



# Language Skills and Translation Tools for Adults:

Preliminary Findings from Quebec



# Partners



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# Executive Summary

Proficiency in one of Canada's two official languages (English and French) is essential for individuals seeking to fully integrate into Canadian society. For those looking to improve their language skills, English as a Second Language (ESL) and French as a Second Language (FSL) training can open new doors to employment and career advancement, educational opportunities, social and community participation, and a deeper understanding of Canadian culture.

Research has shown the potential of artificial intelligence (AI) to support language training. At the same time, AI is driving the development of a range of tools that support written document translation and real-time communication, which can both enhance or potentially undermine language learning. AI tools, such as machine translation (MT) applications, automated writing evaluators and conversational chatbots, are becoming more common in language learning environments, providing learners with unprecedented access to information in foreign languages. However, while these tools can accelerate language comprehension and vocabulary acquisition, overreliance on them often bypasses the cognitive effort required for genuine language internalization and development. The challenge lies in strategically

leveraging AI to support language learning without removing the difficult, yet essential, struggle required for true mastery.

MT predates the widespread adoption of generative AI, including large language models such as ChatGPT, Google Gemini and Claude with translation capabilities. The wide range of translation tools available on the market today signals the need for further research on how these tools can affect language acquisition. This is especially relevant given that many language learning programs are lagging behind in adopting technological innovations.

This report examines the use of MT tools in the province of Quebec by analyzing the results of an online survey of 1,000 people conducted by the Association for Canadian Studies in September 2023. The survey found that participants were using AI to overcome language barriers, access information and navigate work, legal and health care environments. The data analysis shows that immigrants use and trust MT more than Canadian-born individuals, which underscores the opportunity to use MT in newcomer language training programs. Insights from the survey and implications for the future use of technology in Canadian language training programs are the focus of this report.

# Tools for Translation

Artificial intelligence (AI) is widely used to support language training.<sup>1</sup> Machine translation (MT) is an AI-powered technology that serves a critical purpose in language learning. It refers to the process by which a machine (e.g., web interface, browser plugin, mobile phone app) translates a written or spoken text from one language into another without involvement of a human translator.<sup>2</sup> MT facilitates more accessible multilingual communication in a variety of contexts, including customer support, e-commerce, health care, education, and government.<sup>3</sup>

With the rapid adoption of AI in many widely used applications, MT has become more commonplace. The landscape of MT tools is dominated by two distinct categories: dedicated neural machine translation (NMT) systems and generalist large language models (LLMs).

NMT is based on the concept of deep learning where a neural network processes input data. This involves training the network on a large corpus of text so that it can predict the probability of a sequence of words in the target language given a sequence of words in the source language. In this way, NMT models the entire translation process as a single

end-to-end process, unlike earlier statistical machine translation models that translate phrases in isolation and stitch them together.<sup>4</sup> This allows NMT systems to better capture the context and nuances of the original text over longer sequences resulting in more accurate translations. Prominent examples of dedicated NMT systems include Google Translate, Microsoft Translator, and DeepL.<sup>5</sup>

LLMs are based on deep neural networks that have been trained on vast amounts of text data from a variety of sources (e.g., books, articles, web pages, etc.) to learn language patterns and extract meaning from text. Unlike NMT systems that are specialized for translation, LLMs are used for a wide range of natural language processing tasks including translation, summarization, content generation and question answering.<sup>6</sup> Popular LLMs include ChatGPT, Google Gemini and Claude.

In terms of benefits, MT is widely used in various settings due to its low cost, high efficiency and high translation quality. Evidence also suggests that MT can improve writing fluency, vocabulary, grammar and expression.<sup>7,8</sup> On the other hand, MT has been questioned for its functional effectiveness, accuracy and reliability, especially since its ability to convey

emotional and cultural nuances is limited. MT also carries risks in legal, community and medical settings because it may lack the understanding for the values and needs of a community.<sup>9</sup> Language learners in particular have demonstrated an overreliance on MT applications in writing assignments, leading some instructors to believe it hinders the language learning process.<sup>10</sup>

As a result of the benefits and challenges of MT, researchers have advocated for professionals to develop “machine translation literacy”, which entails how to use MT applications, where they might be helpful and the implications it carries for communicative

needs. However, limited research has been conducted on users’ sentiments toward MT, specifically whether, why and how professionals in non-translation disciplines integrate MT in their day-to-day work.<sup>11</sup> As such, strong evaluation metrics are needed to measure the effectiveness of MT compared to human translators, especially since MT’s performance varies by language pairs.<sup>12</sup> Evaluations of MT applications would also inform risk management strategies that address information security, legal, professional, medical and financial risks.<sup>13</sup>



# Survey Design

During the week of September 18, 2023, Léger Marketing conducted an online survey of 1,000 Quebecers for the Association for Canadian Studies (ACS).<sup>14</sup> The survey focused on themes of AI, translation, language knowledge and language use. Among survey participants, 798 (79.8%) identified as Francophones (whose first language is French), 130 (13%) as Anglophones (whose first language is English), and 72 (7.2%) as Allophones (whose first language is neither French nor English). For comparison, in the 2021 Census, 74.8%

of Quebecers spoke French as their mother tongue, 7.6% spoke English as their mother tongue, 14% spoke a single non-official language as their mother tongue and 3.6% spoke multiple mother tongues.<sup>15</sup>

The research provided insights into:



*The survey focused on themes of AI, translation, language knowledge and language use.*

*Among survey participants, 798 (79.8%) identified as Francophones, 130 (13%) as Anglophones, and 72 (7.2%) as Allophones.*

1

How often participants used translation devices with automated machine learning (e.g., Google Translate, Bing Translator, DeepL, ChatGPT, etc.).

2

The scenarios where an automated machine learning device was used for translation (e.g., assimilation of information, dissemination of information, translation-mediated interaction).

3

Whether participants were active or passive users of MT.

4

The sources that participants trusted more for translation purposes (e.g., humans, translation devices, both equally, neither).

5

Participant trust in MT devices in various contexts (e.g., for entertainment; in educational, workplace, legal, or health care settings).

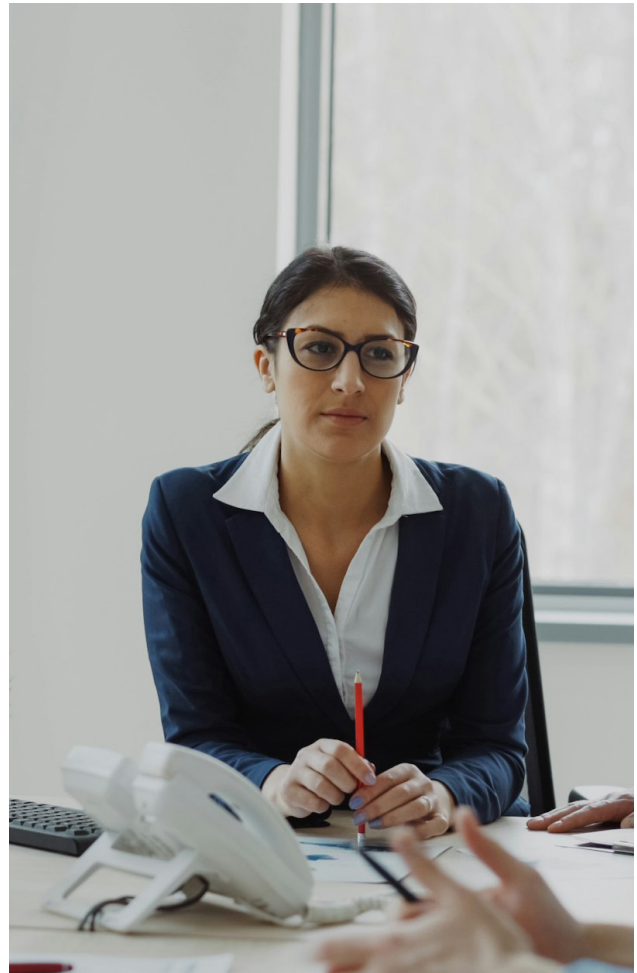
6

The languages that participants used MT to translate to and from.

7

Whether participants believed that MT can help improve second-language knowledge and reduce language barriers between language groups.

An acknowledged limitation of the study lies in its sampling method. The online survey format requires participants to have Internet access and a basic level of digital literacy. As a result, individuals who lack a reliable Internet connection or confidence using technology may have been excluded. This is particularly relevant for older adults, newcomers, and individuals with lower incomes or living in rural areas. Additionally, the survey was conducted in English and French which may have limited participation from individuals with lower official language proficiency, including newcomers and linguistic minorities.

