Canadian Public Libraries Fighting Mis- and Disinformation: Review of Published Literature

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Contents

Introduction

Public libraries across Canada are working to combat mis- and disinformation in their communities. This report provides a summary of insights from published research regarding how people can combat these forces in their communities at a grassroots level.

Mis- and disinformation are formidable threats, undermining confidence in democratic systems and individual leaders, damaging public health efforts, and challenging policy and governance efforts across the world. Some examples include:

- False information spread rapidly during the COVID-19 pandemic (often referred to as the "infodemic") which undermined public health efforts to halt the spread of the disease and led to fractious debates about government powers.
- Contradictory information about genetically modified mosquitos distracted the US public during a Zika virus outbreak in 2016 and led to policy banning pesticides, which worsened the outbreak (Yoo et al., 2023).
- Disinformation spread during elections in several countries including the US, Brazil, and Indonesia. These efforts focus on influencing voters or impeding key groups' ability to vote.

In its recent report *Countering an Evolving Threat: Update on Recommendations to Counter Foreign Interference in Canada's Democratic Institutions*, the Privy Council recommends that Canada equip its citizens with knowledge as the best defence against election interference and called for "whole of society" approach to countering foreign interference (*Countering an Evolving Threat*, 2023). A study by the Ryerson Media Lab found that two thirds of Canadian respondents agreed that the "intentional spread of false information is a threat to Canadian democracy and needs to be addressed by government" (Andrey, 2023, p. 22).

In a summary of expert opinions from a wide range of disciplines and institutions, the Pew Institute identified AI-driven disinformation as one of the most harmful and menacing changes in digital life likely to happen by 2035,

> *A large proportion of those who wrote on this topic focused on what they consider to be the rising threat of newly emerging digital tools that can create deceptive or alternate realities, leading to battles for "truths." These experts say the social and political unrest, confusion and cognitive dissonance created by human-led, AI-bot-generated content, deepfakes and fake personas are a threat to human wellness and to participatory democracy. A number of these experts worry human analytical and cognitive skills could wither. One worried about the "decline in and discouragement of individual human thought."* (Rainie, 2023, p. 137)

The spread of incorrect information exacerbates other underlying risks. For example, misinformation risk interacted with the existing health risks of the COVID-19 pandemic, creating a multi-layered risk (Krause et al., 2020). In other words, false information, whether deliberately or accidentally false, increases risk to society overall and causes deep harm.

The United Nations has identified the spread of mis- and disinformation as "an existential risk to humanity," and identified eight approaches to strengthen information integrity. The user empowerment strategy calls for "bottom-up solutions that empower Internet users to limit the impact of online harms

on their own communities and decentralize power from the hands of the platforms," which will require building critical thinking skills and digital literacy (2023, p. 17–18).

Immediate and effective action is needed to reduce the spread and impact of mis- and disinformation. Canadian public libraries are uniquely positioned to teach "whole of society" strategies, thanks to several key strengths:

- A shared commitment to access to information, lifelong learning, and community wellbeing
- Experienced instructors of digital literacy and information literacy
- Trusted non-partisan institutions
- A broad footprint with a physical and digital presence in urban and rural communities across Canada.

As the Canadian Urban Libraries Council noted,

> *Libraries embody the democratic principle that citizens can freely inform and educate themselves. They uphold freedom of expression and freedom to read, and provide access to a wide range of ideas and information that empower individuals to make informed decisions and fully participate in society. They combat polarization by being open and free to everyone, providing the most democratic of spaces in our cities. During elections, many libraries distribute voter information, host all-candidate meetings, and operate as polling stations* (2023, p. 17).

Canada's 652 public libraries and 3,350 branches can lead knowledge mobilization, helping citizens learn evidence-based strategies to identify and prevent the spread of mis- and disinformation at a grassroots community level.

Purpose & scope

To date, many policy efforts to stem the flow of false information have focused on regulating the platforms through which mis- and disinformation are spread. This literature review focuses instead on the people who are exposed to mis- and disinformation and the conditions that make them more or less likely to believe it and spread it. The goal of this literature review is to identify strategies that libraries can teach to community members to reduce the very real threats posed by mis- and disinformation.

This report uses the following definitions: misinformation is information that is verifiably incorrect, possibly by accident, while disinformation is a specific type of misinformation that is intentionally false (Scheufele & Krause, 2019).

