E-mentoring:
Key Topic
Overview

The Canadian Mentoring Partnership is a coalition of organizations that provide youth mentoring. Our goal is to build sector capacity to expand access to mentoring across Canada. Our work is focused in four areas: research, technology, public education and development of regional networks.

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Table of Contents

Introduction

Mentoring programs that rely on virtual tools to facilitate exchanges between mentors and mentees have grown in popularity in recent years spurred by youth's interest in such opportunities and the increasing ubiquity of information and communication technology (ICT) such as smartphones, tablets, and computers. E-mentoring (also known as virtual mentoring) refers to mentoring programs where the relationships between mentors and mentees take place either partially or entirely online. ICT is a tool that mentoring programs can use to allow mentors and mentees to develop and sustain relationships remotely.

Just like in-person mentoring programs, virtual mentoring programs must identify program goals, recruit, screen, train, and match mentors and mentees, monitor and support matches, and facilitate match closure. Although the majority of recommended principles and practices for in-person mentoring programs also apply to e-mentoring programs, there are elements specific to the virtual context that mentoring service providers need to consider when designing and implementing e-mentoring programs.[1]

ICT is a critical tool to counter social isolation, especially in the context of the 2020 COVID-19 pandemic. Many in-person mentoring programs have taken steps to transition in-person relationships to the virtual space to keep mentors and mentees connected. When transitioning to virtual relationships, even if temporarily, programs need to take into consideration their capacity as well as that of their matches, the alignment of virtual interactions and ICT with their program goals, and how they can monitor and support matches. If physical distancing requirements persist, in-person programs may need to consider how to alter recruitment, training, and matching, monitoring, and closure processes to ensure their sustainability.

This e-mentoring key topic overview contains some background information on e-mentoring, including its benefits and challenges, an overview of the current research in the field, and some principles and practices and guiding questions for e-mentoring programs. E-mentoring is an emerging and growing field and the Canadian Mentoring Partnership needs your help to grow the evidence base, identify best practices, and strengthen the field.

Together we can strengthen our practices and have a more positive impact on the young people in e-mentoring programs. Contact us at info.cmp@mentoringcanada.ca

→ Let us know how we can improve the E-mentoring Key Topic Overview.

→ Share your e-mentoring experiences and insights with us.

1. E-mentoring background information

Benefits

E-mentoring programs help increase social capital and social supports for youth facing barriers that prevent them from accessing these supports through their families, schools, or communities. E-mentoring programs have tremendous potential to provide access to caring, supportive adults for youth who live in rural or remote communities, youth with disabilities or chronic illness, youth with social anxiety, or youth interested in pursuing higher education and/or specific careers who may not have access to expertise or specialized support in their immediate surroundings or networks. Virtual mentoring can foster connections between youth and adults who may share personal circumstances or interests that are not common in the general population.[2] E-mentoring programs also have the potential to foster connections enhancing local social capital and promoting community connections.[3] This potential to foster community connections is especially crucial in this time of social/physical distancing.

Additionally, online support, through social media or otherwise, can impact youth's mental health positively. Online support has been shown to reduce the incidence of depressive thoughts and reduce the effects of bullying and peer victimization.[4] Studies have demonstrated that mobile devices can be an effective way of reaching young people to increase their knowledge and engender behavioural changes for health-related outcomes.[5]

"Many e-mentoring tools or platforms have safety and monitoring capabilities that exceed what many in-person programs can offer."

Finally, many e-mentoring tools or platforms have safety and monitoring capabilities that exceed what many in-person programs can offer.[6] Automated tools can flag potentially problematic content for review and program staff can monitor the digital interactions between mentors and mentees.

Challenges

E-mentoring programs also face some unique challenges. First, mentors and mentees need easy and timely access to reliable Internet connections and devices. Insufficient bandwidth, household rules about the use of ICT, device availability, and privacy concerns can prevent some children and youth, as well as mentors, from participating in an e-mentoring program.

"Insufficient bandwidth, household rules about the use of ICT, device availability, and privacy concerns can prevent some children and youth, as well as mentors, from participating in an e-mentoring program."

