking	Reading	Writing
Intercept	1.41 ***	1.05 ***	1.44 ***	1.03 ***
	(0.08)	(0.08)	(0.08)	(0.07)
Online	-1.05 ***	-0.86 ***	-1.39 ***	-0.92 ***
	(0.13)	(0.12)	(0.13)	(0.12)
R^2	0.37	0.32	0.52	0.37

Note: All continuous predictors are mean-centered and scaled by 1 standard deviation. The outcome variable is in its original units. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

We did not find statistically significant results for delivery format when we examined just the healthcare cohorts (n = 42), shown in Table 8. The lack of statistically significant effects may however be due to the smaller sample size.

TABLE 8. REGRESSION OUTPUT, BY DELIVERY FORMAT FOR HEALTHCARE

Predictors	Listening	Speaking	Reading	Writing
Intercept	1.25 ***	1.05 ***	1.30 ***	1.15 ***
	(0.23)	(0.21)	(0.23)	(0.23)
Online	-0.61	-0.50	-0.62	-0.56
	(0.32)	(0.29)	(0.31)	(0.32)
R^2	0.08	0.07	0.09	0.07

Note: All continuous predictors are mean-centered and scaled by 1 standard deviation. The outcome variable is in its original units. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Client self-ratings of language skills

From July 2022 onwards, clients were asked to rate their language skills during the baseline and end-of-program surveys. Changes in these ratings were then examined descriptively and statistically using a series of paired sample t-tests.

CCS Target: 80% of clients reported that their English Language skills have improved because of taking the program.

Results: We conducted two sets of analyses to investigate clients' ratings of their own language skills. In the first analysis, we conducted a Wilcoxen paired sample t-test and found a statistically significant difference between the pre-and post-program median scores. This finding suggests a program-related improvement in clients' self-reported language skills. It is important to note that the sample size for this analysis is 73 clients, only representing about 41% of total clients (n = 175). This sample size is smaller than our previous analysis because some clients had not completed pre-program assessments, while some had not completed post-program assessments.

In our surveys, we asked our clients to self-assess their English skills on a scale of 1 to 5 (ranging from very poor to very good). These skills are assessed at the beginning and end of the program. Our results show that a substantial number of clients had improved their English skills across listening, speaking, reading, writing and pronunciation based on self-ratings (Table 9). While the proportion of clients who improved in across these skills is lower than the target of 80%, ranging from 45% to 60%, it is important to note that these clients only received a limited number of hours of language instruction (about 150 hours for Healthcare and 102 hours for CM & FH Cohorts). Additionally, in contrast to CLB scores which were assessed by an external agency and instructors, these ratings rely on clients' self-reports, which may be less accurate. For example, clients may over-estimate their proficiency at the earlier time point.

TABLE 9. CHANGES IN CLIENT SELF-RATINGS OF LANGUAGE SKILLS BY DELIVERY FORMAT AND SKILL

Skill Area	All cohorts (n = 73)	ELT Healthcare (n = 39)	Online (n = 34)	Change
Listening	7%	8%	6%	Decrease
	48%	46%	50%	No Change
	45%	46%	44%	Increase
Speaking	0%	0%	0%	Decrease
	45%	41%	49%	No Change
	55%	59%	51%	Increase
Reading	5%	6%	4%	Decrease
	40%	47%	32%	No Change
	55%	47%	64%	Increase
Writing	4%	3%	6%	Decrease
	39%	42%	35%	No Change
	57%	55%	59%	Increase
Pronunciation	10%	11%	10%	Decrease
	33%	26%	42%	No Change
	57%	63%	48%	Increase

We also *directly* asked clients to rate the degree to which they were confident that their language skills improved from a scale of 1 to 5, ranging from strongly disagree to strongly agree. Clients were asked to endorse statements such as "I am more confident in my ability to read and understand food handling related documents." We found that most clients indicated that their language skills had improved.

Childminding

Around 80% of CM clients in the online cohorts indicated some level of improvement in English language skills. However, we observed a small proportion of clients (10%-20%) reporting feeling neutral about their improvement in presentation, pronunciation, writing, and reading skills (Figure 9). For those in the hybrid format, the majority of clients agreed or strongly agreed that they improved their English language skills in most skill areas (Figure 10). In this format, however, a one client strongly disagreed about improvements in a handful of skill areas.