The research has been arranged into three sections:

- Factors influencing people accepting false information
- Factors in spreading mis- and disinformation
- Strategies to reduce the acceptance and spread of mis- and disinformation

These are followed by specific recommendations for public library program development.

Methodology

The literature review was conducted using a two-pronged approach. First, keyword searches and structured vocabulary searches were undertaken in a range of academic sources. After filtering and reviewing the results, the best articles were identified, and citation tracing was used to identify related

research, particularly broadly cited works. Meta-analyses and literature reviews were particularly helpful in identifying the most supported theories.

Access to much of the research was made possible through the Community Scholars program at Simon Fraser University.

The bibliography presented in Appendix A lists the sources cited in this review.

Appendix B outlines the sources and terminology used to identify scholarly works.

Literature Review

Mis- and disinformation are commonplace. One in four Americans are believed to have visited a fake news website during the 2016 US election (Guess et al., 2020), and in the intervening years, the spread of false information has continued to grow. A 2018 study in Singapore found that 80% of people were confident in their ability to identify fake news, but that 91% identified at least one fake news story as truthful (Tandoc et al., 2020, p. 385). A recent study found that 56% of Canadians had seen information they immediately suspected was fake at least a few times a month (Andrey, 2023, p. 13).

Studies in persuasion have shown that yielding to persuasion takes less cognitive effort than resisting it - and that citizens are therefore predisposed to accept misinformation rather than reject it (Pantazi et al., 2021, p. 271–272). Simultaneously, experts in psychology and linguistics agree that humans have a "truth bias" and tend to believe information that they encounter at face value (Pantazi et al., 2021, p. 273). A 2023 report by the Ryerson Media Lab at Toronto Metropolitan University found that 15% of Canadians have a high degree of belief in misinformation (Andrey, 2023, p. 4).

Given these challenges, any efforts to reduce mis- and disinformation must be evidence-based, effective, and as straightforward as possible. While there is continuing debate among researchers on these topics, some important insights can be drawn from the research to explain what predisposes people to believe or retain mis- and disinformation. These insights can be grouped into three areas: demographics, how the information is encountered or presented, and cognitive and psychological factors.

1. Factors in accepting false information.

a. Demographic factors

A 2022 study found that there was no correlation between level of education and likeliness to believe false information, but that exposure to fake news resulted in a higher belief in misinformation among the elderly, those with higher information literacy, and lower trust in mainstream media (Anspach & Carlson, 2022, p. 2–3). A Canadian study of online harms found no correlation between gender and social media use and people's belief in misinformation, and only a weak correlation with income and education level (Andrey, 2023, p. 14).

b. Cognitive and psychological factors

Continued influence

The continued influence effect has been well studied by psychologists. It occurs when someone has been introduced to misinformation, and then heard it debunked or corrected. Studies show that people continue to be influenced by the original misinformation even after a clear connection or retraction.

Related to memory storage, this effect has been shown to have a continued influence on voting intentions and support for political figures (Pantazi et al., 2021, p. 283). Some believe that the longer misinformation is held, the harder it is to replace (Walter & Tukachinsky, 2020, p. 5–7).

Mental models and belief perseverance

People are cognitively pre-disposed to maintain a confident but incorrect mental model rather than replace it based on a less complete understanding. Studies suggest that effective corrections need to offer a detailed explanation with evidence, and where possible, explain why the misinformation was acquired to begin with (Walter & Tukachinsky, 2020, p. 5).

Metacognitive myopia

Humans have a strong ability to learn new information, and a weaker ability to assess the context, quality, or provenance of information. At times, this can manifest as a stubborn resistance to questioning the accuracy or origin of information they've embraced (Pantazi et al., 2021, p. 272).

Motivated reasoning

Motivated reasoning is a defensive tactic. It is essentially "doubling down" on a position when new facts and evidence are presented. Instead of shifting perspective, a person using motivated reasoning will use new facts to justify their existing position. Using the earlier example of the US invasion of Iraq, the better informed the subjects were, the more effectively they used facts to support their existing views (Gaines et al., 2007). A later study confirmed that "direct factual contradictions can actually *strengthen* ideologically grounded beliefs" (Nyhan & Reifler, 2010, p. 323).

c. How the information is encountered or presented

Ideology, partisanship, and values

In studies of how partisanship influences opinion, researchers studied people's factual knowledge, whether they could update their beliefs as new information was shared, and how they interpreted the facts during the US-Iraq war. The results showed that people of all political beliefs updated their factual understanding as new information arose and maintained an equal awareness of facts (for example - no weapons of mass destruction were found in Iraq). However, their pre-existing political leanings determined how they *interpreted* facts (some believed that no weapons of mass destruction existed, others believed that they had been moved out of Iraq before the war began) (Gaines et al., 2007).

