

Evidence Brief

The ‘Digital Divide’ and Six Promising Practices to Ensure Greater Access to Online Programming

How Did We Compile This Evidence?

We searched YouthREX’s online Knowledge Hub, Google Scholar, and Google using various combinations of key terms, including: “online”, “program”, “learning”, “access”, “barriers”, “limited internet”, “low-bandwidth”, and “youth”.

Definition of Key Terms

The ‘*digital divide*’ refers to the widening gaps in access to internet and communications technology (ICT) that disproportionately affect rural, Indigenous, and low-income households (Graham, 2020).

Asynchronous communication is separated by time, and includes email, online discussion forums, message boards, blogs, and podcasts.

Synchronous communication involves interaction at the same time, such as telephone calls, videoconferencing, chat, and face-to-face communication.

Summary of Evidence: Four Key Facts About the ‘Digital Divide’

1. It is essential to consider speed when assessing access to the internet.

While the majority (98.7%) of households in Canada have access to the internet, only 84.1% have access to *high-speed internet*, defined as 50/10 Mbps* (i.e., 50 Mbps download and 10 Mbps upload) (Canadian Radio-television and Telecommunications Commission [CRTC], 2019). The CRTC has identified **speeds of 50/10 Mbps as necessary to take full advantage of the internet**, including cloud-based software applications, multiple government services, online learning resources, and high-definition streaming videos (Innovation, Science and Economic Development Canada [ISED], 2019). These speeds can also support use by multiple simultaneous users (ISED, 2019).

**Megabits per second (Mbps) is a standard measure of the speed, or ‘bandwidth’, of an internet connection. It measures how many bits (units of digital information) can be transferred each second (Cooper, 2020). Since data can be transferred in two directions – to and from your home – the rate includes both a download speed and an upload speed.*

2. Disparities in access to high-speed internet are both geographic and socioeconomic.

In Canada, in 2017, only 37.2% of rural households and 27.7% of households in Indigenous communities had access to high-speed internet, compared to 97% of urban homes (CRTC, 2019). For many families in rural areas, an unreliable internet connection means that only one person can be online at a given time (Garel, 2020). Low-income households also face significant cost-related barriers. A survey of 472 Canadians found that more than one third of respondents have to make sacrifices to afford internet access (ACORN Institute Canada, 2019). Households in the lowest income quartile (those with a household income of less than \$32,914) report spending 9.1% of their income on communications services (CRTC, 2019).

3. Many low-income households lack access to internet-enabled devices.

According to Statistics Canada, more than half (58.4%) of households with children under 18 have less than one internet-enabled device per household member (Frenette et al., 2020). Lower-income families are also **more likely to rely on mobile devices to access the internet**, with nearly one quarter (24.1%) of households in the lowest income quartile using **only** mobile devices (Frenette et al., 2020). The transition to online learning during the COVID-19 crisis brought these stark disparities to light, as school boards across Ontario scrambled to deliver internet-enabled devices to thousands of students in need (Teotonio & Rushowy, 2020).

4. Issues of access impact youth engagement in online learning.

Some evidence suggests that schools with many low-income students are facing **high absence rates** during the COVID-19 crisis (Goldstein et al., 2020). In Los Angeles, California, America's second-largest school district, about 13% of high school students had no online contact with teachers in the three weeks after schools closed due to the COVID-19 pandemic, and one-third are not regularly participating in online learning (Goldstein et al., 2020). In northeastern Ontario, an estimated 15% of students are not attending online classes, and absenteeism in grades 11 and 12 is expected to be much higher (White, 2020).

Summary of Evidence: Six Promising Practices to Ensure Greater Access to Online Programming

1. Be responsive to young people's needs.

Programs should check in with young people to assess their home setup, and use this feedback to inform programming choices (Jungels, 2020; Rimmer, n.d.; Trust, n.d.; University of Bristol Digital Education Office, n.d.). Key considerations include:

- Availability of internet-enabled devices
- Quality of internet connection

- Access to quiet space, and privacy
- Preferences for online programming

If considering high-bandwidth formats, such as videoconferencing, organizations should ensure that youth have access to a fast and reliable internet connection. Staff can identify potential bandwidth issues by helping youth check their connection speed using free online tools (Rimmer, n.d.). Whenever possible, programs should offer multiple options for engagement, and use open-ended activities that encourage youth choice.

2. Make programming mobile-friendly.

Evidence shows that members of low-income households are more likely to access the internet using mobile devices (Frenette et al., 2020). Organizations should ensure that program materials and activities are accessible and mobile-friendly (Jungels, 2020; Saylor, 2020). Choose an online platform with mobile functionality, and consider how your content will translate to smaller screens (e.g., PowerPoint slides, PDF files, screen-sharing, etc.).

3. Keep bandwidth in mind.

Unreliable internet connections and low data caps can be a significant barrier to accessing online programming. While videoconferencing may help recreate an in-person experience, it requires a strong internet connection, and can deplete data plans and memory on devices (Jungels, 2020). Consider whether video is necessary, and, if possible, provide alternative ways to access content. Be mindful of bandwidth by reducing file sizes whenever possible, and using apps that require less data (Major, 2020).

4. Mix synchronous and asynchronous activities.

Evidence suggests that youth may benefit from a combination of synchronous and asynchronous activities (Intercultural Development Research Association [IDRA], 2020). Synchronous activities may feel more ‘familiar’ and can help young people feel more connected to their community, but they may pose logistical and technical challenges for some participants (Jungels, 2020; Saylor, 2020). Consider that young people may not be able to access the internet at a designated time, especially if they share devices with other household members. Asynchronous activities can reduce or remove many of these barriers, and may increase engagement by allowing young people to access activities on their own schedule (Jungels, 2020).

5. Provide tech support.

Keep in mind that participants may encounter technical difficulties before and during the delivery of online programming. Programs should provide young people and their caregivers with written instructions on how to access and use the platform, so that they can answer

some of their own questions before reaching out for help (Schwartz, 2020). If feasible, allocate tech support to one staff member, and decide how they will be reachable by young people, families, and facilitators (Schwartz, 2020).

6. Engage in evaluation.

Online programs may be particularly well-suited for evaluation, as they offer a unique opportunity to collect data and share results with stakeholders (Coleman & Broderick, 2013; Garringer et al., 2019). Programs can track engagement by examining the frequency of platform log-ins, number of messages exchanged, length of messages, and average response time, or the length of video conferences. Engaging online could also allow for easier integration of pre- and post-surveys. Be aware of ethical issues around surveillance and privacy when introducing any evaluation methods and tools.

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