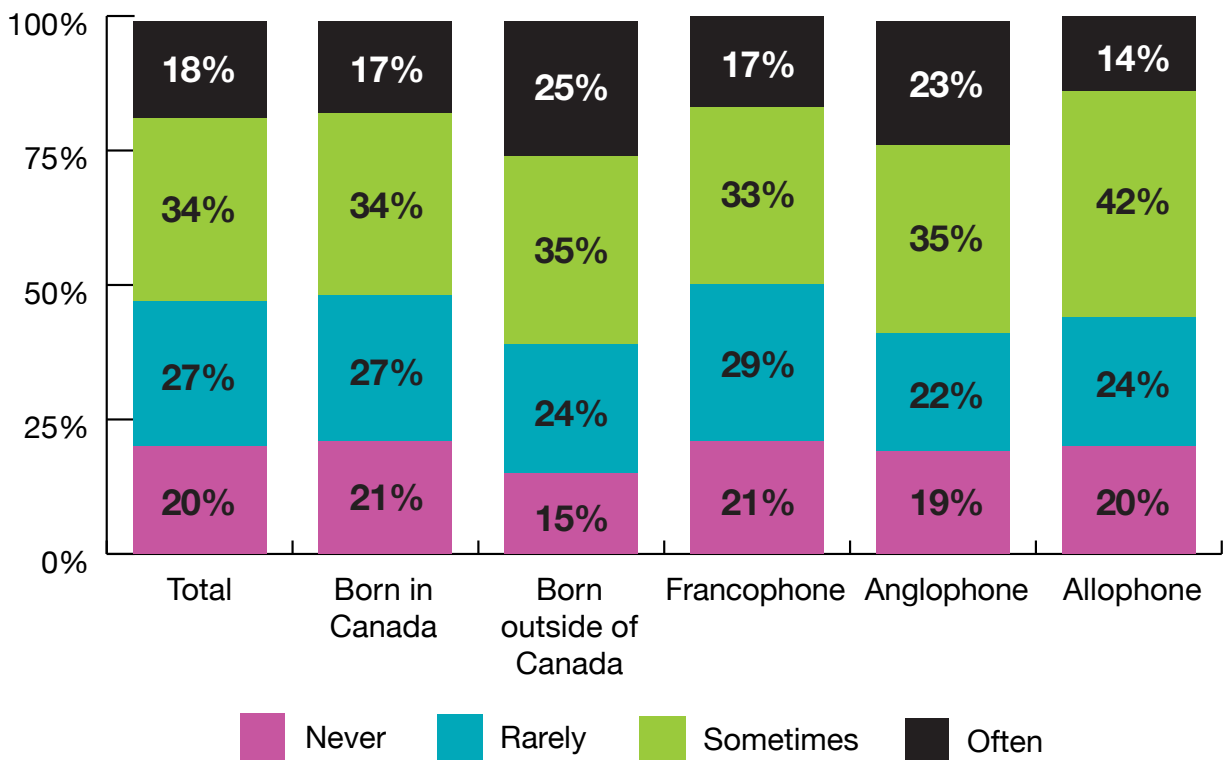


# Findings

When participants were asked how often they used translation devices with automated machine learning (e.g., Google Translate, Bing Translator, DeepL, ChatGPT, etc.), 51% of respondents sometimes or often used these devices. Conversely, 47% reported that they rarely or never use translation devices. Among respondents born in Canada, 51% indicated that they sometimes or often used translation devices. However, this percentage was higher (60%) for respondents born outside of Canada. Anglophones (58%) were also more likely to use translation devices than Francophones (50%) and Allophones (56%) (Figure 1).

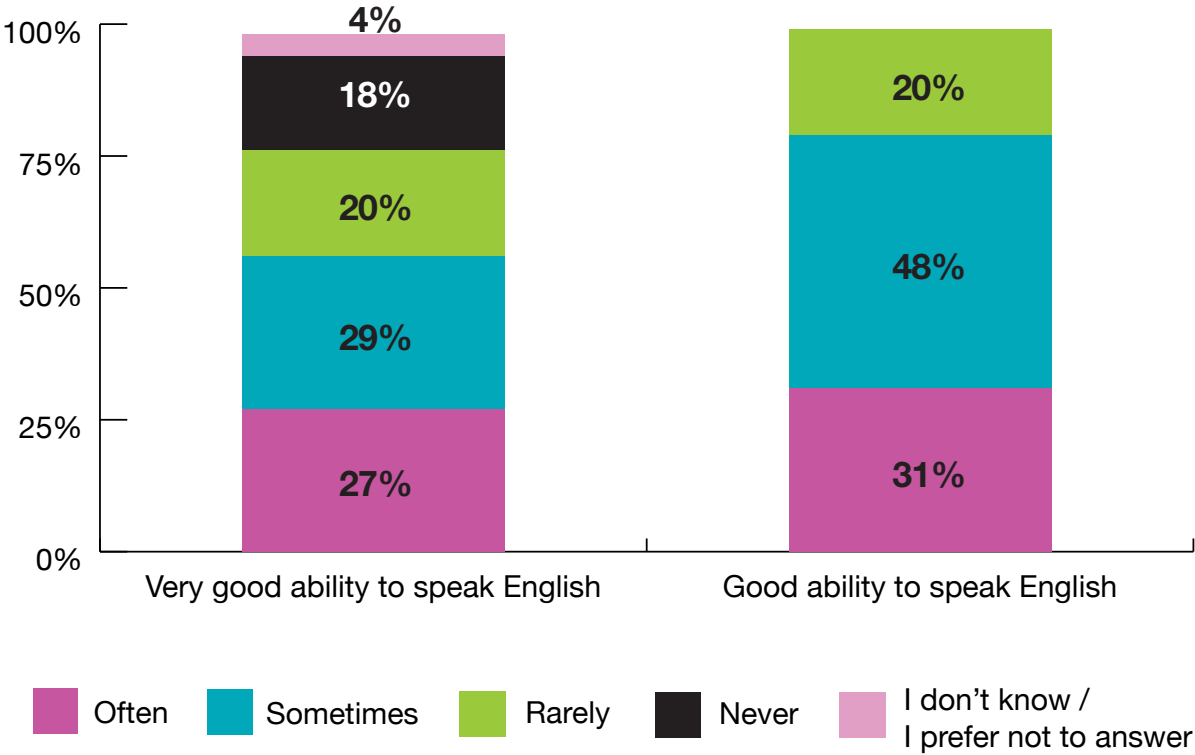
**Figure 1**

Reported usage of translation devices with automated machine learning (e.g., Google Translate, Bing Translator, DeepL, ChatGPT, etc.)



Immigrants reporting a good ability to speak English were also far more likely than immigrants reporting a very good ability to speak English to use translation devices with automated machine learning sometimes or often (79% vs. 56%) (Figure 2).

**Figure 2**  
**Reported usage translation devices with automated machine learning among immigrants (e.g., Google Translate, Bing Translator, DeepL, ChatGPT, etc.)**



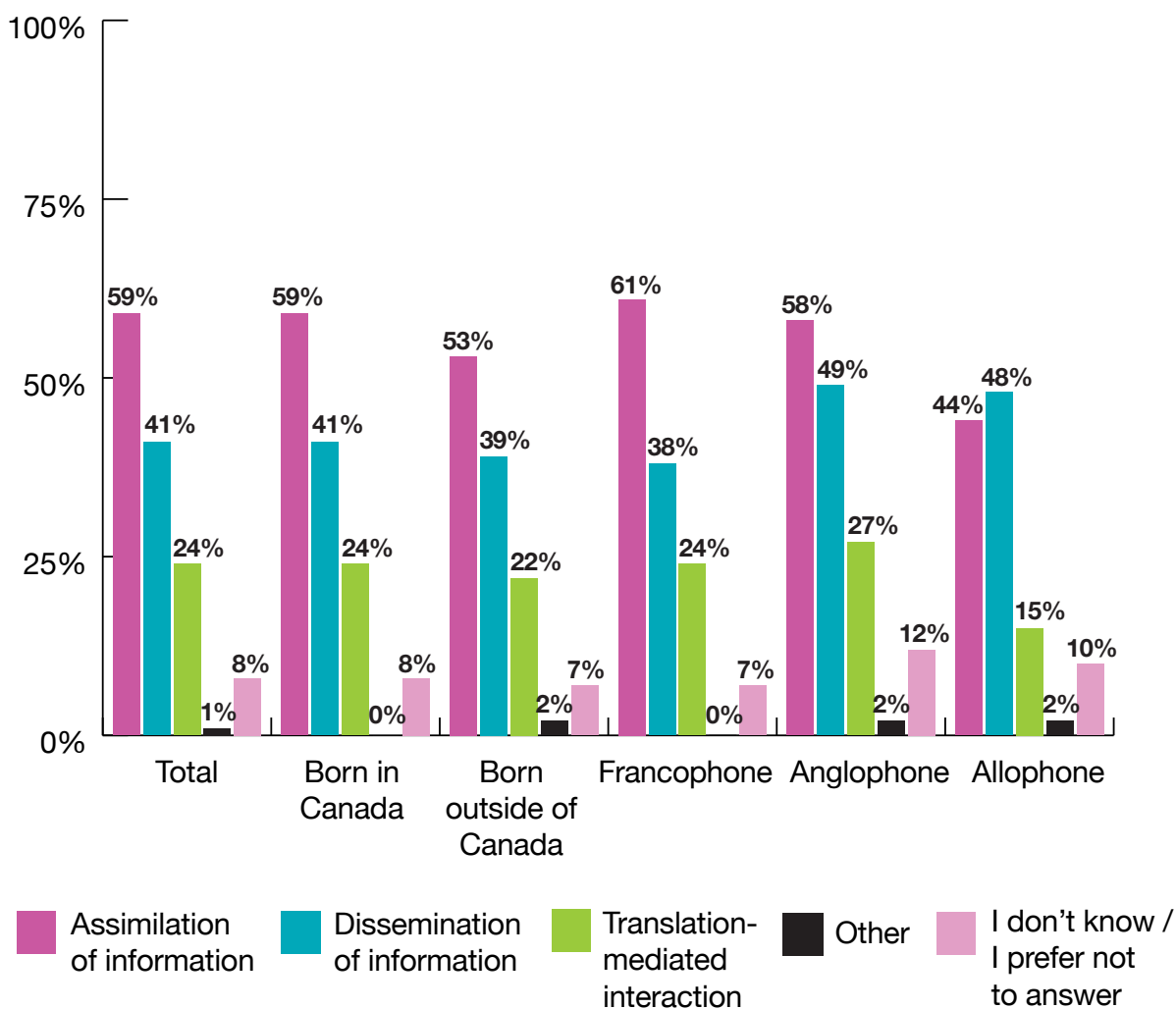
Survey participants were asked in which scenarios they have used an automated machine learning device for translation. Overall, 59% of respondents used an MT device for assimilation of information (translating a text from a foreign language for personal use), 41% for dissemination of information (writing in a language that has