Similarly, a later set of experiments presented people with news articles containing inaccurate information. Some subjects were presented with a correction, and some were not. The results showed that groups aligning with all ideologies "failed to update their beliefs when presented with corrective information that runs counter to their predispositions. Indeed, in several cases, we find that corrections actually *strengthened* misperceptions among the most strongly committed subjects" (Nyhan & Reifler, 2010, p. 304).

Emotional and values-related misinformation is not easily debunked by providing accurate facts. Instead, factual information should be framed in terms of the audience's values and concerns (Krause et al., 2020, p. 1058).

Selective exposure

People prefer to consume information that is consistent with their existing beliefs, values, and ideology. Research shows that many people actively avoid reading information that contradicts their existing

perspective. This avoidance is often motivated by a belief that the news source in question is biased and not providing balanced coverage (Iyengar & Hahn, 2009).

Interestingly, research has shown that the oft-cited "echo chamber" of social media is not as complete as many believe. Most social media users are regularly exposed to information that contradicts their perspective or politics, and those who use social media consume a wider range of news sources than those who do not (Rossini et al., 2021, p. 2433). This may have mitigated selective exposure to a degree. However, since Bill C-18 brought the *Online News Act* into force in 2023 Canadians are consuming less news through social media, and are instead turning to TV, radio, and free media websites (*Should News Be Free to Access?*, 2023), which may strengthen selective exposure.

Fluency

The easier the information is to understand and grapple with, the more truthful it appears. Key elements of fluency include visual elements and repetition. In other words, the easier it is to take the information on board and explain it to others, the more deeply held the beliefs (Walter & Tukachinsky, 2020).

Repetition (illusory truth)

Related to fluency, evidence shows that information gains credibility through familiarity. The more a piece of information is repeated, the more it is believed. A 2015 study found that asking people to repeat a rumour increased their belief in the information for weeks after they encountered it (Berinsky, 2017). Other experiments have found that people believe statements that were repeated to be true more often than those that were not repeated (Pantazi et al., 2021, p. 275). Humans organize information into "networks of coherent schemata and narratives." Therefore, new misinformation that relates to a topic that was previously encountered may also benefit from familiarity as if it had already been repeated (Pantazi et al., 2021, p. 276).

While researchers are split on the impacts of confirmation bias – where repeating misinformation while trying to debunk it backfires and instead reinforces the original misinformation – library programs addressing mis- and disinformation should avoid repeating false information and should teach others the same tactic.

Presupposition

When information is framed as a presupposition, it is likely to be subconsciously embraced. One researcher gives this headline as an example: *Folli-Follie: Another scandal added to the "achievements" of the Greek government.* The word "another" presupposes that the reader knows (and agrees) that there have been previous scandals and creates a bias towards believing there have been previous scandals, even if this isn't true (Pantazi et al., 2021, p. 273–274). Embedding information in presupposition in conversation, news headlines and social media plays on this form of gullibility.

2. Factors in spreading mis- and disinformation.

It's clear that several cognitive processes are involved in accepting mis- and disinformation. But what motivates people to accidentally share misinformation, or worse, intentionally share disinformation? And what factors inhibit people from addressing mis- and disinformation when they encounter it, particularly in interpersonal relationships?

Demographic factors

Age and gender do not appear to significantly impact a person's likeliness to share incorrect information accidentally or intentionally, however, people with higher levels of education are less likely to accidentally share misinformation. No demographic correlation has been identified for intentionally sharing disinformation. (Rossini et al., 2021, p. 2441–2442).

Those who engage in political talk on social media are more likely to share mis- and disinformation.

Online political talk is common in Canada. A recent study found that 35% of Canadians had commented on or posted a link, video or image about news or politics and 17% reported joining virtual groups focused on political issues with people they didn't know (Andrey, 2023, p. 8). Engaging in political talk online has positive outcomes, including increased political participation offline, being more informed, and fostering engagement and activism (Rossini et al., 2021, p. 2433). However, it also increases the risk that a user will unintentionally share misinformation or intentionally share disinformation. People who are exposed to a range of political opinions (not just those aligned with their own views) are more likely to accidentally share and much more likely to deliberately share false information (Rossini et al., 2021, p. 2445).