ELT Healthcare

Overall, for both online and hybrid ELT healthcare cohorts, at least 80% of clients agreed and strongly agreed that their English language skills improved (Figures 9 & 10). However, one client in the online format strongly disagreed with these statements for a handful of skill areas and two clients in the hybrid program reported difficulty in understanding people during their volunteer placements.

Food handling

Lastly, we observed a slightly different trend in the FH cohorts. Most clients in the online cohorts agreed that they had improved their English skills in most areas. One client disagreed with the statement about improvements in presentation skills. While most clients (ranging from 70 to 80%) in the hybrid format also reported an improvement, there was a larger proportion of clients responding neutrally to the statements, and a small portion (2 clients) disagreeing with the statements that their presentation and writing skills improved. The difference between self-reported gains and CLB score gains needs further analysis to better understand why trends differ based on who responds.

*FIGURE 9: SELF-REPORTED ENGLISH SKILLS BY COHORT IN ONLINE FORMAT*

PROPORTION OF RESPONDENTS

● Strongly Disagree   ● Disagree   ● Neutral   ● Agree   ● Strongly Agree
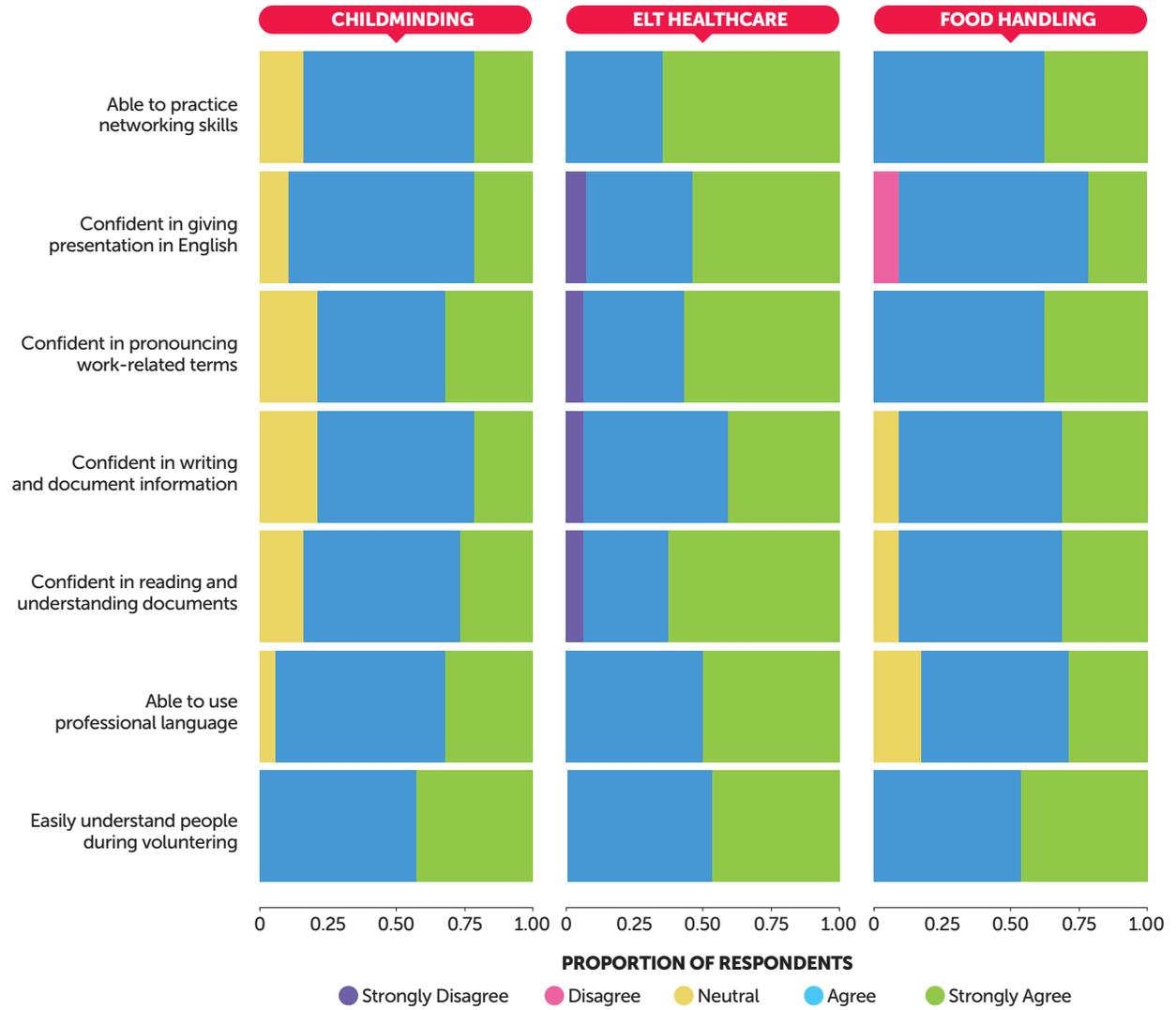
FIGURE 10: SELF-REPORTED ENGLISH SKILLS BY COHORT IN HYBRID FORMAT