not been mastered to share with others), and 24% for translation-mediated interaction (typically in real-time using a smartphone translation app). Compared to respondents born outside of Canada, respondents born in Canada were more likely to use an MT device for assimilation (59% vs. 53%), dissemination (41% vs. 39%), and translation-

mediated interaction purposes (24% vs. 22%). Francophones were more likely to use MT devices for assimilation (61%) than Anglophones (58%) and Allophones (44%). However, Anglophones (49%) were more likely to use MT devices for dissemination than

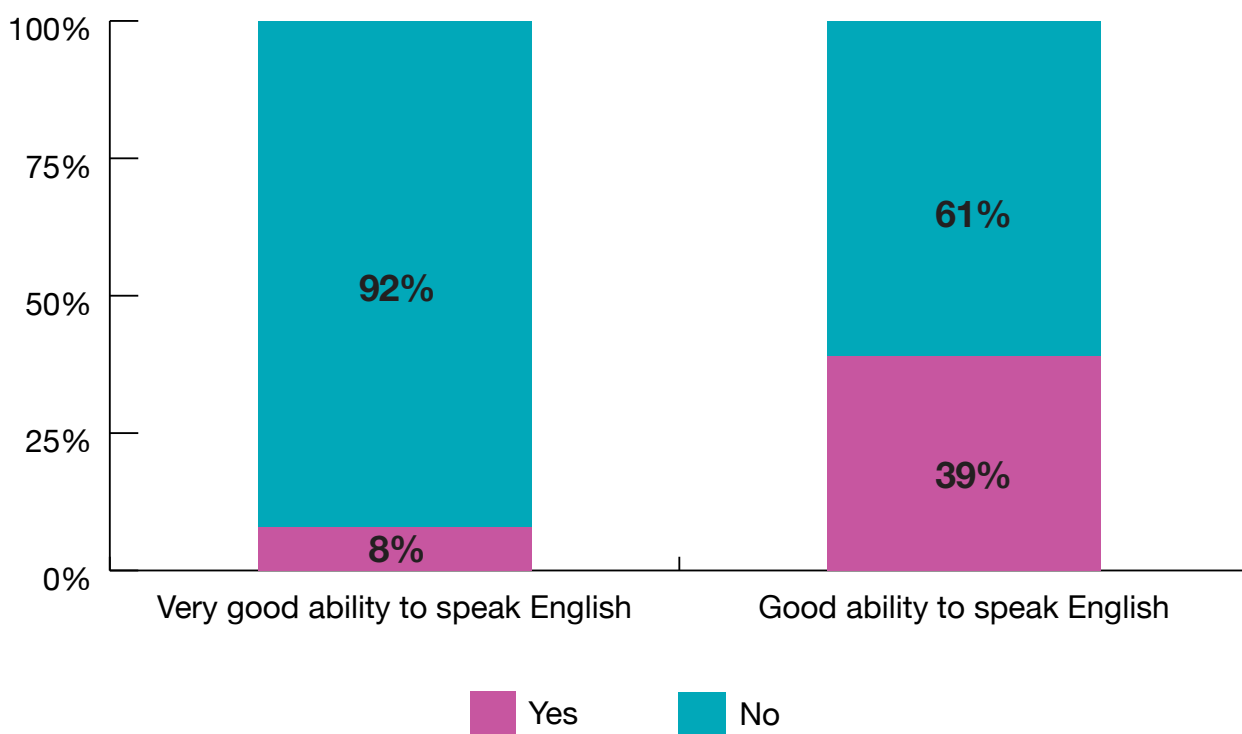
Francophones (38%) and Allophones (48%). Anglophones (27%) were also more likely than Francophones (24%) and Allophones (15%) to use MT devices for translation-mediated interaction (Figure 3).

**Figure 3**  
Scenarios where an automated machine learning device for translation was used



Additionally, immigrants reporting a good ability to speak English were far more likely than immigrants reporting a very good ability to speak English to use an MT device for translation-mediated interaction (39% vs. 8%) (Figure 4).

**Figure 4**  
Immigrant use of an automated machine learning device for translation-mediated interaction



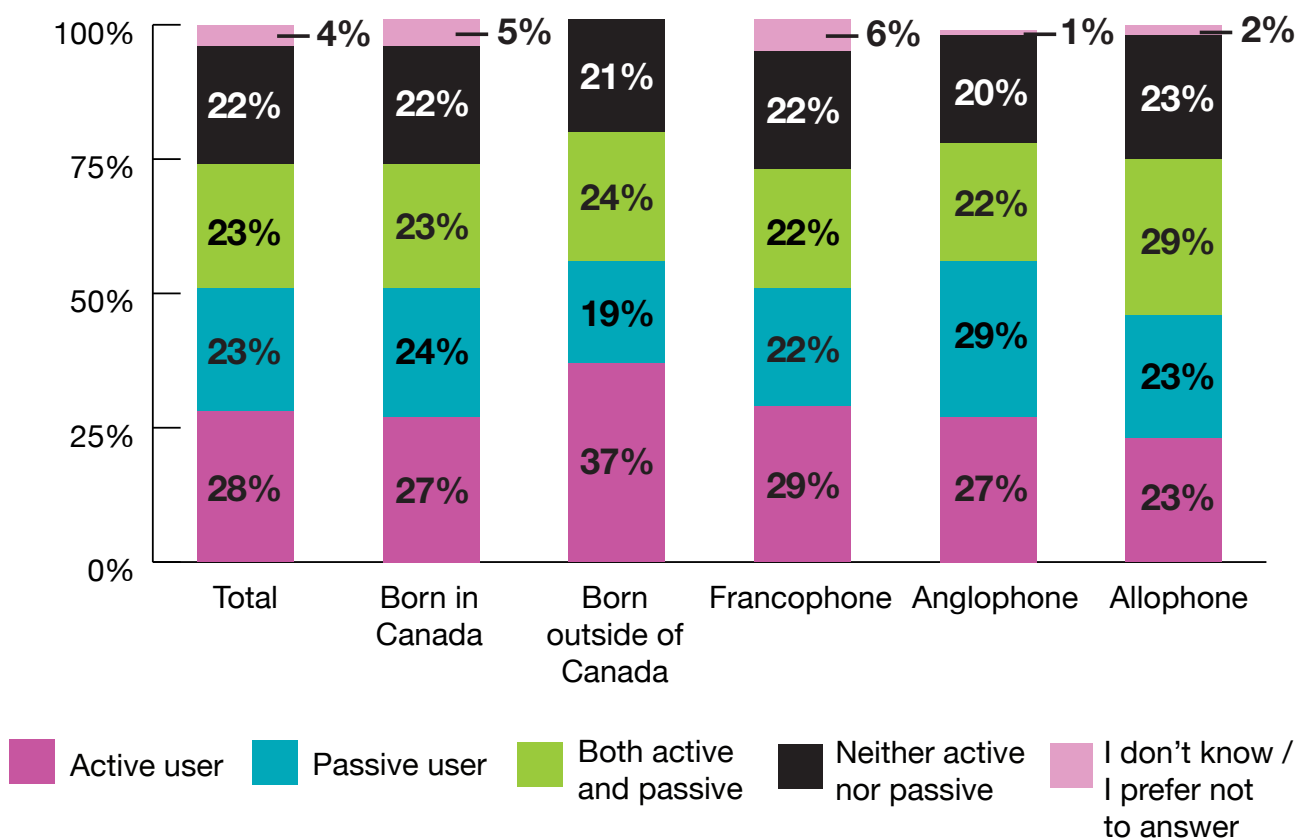
Survey participants were asked if they were passive or active users of MT. Active machine translation users are those who directly operate machine translation tools in a deliberate and task-oriented way. Whereas passive machine translation users are those who receive or consume machine-translated content without directly operating the machine

translation system. When asked whether they were active or passive users of MT tools, 28% of respondents indicated that they were active users and 23% indicated that they were passive users. Additionally, 23% stated that they were both active and passive users and 22% stated that they were neither active nor passive users. Respondents born outside of