Interestingly, political extremism was not a significant predictor for sharing mis- or disinformation. This suggests that people with "moderate" political views are just as likely to contribute to spreading incorrect information as those with extreme viewpoints (Rossini et al., 2021, p. 2441–2442), and provides a real opportunity for Canadian public libraries to reach a broad section of Canadians who are at risk of believing and sharing misinformation.

As one researcher notes, "social media allow anyone to become an opinion leader. Individuals who share political news via social media consider themselves highly influential and actively try to persuade others" (Anspach & Carlson, 2020, p. 699).

Misinformation spreads alongside accurate information

A study published in 2020 found that when a news article was shared on Facebook or Twitter, people paid more attention to the comments and context provided by the poster than the content of the news article itself. Since the social commentary often contradicted the content of the article, this led to misinformation even if the article was from a reliable source (Anspach & Carlson, 2020). A later study also found that exposure to fake news is not needed for misinformation to spread. Young people, people with low information literacy, and those with high trust in government tended to believe incorrect information without exposure to published misinformation (Anspach & Carlson, 2022).

Platform matters

Much of the research distinguishes between two types of social media – mobile instant messaging services such as WhatsApp, Snapchat, Facebook Messenger, and WeChat, where most messages are shared in private settings; and social networking sites such as Facebook, X / Twitter, and Instagram, in which most sharing is public or semi-public. People are more likely to share political talk and information in the private nature of mobile instant messaging services such as WhatsApp.

Research comparing Facebook and WhatsApp use during the 2018 Brazilian election found that people who engaged in political discussions on one platform were more likely to unintentionally share misinformation there and remarkably, more likely to intentionally share DIS information on the other platform. For example, participating in political talk on Facebook is strongly associated with intentionally

sharing disinformation on WhatsApp and vice versa. Furthermore, exposure to diverse perspectives on social media – for example, seeing news that contradicts the user's ideological beliefs, increases the likeliness that the person will deliberately post disinformation on the other platform (Rossini et al., 2021, p. 2441–2445).

Sharing content on WhatsApp occurs through private chats, rather than a public newsfeed, and does not contain metadata about its origin – making it easier for misinformation to spread, and harder for it to be traced and studied. This disadvantages policymakers and researchers, and also makes it harder for users to ascertain whether the information is from a reliable source (Rossini et al., 2021, p. 2435).

The coming into force of Canada's *Online News Act* in 2023 resulted in several major social media platforms (Facebook, Instagram) shutting off the sharing of news content, which is not accounted for in much of the research. Prior to this change, 29% of Canadians relied on Facebook for news consumption (Newman et al., 2024).

Conflict avoidance

Overall, most people prefer to avoid political disagreements regarding false information, and fear that it could impact their social relationships (Chadwick et al., 2023, p. 16). This leads to avoiding conflict. When a social contact shares mis or disinformation it creates a sense of unease, and people respond in a variety of ways, including silence, ignoring, muting, scrolling faster, silencing notifications, and restricting personal messaging to people with whom they agree (2023, p. 16). However, these strategies do not address mis- and disinformation, and instead leave it uncorrected.

3. Strategies to reduce the acceptance and spread of mis- and disinformation.

To reduce the risks associated with mis- and disinformation, libraries must identify strategies that reduce the likelihood of people accepting or resharing false information and increase their confidence and effectiveness when addressing mis- and disinformation in social settings.

Unfortunately, many people believe that correcting mis- and disinformation shared by friends and family will have no impact (Tandoc et al., 2020, p. 393), but the research highlights strategies and techniques and measures their effectiveness. To develop programs that will ultimately reduce mis- and disinformation and its impact, libraries must be able to confidently teach effective and evidence-based strategies for intervening.

