Empowering Newcomers to Succeed

Service Delivery Improvements
Through the Development of Digital Tools

NORQUEST COLLEGE

Empowering Newcomers to Succeed: Service Delivery Improvements Through the Development of Digital Tools

Final Report and Findings

Project Team

Zeina Sleiman-Long
Project Manager

Deanna Neri
Research Coordinator

Erin O'Neil
Content Developer

Rozita Amini
Content Developer

Myriam Gerber
Research Coordinator

Table of Contents

Executive Summary

Prior to the COVID-19 pandemic, hybrid and online models of learning had become increasingly available and accessible on a global scale, especially in post-secondary education and in Canada's settlement sector. However, despite this growth in the sector, the pandemic necessitated the move of almost all services to online environments, thereby requiring settlement agencies and instructors, as well as newcomer learners, to pivot and adapt at unprecedented rates. And, although some institutions were able to set up different systems to ensure continuity of learning, the limitations of in-person learning created a series of challenge to learners and teachers alike (Chen, 2021).

Nevertheless, there has been growth in institutions' abilities to serve clients through different modalities as new technologies are tested and explored. But how do we support different types of clients through these various modalities? Are these technologies suited for everyone? The *Empowering Newcomers to Succeed Project* was created to help answer these questions, especially as they relate to newcomers. Through this project, we were able to collect research around the ways in which different service delivery modalities affected newcomers through their settlement journey. To accomplish this, the project team developed a series of self-assessment tools that include the following:

- A self-assessment for newcomers that provides recommendations on the best service delivery modality based on their needs and goals. There are two versions of this assessment. One is designed to be taken with the assistance of a settlement service provider and another can be taken independently by newcomers.

- A digital literacy assessment tool for settlement service providers that provides them with an assessment of their digital literacy skills.

- An asynchronous, online training module for settlement workers on the impact of different service delivery modalities for newcomer learners.

These tools were piloted with over 400 newcomers and more than 50 settlement practitioners. This report includes findings from the research and data on how different types of service delivery modalities impact different types of newcomers based on their needs and goals. It also includes a detailed breakdown of the findings from the development and piloting of the materials.

The tools and resources developed through this project can be accessed by visiting our website at norquest.ca/ENS.

Methods

This project consisted of two main components. First, a comprehensive literature review was conducted to summarize existing data on the changing needs of newcomers and how different service delivery modalities impact their learning and settlement journey. Also, a series of community consultations took place between February and March 2022. In these consultations, information on the specific challenges encountered by settlement practitioners as they shifted from a largely in-person environment to (almost) exclusively online service provision for newcomer clients was gathered. Second, we piloted the assessment tools listed in the section above to understand their impact on newcomers and the newcomers' knowledge of service-delivery modalities.

Data gathered during the first phase were used to guide the development of assessment tools for newcomer clients and settlement service providers. This led to the development of the tools, which were designed to assess which service modalities might be best suited for newcomers based on their goals and needs, as well as to measure digital literacy skills among settlement practitioners.

Invitations to test the tools were sent out to NorQuest language learners in the LINC program and clients at Catholic Social Services (CSS). Settlement practitioners who work at NorQuest College and CSS were invited to test the tools for settlement providers. After completing the assessment tools, a post-completion survey was administered to both newcomer clients and settlement practitioners.

The tools were piloted with over 400 newcomers and more than 40 settlement service workers and LINC instructors. Among those who took part in the pilot, 317 newcomers and 43 settlement practitioners completed the post-assessment survey. We also gathered information from newcomer participants informally after a piloting session for literacy learners and those at the CLB 3–4 level who were not able to complete the survey.

Background and Literature Review

The literature review provides an overview of the changing landscape of settlement service delivery in Canada and includes a breakdown of how the settlement sector shifted during the COVID-19 pandemic. It also highlights recommendations and best practices in online and hybrid service delivery in the settlement sector that might be useful for improving services to newcomer clients, especially in language training.

For a longer and more detailed version of this literature review, please visit norquest.ca/ENS.

Changing Needs and Abilities of Newcomers to Canada

Dekker et al. (2018) note that newcomers are increasingly digitally literate and avid technology users, which includes the use of technology in relation to settlement processes. Additional data also shows that access to digital information eases the transition of immigrants and refugees to a new country as they consult various sources pre- and post-arrival (Caidi & Allard, 2005; Lloyd et al., 2010; Esses & Medianu, 2012; Kaushik & Drolet, 2018).

Studies conducted in North America showed that the internet remains the main source of information among recent immigrants (Rayes et al., 2016; Caidi et al., 2014). Newcomers rely heavily on the internet for getting information about pre- and post-arrival services. Along with several internet-based platforms such as Google, online forums, and blogs, family and friends were also found to be crucial sources of information for some immigrants, including refugees when moving to a new country (Khoir, 2017; Shuva, 2020).