Canada (37%) were more likely to be active users of MT tools than respondents born in Canada (27%). Conversely, respondents born in Canada (24%) were more likely to be passive users of MT tools than respondents born outside of Canada (19%). Francophones

(29%) were more likely than Anglophones (27%) and Allophones (23%) to be active users while Anglophones (29%) were more likely than Francophones (22%) and Allophones (23%) to be passive users of MT tools (Figure 5).

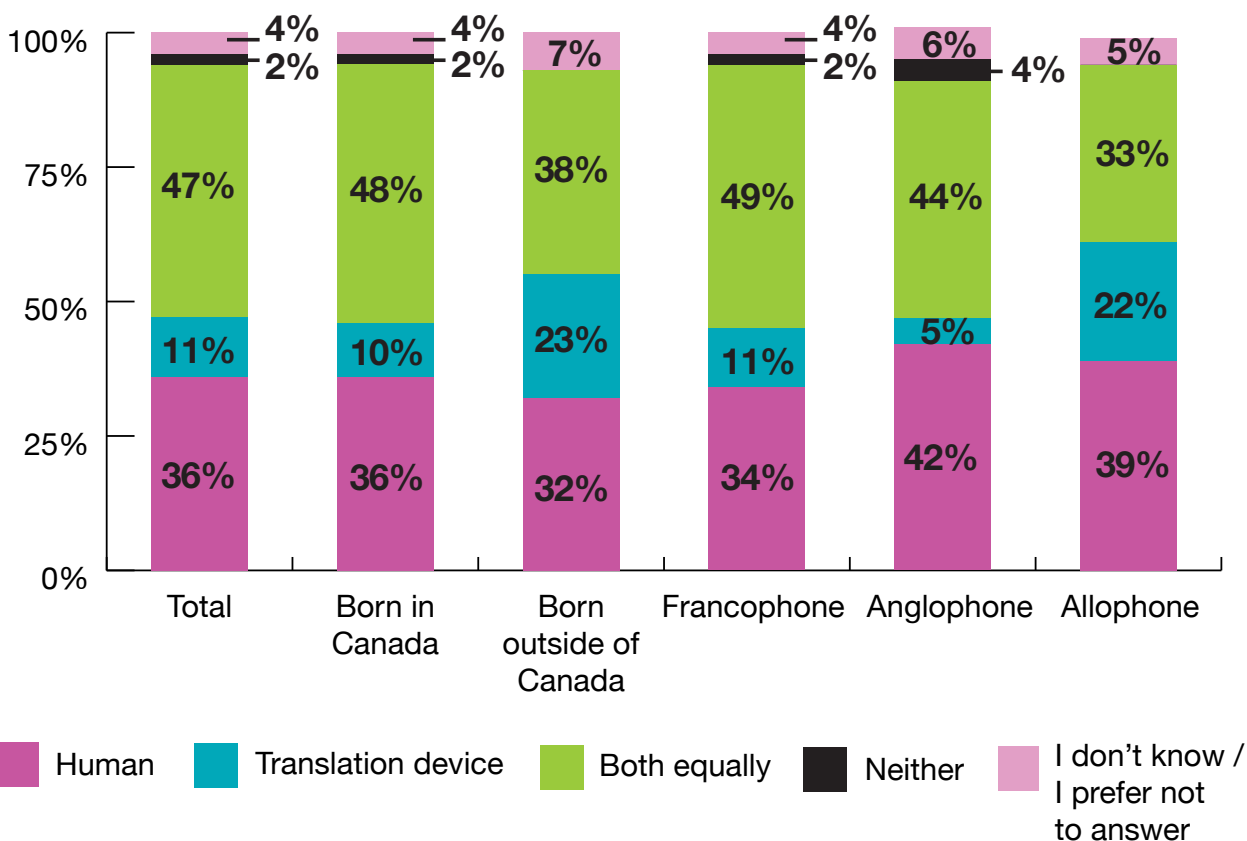
**Figure 5**  
Active vs. passive users of machine translation



When asked which sources they trusted more for translation purposes, 36% of respondents trusted humans more, 11% trusted translation devices more, 47% trusted both equally and 2% trusted neither. Respondents born in Canada (36%) were more likely to trust humans for translation than respondents born outside of Canada (32%). Meanwhile, respondents born outside of Canada were much more likely to trust translation devices

than respondents born in Canada (23% vs. 10%). Additionally, 48% of respondents born in Canada trusted both sources equally compared to 38% of respondents born outside of Canada. Anglophones (42%) were more likely to trust humans than Francophones (34%) and Allophones (39%), but Allophones (22%) were much more likely to trust translation devices than Francophones (11%) and Anglophones (5%) (Figure 6).

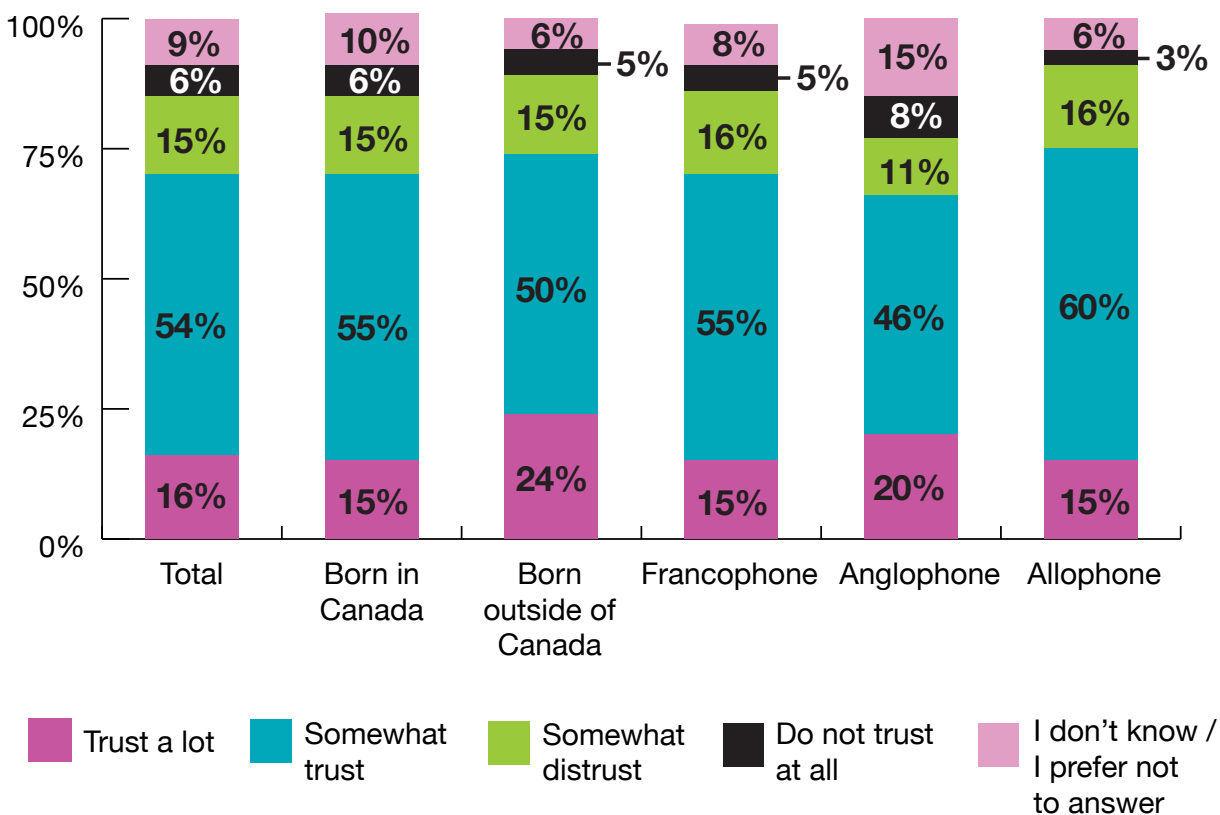
**Figure 6**  
Trust in human translators vs. translation devices



When asked whether they trusted MT for entertainment purposes (e.g., Netflix, foreign films, anime, etc.), 70% of respondents trusted MT (a lot or somewhat), 21% distrusted MT (somewhat or not at all) and 9% did not know or preferred not to answer. Respondents born outside of Canada (74%) were slightly more

likely to trust MT for entertainment purposes than those born in Canada (70%) but had similar levels of distrust (20% vs. 21%). Allophones (75%) were more likely to trust MT for entertainment purposes than Anglophones (66%) or Francophones (71%) but had similar levels of distrust (19–21%) (Figure 7).