The overwhelming majority of Canadians can access broadband speeds of at least 5Mbps/1Mbps but this connection speed may not support high bandwidth activities such as video calls. In 2018, 85.7% of Canadian households could access 50/10Mbps service with unlimited data but only 40.8% of rural households had access to this service. In 2018, 85.8% of households in First Nations reserves could access broadband internet services with a speed of at least 5 Mbps although less than a third of households could access connection speeds of 50 Mbps or faster.[7] Furthermore, in 2018, 6% of Canadians did not have home Internet access, reasons included the cost of Internet service (28%), equipment (19%), and unavailability of internet service (8%).[8]

In 2014, approximately 6% of children and youth depended on schools, public libraries, or community centres to access the internet.[9] Programs must be prepared to offer technical support to help mentors and mentees interact, especially if the program is delivered through a custom platform instead of a commonly used technology (e.g. texting, social media platforms).[10]

Meaningful participation is also dependent on the mentors and mentees having requisite skills such as communication skills (including digital literacy skills), reading comprehension, and technological proficiency.[11] E-mentoring programs may be more suitable for teenagers than children since they require emotional maturity and the ability to express emotions in digital communications.[12] Misunderstandings can occur when relationships take place solely through written communications as a recipient may be unaware of the sender's emotions or needs unless those are explicitly stated. Moreover, the absence of visual cues such as body language can obscure intent and impede clear communications.[13] Delays in responses can result in feelings of frustration or abandonment.[14]

Finally, sustaining a virtual relationship can be challenging as engagement levels and frequency of communications tend to diminish over time, especially once the initial enthusiasm wanes.[15]

E-mentoring program types
There are 3 main types of e-mentoring programs based on where the interactions between mentors and mentees take place:
　　1) programs that rely solely on ICT for interactions between
　　　 mentors and mentees;
　　2) programs that blend ICT and some in-person interactions; and
　　3) programs where ICT is used to supplement primarily
　　　 in-person interactions.

E-mentoring programs also use two main models for the interactions between mentors and mentees: synchronous interactions where participants interact simultaneously through video calls or live chats and asynchronous interactions where there may be a significant time lapse between sending and receiving messages such as emails, text messages, or forums.[16]

"Online relationships conducted through e-mentoring can be similar to those developed in person in terms of their breadth, depth, and quality."

Some e-mentoring programs use a developmental relationship approach where the focus is initially placed on personal development and the youth's emotional well-being whereas others privilege instrumental (or goal-directed) relationships that focus initially on learning and developing skills most often to provide vocational or educational support. Currently, the majority of existing e-mentoring programs in the United States and Canada use a more instrumental than developmental approach.[17] Nevertheless, Carmit-Noa Shpigelman stated that "online relationships conducted through e-mentoring can be similar to those developed in person in terms of their breadth, depth, and quality".[18]

2. E-mentoring research

E-mentoring programs are growing in popularity but there is limited rigorous research about the effectiveness of these programs.[19] Peer-reviewed literature struggles to keep up with the rapidly changing e-mentoring landscape. Digital programs and platforms tend to constantly innovate whereas the research and scientific publication cycles tend to be much slower.

Current evidence on the effectiveness of e-mentoring programs is mixed. Some programs demonstrated positive effects and others showed no effect. More research is needed to identify which formats or program types work best for which youth and to measure the effectiveness of various program types on youth outcomes.[20]

Even though current research findings are limited, there is some consensus among researchers that programs focusing on task-based interactions can foster more successful virtual mentoring relationships. Regular and ongoing activities can help sustain digital relationships over time and make the interactions more attractive and genuine for youth.[21]

Researchers have identified some specific factors that moderate and mediate the effectiveness of e-mentoring programs and the impact on outcomes. According to MENTOR, factors that can moderate the effectiveness of e-mentoring programs include demographics, personal factors, interpersonal communication styles, accessibility, and program implementation. Factors that mediate the impact of a mentoring relationship include relationship satisfaction and conversational compatibility, and frequency of interactions. More research is needed to understand how and why these moderating and mediating factors impact youth outcomes.[22]

Moderating factors[23]
- Demographics. Youth in rural or remote locations or of lower socioeconomic status may benefit more from e-mentoring.
- Personal factors. Both a mentor and a mentee's personal circumstances can influence the effectiveness of an e-mentoring program. For instance, a mentor who is not as technology literate as a young person may find using technology to communicate challenging or limiting. On the other hand, a youth who needs support that goes beyond infrequent face-to-face meetings may find it comforting to be able to reach a mentor in real time.
- Interpersonal communication styles. A mentor who is used to talking by phone or face-to-face may struggle with the quick texts, emojis, or acronyms commonly used in chats. On the mentee side, emotional maturity may be important, as being able to share emotions in writing without the facial and body language cues available during in-person meetings is crucial.
- Accessibility. E-mentoring is potentially more accessible for youth with a physical, intellectual, or developmental disability or chronic health condition since it does not necessarily require that the mentoring interactions happen at a specific location.