	CHILDMINDING	ELT HEALTHCARE	FOOD HANDLING

PROPORTION OF RESPONDENTS

● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree
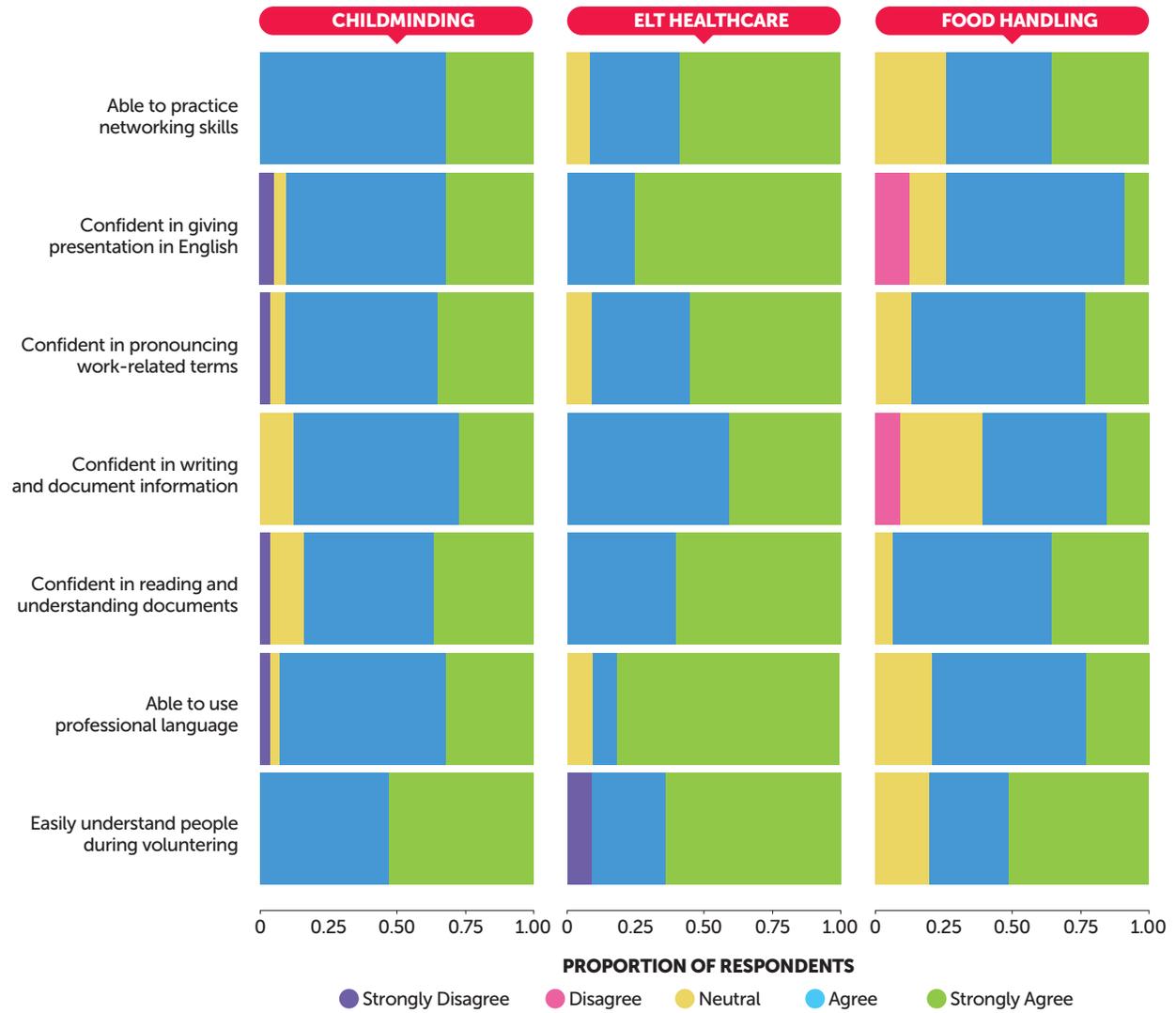
Clients acquire knowledge, skills and connections needed to prepare for the Canadian labour market.