**Figure 7**  
Trust in machine translation for entertainment purposes

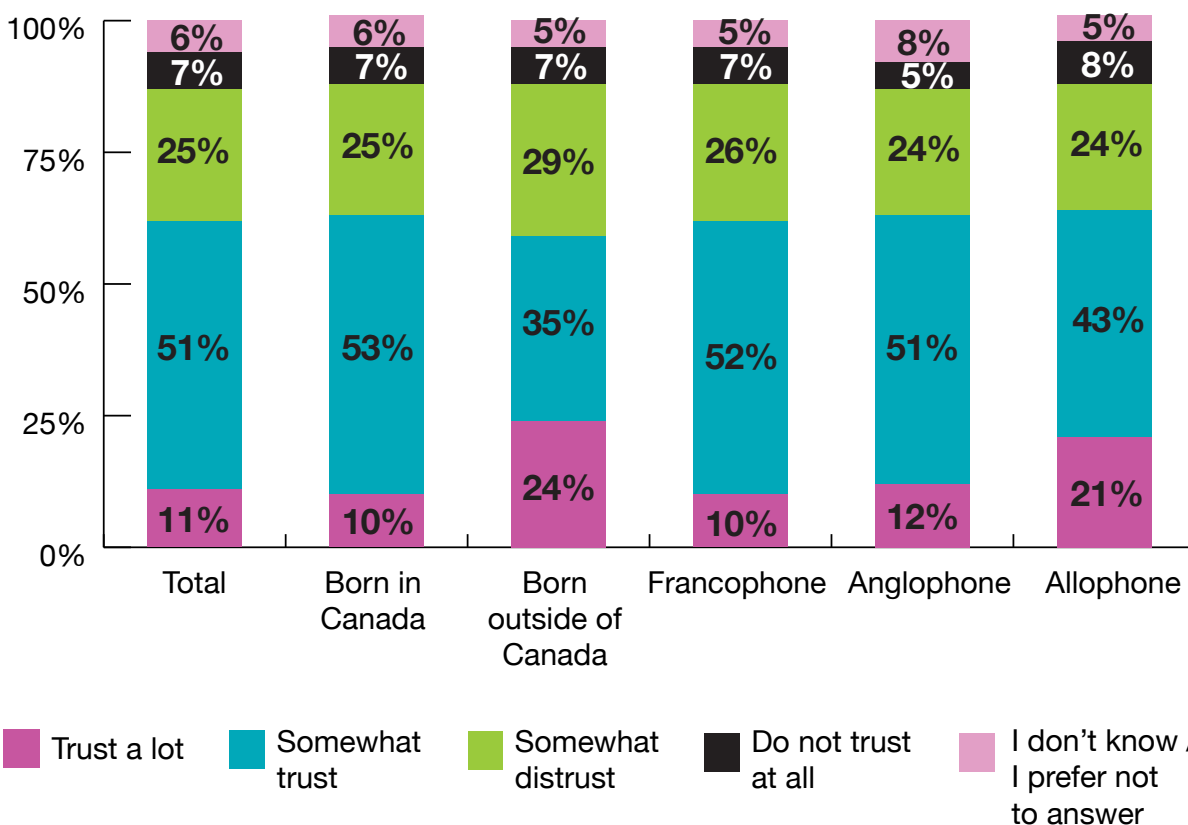


When asked whether they trusted MT to communicate in an educational setting, 62% of respondents trusted MT (a lot or somewhat), 32% distrusted MT (somewhat or not at all) and 6% did not know or preferred not to answer. Respondents born in Canada were more likely

to trust MT in an educational setting than those born outside of Canada (63% vs. 59%). Additionally, Anglophones (63%), Francophones (62%) and Allophones (63%) showed similar levels of trust in MT to communicate in an educational setting (Figure 8).

**Figure 8**

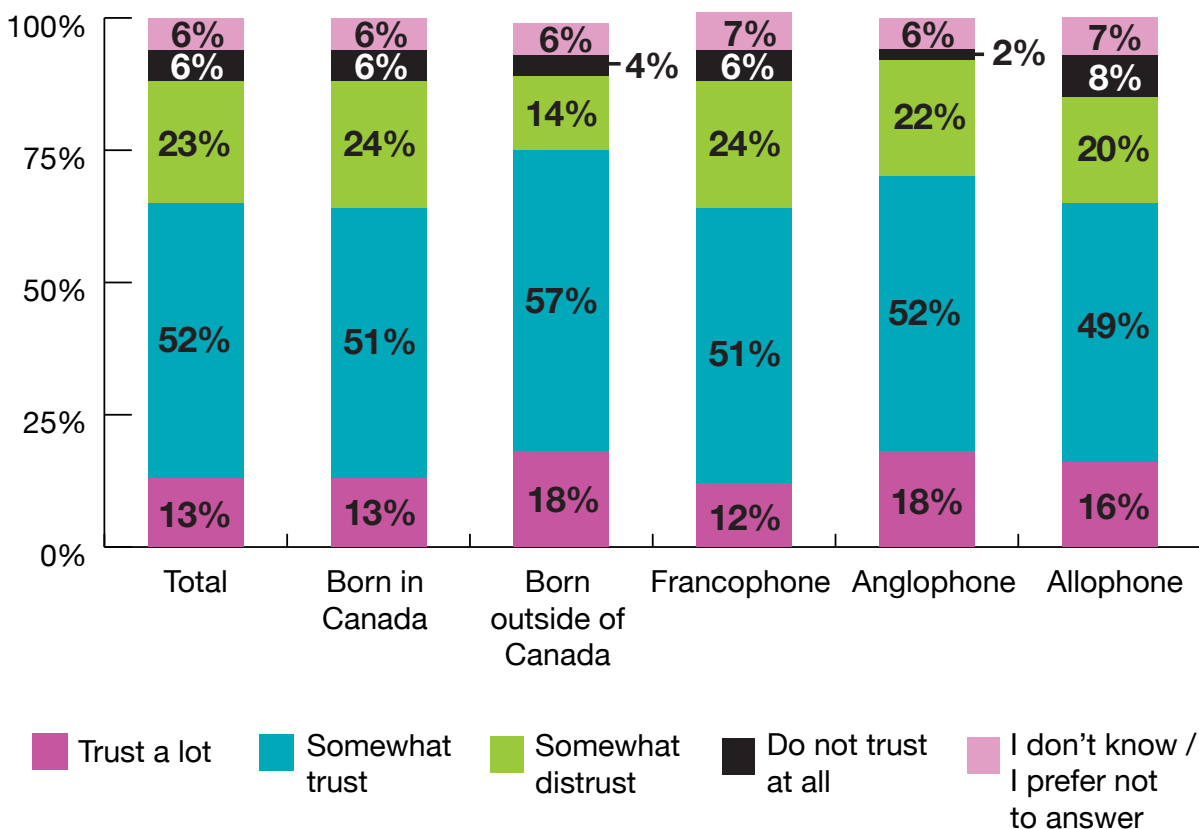
**Trust in machine translation to communicate in an educational setting**



When asked whether they trusted MT to communicate in a workplace setting, 65% of respondents trusted MT (a lot or somewhat), 29% distrusted MT (somewhat or not at all) and 6% did not know or preferred not to answer. Respondents born outside of Canada were

more likely to trust MT in the workplace than respondents born in Canada (75% vs. 64%). Moreover, Anglophones (70%) were more likely to trust MT in the workplace than Francophones (64%) and Allophones (65%) (Figure 9).