The strategies have been grouped into high and low impact areas, based on both their applicability to library programming and the research into their effectiveness.

a. High impact strategies and insights to support library programming

Awareness training to reduce belief perseverance bias

Belief perseverance bias is defined as "the tendency to cling to one's initial belief even after receiving new information that contradicts or disconfirms the basis of that belief" (Siebert & Siebert, 2023, p. 2). In one study, 42% of people who had been exposed to misinformation experienced belief perseverance bias after the misinformation was retracted (Siebert & Siebert, 2024, p. 10). One effective approach to reduce belief perseverance bias is awareness training - informing people about the tendency to

experience belief perseverance so that they can recognize it in themselves and others when it arises. The effectiveness of this approach has been tested by having people read misinformation, then have it retracted, and then read about belief perseverance bias (Siebert & Siebert, 2023). Adapting this technique in libraries would mean teaching people about cognitive bias in anticipation of encountering mis- and disinformation going forward.

Correction

Also known as a refutation, a correction addresses false information by providing alternative information and explanations. Studies have shown that corrections are more effective than simple retractions or warnings (Siebert & Siebert, 2023, p. 5), and that people are more likely to correct a close friend or family member than a casual acquaintance (Tandoc et al., 2020, p. 391).

All corrections have limitations. Regardless of the type of correction used, a meta-analysis of 32 studies found that overall, no correction can entirely reset a person's beliefs and attitudes to the same state as before they encountered the false information. The most effective corrections are delivered immediately, are consistent with the audience's worldview, and are attributed to the same source as the original misinformation (Walter & Tukachinsky, 2020, p. 20). People are more likely to believe information that "appears to follow a logical narrative, that comes from a source they perceive to be "credible," that is consistent with their preexisting values and beliefs, and that seems to be something other people believe" (Scheufele & Krause, 2019, p. 7664).

Bypassing

Another strategy which is effective at reducing the impact of misinformation is bypassing. While many believe that debunking or correcting false information is necessary, this approach suggests that it is not. Instead, bypassing redirects attention to information that supports a different conclusion. In a series of experiments, researchers compared the impact of bypassing on a group of people who had received misinformation about the dangers of genetically modified crops and measured their support for policy decisions to restrict genetically modified crops. One group was provided with information about the positive benefits of genetically modified crops, and a second group received corrections to the original misinformation followed by information about positive benefits. Both strategies reduced the belief in the misinformation, demonstrating that bypassing is an effective strategy. Subsequent experiments showed that bypassing increased participants' confidence in the alternate information (in this case, the benefits of GM crops), a benefit not received from correction (Calabrese & Albarracín, 2023). This study demonstrates that misinformation can be reduced without direct confrontation – a strategy that might serve people well when addressing false information in close social relationships.

Framing Corrections in Relation to Values and Ideology

False information is difficult to correct, and even more so when people have pre-existing attitudes. Research has shown that overall, efforts to correct mis- and disinformation are more effective for health-related topics than political topics, in part because people are more likely to engage in motivated reasoning (defined above) on political issues (Rossini et al., 2021, p. 2436). Effective corrections must emphasize how the information fits within someone's existing worldview and values to improve the likeliness that they will embrace it (Walter & Tukachinsky, 2020, p. 24).

Social correction online

False information does not go unnoticed, and studies of online social corrections – when someone challenges another for sharing mis or dis information, have identified some interesting information.

People report that they frequently experience, witness, and engage in corrections of mis- and disinformation on social media. Social corrections occur more frequently on WhatsApp than on Facebook. Researchers speculate that people are more comfortable challenging mis- and dis information in small settings with close friends and family than in more public venues such as Facebook where they may have a larger community of people with weaker social ties (Rossini et al., 2021, p. 2440, 2446).

	Facebook	WhatsApp
Experiencing social corrections (being corrected by someone else)	26.44%	36.05%
Witnessing social corrections of others	41.96%	46.78%
Engaging in social corrections (performing a correction yourself)	32.03%	40.15%

Table source: (Rossini et al., 2021, p. 2441)

b. Ineffective approaches and tactics to avoid

Knowledge deficit model

Some theorists have argued that people who believe disinformation are suffering from a lack of knowledge which is easily corrected with facts. This solution has been proven to be ineffective, but many strategies for addressing mis- and disinformation continue to rely on this assumption. In reality, when people are confronted with facts that contradict their views and are told that they are wrong, they are likely to defend their beliefs using "motivated reasoning" (Krause et al., 2020, p. 1057). Effective corrections must avoid this pitfall.