Clients' knowledge of the Canadian labour market

From July 2022 onwards, clients were asked to rate their knowledge of the Canadian labour market during the baseline and end-of-program surveys. Changes in these ratings were then examined descriptively and statistically using a series of paired sample t-tests.

CCS Target: 80% of clients who completed the end-of-program survey saw an improvement in their knowledge of the Canadian Labour Market (specific to their field).

Results: To assess labour market knowledge, clients were asked to rate their knowledge of the Canadian labour market on a scale from 1 to 5, with one (1) being very poor, three (3) being fair, and five (5) being very good. With a sample of only 73 clients (due to a lower response rate), we find that 47% of clients showed an improvement in their knowledge of the Canadian Labour Market, whereas 38% showed no improvement. Notably, 15% of clients demonstrated lower levels of knowledge at the end of the program.

The median client score during the baseline period was three (3), and at the end of program it was four (4). This result was statistically significant, showing that on average, clients demonstrated an improvement in labour market knowledge in some capacities.

In the online-only format, 44% of the 34 clients showed an improvement in their knowledge of the labour market, 15% showed a reduction, and 41% showed no change. In the hybrid cohorts with a sample size of 39, we found that 49% of clients showed an improvement in their knowledge of the Canadian Labour Market by at least one point, 36% showed no improvement, and 15% showed a reduction. The results for both formats were statistically significant, indicating that a significant difference between the pre-program and post-program ratings.

These findings suggests that while on average, there are improvements in clients' knowledge of the labour market, there is a substantial degree of variation. There may be mechanisms of change that are format-specific and need to be tested using larger sample sizes.

Clients' networking skills

From July 2022 onwards, clients were asked to rate their networking skills during the baseline and end-of-program surveys. Changes in these ratings were then examined descriptively and statistically using a series of paired sample t-tests.

CCS Target: At the end of the program survey, 70% of clients indicate their networking skills had improved since joining the program.

Results: In assessing the networking skills, we asked clients to report on a scale of one (1) to five (5), 1 being very poor, 3 being fair, and 5 being very good. The median score for clients during the baseline survey was 3, and the median score during the post-program was 4. Our analysis found these results to be statistically significant between the baseline and the post-program. In total, 41% of clients showed an improvement in networking skills, 49% showed no change, and about 10% showed lower networking skills.

When examining the results across cohorts we found that in the online format only 35% of clients' networking skills had improved. About 58% of clients said showed no change in networking skills, and about 6% showed a reduction in these skills. For the hybrid format, 46% of clients demonstrated an improvement, 40% showed no change and 14% showed a reduction. The results across both cohorts were statistically significant.

However, when we asked clients whether they agreed or disagreed that they could practice their networking skills in real life situations, the majority (92%) indicated that they agreed. For the CM cohorts, all clients in the hybrid format agreed and 80% of clients in the online format agreed. In the FH and ELT cohorts the trend was reversed with all clients in the online format agreeing and 75% and 90% of clients in the hybrid format agreeing in the FH and ELT cohorts respectively.

For Outcome 3 overall, we find that the programs did not meet the knowledge and networking targets for this specific outcome, however, we speculate that this may occur for two reasons. Firstly, there may be lagged effects that could be revealed over a longer period of time as clients further interact with the labour market. Secondly, clients may over-report their abilities at baseline, and upon further interaction with other clients in the same field or volunteer placements, they may re-assess their ability levels and rate themselves lower. These findings highlight a pressing need for more longitudinal research in this area.