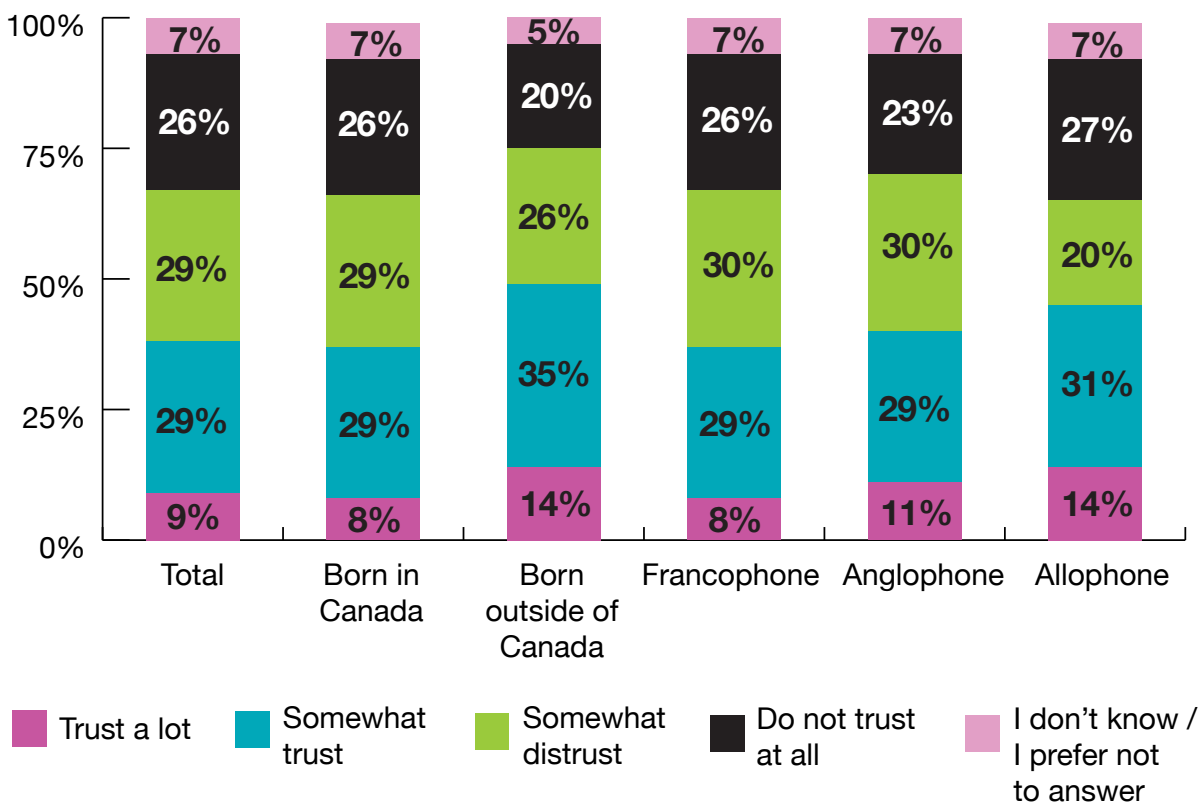
**Figure 9**  
Trust in machine translation to communicate in a workplace setting



When asked whether they trusted MT to communicate in a legal setting, 38% of respondents trusted MT (a lot or somewhat), 55% distrusted MT (somewhat or not at all) and 7% did not know or preferred not to answer. Respondents born outside of Canada

were more likely to trust MT in legal settings than respondents born in Canada (49% vs. 37%). Additionally, Allophones (46%) were more likely to trust MT in legal settings than Anglophones (40%) and Francophones (37%) (Figure 10).

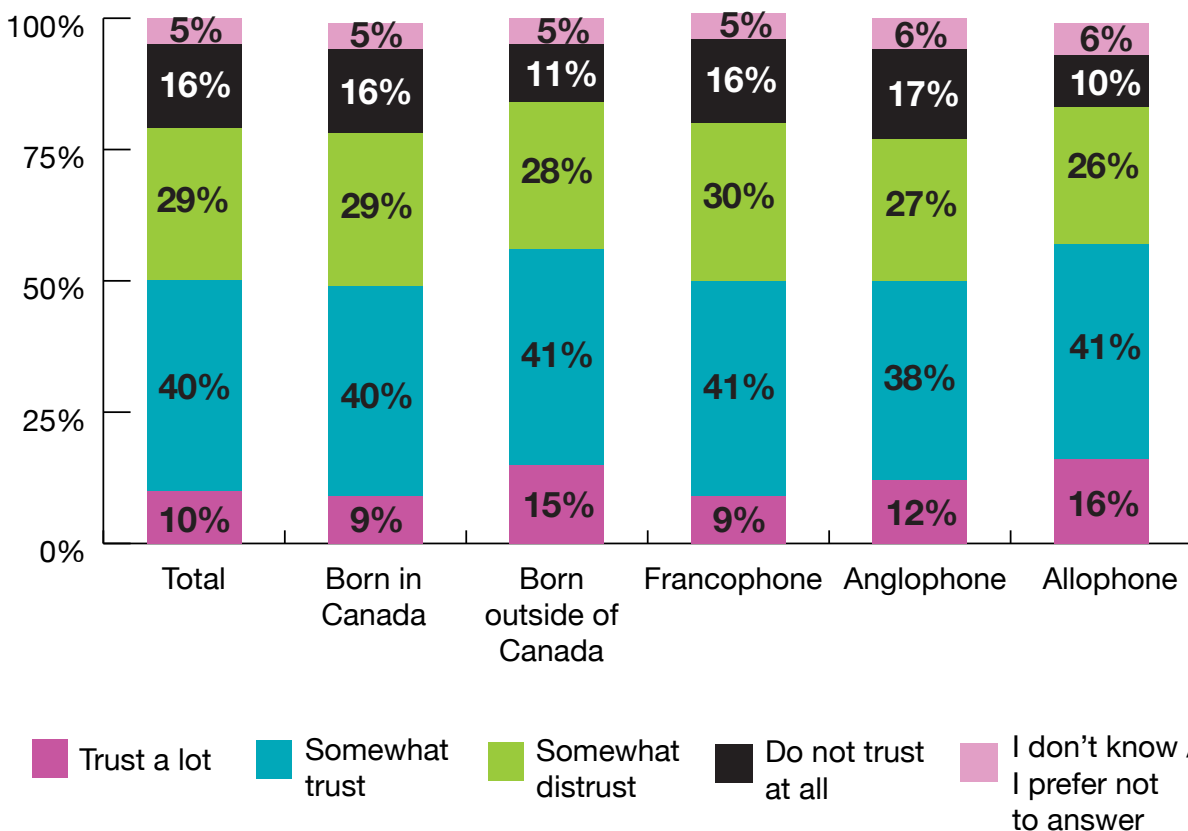
**Figure 10**  
Trust in machine translation to communicate in a legal setting



When asked whether they trusted MT to communicate in a health care setting, 50% of respondents trusted MT (a lot or somewhat), 45% distrusted MT (somewhat or not at all) and 5% did not know or preferred not to answer. Similar to workplace and legal settings, respondents born outside

of Canada were more likely to trust MT in health care settings than respondents born in Canada (57% vs. 49%). Anglophones and Francophones exhibited similar levels of trust in MT in health care settings (50% vs. 49%) but Allophones had higher levels of trust (57%) (Figure 11).

**Figure 11**  
Trust in machine translation to communicate in a health care setting



When asked what languages they use MT to translate to and from, 55% of respondents translated from English to French, 53% from French to English, 7% from English to a language other than French, 14% from

French to a language other than English, 6% from a language other than French to English and 9% from a language other than English to French. MT use for translation between English and French (both directions) was

similar for respondents born in Canada and outside of Canada. However, respondents born outside of Canada were much more likely than those born in Canada to use MT to translate from English to a language other than French (16% vs. 6%), a language other than French to English (21% vs. 7%) and a language other than English to French (26% vs. 7%). Francophones (59%) were more likely than Anglophones (45%) and Allophones (45%) to use MT to translate English to French. Conversely, Anglophones (60%) were more likely than Francophones

(52%) and Allophones (46%) to use MT to translate from French to English. Additionally, while Francophones (17%) were more likely than Anglophones (5%) and Allophones (10%) to use MT to translate from French to a language other than English, Allophones were significantly more likely than Anglophones and Francophones to use MT to translate from English to a language other than French (29% vs. 13% vs. 3%), a language other than French to English (31% vs. 6% vs. 3%) and a language other than English to French (22% vs. 7% vs. 8%) (Table 1).