Fact-checking

A strategy embraced by journalists and some librarians has been to provide independent fact-checking services. For example, during a political debate, a fact checker will research claims as they are made, and share the results live online. Unfortunately, these efforts are often viewed skeptically, especially when the media outlet or institution doing the fact-checking is not perceived to align with a person's existing beliefs. More than half of Americans report that they view fact-checkers as biased (Krause et al., 2020, p. 1056). Furthermore, fact-checking a rapidly changing issue (such as a war or a pandemic) leads to uncertainty, since yesterday's accurate information quickly becomes today's misinformation, undermining the creditability of fact-checkers (2020, p. 1056). A study of the 2016 US election found that while 25% of people visited a fact-checking website during the study, they did not overlap significantly with people who reported visiting a fake news website – less than 7% of people who consumed fake news also consumed fact-checking services (Guess et al., 2020). In other words, most fact-checking efforts don't reach their intended audiences.

Repeating false information while debunking it

Based on the principle of repetition, researchers have shown that repeating false information to debunk it can inadvertently reinforce it for listeners. This is known as the backfire effect. Efforts to correct false information should avoid repeating the original claims (Walter & Tukachinsky, 2020, p. 7).

A related backfire can occur when contradictory information is perceived to support the original misinformation. This often occurs during an argument – the more vigorously a person argues against new information that is incongruent with their position, the more likely that information is to bolster their original views. Some have found that they may then hold opinions that are *more* extreme than before the argument (Nyhan & Reifler, 2010, p. 308).

Potential for library programming

Awareness training is one proven effective tool in countering belief perseverance bias, and libraries can activate this strategy through public programming. A basic awareness of cognitive biases can help people recognize them in action and improve resilience to mis- and disinformation (Siebert & Siebert, 2023, p. 16), and can be paired with strategies for addressing mis- and disinformation in social relationships to build impactful library training.

Recommended Program Outcomes

Future library programming should focus on 4 key outcomes.

1. Improved ability to recognize mis- and disinformation.

2. A basic understanding of the human tendencies that predispose us to believe mis- and disinformation.

3. Identify practical tips to avoid sharing mis- and disinformation.

4. Learn key strategies for addressing mis- and disinformation when you encounter it in your community and social circles.

Cognitive biases impacting mis- and disinformation

- There is a human tendency to take information at face value.
- We have limited capacity to evaluate complex source information.
- Pre-existing values and political views influence how people interpret information.
- We are more likely to accept information that is simple, and frequently repeated.
- Misinformation that is corrected continues to influence people's thoughts and decision making.

Strategies for addressing mis- and disinformation in the community

When correcting:

- **Address mis- and disinformation promptly.** The longer it takes to correct mis- and disinformation, the less effective the correction is at changing a person's belief.

- **Correct in private.** To ease social discomfort, researchers suggest that people step away from larger groups and address mis- and disinformation in private settings or smaller circles, and adopt an empathetic orientation (Chadwick et al., 2023, p. 18).

- **Avoid repeating the original mis or disinformation.** Repetition makes mis- and disinformation harder to dislodge. Avoid repeating it whenever possible.

- **Frame your correction.** Emphasize how the factual information fits within someone's existing worldview and values to improve the likeliness that they will embrace it (Walter & Tukachinsky, 2020, p. 24).

- **Provide straightforward information, alongside context and explanation.** Information that is simple and easy to understand is more frequently perceived as true. However, you should be prepared with context and details to match the level of detail contained in the original mis or disinformation.

- **Question the creditability of the original information source**. Source credibility is core to how misinformation is processed, but humans place less value on sources used in corrections (Walter & Tukachinsky, 2020, p. 23–24). Put simply, it is more effective to question the source of the misinformation than to counter it with new sources.

- **Refer to the same source where possible.** If the misinformation came from a credible source but is verifiably false, use contradictory information from the same source (Walter & Tukachinsky, 2020, p. 24).

- **If you are relying on third-party sources, reduce the impact of partisanship** by referencing non-partisan sources (Berinsky, 2017, p. 259) such as research institutes, trusted non-profit organizations, etc.

- **Acknowledge uncertainty.** To maintain credibility when addressing false information, acknowledge any gaps in current knowledge. Be clear when a definite answer is not known, to avoid the pitfall of appearing incorrect later and damaging trust (Krause et al., 2020, p. 1058).

- **Avoid protracted arguments.** These can damage relationships, undermine your credibility, and entrench people's existing views, even when the information you are providing debunks their beliefs.