Although many newcomers are digitally literate in the use of mobile technologies and apps—with the smartphone as a primary communication and connection tool and WhatsApp as an easy and convenient way to connect with loved ones—some may lack more general digital literacy relating to the use of computers or the internet. This supports studies that call for addressing the gap in research on the correlation between the use of the internet and the decision-making processes of skilled immigrants when settling in a new country (Shuva, 2021).

The increasing and changing capacity regarding digital literacy has been an ongoing issue in the settlement sector. Prior to the COVID-19 pandemic, settlement workers already felt underprepared, isolated, and overwhelmed (PeaceGeeks, 2019). Open North (2017) reported that only 40% of Canadian settlement agencies had a digital strategy. A successful strategy that addresses the increased demand and need for additional and accessible online content must be addressed and resolved at multiple levels of government and organizations.

Like other areas of society, work in the settlement sector became primarily digital and remote in March 2020. As settlement workers provided services to newcomers through creative online and non-digital means, the settlement sector was forced to embrace technology and collaboration more comprehensively and incorporate hybrid service delivery models (Liu et al., 2021).

Newcomer adult language learners who were already struggling to adjust to their new environment faced additional challenges owing to the social isolation and forced online learning brought about by pandemic restrictions (Cummings et al., 2021).

In addition to this shift to primarily fully digital service delivery, the pandemic had a significant impact on already existing social and economic gaps and inequities: "[t]he physical pandemic has illuminated the crisis of the long-ignored silent one" (ACS, 2021, p. 10). This "silent pandemic" refers to prevalent intersectional social and economic inequalities, which lead to individuals and communities facing intersecting and overlapping systems of disadvantage, exclusion, stigmatization, and lack of supports.

Many newcomers had limited access to devices and reliable internet at home, and with all classes moved online, most of them ended up using a shared single device with other members of the family (Cummings et al., 2021).

We also saw an increased demand for resources to support settlement workers and LINC instructors, specifically those who work with newcomers who experience multiple barriers, such as gender, age, and race, as well as LGBTQ2+ individuals and those living with disabilities (IRCC, 2021). Although newcomers who had good language and digital skills were able to navigate the global crisis, those with low digital and technological skills and limited language abilities were at a clear disadvantage (Shields, 2020). Amid already dynamic and changing settlement service delivery, the changes enforced by the pandemic placed even higher demands and pressures on settlement workers, who had to find creative solutions to work with new technologies, their own or their client's lack of technical training, and digital accessibility as they were serving newcomers remotely.

Benefits and Limitations of Different Modalities

Hybrid or blended learning

Prior to the pandemic, online or blended learning modalities had become increasingly available and accessible. "Blended learning" and "hybrid learning" broadly refer to a combination of online and classroom-based instruction in a responsive and dynamic process (Bruggeman et al., 2020). This can involve different types of interactions and new forms of technology and electronic media, including mobile apps such as WhatsApp, text messages, or SMS, and other online tools and social media. Instructors may incorporate a broad range of digital resources into their programs, such as web-based activities, access to online educational sources, and video lectures.

Although blended learning offers a range of benefits, it is more than simply distributing content online, and the development of a hybrid program requires different pedagogical approaches, considerations, and engagement by the instructor. For example, effective communication between an instructor and

a student requires timely and clear formats, including email, chat, assessment, and feedback. The authors also highlight that, owing to the changing student demographics in online courses, instructors need to consider students' other commitments and provide elements that give students the opportunity to learn at their own pace or access resources and materials repeatedly. Similar findings have also been reported in other studies; for example, Stevens et al. (2021) note that the presence, engagement, and rapport of an instructor with students in addition to a sense of community and trust among learners are vital for effective digital learning outcomes (ibid, p. 281).

Blended learning offers a range of important benefits for both instructors and students. It can provide broader access to education and enhance diversity because new technologies can be used both locally and globally, which can result in more collaborations for learners as well as instructors (Traxler, 2018). The strategic thinking required to develop a blended course provides opportunities for instructors to carefully align learning outcomes in a range of instructional, pedagogical, and technological approaches that are most effective for students. This offers new possibilities for delivering content; for example, lectures, texts, or demonstrations can be delivered online, allowing students more flexibility and independence to access the content. At the same time, available technologies, such as breakout rooms and online chat or forums can provide opportunities for students to engage with their peers or instructors directly, or to apply their knowledge in simulated environments for problem solving (Joosten et al., 2021). On the other hand, different modules also raise specific challenges; for example, online learning does not provide the same feedback loop between learner and instructor as classroom-based settings—an aspect that requires consideration by the instructor.

Classroom-based learning

Traditional forms of learning, such as in a classroom, provide learners with a broad range of benefits, including access to different campus activities and resources. In-person classroom learning facilitates social interactions as students and instructors engage directly with each other. It also provides

opportunities for networking, support, and collaboration. Students may develop a sense of belonging, and the structure of the campus, the classroom, and the routine of specific class times can provide a sense of stability and routine, which may help students to be more focused. As well, classroom learning environments provide opportunities for newcomers, many of whom need to establish new social networks, to develop social connections (and by extension, social capital).