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- Program implementation. Access to a stable mobile network or internet service is essential for the success of an e-mentoring program, as is easy access to technological support.

Mediating factors[24]

- Relationship satisfaction and conversational compatibility. Regardless of whether a program focuses primarily on developmental or instrumental relationships, there is emerging evidence showing that relationship satisfaction is closely tied to outcomes. One of the leading factors in relationship closeness is "electronic chemistry" — the ability of mentors and youth to connect electronically in ways that are mutually satisfying, fun, and imbued with personality despite the limitations of communicating digitally. In some cases, closeness and satisfaction can exceed in-person relationships because status and other factors are stripped away in the virtual environment, and users can craft perfect responses that represent their best selves at all times.
- Frequency of interactions. The frequency of communications in e-mentoring programs almost always dissipates over time, even in cases where the program is providing a curriculum or prompting ongoing exchanges. Programs should do everything they can to boost the frequency and depth of interactions that mentors and youth have since this is closely tied to outcomes and overall satisfaction with the experience.

Other factors that may contribute to relationship quality include perceived similarity, social presence, support, and the perceived utility of the relationship. In a digital context, many aspects of similarity are muted. Factors such as communication styles, values, and interests can play a greater role than gender, ethnicity, or socioeconomic background in helping matches feel similar. Matches with high perceived similarity often report higher levels of mentor support and overall match satisfaction.[25] Supportive behaviours such as informational support (offering guidance, advice, or useful information), tangible support (financial or material assistance, services), social support (communicating belonging), and emotional support (nurturing and communicating care) also contribute to relationship quality.[26] Social presence refers to the feeling of being together and the ability to project physical and emotional presence and experience it from others. Social presence can be facilitated by sharing emotions, adding emojis, and disclosing appropriate personal information.[27] Finally, e-mentoring relationships may be more easily sustained if youth perceive them as being useful to them.[28]

3. E-mentoring principles and practices

While researchers, practitioners, and policy-makers work together to expand e-mentoring's evidence-base and strengthen its efficacy, some principles as well as emerging and promising practices offer guidance to mentoring service providers who wish to design and implement virtual mentoring programs or to temporarily transition in-person mentoring programs to a virtual environment.

Program design
Principle: E-mentoring programs should have a theory of change and/or logic model that outlines the program's goals and outcomes and outline the benefits of offering mentoring virtually as opposed to in-person or the benefits of offering a blended in-person and virtual approach.[29]

MENTOR found that the most common youth outcomes for e-mentoring programs include:
• Offsetting youth isolation and increasing feelings of belonging and connectedness;
• Providing access to subject-matter expertise and project/goal setting support;
• Increasing social supports and feelings of self-efficacy;
• Increasing social capital and the building of networks; and
• Offering mentees a safe space to share and process their feelings.[30]

Selection of technology tool
Principle: E-mentoring programs should employ a user-centered approach when selecting their tools or platform.

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Programs should think "people, not platforms" and carefully consider how users will use the tools to achieve the program goals. The efficacy of a program depends on the alignment of the technology to its theory of change and how well the technology and the mentors' roles support the needs of the youth they serve.[31] For in-person programs temporarily transitioning to a virtual environment, consider which tools could best support your pre-existing program goals. Since engaging mentors and mentees in task-based activities can help them build and maintain a more successful relationship, it is also important to consider how technological tools can facilitate, or on the contrary, impede these activities.