Other strategies for responding to mis- and disinformation:

- **Bypassing**
  Instead of challenging incorrect information, direct people's attention to factual information that supports a different conclusion. This strategy is valuable when you are concerned about the impacts of a confrontation.

- **Be cautious about labeling**

Labeling something as false which is true leads people to discard accurate information and damages the credibility of the source. Furthermore, it can cause readers to mix up which details were accurate and which were not (Freeze et al., 2021, p. 1460).

Application of research & next steps

The next steps in this project are:

- Undertaking an environmental scan:
    - A survey of public libraries and community organizations in North America to identify existing programs addressing mis- and disinformation.
    - Online research of existing Canadian and US programs addressing mis- and disinformation.
    - Interviews with libraries and community organizations to explore the features of their programs and their alignment with the recommendations above.
- A workshop with a sample of Canadian public libraries to test receptiveness and identify additional criteria necessary to ensure that any future program will be well adopted and widely used.
- A final report summarizing everything learned during this process and recommending the next steps in developing a national curriculum on mis- and disinformation.

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Appendix B: Search terms and sources

Sources

This is an interesting topic since it doesn't fit neatly into one discipline. Accordingly, a wide range of academic resources were used to identify all relevant materials. From social science, psychology, policy, political science, to education and public health – the issue of dis and misinformation touches nearly every aspect of human life and academic studies.

Database	Scope
Community Scholars Portal, Simon Fraser University	More than 20,000 titles including journals, ebooks, and reference works in the following collections: Sage, Oxford University Press, Wiley-Blackwell, Taylor & Francis, Cambridge University Press, Springer, Duke University Press, Policy Commons.
APA PsychInfo	Source of authoritative research on behaviour and social sciences. More than 5,000,000 peer-reviewed records, 144 million cited references from 2,400 journals. Content from journal articles, book chapters, and dissertations.
PsychArticles	A comprehensive database of full-text, peer-reviewed articles published by the American Psychological Association, the Canadian Psychological Association, Hogrefe Publishing Group, and the Educational Publishing Foundation. Includes 119 journals and journal coverage dating back to 1894.
Academic Search Complete (EBSCO)	Academic Search Complete is a multi-disciplinary database which provides indexing (with abstracts) to peer-reviewed journals, conference proceedings, monographs and reports.
Social Sciences Citation Index	Searched via Web of Science. SSCI covers 3,400 journals across 58 social science disciplines and includes extensive citation tracing.
Policy Commons	11 million reports from think tanks, agencies, governments and cities.

Search terms

These terms were used in various Boolean combinations with truncation where appropriate. Some represent key words, and others structured vocabulary:

- Information
- Misinformation
- Disinformation
- Fake news
- Deception
- Interpersonal communication
- Interpersonal interaction
- Conflict Resolution
- Continued influence effect (CIE)
- Correction
- Political elections
- Political processes

- Social media
- Conspiracy beliefs
- Conspiracy theory
- Information Dissemination

Public Training Initiatives Addressing Mis- and Disinformation in Canada and the United States

About this survey

Mis- and disinformation are formidable threats, undermining confidence in democratic systems, damaging public health efforts, and challenging policy and governance efforts across the world. Canada's Privy Council Office recommends that Canada equip its citizens with *knowledge* as the best defence and has called for a "whole of society" approach to countering foreign interference.

This survey will identify existing public education efforts to address mis and disinformation in Canada and the United States. The results will inform efforts to develop a national public library curriculum to empower Canadians to fight mis- and disinformation.

The survey will take between 5 and 20 minutes to complete.

This project was funded by the Government of Canada, and is steered by 5 Canadian public libraries including Burlington Public Library, Fraser Valley Regional Library, North Vancouver City Library, Pickering Public Library, and Vancouver Public Library. The project is administered by Public Library InterLINK.

* Organization Name

* Name of person responding to survey

Title (your role)

* Email

Type of organization

- ◯ Public Library
- ◯ Community organization
- ◯ Post-secondary institution
- ◯ Other:

Country

Province or State

In this survey, misinformation refers to information that is verifiably incorrect, possibly by accident, and disinformation refers to a specific type of misinformation that is intentionally false.

Training refers to classes, workshops, instructional videos, and other planned learning opportunities, offered for free or for a cost.

* Do you currently, or have you in the past 5 years, offered any training on misinformation and/or disinformation?