On the other hand, classroom-based learning often entails higher costs for the institution. It may be less flexible in terms of class times or other services and facilities and may lead to unnecessary social interactions (for example, if students have side conversations), less material may be made available, or material may only be available during certain times, such as during library hours. A classroom environment may make it more difficult for some students to speak up or participate if they feel uncomfortable speaking publicly. Finally, during the time of the pandemic, classrooms and campus settings had (and continue to have) a high risk of infection.

Online learning

The most common forms of online learning can be grouped into three categories: web-based learning, synchronous learning, and virtual reality. It is important to note that these modes of delivery are not mutually exclusive and are usually conducted together, especially in the United States (MyHill et al., 2007).

Online learning can offer a range of advantages to both students and instructors by facilitating both real-time and asynchronous communication between instructors and learners; specifically, if offered in an asynchronous format, it offers more flexibility in terms of scheduling. It can also increase student access for learners in remote communities or for those with other responsibilities and complex schedules (Contact North Online Learning, 2019). Asynchronous learning allows students to learn at their own pace and can offer more engaging and participatory alternatives to lecture-style classes. For example, a lecture does not necessarily require on-campus attendance but can instead be made available as a recorded video.

Online learning has the potential benefit of providing education at a significantly lower cost than traditional classroom-based learning environments (Carey & Trick, 2013). However, the infrastructure of online learning, increased time required to develop online content in online or hybrid learning settings, as well as possible additional fees related to online libraries or materials must be taken into consideration when comparing the cost of classroom versus online learning environments.

Online learning and hybrid learning provide more flexibility for students with other responsibilities and commitments, such as work or child care, because they can access materials and complete coursework on their own time. Online modalities can provide diverse options for assessments; for example, it can allow students to assess their own progress and improve accordingly. Pre-tests made available online can help to highlight areas of weakness (Contact North Online Learning, 2019).

Online learning also offers a range of benefits to instructors by allowing students to submit assignments electronically rather than as paper copies, using marking rubrics. Online modalities also allow the use of sophisticated learning analytics, which provide a detailed analysis of individual and group progress (Contact North Online Learning, 2019).

Conversely, online learning does not offer students the opportunity to participate in campus-based activities and reduces social interactions. It requires students to have some degree of digital literacy as well as access to technology and the internet, and technological issues may emerge. Online learning also requires students to be dedicated and disciplined because content is no longer delivered through lectures, and, depending on the setting, there is a high chance of distraction for the student.

Barriers that Newcomers Face when Accessing Training and Services

Technological barriers

Research has highlighted different technological barriers experienced by newcomers. Although some newcomers may have excellent language skills and high levels of digital and technological literacy, many may have no or only limited access to appropriate technology, such as computers/laptops or tablets, sufficient and affordable internet services, or appropriate workspaces that allow for quiet study. A survey of Canada's settlement sector during the pandemic conducted by North York Community House (2020) indicates that approximately one-third of newcomers were struggling with technology or access. Dumford and Miller (2018) highlight that poorly functioning technology can hinder learning and engagement; if students and/or instructors have to devote time and resources to access content, this can have a negative impact on students' overall experience and perception of the course. As a result of such barriers, newcomers may face difficulty accessing language learning and employment services information on government or community support for available services, which increases social isolation. On the other hand, attending in-person programs provides opportunities for social contacts and activity. Individuals struggling with mental health challenges may not access online counselling services, which was further exacerbated by the pandemic. Large families may only have access to one computer, thereby making it difficult for older or young learners to meet all their educational needs.

Language barriers

The connection between digital literacy and language proficiency is complex, and low language skills can considerably reduce a learner's ability to engage fully with online content. Literacy has been identified by some researchers as a prerequisite for digital skills (van Deursen & van Dijk, 2016), while Stone et al. (2020) note that limited use of the internet by some learners was linked with low literacy and numeracy, and that disadvantaged learners experienced

multiple barriers, which may lead to low levels of confidence and motivation. The authors highlight that literacy is intrinsically linked to a broad range of online tasks, including logging in, managing passwords and email addresses, and processing information. On the other hand, ISSofBC noted in their 2020 support package that "digital skills do not correspond to language skills" (p. 2), highlighting that although it is possible for newcomers to have strong language skills, they may not be able to use the internet or beginner English learners may have high levels of digital literacy. Quoting a settlement services provider, Campana (2021) notes that "close to 20% [of newcomers] don't have functional literacy in their first language [...] A fifth of your audience doesn't read the language? Why did you bother translating it? [...] if we're gonna push the message to people, well, maybe we should be using WhatsApp voice messages, because that's what's going to be effective. It doesn't presuppose literacy. And that literacy bias is so huge." The experience of language barriers also has considerable emotional impact, and newcomers may feel stressed, lonely, ashamed, nervous, depressed, or powerless (North York Community House, 2018).