Virtual mentoring programs are delivered through a wide variety of technological media such as emails, forums and discussion boards, video calls, live chats, SMS or instant messaging, and multi-feature platforms. Each medium has specific strengths and challenges such as their ease of use, immediacy, monitoring capabilities, activity integration (for a brief overview of each medium's strengths and challenges, see MENTOR's E-mentoring Supplement).* Additionally, programs should consider whether custom or commonly used

*Garringer et al, E-mentoring Supplement, p. 10. https://www.mentoring.org/new-site/wp-content/uploads/2019/12/E-Mentoring-Supplement-to-EEP-1.pdf

technologies can best serve their audience and program goals. Commonly used technological tools are often more affordable and more easily integrated into users' daily lives but they generally provide more limited monitoring and control opportunities for programs and they may introduce privacy and security issues. Custom technological tools can be optimally aligned to a program's goals and offer superior monitoring opportunities but they can be very costly to develop and maintain. Furthermore, given the rapid pace of technological innovation, they can quickly become obsolete without ongoing development efforts (for a more in-depth look at the "Issues associated with the type of software platform employed in an e-mentoring program", see MENTOR's E-mentoring Supplement).†

Programs should consider if the tool is accessible for all its intended users (device and internet access, mobile-friendliness, privacy, skills requirements), including users with disabilities (taking into consideration Canadian accessibility laws). Programs should consider whether users have the required bandwidth to engage seamlessly with the tool. Low bandwidth and immediacy options can offer participants the most flexibility but may reduce feelings of social presence whereas high bandwidth and immediacy options can be more engaging but may be less accessible for some users (see Appendix A: Bandwidth Immediacy Matrix). Other aspects to consider include security issues such as password protection, user privacy, and data safety as well as the ability for a program to manage users.

Training
Principle: Mentor and mentee training should be tailored to address the technical and communications skills needed to develop successful virtual relationships.

In addition to the topics typically covered in the training sessions for face-to-face mentoring programs, MENTOR stated that virtual mentoring programs should provide strong pre-match training for mentees and mentors on:
• The use of the technological platform or tool;
• The expectations regarding the frequency of communications and response times;
• The development or strengthening of the skills needed to have an online voice and a relatable communication style;
• The importance of participants sharing appropriate personal information, asking questions, and using an informal conversational style;
• Icebreakers and conversation starters;
• The unique challenges of ICT and e-mentoring programs; and
• Internet safety.[32]

Even in our increasingly digital world, both youth and mentors will likely need training on how to be effective online communicators. Mentors may need training on how to be youth-focused and relationship-oriented as opposed to task-oriented, how to use emojis, gifs, or memes, how to use strategic personal disclosures to build trust, and how to convey complex emotions online. Youth

may need to develop their ability to compose lengthy responses as opposed to short answers, their ability and willingness to share personal information or feelings, and their capacity to implement the advice received from their mentors.[33]

Matches transitioning from in-person to online interactions may need guidance and support about the effective use of the ICT tool and the expectations regarding online communications.

Monitoring and evaluation
Principle: Virtual mentoring programs should monitor mentoring relationships and evaluate program implementation and effectiveness.

Technological tools, especially custom tools, can allow for the collection of comprehensive data about match interactions such as frequency and length of interactions and response times. Filters and other security features can automatically intercept inappropriate content and flag it for review. If the tool allows it, program staff should regularly analyze the data collected to ensure that participants are not sharing inappropriate information and to track user engagement and identify matches that may need additional support, coaching, or encouragement.[34]

Digital tools may facilitate the administration of some evaluation tools such as pre- and post-match questionnaires for mentors and mentees. However, programs and researchers should consider collecting and analyzing qualitative data (e.g. interviews with participants) to address the social desirability bias that may be present in self-reported questionnaires and to assess if and how virtual mentoring programs achieve desired outcomes.[35]

Policies and procedures
Principle: Virtual mentoring policies should address issues specific to the digital space including user privacy and confidentiality.

Among other things, MENTOR suggests that virtual mentoring program policies should include:
• Appropriate use of technology;
• Expectations around the frequency of communications and response times;
• Rules around in-person contact or other digital contacts between mentors and mentees outside of the program's platform (during and after the program);
• User privacy and confidentiality, including clearly stating the measures that the program takes to monitor the matches' interactions and ensure the safety of the participants and data storage policies;
• How to access technical or relationship support.[36]

In-person programs temporarily transitioning to virtual relationships, may consider amending their policies or creating guidelines to delineate appropriate digital relationships.