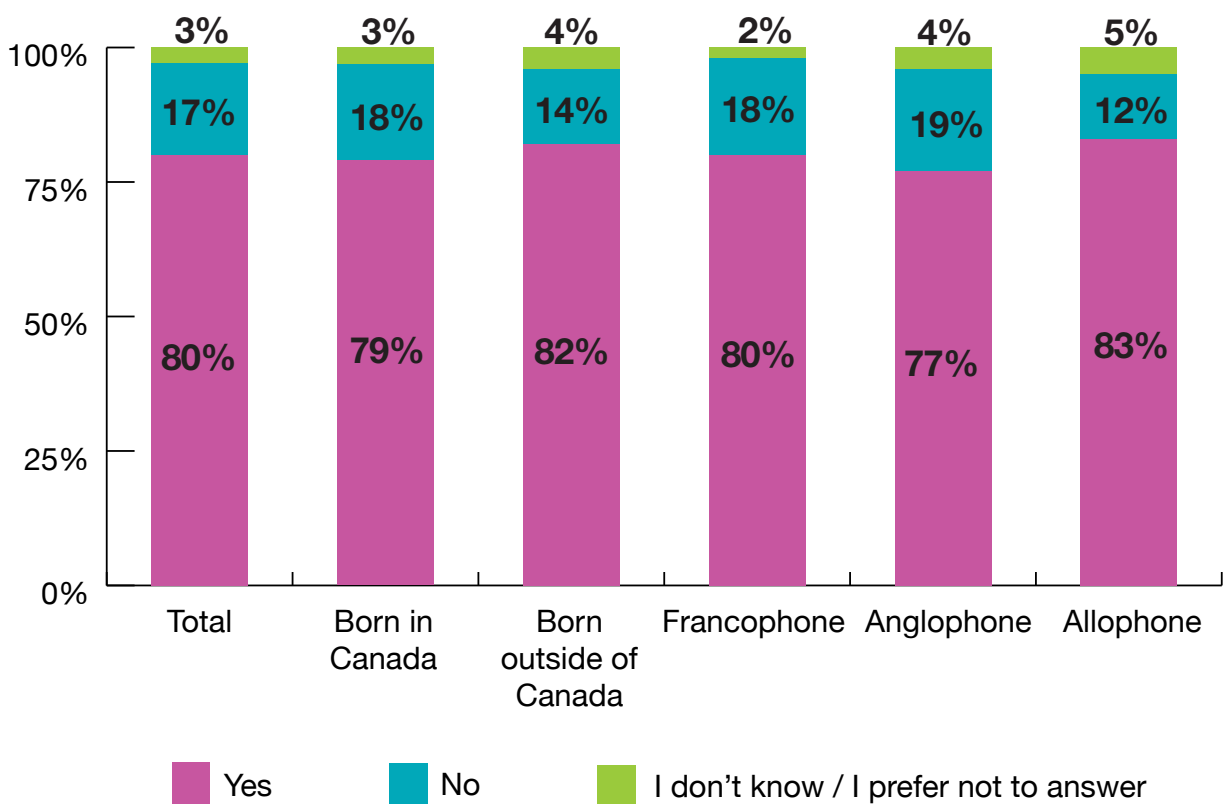
**Table 1**  
Languages survey participants used machine translation to translate to and from

	Total (%)	Born in Canada (%)	Born Outside of Canada (%)	Francophone (%)	Anglophone (%)	Allophone (%)
English to French	55	55	52	59	45	45
French to English	53	53	53	52	60	46
English to other	7	6	16	3	13	29
French to other	14	14	17	17	5	10
Other to English	6	4	21	3	6	31
Other to French	9	7	26	8	7	22
Don't know/ prefer not to answer	2	2	5	2	4	6

When asked if they believe MT can help improve second-language knowledge, 80% of respondents indicated “Yes”, 17% indicated “No” and 3% did not know or preferred not to answer. Respondents born outside of Canada were slightly more likely than respondents

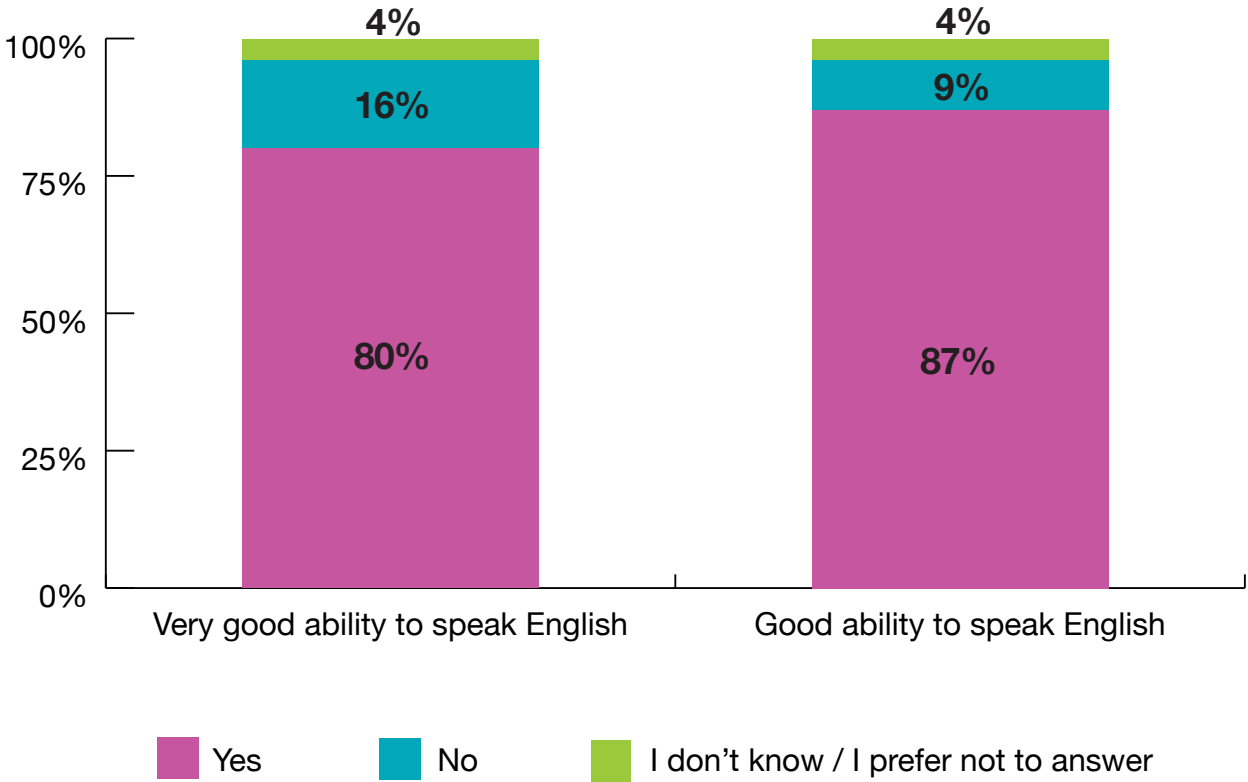
born in Canada to believe that MT can improve second-language knowledge (82% vs. 79%). Additionally, Allophones (83%) were more likely than Francophones (80%) and Anglophones (77%) to believe that MT can improve second-language knowledge (Figure 12).

**Figure 12**  
Belief that machine translation can help improve second-language knowledge



Additionally, immigrants reporting a good ability to speak English were more likely than immigrants reporting a very good ability to speak English to believe that an MT device can help improve second-language knowledge (87% vs. 80%) (Figure 13).

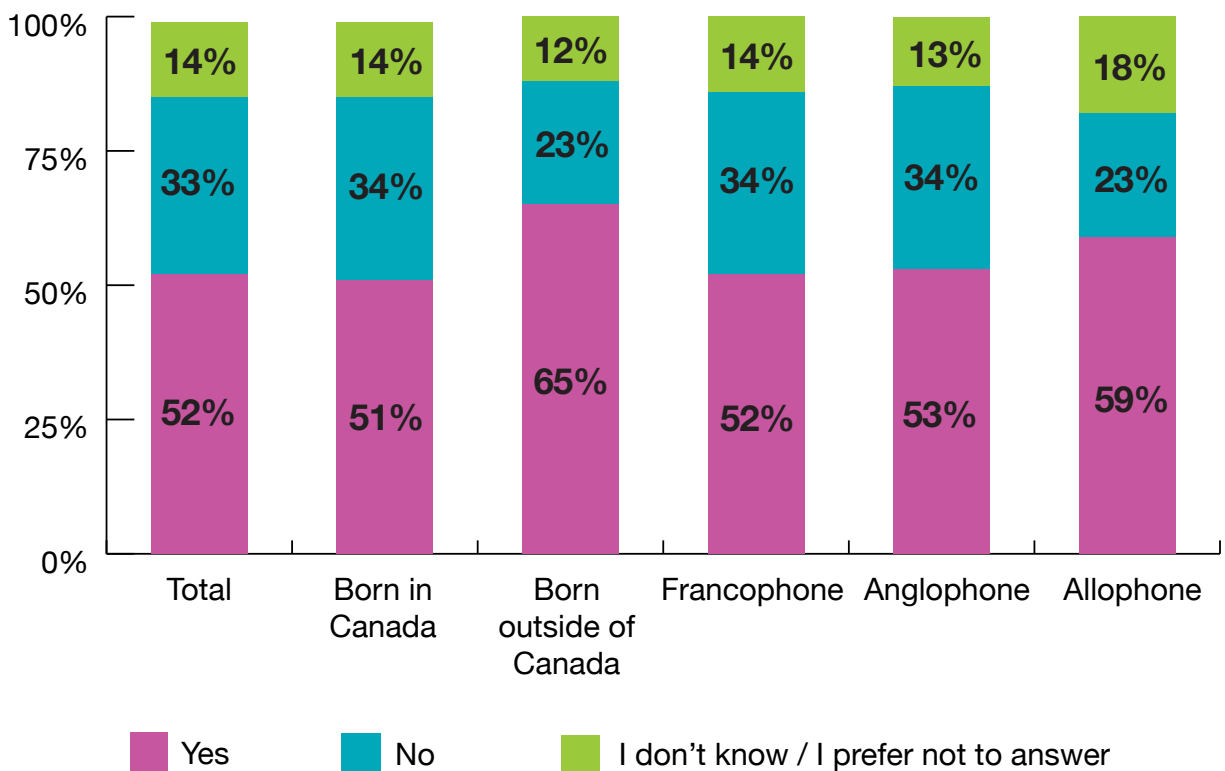
**Figure 13**  
Belief among immigrants that machine translation can help improve second-language knowledge