Results and Findings

The following section summarizes the results of the pilot session of the assessment tools designed for newcomers and settlement practitioners. It should be noted that the majority of respondents were at CLB 6 and below, and over half indicated that they had some experience with online courses within the last three years.

Additional highlights from respondents include the following:

- Respondents generally expressed a very high level of comfort with different technology and communication software such as Zoom, Google Meets, and Teams.

- Respondents generally expressed a high level of satisfaction with the tool, with 81% of indicating that it was easy to use and understand.

- Nearly two-thirds (64%) of respondents indicated that they were likely to use the assessment tools again in the future and would recommend the tools to friends and family. It should be noted here that the tools are

designed for those who are unsure which service delivery modalities they should pursue, and a desired repeat rate of 64% can be considered relatively high.

- Just over two-thirds (67%) of the respondents said they were likely going to follow the suggestions given to them.
- The majority of respondents (70%) either want to get a job (34%) or a post-secondary degree (36%).
  - The vast majority of respondents believed that the assessment tools would help them achieve their goals.

Highlights for Settlement Practitioners

- The vast majority of respondents who piloted the tools for settlement practitioners had been working in the industry for less than four years.
- The majority of respondents reported being very comfortable with computers/laptops and smartphones and reported using hybrid models with clients.
- All respondents identified clients' digital literacy as the main challenge experienced when working in an online environment.
- The majority indicated that they had prior online learning experience.
- Overall, respondents agreed that the assessment tools were easy to use and that the questions were easy to understand.
  - In addition, respondents agreed that the assessment tools helped them better understand their own digital literacy.

Results from Newcomers

In order to evaluate the relevance and accessibility of the assessment tools, newcomers from diverse backgrounds (i.e, age, gender, language, CLB level) were invited to try them out either at home, in school, or at work. The majority of the respondents had a level of CLB 6 (40%) or lower, CLB 4 (17%).

Most respondents had high level of comfort using smartphones, computers/laptops, and communication software such as Zoom, Google Meet, and Teams. A few of them indicated that they were not familiar with using tablets.

When it comes to online learning, just over half of the respondents (51%) had taken online courses within the last three years and were mostly using computers/laptops. The majority of respondents generated a positive rating about the assessment tools. Over 68% said they now have a better understanding of where to access settlement support, including LINC training. About 79% expressed that the assessment tools were easy to access online and that they understood the purpose of the assessment. The tools provided recommendations on the best service delivery modality for each respondent based on their personal circumstances and goals. Approximately 75% of those who tested the tools strongly agreed that the result of the assessment was accurate.

Respondents were appreciative of the assessment tools and expressed that they were easy to understand. The following quotes from newcomer respondents further illustrate their satisfaction with the assessment tools:

> "Everything was perfect and easy to understand."

> "[There is] a lot of information which I can get [for] the LINC program."

> "The tools are crucial for me because I can develop my English and computer skills. Thank you so much!"