**Guiding questions for designing an e-mentoring program
or to transition from in-person to virtual interactions**

Area	Guiding questions
Define program goals and structure	What is the purpose of the program? What is the program's theory of change? Why is a virtual medium suitable and useful to achieve the program goals? *For in-person programs transitioning to virtual relationships: Should the theory of change be adjusted? How can the program goals be achieved in a digital environment?*
Choose the technology (users, not platforms)	Will your program use asynchronous or synchronous communications? Will you use custom technology or commonly available technology? Will it use low or high bandwidth tools? Is the technology accessible for your intended users (internet connection, device availability, privacy, accessibility, users with disabilities)? *For in-person programs transitioning to virtual relationships: Which tools best align with the program's theory of change? What is the program and the staff's capacity to manage a digital tool?*
Outline activities and communication expectations	What will the mentors and mentees do when they interact (or in-between their interactions)? How often will mentors and mentees interact (frequency)? How long will the program take (duration)? *For in-person programs transitioning to virtual relationships: What activities could matches do in a virtual environment? Do matches require additional activity ideas? Do matches require a clarification around meeting and communication expectations?*
Create and deliver training	How will you train mentors and mentees before they are matched? What do they need to know about the technological tool? What skills do they need for effective virtual communications? What do they need to know about the program goals and communication expectations? What training does your staff need? *For in-person programs transitioning to virtual relationships: Do matches need additional training on online communications or the use of the technological tool?*
Monitor and support matches	How will you offer ongoing support to mentors and mentees during the program? How will you monitor matches to ensure that they are on track to meet the program goals? *For in-person programs transitioning to virtual relationships: How should monitoring processes be modified? How can programs offer support to matches?*
Evaluate program implementation and outcomes	How will you evaluate your program and track youth outcomes? Will you be using qualitative and/or quantitative methods to evaluate your program's outcomes? *For in-person programs transitioning to virtual relationships: What information can programs collect online or by phone? Should metrics or evaluation frameworks be adjusted to the online environment?*
Ensure privacy and data safety	Do your policies include user privacy and data safety protocols? How will you manage parental consent (if applicable)? How will you manage user information before, during, and after the program? Where are the platform or tool's servers located (e.g. Canada or the United States)? If your program uses a commonly available technology, does the app or software developer collect and potentially share or sell user information? *For in-person programs transitioning to virtual relationships: Should programs adjust their policies or create temporary guidelines to delineate processes and expectations?*

"To strengthen the evidence-base, researchers, practitioners, and policymakers will need to work together to further examine e-mentoring's emerging and promising practices."

E-mentoring programs have tremendous potential to complement in-person program offerings and support our efforts to remove barriers and increase young Canadians' access to quality mentoring opportunities.

Although telementoring or e-mentoring programs have existed since the 1990s, the field remains understudied. Rigorous research in the field remains sparse and the rapid innovation pace of the ICT field does not easily align with the natural cycles of academic research. To strengthen the evidence-base, researchers, practitioners, and policymakers will need to work together to further examine e-mentoring's emerging and promising practices. In the next few years, it will be crucial to develop our understanding of which types of programs work best to achieve specific outcomes or which ones are best suited to specific youth populations.

Additional Resources
National Mentoring Resource Center (United States). E-Mentoring.
https://nationalmentoringresourcecenter.org/index.php/what-works-in-mentoring/key-topics.html?layout=edit&id=204