OUTCOME 4:

Clients apply the knowledge and skills gained during the program to find employment.

Client ratings of degree to which work placement helped them to improve their job search skills.

During the program's end-of-program survey, clients were asked to rate their experiences with their placement opportunities, whether they were useful and helpful, and whether they met their expectations.

CCS Target: 80% of work placement participants found the work placement useful in improving job search skills.

Results: We asked clients to endorse a series of statements about their experiences with their work placement on a scale of 1 – 5, where 1 represented strongly disagree and 5 represented strongly agree. Our results varied across cohorts (Figure 11). A similar trend was observed between both the hybrid and online formats for the CM cohorts, where at least 85% of work placement participants found their placement experiences to be useful. We found that a small group of clients, about 13%, indicated that their experiences were neutral. For the FH cohorts, all clients agreed or strongly agreed that their work placement met their expectations and provided them with meaningful opportunities.

There was more variation in our findings across the ELT healthcare cohorts. All clients in the online format found the placements to useful in terms of their expectations and providing them with meaningful opportunities. For the hybrid format, however, while a large proportion (72%) of clients found the placements to be useful, 18% were neutral and 10% did *not* find them useful.

FIGURE 11: SELF-REPORTED USEFULNESS OF PLACEMENT BY COHORT

CHILDMINDING (HYBRID)

CHILDMINDING (ONLINE)

ELT HEALTHCARE (HYBRID)

ELT HEALTHCARE (ONLINE)

FOOD HANDLING (HYBRID)

FOOD HANDLING (ONLINE)

Meaningful opportunities

Met expectations

0   0.25   0.50   0.75   1.00   0   0.25   0.50   0.75   1.00

PROPORTION OF RESPONDENTS

● Strongly Disagree ● Disagree ● Neutral ● Agree ● Strongly Agree
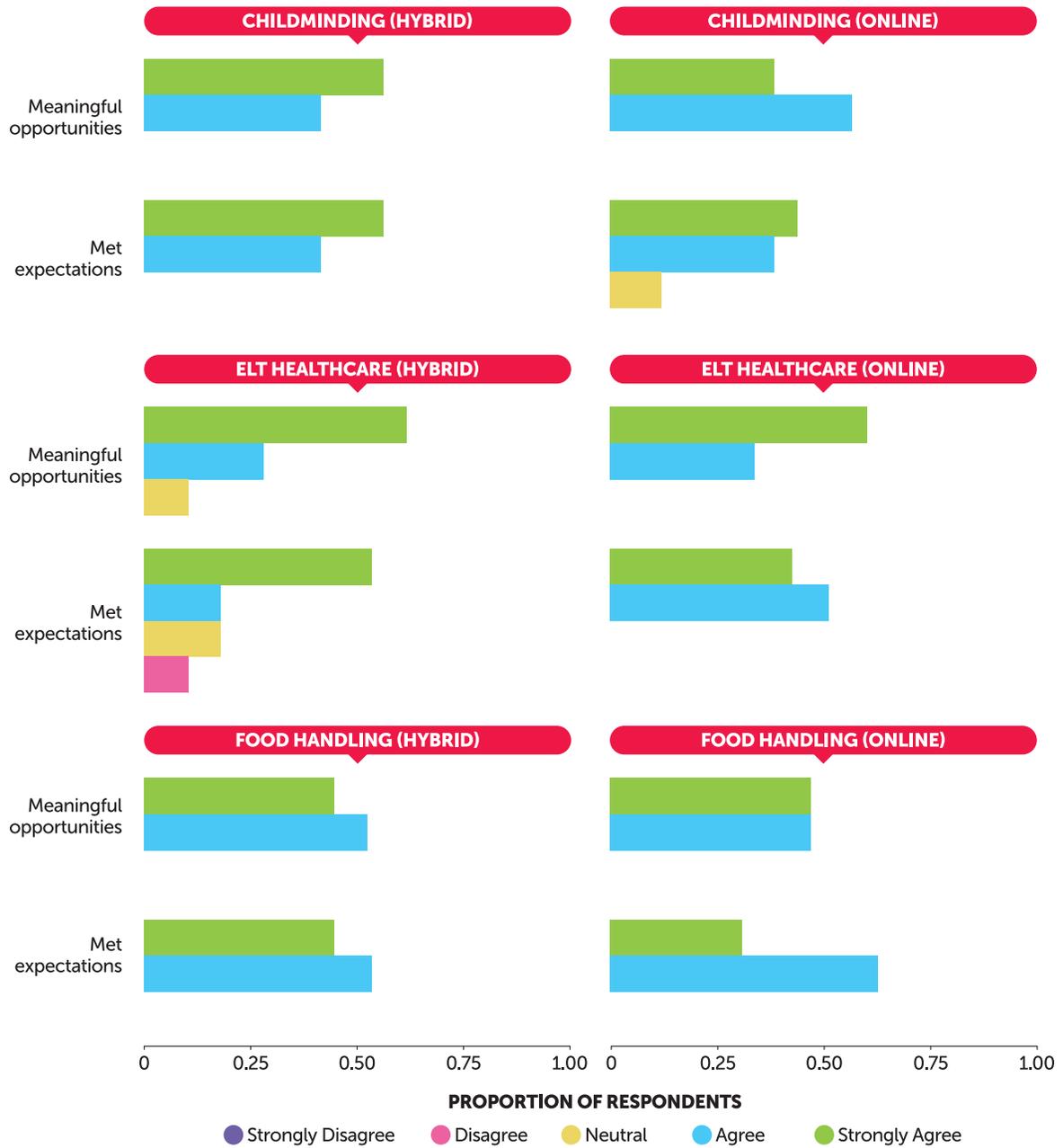
Proportion of clients that indicate they were able to practice networking skills.

