TECHMANITOBA DIGITAL LITERACY FINAL REPORT

April 2020

C.A.R.E.S.
CENTRE FOR ABORIGINAL &
RURAL EDUCATION STUDIES

The Centre for Aboriginal and Rural Education Studies (CARES) is an applied research institute of the Faculty of Education at Brandon University. Its role is to promote and facilitate research activities that are of interest to rural, northern, Aboriginal and rural school divisions, communities and related organizations. The Centre also offers research training and networking opportunities for educational researchers actively involved in Aboriginal and rural education research.

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Acknowledgements

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Executive Summary

Digital literacy and technology use are increasingly important in today's economy. TechManitoba's DigitALL program seeks to increase and improve these important skills across Manitoba by offering free workshops such as Intro to Computers, Intro to Microsoft Word, Intro to Microsoft Excel, Powerpoint, Computer File Management, Emails, Social Media, and Privacy, Computer Security and Fraud, MS Word and Poster Design, Internet Searches, and Digital Presentations. Understanding the effectiveness and outcomes of these workshops will help with future planning and directions.

The focus of this research project was digital literacy in Manitoba. The objectives were to:
1. Assess internet use in multiple communities across Manitoba;
2. Evaluate whether Tech Manitoba's DigitALL workshops resulted in increased internet use, confidence, skills, and ability to make informed decisions online; and,
3. Collect feedback on the workshops attended.

The research involved phone and email surveys to former workshop participants who had participated in TechManitoba's workshops. Major findings from the research include:

- An increase in internet use as a result of TechManitoba's workshops
- Increased confidence as a result of TechManitoba's workshops
- An increase in skills as a result of TechManitoba's workshops
- An increase in the ability to make informed decisions online as a result of TechManitoba's workshops

Several recommendations are included in this report. These include continuing to offer workshops and classes across Manitoba, increasing supports for people with learning difficulties or needing language assistance, providing instruction on a variety of devices, developing a long-term research plan that follows participants at regular intervals and allows for comparison for future technology use and skills, and communicating the needs and benefits of this research to workshop participants.

This report includes a short introduction followed by major findings and recommendations. Appendix A includes the full responses to the survey.

Introduction

Background

In January 2020, TechManitoba commissioned the Centre for Aboriginal and Rural Education Studies (CARES) at Brandon University to examine digital literacy in Manitoba by following up with workshop participants of Tech Manitoba's DigitALL program. The objective of the *Digital Literacy in Manitoba* project was to assess the success of technology workshops that had been delivered by DigitALL. This information will be used to justify and strengthen future workshops across Manitoba through the DigitALL program.

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1. Assess internet use in multiple communities across Manitoba;
2. Evaluate whether Tech Manitoba's DigitALL workshops resulted in increased internet use, confidence, skills, and ability to make informed decisions online; and,
3. Collect feedback on the workshops attended.

Methodology

Process

In January 2020, the Centre for Aboriginal and Rural Education Studies (CARES) at Brandon University began the facilitation and coordination of a phone and email survey to assess the success of technology workshops that had been delivered by DigitALL between January and December 2019.

The purpose of this survey research was to establish how individuals who had participated in TechManitoba's DigitALL workshops were using the new skills after a period of 6 to 12 months had passed. As a result, this research provides TechManitoba with information on the success of past programs, and insights for future programs and planning.

Participants

The research participants for this study were people who had participated in Tech Manitoba's DigitALL workshops between January and December 2019. In those workshops, participants had given permission to be contacted for follow-up and had indicated a preference for telephone, email, in-person, or mail contact. Participants who had selected in-person or mail follow-up were not included in the study. Before conducting this survey research, BU CARES received ethics approval from Brandon University's Research Ethics Committee. This ethics approval included the

condition that respondents would voluntarily give their consent to participate in the survey and the surveys were anonymous.

To complete this research, SurveyMonkey forms were designed that could be filled out with a research assistant over the telephone or directly by clicking on a link distributed by email. Approximately, 125 names of participants who had attended workshops between June 2019 - September 2019 were shared with research assistants and they were tasked with contacting those individuals via phone and/or email. The research assistants were asked to use the medium that had been listed as the participants' preference. If the initial medium did not elicit a response, the research assistants were asked to try either email or telephone to reach participants.

The target completion date for this research project was March 2020. After receiving ethics approval from the university and hiring two research assistants to help with data collection, it was mid-March and self-isolation at home to reduce the spread of Covid-19 had begun. TechManitoba and the research team agreed to continue with the research, however by the end of March, only 6 responses had been collected of the initial 125 names. As a result, the original participant selection was expanded to include the entire list of individuals that had participated in a TechManitoba workshop between June 2019 and February 2020.

After expanding the list of participants, a total of 51 participants completed surveys, either by phone or through email. Of these responses, the majority attended a workshop in Winnipeg (53.49%), followed by UCN Campus (25.58%), Thompson (11.63%), The Pas (6.98%), and one response from Crossroads Learning Centre. No participants from Churchill opted to complete the survey.

Data Collection and Analysis

The SurveyMonkey link was distributed via email to potential respondents who had selected to be contacted via email, along with an introductory statement explaining the research in the body of the email. Two research assistants made calls to participants who had opted to be contacted via telephone, and then entered those responses directly.

All survey responses are included in this report (Appendix A), as well as an analysis of responses by location.