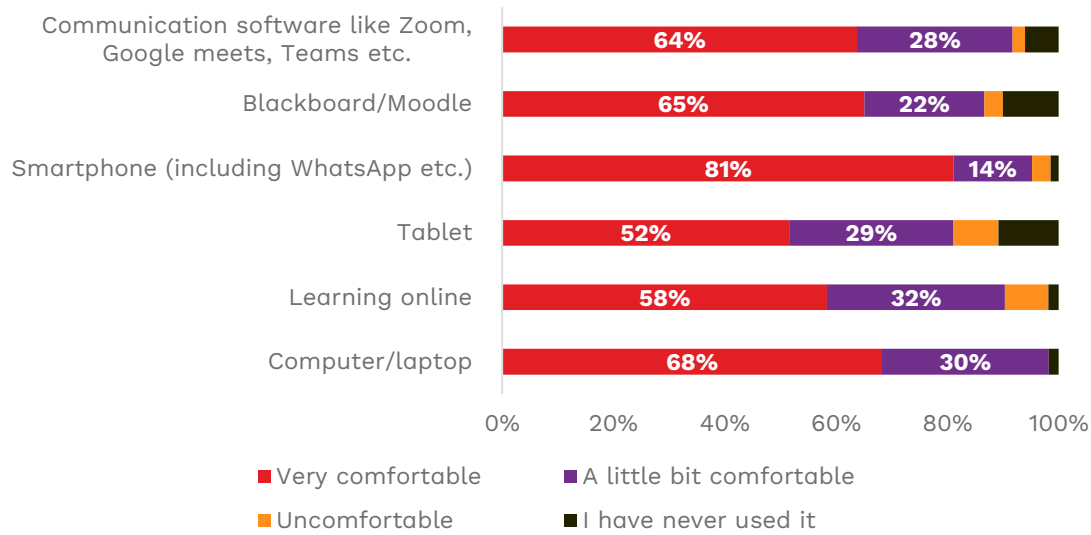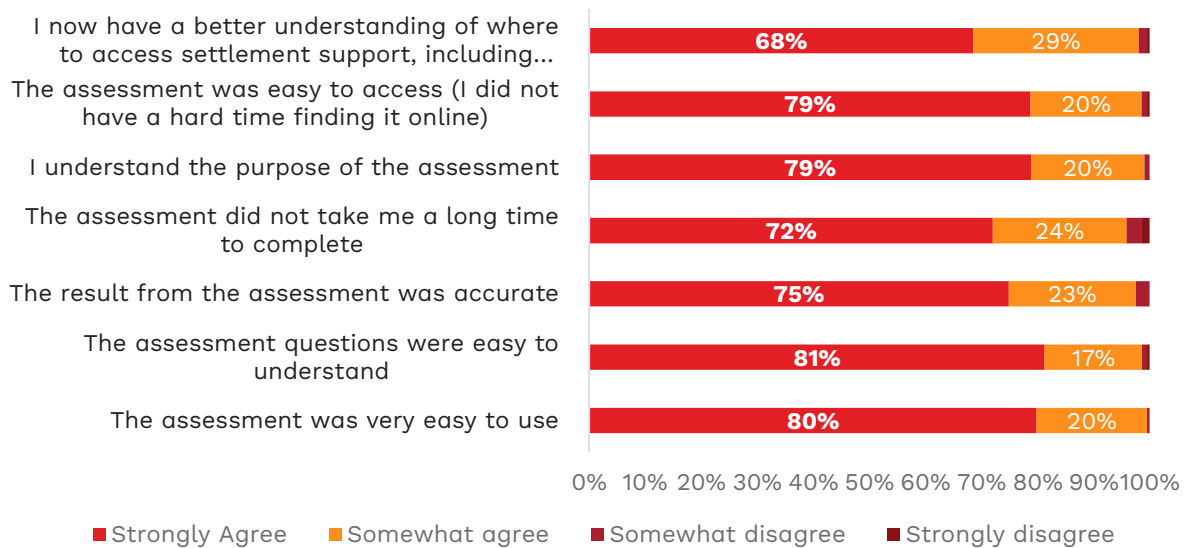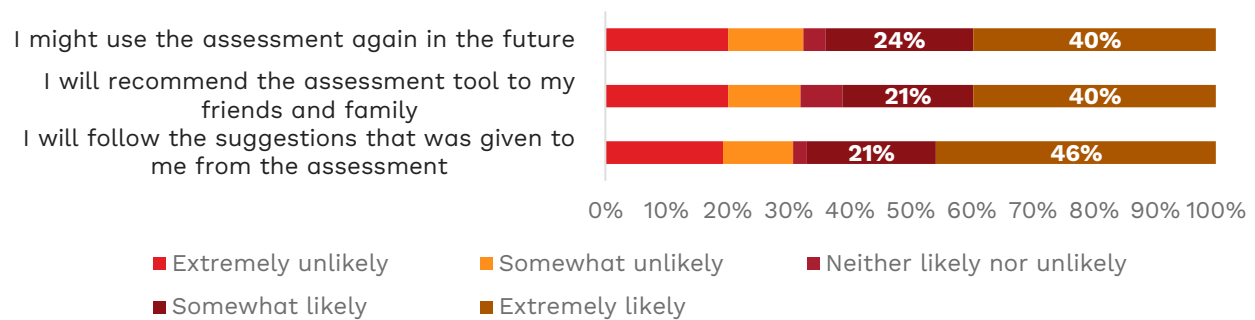**Table 1. Respondents' experience with the assessment tool**

	Very comfortable	A little bit comfortable	Uncomfortable	I have never used it
Communication software like Zoom, Google meets, Teams etc.	64%	28%		
Blackboard/Moodle	65%	22%		
Smartphone (including WhatsApp etc.)	81%	14%		
Tablet	52%	29%		
Learning online	58%	32%		
Computer/laptop	68%	30%		

■ Very comfortable ■ A little bit comfortable
■ Uncomfortable ■ I have never used it

Table 2. Respondents' experience with the assessment tool

	Strongly Agree	Somewhat agree
I now have a better understanding of where to access settlement support, including...	68%	29%
The assessment was easy to access (I did not have a hard time finding it online)	79%	20%
I understand the purpose of the assessment	79%	20%
The assessment did not take me a long time to complete	72%	24%
The result from the assessment was accurate	75%	23%
The assessment questions were easy to understand	81%	17%
The assessment was very easy to use	80%	20%

■ Strongly Agree ■ Somewhat agree ■ Somewhat disagree ■ Strongly disagree

Overall, respondents indicated that newcomers were satisfied with the assessment tools. Over two-thirds (67%) indicated that they were likely going to follow the suggested modality given to them (i.e., in-person, online, or blended learning). Almost the same number of respondents (64%) indicated that they were likely to use the assessment tools again in the future.