During the six-month post-follow-up survey, clients were asked to report on their networking skills.

CCS Target: 70% indicate they were able to practice networking skills in real-life situations in 6 months post-program follow-up.

Results: We ask the clients on a scale from 1-5 (1 being very poor to 5 is very good), "How would you rate your ability to practice networking skills in real-life situations?" For this particular outcome, we had a very small sample size of 24 respondents with responses at both time points (Figure 12). As such, we were unable to conduct analyses at the cohort level. We found that about half of the clients in online format indicated that their ability to practice networking skills was good, or very good. On the other hand, more clients in the hybrid format (65%) rated these skills as good or very good. Given the very small sample size, we advise that this finding be interpreted with caution, particularly as effects may vary across cohorts.

FIGURE 12: SELF-REPORTED NETWORKING SKILLS BY FORMAT IN 6-MONTH POST-PROGRAM FOLLOW UP
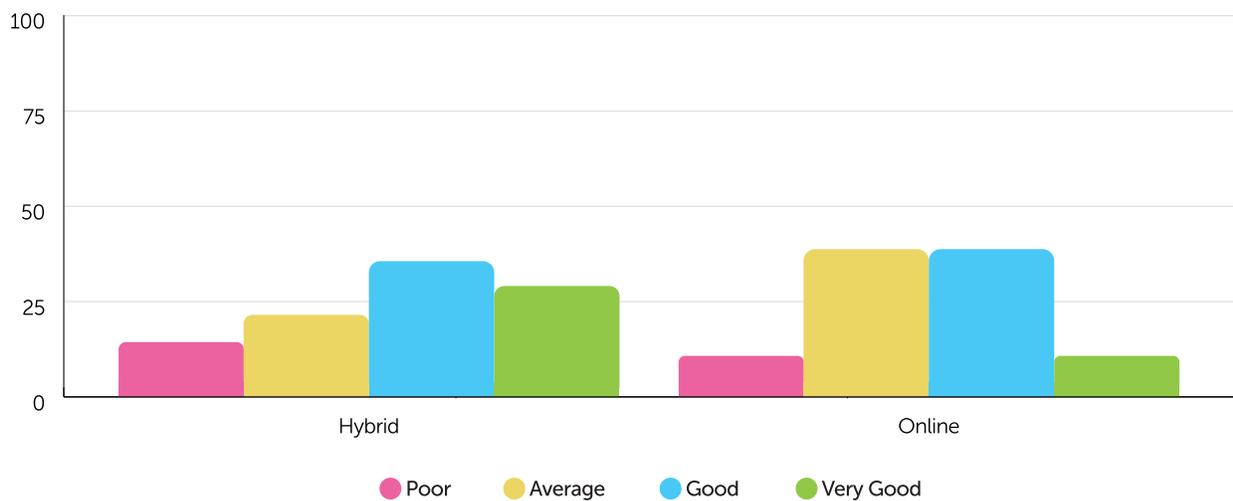
TAKEAWAYS & CHALLENGES AND LIMITATIONS

Takeaways

In summary, our key takeaway from this study is that occupation-specific language training (OSLT) programs provided by CCS effectively aid clients in enhancing their English language abilities. We found that participants in the hybrid format (a mix of online and in-person learning) generally saw greater improvements (both self-rated and assessed) than those who participated solely in online learning.