When asked if they believe MT will reduce language barriers between language groups, 52% of respondents stated “Yes”, 33% stated “No” and 14% did not know or preferred not to answer. Respondents born outside of Canada were more likely to agree with the

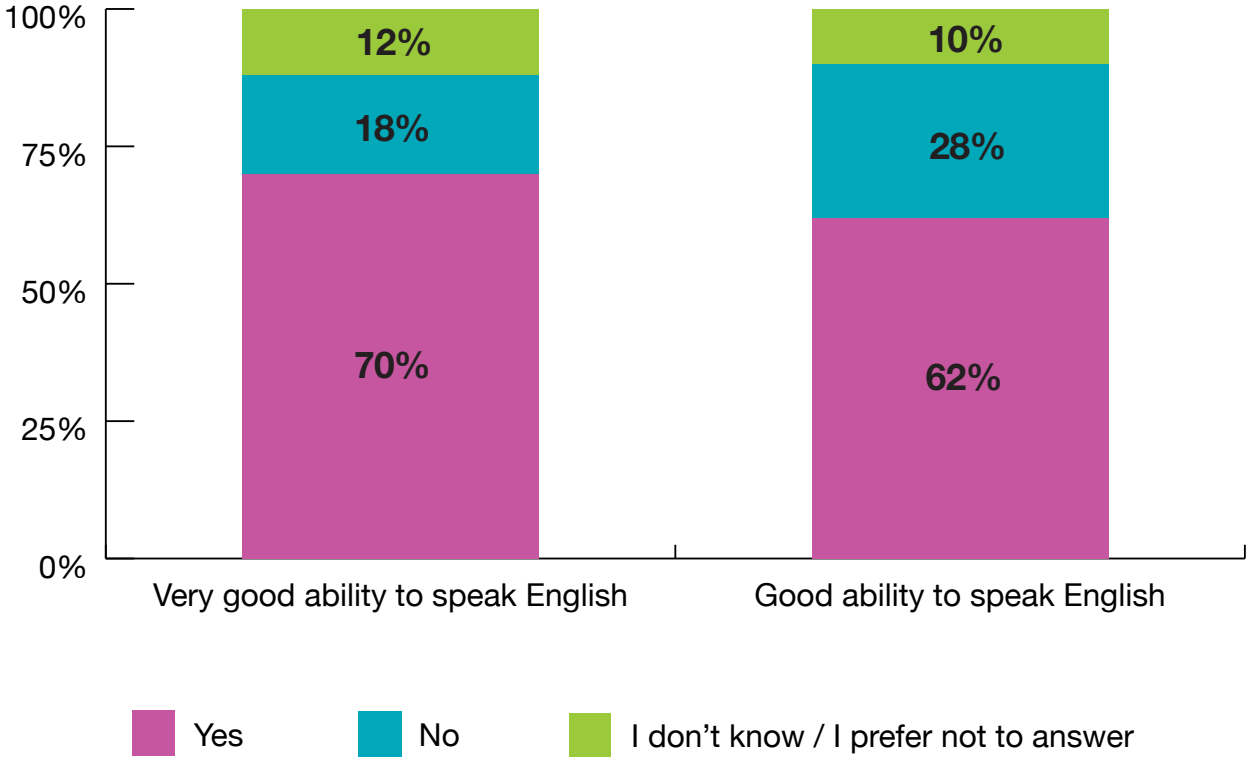
statement than respondents born in Canada (65% vs. 51%). Meanwhile, Allophones (59%) were more likely to believe that MT will reduce language barriers than Anglophones (53%) and Francophones (52%) (Figure 14).

**Figure 14**  
Belief that machine translation will reduce language barriers between language groups



Finally, immigrants reporting a very good ability to speak English were more likely than immigrants reporting a good ability to speak English to believe that MT will reduce language barriers between language groups (70% vs. 62%) (Figure 15).

**Figure 15**  
Belief among immigrants that machine translation will reduce language barriers between language groups



Overall, the results of the survey provide key insights about the use of MT among Canadian-born individuals and immigrants, and among Francophones, Anglophones and Allophones:

- > Respondents born outside of Canada were more likely to use translation devices than those born in Canada (60% vs. 51%).
- > Respondents born outside of Canada were more likely than those born in Canada to believe that MT will reduce language barriers between language groups (65% vs. 51%).
- > Overall, 80% of survey participants believed that MT improved their second-language knowledge. All five groups surveyed indicated similar levels of belief (77-83%).
- > The most common use of MT among all respondents was for assimilation of information (59%), followed by dissemination of information (41%) and translation-mediated interaction (24%). This order of preference was the same for respondents born in Canada and outside of Canada, as well as Francophones and Anglophones. However, Allophones were more likely to use MT for dissemination of information (48%) than assimilation of information (44%).
- > All groups of respondents trusted humans more than MT devices to conduct translations. However, almost one-half (47%) of survey respondents trusted humans and MT devices equally.
- > Respondents born outside of Canada were more likely than respondents born in Canada to trust MT for entertainment purposes (74% vs. 70%), in a workplace setting (75% vs. 64%), in a legal setting (49% vs. 37%) and in a health care setting (57% vs. 49%).
- > Allophones were more likely than Francophones and Anglophones to trust MT for entertainment purposes, and in legal and health care settings. However, Anglophones were more likely to trust MT in the workplace. Francophones, Anglophones and Allophones all had similar levels of trust in MT for educational purposes.
- > Respondents born outside of Canada were much more likely than respondents born in Canada to use MT to translate from English to a language other than French, from a language other than French to English and from a language other than English to French. The same held true for Allophones compared to Francophones and Anglophones.
- > Among immigrants, those reporting a good ability to speak English were more likely than those reporting a very good ability to speak English to use translation devices with automated machine learning (79% vs. 56%), to use an MT device for translation-mediated interaction (39% vs. 8%) and to believe that an MT device can help improve second-language knowledge (87% vs. 80%). However, immigrants reporting a very good ability to speak English were more likely to believe that MT will reduce language barriers between language groups (70% vs. 62%).

# Conclusions and Implications

As digital technologies are increasingly integrated into the everyday lives of people in Canada, technology-enhanced language learning (TELL) tools have emerged as key language learning supports for newcomers and immigrants. Based on recent research on MT, this study used a survey conducted by the ACS to investigate the use of MT among Canadian-born, immigrant, Francophone, Anglophone and Allophone populations in Quebec. We conducted quantitative data analysis to compare the use of MT among language learners, their trust in these tools in various settings (e.g., workplace, legal, health care), and MT's effectiveness in enhancing second-language skills and reducing language barriers. The prevailing theme from the data analysis shows that immigrants use and trust MT more than Canadian-born individuals, underscoring the opportunity to use MT in newcomer language training as a primary or supplementary tool. At the same time, we stress the importance of evaluations such as ours, as they can inform the use of MT and other TELL tools for language learning.

Based on the research and analysis presented in this report, we offer several recommendations for better incorporating MT into Canadian language training programs.

- > Encourage integration of MT into language training programs, using it as a supplementary tool rather than a replacement for direct instruction or human translation.
- > Develop targeted training for instructors and learners on the effective and ethical use of MT tools, focusing on strengths, limitations and risks.
- > Educate users in workplace, legal and health care settings about potential reliability concerns associated with MT.
- > Support the development and adoption of MT that caters to the diverse linguistic backgrounds of Canadian immigrants, including Allophones.
- > Encourage partnerships between government agencies, tech companies and settlement services to share best practices and ensure MT solutions are responsive to learner needs.
- > Conduct further research and regular program evaluations to monitor MT effectiveness, learner outcomes and user satisfaction.

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