Table 3. Overall likelihood of using the tool and recommending it to others

I might use the assessment again in the future	24% 40%
I will recommend the assessment tool to my friends and family	21% 40%
I will follow the suggestions that was given to me from the assessment	21% 46%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ Extremely unlikely   ■ Somewhat unlikely   ■ Neither likely nor unlikely

■ Somewhat likely   ■ Extremely likely

The assessment tools were found to be helpful to newcomers, and about 61% of those who tested them indicated that they would recommend the tools to their friends and family. The vast majority of newcomers (93%) said that the assessment could help them achieve their main goals, which were mostly either to get a job or get a post-secondary degree in Canada.

Digital Literacy Among Settlement Workers and LINC Instructors

Approximately 91% of settlement workers who completed the digital literacy tools were employees of NorQuest College or Catholic Social Services. The vast majority of respondents (63%) indicated that they were new in the settlement sector, with about one to three years of experience. The remaining 19% had four to six years of experience, followed by about 11% with over ten years of experience and around 7% having seven to ten years of experience.

In terms of serving newcomer clients, most settlement practitioners (93%) reported using a hybrid model, which is a mix of online and in-person support for their clients. Approximately 30% indicated that they provide services through in-person sessions only, and the remaining 22% provide fully online classes. In addition to this, approximately 81% of the respondents indicated having experience with online learning before the COVID-19 pandemic, whereas 19% responded that they had no prior experience providing online services to clients.
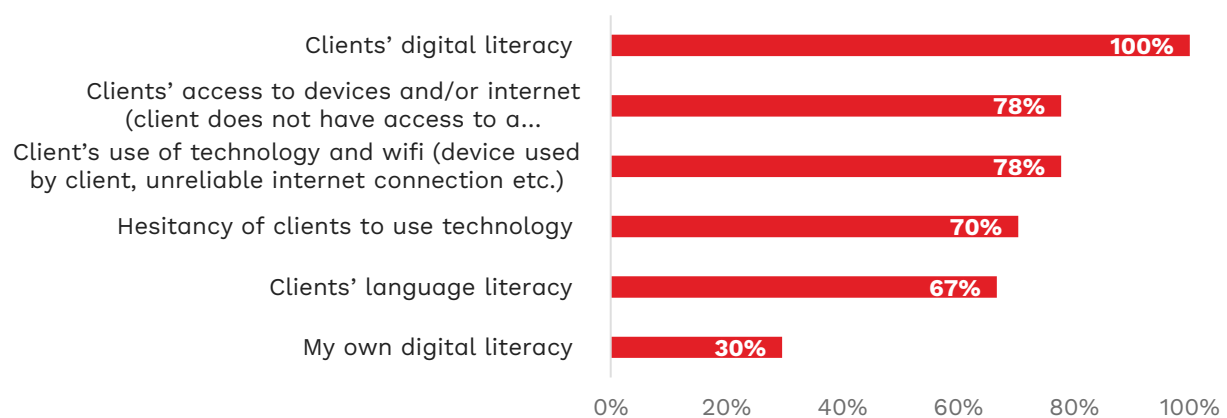
Overall, respondents indicated a high level of familiarity and comfort using different kinds of technology, such as computers/laptops and smartphones. More than 50% also indicated frequent use of communication software such as Google Meet, Zoom, and Teams, among others. The lowest level of comfort reported was with Blackboard and Moodle.

With the sudden shift to online services during the pandemic, respondents identified that the most common challenges they encountered when conducting online classes was the clients' digital literacy, which includes familiarity with different kinds of technology and the ability to access and navigate the internet. Additionally, about 78% of the respondents shared that their clients lack access to devices and a stable internet connection, which affects the whole learning experience. Approximately 70% of settlement practitioners observed hesitancy among their clients to use technology. Although providing virtual support to clients in navigating online learning platforms is possible, over 67% of settlement practitioners reported difficulty owing to their clients' limited English-language literacy skills. Lastly, almost one-third (30%) of settlement practitioners shared that their own digital literacy skills limit their ability to efficiently deliver online classes.

One respondent stated:

> *"I'm not sure how my CLB 4 LINC learners would do considering their language constraints."*

Table 4. Challenges when working with clients in online environments

Clients' digital literacy — 100%
Clients' access to devices and/or internet (client does not have access to a…) — 78%
Client's use of technology and wifi (device used by client, unreliable internet connection etc.) — 78%
Hesitancy of clients to use technology — 70%
Clients' language literacy — 67%
My own digital literacy — 30%

Overall, respondents provided positive ratings on the assessment tools and agreed that they were easy to use and understand. More than 90% of the settlement practitioners indicated increased understanding of their own digital literacy. About 80% of respondents said that the assessment gave them new information and helped them identify which type of training they need to improve their digital literacy. Almost the same number of people agreed that the assessment aligned with their own goals for professional development.

Recommendations and Further Research

- Additional research is needed to understand the impact of different service delivery modalities. While our tools were developed based on existing knowledge, it should be noted that this remains very limited, especially in relation to adult language learners. A longitudinal study that examines and validates our assessment tools would be necessary to understand the long-term impacts.