MENTOR: The National Mentoring Partnership (United States). E-mentoring
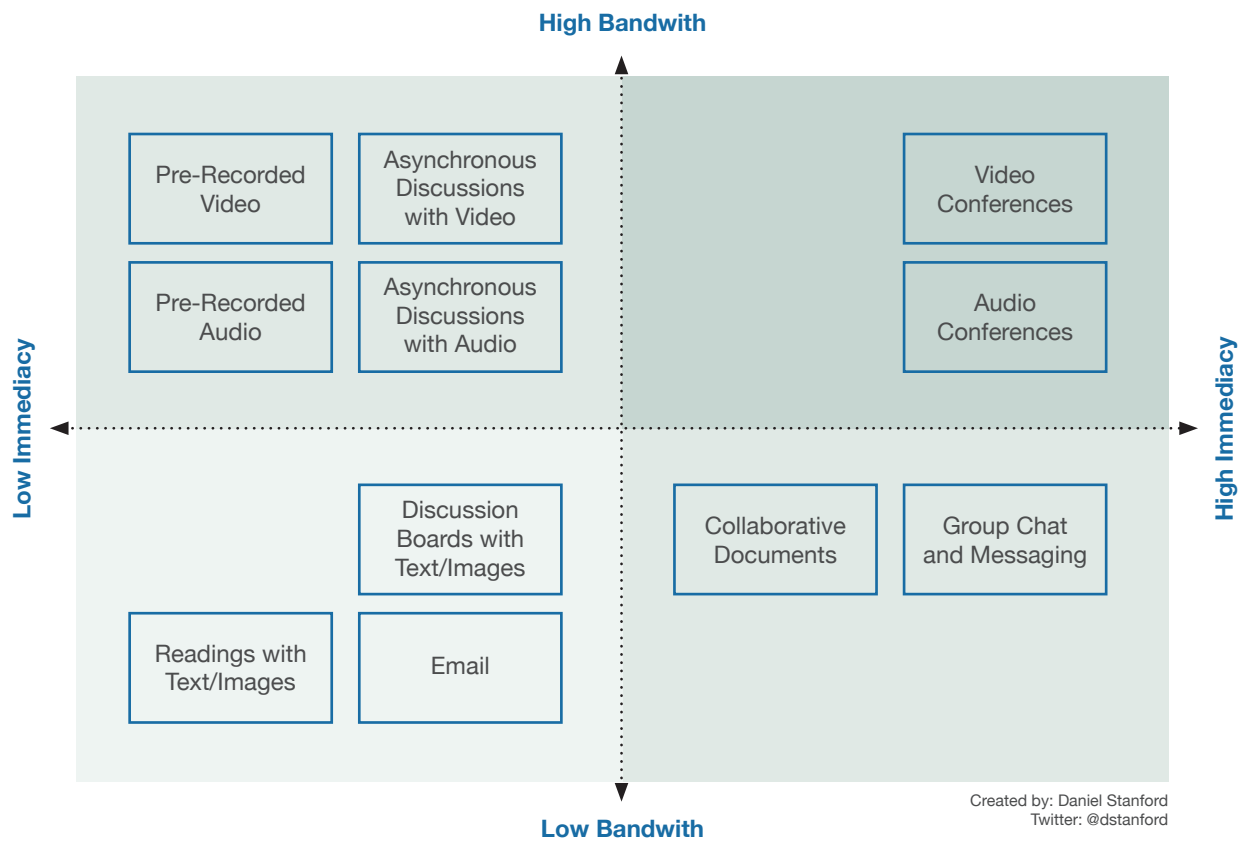https://www.mentoring.org/ementoring/

Search Institute (2020), Checklist: Building Developmental Relationships During the COVID-19 Crisis
https://www.search-institute.org/wp-content/uploads/2020/03/Coronavirus-checklist.pdf

For Canadian research on e-mentoring see Dr. Kevin O'Neill's work:
O'Neill, D. K., Asgari, M., & Dong, Y. R. (2011). Trade-offs between perceptions of success and planned outcomes in an online mentoring program. Mentoring & Tutoring: Partnership in Learning, 19(1), 45–63.

O'Neill, D.K., Weiler, M.J., and Sha, L. (2005). Software support for online mentoring programs: A research inspired design. Mentoring & Tutoring 13(1), 109–132.

O'Neill, D. K., & Harris, J. B. (2004). Bridging the perspectives and developmental needs of all participants in curriculum-based telementoring programs. Journal of Research on Technology in Education, 37(2), 111–128

Appendix A: Bandwidth and Immediacy Matrix

High Bandwith

Low Immediacy

High Immediacy

Pre-Recorded Video

Asynchronous Discussions with Video

Video Conferences

Pre-Recorded Audio

Asynchronous Discussions with Audio

Audio Conferences

Discussion Boards with Text/Images

Collaborative Documents

Group Chat and Messaging

Readings with Text/Images

Email

Created by: Daniel Stanford
Twitter: @dstanford

Low Bandwith

Notes

1 For recommended practices for in-person mentoring programs, see Garringer, M., Kupersmidt, J., Rhodes, J., Stelter, R., & Tai, T. (2015). Elements of effective practice for mentoring (4th Edition). Boston, MA: MENTOR: The National Mentoring Partnership. https://www.mentoring.org/program-resources/elements-of-effective-practice-for-mentoring/