Challenges and Limitations

A particular obstacle we faced was gathering enough data from clients across all time points. While we had an acceptable initial response rate of 79% for our baseline surveys, the end of program surveys had a lower response rate of 68%. Follow-up surveys conducted at 6 weeks, 3 months, 6 months, and 1 year after the program ended had even lower response rates.

Fortunately, we were able to improve response rates by implementing an incentive scheme offering gift cards. Specifically, the response rate for end-of-program surveys after the incentive was offered improved to 84%. Response rates are particularly important because a larger sample size provides enough statistical power to detect meaningful differences. Additionally, clients who choose to respond to the survey may be inherently different from clients who do not, particularly in ways that may affect their learning. Unfortunately, we are unable to control for this self-selection in our analysis. However, anecdotally, according to CCS staff, a potential barrier to survey completion was that clients became employed quickly after the program. Therefore, this selection may have a negative bias on our results.

Another limitation is that our data collection relied on clients self-reporting on their skills and characteristics. Self-reported data comes with certain limitations and barriers validity that may arise due to biases, particularly social desirability bias which arises when respondents answer questions in ways that make them look better to the researchers. To mitigate these effects, we relied on CLB scores as a key indicator in our study, because these scores are standardized and collected by external assessors. Another way in which we addressed biases is that in addition to self-reporting whether they had improved in certain areas, we also asked respondents to rate their skill levels at different time points and tested whether these ratings had changed. However, although we implemented these strategies to reduce biases, we recognize that some biases might occur nonetheless and can skew responses.

Finally, a limitation of this study is that we did not randomly assign the clients into hybrid or online conditions. It was determined that doing so may be detrimental to the clients by depriving them of their *choice* of delivery format. Therefore, CCS staff and the research team decided against a randomized design, allowing clients to self-select their delivery format. Consequently, our analysis were unable generate any causal estimates for delivery format. For example, it is possible that clients who selected the hybrid format were more motivated than their online-only counterparts. However, we do not think this is a large problem as the initial scores for both formats were similar. Additionally, according to CCS staff, clients' choices regarding format were largely influenced by their proximity to the CCS office and not based on a preference for a specific delivery format.

RECOMMENDATIONS

Providers should regularly check-in on client needs

Clients may under-report their needs for learning and supports needed to access services, which can evolve as programs progress. The OSLT provider should assess client needs and remind them of available supports to facilitate their learning experience. Some approaches to doing so include conducting regular announcements or by posting a list of available supports in high-traffic, visible locations (e.g., at the entrance of the classroom, or the landing page online for online students).

Increasing survey response rates

Future studies should budget in advance for meaningful incentives to improve survey completion rates. In addition to providing incentives, programs may tie survey completion to an end-of-program completion certificate. The certificate may be given to clients who complete all the surveys and other programming requirements.

Improving learning experiences for clients in online programs

The OSLT provider and instructors should adapt learning modules using best practices for online program delivery, that align with in-person experiences as closely as possible. For example, creating activities to increase clients' interaction and participation in synchronous classes and other follow-up activities to create an online learning community with their peers.

Pre-program language abilities should be considered when offering online-only courses

The client's CLB level should be considered prior to offering online-only courses. Our study found that clients with lower CLB scores do not benefit to the same degree from online-only programming, and they should be encouraged (for example, by offering additional supports) to attend programming in-person.

Additional research and resources are needed

Granting agencies need to provide sufficient resources and require further quantitative evaluation for OSLT training programs in Canada. OSLT providers should be required to share their evaluation frameworks, data collection instruments, and procedures with other providers to maximize evaluation efficiencies. OSLT providers should be rewarded with additional resources for conducting high-quality, useful analyses of their programs.

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