- Research on service delivery modalities and digital literacy among learners often covers results from post-secondary institutions and rarely focuses specifically on the needs of newcomers and/or adult language learners. Additional research is needed to understand how different digital literacy tools impact this demographic.

- Additional training, resources, and time is needed among settlement practitioners and LINC instructors to support them in adapting to emerging technologies and to assist them in acquiring the skills they need to support newcomer clients.

References

Alencar, A. (2017). Refugee integration and social media: a local and experiential perspective. *Information, Communication & Society*, 21, 1588–1603. https://www.tandfonline.com/doi/full/10.1080/1369118X.2017.1340500?scroll=top&needAccess=true&role=tab

Association for Canadian Studies (ACS). (2021). *Finding solutions for the immigrant serving sector – Literature review/analysis*. https://acs-aec.ca/wp-content/uploads/2021/04/ACS_WES-Literature-Review-1.pdf

Bruggeman, B., Tondeur, J., Struyven, K., Pynoo, B., Garone, A., & Vanslambrouck, S. (2020). Experts speaking: Crucial teacher attributes for implementing blended learning in higher education. *The Internet and Higher Education*, *48*, 100772.

Caidi, N., & Allard, D. (2005). Social inclusion of newcomers to Canada: An information problem? *Library & Information Science Research, 27*(3), 302–324. https://doi.org/10.1016/j.lisr.2005.04.003

Caidi, N., Komlodi, A., Lima Abrao, A., & Martin-Hammond, A. (2014). Collectively figuring it out: Foreign-trained health professionals and labor market integration. *Library and Information Science Research Electronic Journal, 24*(2), 118–131. https://cpb-us-e1.wpmucdn.com/blogs.ntu.edu.sg/dist/8/644/files/2015/03/LIBRESv24i2p118-131.Caidi_.2014.pdf

Campana, M. (2021, May 29). *A nuanced approach to digital literacy and skills in the immigrant and refugee-serving sector*. Knowledge Mobilization for Settlement (KM4S). https://km4s.ca/2021/05/a-nuanced-approach-to-digital-literacy-and-skills-in-the-immigrant-and-refugee-serving-sector/

Carey, T., & Trick, D. (2013). *How online learning affects productivity, cost and quality in higher education: An environmental scan and review of the literature*. Higher Education Quality Council of Ontario. https://heqco.ca/wp-content/uploads/2020/03/How_Online_Learning_Affects_Productivity-ENG.pdf

Chen, E. X. (2021). Supporting online learning in an unfamiliar language: Immigrant parents and remote dchooling during COVID-19. *International Journal of Multicultural Education, 23*(3), 62–78. https://ijme-journal.org/index.php/ijme/article/view/2929/1557

Contact North Online Learning. (2019). *220 pockets of innovation in online learning*. Teach Online. https://teachonline.ca/sites/default/files/pdfs/contact_north_i_contact_nord_220_pockets_of_innovation_in_online_learning_-_2019_0.pdf

Cummings, J., Sturm, M., Lawrence, G., Avram, A., & McBride, R. (2021, March 30). *Teaching in COVID-19 Times: Challenges, innovations, solutions, and opportunities*. Teachers of English as a Second Language Association of Ontario. https://contact.teslontario.org/teaching-in-covid-19-times-challenges-innovations-solutions-and-opportunities/

Dekker, R., Engbersen, G., Klaver, J., & Vonk, H. (2018). Smart refugees: How Syrian asylum migrants use social media information in migration decision-making. *Social Media + Society, 4*(1). https://journals.sagepub.com/doi/10.1177/2056305118764439

Dumford, A. D., & Miller, A. L. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, 30(3), 452–465. https://doi.org/10.1007/s12528-018-9179-z

Esses, V. M., & Medianu, S. (2012). *Integration barriers and information as a solution: Report based on literature covering 2005–2011 inclusive*. Welcoming Communities Initiative. http://p2pcanada.ca/files/2012/08/Integration-Barriers-and-Infomation-as-a-Solution.pdf

Immigrant Services Society of BC (ISSofBC). (2020). *Digital literacy support package: overview, best practices and guidance for delivering training*. https://issbcdigitalskills.ca/wp-content/uploads/2020/09/Digital-Literacy-Support-Package-Overview-and-Best-Practices.pdf

Immigration, Refugees and Citizenship Canada (IRCC). (2021). *Settlement outcomes highlights report: Summary findings from IRCC's first settlement outcomes report 2021*. https://www.canada.ca/content/dam/ircc/documents/pdf/english/corporate/publications-manuals/settlement-outcomes-highlights-report-2021.pdf

Joosten, T., Weber, N., Baker, M., Schletzbaum, A., & McGuire, A. (2021). *Planning for a blended future: A research-driven guide for educators*. Every Learner Everywhere. https://www.everylearnereverywhere.org/wp-content/uploads/Planning-for-a-Blended-Future-FINAL-1.pdf