2 Garringer, M., Kaufman, M., Stelter, R., Shane, J., & Kupersmidt, J. (2019). E-mentoring Supplement to the Elements of effective practice for mentoring. Boston, MA: MENTOR: The National Mentoring Partnership., p. 5-6, 8. https://www.mentoring.org/ementoring/

3 O'Neill, K. (2011) "Local social capital through e-mentoring: an agenda for new research". Learning, Media and Technology 36, 3. p. 318-319.

4 Kaufman, M. (2017). E-mentoring: National Mentoring Resource Center Model Review. National Mentoring Resource Centre. p. 5. http://nationalmentoringresourcecenter.org/images/PDF/E-Mentoring_Model_Review.pdf

5 Kaufman, E-mentoring, p. 5.

6 Garringer et al, E-mentoring Supplement, p. 3.

7 Canadian Radio-television and Telecommunications Commission. (2019). Communications Monitoring Report 2019. Ottawa, ON: CRTC. p.274, 281. https://crtc.gc.ca/eng/publications/reports/policymonitoring/2019/cmr9.htm#a3.1

8 Statistics Canada. (2019). The Daily: Canadian Internet Use Survey. Ottawa, ON: Ministry of Innovation, Science, and Economic Development. https://www150.statcan.gc.ca/n1/daily-quotidien/191029/dq191029a-eng.htm

9 Media Smarts. (2014). Young Canadians in a Wired World: Life Online. Ottawa, ON: Media Smarts. p. 2. https://mediasmarts.ca/sites/default/files/pdfs/publication-report/full/YCWWIII_Life_Online_FullReport.pdf

10 Kaufman, E-mentoring, p. 5.

11 Shpigelman, C.-N. (2014). "Electronic Mentoring and Media" in DuBois. D. & Karcher. M. Handbook of Youth Mentoring (2nd edition). Thousand Oaks, CA: Sage Publications. p. 262, 268. Kaufman, E-mentoring, p. 5.

12 Shpigelman, "Electronic Mentoring and Media", p. 262.

13 Shpigelman, "Electronic Mentoring and Media", p. 268. Garringer, M. (2017). "Implications for Practice" in Kaufman, E-mentoring, p. 19.

14 Shpigelman, "Electronic Mentoring and Media", p. 268-269.

15 Shpigelman, "Electronic Mentoring and Media", p. 268-269.

16 Garringer et al, E-mentoring Supplement, p. 4.

17 Garringer et al, E-mentoring Supplement, p. 78.

18 Shpigelman, "Electronic Mentoring and Media", p. 261-262.

19 Kaufman, E-mentoring, p. 1. Garringer et al, E-mentoring Supplement, p. 13.

20 Kaufman, E-mentoring, p. 1, 7, 11.

21 Shpigelman, "Electronic Mentoring and Media", p. 264. Kaufman, E-mentoring, p. 14. Garringer et al, E-mentoring Supplement, p. 78.

22 Kaufman, E-mentoring, p. 11, 13.

23 Adapted from Garringer et al, E-mentoring Supplement, p. 14-15.

24 Adapted from Garringer et al, E-mentoring Supplement, p. 15-16.

25 Garringer et al, E-mentoring Supplement, p. 66.

26 Shpigelman, "Electronic Mentoring and Media", p. 264.

27 Shpigelman, "Electronic Mentoring and Media", p. 265.

28 Kaufman, E-mentoring, p. 14.

29 Garringer et al, E-mentoring Supplement, p. 40.

30 Garringer et al, E-mentoring Supplement, p. 13-14.

31 Garringer, M. (2017). "Implications for Practice" in Kaufman, E-mentoring, p. 16.

32 Garringer et al, E-mentoring Supplement, p. 31-34.

33 Garringer et al, E-mentoring Supplement, p. 70.

34 Garringer et al, E-mentoring Supplement, p. 37.

35 Shpigelman, "Electronic Mentoring and Media", p. 268.

36 Garringer et al, E-mentoring Supplement, p. 40.