Answer yes if the training was delivered by your organization, or in partnership with another. Answer no if the training was content from a third party subscription.

- [ ] Yes, we currently offer training on misinformation and/or disinformation
- [ ] Yes, we have previously offered training on misinformation and/or disinformation
- [ ] No, we do not offer any training on misinformation and/or disinformation

Next page

Save and continue later

Public Training Initiatives Addressing Mis- and Disinformation in Canada and the United States

About your training

Please describe the training you offer or previously offered. Please describe one training session on this page. You can report up to five training sessions in this survey. If you have more than five to report, please contact Anne O'Shea at anne@craftstrategic.ca to arrange an interview.

Name of the class / workshop / training session

Description

Please copy and paste the description used to advertise or describe this training to participants, or provide a general description.

If this training has an online presence, please provide the direct link.

How was this training offered?

Select all which apply.

- [ ] In person
- [ ] Online – synchronous (a live session)
- [ ] Online – asynchronous (a recorded training session)
- [ ] Hybrid (incorporating both in person and online offerings)

What language was this training delivered in? Select all that apply.

- [ ] English
- [ ] French
- [ ] Punjabi
- [ ] Mandarin
- [ ] Arabic
- [ ] Cantonese
- [ ] Spanish
- [ ] Tagalog
- [ ] Italian
- [ ] German
- [ ] Urdu
- [ ] Farsi
- [ ] Portuguese
- [ ] Hindi
- [ ] Russian
- [ ] Other:

Did this training include any of the following topics? Select all that apply.

- [ ] How to identify misinformation and/or disinformation.
- [ ] How to report misinformation and/or disinformation to platforms and/or publishers.
- [ ] How to evaluate the credibility of information sources.
- [ ] Recognizing predispositions to believe misinformation and/or disinformation, such as cognitive or political biases
- [ ] How to avoid spreading misinformation and/or disinformation.
- [ ] How to challenge misinformation and/or disinformation.
- [ ]

- [ ] Strategies for addressing misinformation and/or disinformation with social contacts (friends, family, coworkers, etc).
- [ ] AI digital literacy, including the ability to spot deepfakes, the limitations of ChatGPT, etc.

How many times have you offered this specific training?

Please answer with a specific number. If you held the same session three times, repeating the content to a different audience, answer 3. If you offered a series with two sessions three times, answer 3.

To date, how many people have participated in this training?

Count all participants. For asynchronous video training, count the number of views.

Who is the primary audience for this training? Select all that apply.

- [ ] Community members
- [ ] Students
- [ ] Staff or faculty
- [ ] Adults (18+)
- [ ] Seniors (65+)
- [ ] Teens (12-17)
- [ ] Children (11 and under)
- [ ] Other (Please specify):

Is there a cost for people to participate in this training?

- ◯ It is free
- ◯ There is a cost (Please specify)

* Thank you. We'd like you to fill out this section once for each training opportunity you offer on mis/disinformation. Do you have another training program to report?

- ◯ Yes, I have another program to report.
- ◯ I am done describing my training - please take me to the next part of the survey.

Previous page Next page

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Public Training Initiatives Addressing Mis- and Disinformation in Canada and the United States

If you have not offered training on misinformation and/or disinformation, have you considered it?

- ◯ Yes, we've considered / explored offering training
- ◯ No, we have not considered it
- ◯ Not applicable

On a scale of 1-5, how concerned is your organization about misinformation and/or disinformation?

Not at all concerned **Neutral** **Very concerned**

On a scale of 1-5, how important does your organization think it is for Canadians to have access to training on misinformation and/or disinformation?

Not important **Neutral** **Very important**

If you believe that it is important, what features do you think this training should include?

- [ ] How to identify misinformation and/or disinformation.
- [ ] How to report misinformation and/or disinformation.
- [ ] How to evaluate the credibility of information sources.
- [ ] Recognizing predispositions to believe misinformation and/or disinformation, such as cognitive or political biases.
- [ ] How to avoid spreading misinformation and/or disinformation.
- [ ] How to challenge misinformation and/or disinformation.
- [ ] Strategies for addressing mis and disinformation with social contacts (friends, family, coworkers, etc)
- [ ] AI digital literacy, including the ability to spot deepfakes, the limitations of ChatGPT, etc.

Is there anything else you'd like to say on this topic?

Previous page Submit