Kaushik, V., & Drolet, J. (2018). Settlement and integration needs of skilled immigrants in Canada. *Social Sciences, 7*(5), 76. https://www.mdpi.com/2076-0760/7/5/76

Khoir, S. (2017). *An information behaviour perspective into Asian immigrants' settlement in urban South Australia: Investigating their everyday life information seeking and the value of public library services* [PhD dissertation, University of South Australia]. https://www.researchgate.net/publication/327176719_An_information_behaviour_perspective_into_Asian_immigrants%27_settlement_in_urban_South_Australia_Investigating_their_everyday_life_information_seeking_and_the_value_of_public_library_services

Liu, J., Ekmekcioglu, C., & Campana, M. (2021). *From silos to solutions: Toward sustainable and equitable hybrid service delivery in the immigrant & refugee-serving sector in Canada*. AMSSA. https://www.amssa.org/wp-content/uploads/2021/10/EN-Settlement-Sector-Technology-Task-Group-final-report-and-recommendations.pdf

Lloyd, A., Lipu, S., & Kennan, M. A. (2010). On becoming citizens: Examining social inclusion from an information perspective. *Australian Academic & Research Libraries, 41*(1), 42–53. https://www.tandfonline.com/doi/abs/10.1080/00048623.2010.10721433

Myhill, N. W., Samant, D., Klein, D., Kaplan, S., Reina, M. V., & Blanck, P. (2007). Distance education initiatives and their early 21st century role in the lives of people with disabilities. In E. P. Bailey (Ed.), *Focus on distance education developments* (241–280). Nova Science Publishers.

North York Community House. (2018). *The language barrier and its effects on adult newcomers*. https://static1.squarespace.com/static/54590446e4b06d8951dd9e4e/t/5c33d4f240ec9a2981cdaaa5/1546900724912/THE+LANGUAGE+BARRIER+AND+ITS+EFFECTS+ON+ADULT+NEWCOMERS.pdf

Open North. (2017, May 30). *Understanding the digital capacity of newcomer settlement organizations – research findings*. Knowledge Mobilization for Settlement (KM4S). https://km4s.ca/publication/understanding-the-digital-capacity-of-newcomer-settlement-organizations-research-findings/

PeaceGeeks. (2019). *Settlement 2.0 Project: Situational analysis*. https://global-uploads.webflow.com/630447ca32da77f5be7bead5/63ebbcb6595f6211482c8146_Settlement%202.0%20-%20Situational%20Analysis%20Spring%202019_0.pdf

Rayes, W., Martin-Hammond, A., Komlodi, A., Caidi, N., & Sundin, N. (2016). An Informed transition? International medical graduates settling in the United States and Canada. *Proceedings of the Association for Information Science and Technology, 53*(1), 1–7. https://asistdl.onlinelibrary.wiley.com/doi/10.1002/pra2.2016.14505301068

Shields, J. (2020, July 8). *Will settlement agencies in Canada survive the pandemic?* Open Democracy. https://www.opendemocracy.net/en/pandemic-border/will-settlement-agencies-canada-survive-pandemic/

Shuva, N. Z. (2021). Internet, social media, and settlement: A study on Bangladeshi immigrants in Canada. *Canadian Journal of Information and Library Science, 43*(3), 291–315. https://muse.jhu.edu/article/781389

Shuva, N. Z. (2020). *Information, employment, and settlement of immigrants: Exploring the role of information behaviour in the settlement of Bangladesh immigrants in Canada* [PhD dissertation, University of Western Ontario]. https://ir.lib.uwo.ca/etd/6877

Stevens, G. J., Bienz, T., Wali, N., Condie, J., & Schismenos, S. (2021). Online education is the new normal: but is face-to-face better? *Interactive Technology and Smart Education*, *18*(3), 278–297. https://www.emerald.com/insight/content/doi/10.1108/ITSE-08-2020-0181/full/html

Stone, E., Rae-Evans, R., & Maye, K. (2020). *Supporting digital inclusion of adults with low English language skills*. https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2020/06/11122825/supporting_digital_inclusion_of_adults_with_low_english_language_skills_2020.pdf

Traxler, J. (2018). Distance learning—Predictions and possibilities. *Education Sciences*, 8(1), 35. https://www.mdpi.com/2227-7102/8/1/35

van Deursen, A. J. A. M., & van Dijk, J. A. G. M. (2016). Modeling traditional literacy, internet skills and internet usage: An empirical study. *Interacting with Computers*, *28*(1), 13–26. https://doi.org/10.1093/iwc/iwu027

> " The tools are crucial for me because I can develop my English and computer skills. Thank you so much!

> " This tool was really helpful for newcomers. Thank you.

> " The tools are crucial for me because I can develop my English and computer skills. Thank you so much!

> " [The digital literacy assessment] was very effective and confirmed what I assumed about my digital literacy.