Limitations of this research

The results of this research are limited by several factors:

1. Time elapsed - As time goes by, it becomes more and more likely that participants, who feel increasingly disconnected from their experiences in the workshops, will

opt out of survey completion. At the beginning of this process, participants had not been in contact with TechManitoba for many months. Research assistants reported that many people did not remember the workshop. To mitigate this problem, the research assistants tried to share as much information as they had available to help participants remember their experiences. In the second phase of the research where the list of potential participants was expanded to include those who had participated in workshops more recently, the response rate was higher.

2. List details - Research assistants reported that the list of participants contained entries that were duplicated either because participants had taken more than one workshop or because participants had listed the same information for several members of one household. For example, in one case, a name had been entered 12 times. Since participants were only completing the survey once, those who had taken multiple workshops did not complete separate surveys for each workshop. After accounting for duplicate entries and people who had taken multiple workshops, the list of eligible participants went from 724 names to 511. Of this list, some had chosen not to be contacted, or had opted for in-person or mail contact, which further narrowed the list to 423. The research assistants noted that some emails or phone numbers were incorrect, reporting 50 bounced emails and 21 out of service phone numbers.

3. Workshop topics – Some of the questions explored through the survey were on the topic of internet usage. Not all workshops attended by participants were on the topic of internet. The research assistants noted that this could have contributed to a lack of responses.

4. Current environment - At the time data was collected, Manitobans are responding to the stresses that are initiated by the Covid-19 pandemic. The virus has left communities feeling unsafe and uncertain. Many people have been asked to stay at home and to self-isolate. Schools have been closed and parents have been asked to support students at home. These are uncertain times. The current context is bound to affect how willing respondents are to complete a survey either by telephone or by email. Additionally, it is possible that the emotional responses to the changes that are being forced on our society in response to the pandemic will affect the positive/negative nature of the responses if participants feel that we are taking up their time when they are otherwise occupied with the health and safety of their families.

5. General anxiety - In addition to the direct effects of the pandemic, general anxiety might also affect the results of this study. Participant anxiety in this study could evolve from participants being new to Canada or feeling uncomfortable answering questions in English. Additionally, the media have been reporting an increase in scam initiatives that are associated with society's needs during the pandemic. The research assistants reported that they felt mistrust from the respondents.

Major Findings

In Appendix A, all survey responses can be explored. The authors of this report have summarized these findings in the following sections, including recommendations for further actions.

Overall findings

1. The majority of participants surveyed reported using the internet 10+ times per week (60.87%), and many reported using the internet 2-10 times per week (23.91%). Only 7 participants reported using the internet once per week (15.22%) and no participants reported never using the internet.

2. TechManitoba's DigitALL workshops resulted in 53.19% of respondents saying their internet use increased as a result of the workshop, 74.47% reporting that their confidence increased, 81.25% reporting that their internet skills increased, and 85.42% reporting that their ability to make informed decisions online increased as a result of the workshop.

3. Using sentiment analysis of the open-ended feedback of the workshops, 62% of respondents felt positive about the workshops, and 27% were neutral. 11% of participants left negative comments.

Findings for individual communities

It should be noted that some survey respondents did not include their location. These responses were therefore included in the overall findings, but excluded from community-specific findings. In each of the communities below, the number of respondents is included for reference.

Winnipeg

- There were 23 survey respondents who attended workshops based in Winnipeg. The majority of respondents use the internet 10+ times per week (63.64%), and many use it 2-10 times per week (31.82%). Only one person (4.55%) reported using the internet once a week, and no respondents reported never using the internet.

- TechManitoba's DigitALL workshops in Winnipeg resulted in 56.52% of respondents saying their internet use increased as a result of the workshop, 69.57% reporting that their confidence increased, 69.57% reporting that their internet skills increased, and 82.61% reporting that their ability to make informed decisions online increased as a result of the workshop.

- Using sentiment analysis of the open-ended feedback of the workshops held in Winnipeg, 69% of respondents felt positive about the workshops, and 13% were neutral. 19% of participants left negative comments.

Thompson

- There were only 5 survey respondents who attended workshops based in Thompson. All respondents reported using the internet ten or more times per week, and most reported that their internet use remained the same after the workshop (75%).

- TechManitoba's DigitALL workshops in Thompson resulted in 2 respondents feeling their confidence had increased, and 2 feeling it had stayed the same. 2 respondents felt their skills did not increase, and 3 felt the workshop increased their skills. 4 respondents reported that the TechManitoba workshop improved their understanding and ability to make informed decisions online, and 1 respondent felt it did not.
- Only two people left open-ended feedback on the workshops held in Thompson, and one was positive and the other was negative.

The Pas

- There were only 3 survey respondents who attended workshops based in The Pas. All respondents reported using the internet ten or more times per week, and most reported that their internet use increased after the workshop (66.67%).

- All respondents felt that TechManitoba's DigitALL workshops in The Pas resulted in increased confidence, increased skills in using the internet, and improved their understanding and ability to make informed decisions online.

- Responses to the open-ended feedback were positive.

UCN Campus

- There were 11 survey respondents who attended workshops based in UCN Campus. Some participants reporting using the internet 10+ times or more per week (36.36%), some reported using the internet 2-10 times per week (27.27%), and some reported using it only once per week (36.36%). No participants reported never using the internet. Most participants (54.55%) felt their internet use did not increase as a result of the workshop.

- TechManitoba's DigitALL workshops in UCN Campus resulted in 81.82% reporting that their confidence increased, 100% reporting that their internet skills increased, and 81.82% reporting that their ability to make informed decisions online increased as a result of the workshop.

- Using sentiment analysis of the open-ended feedback of the workshops held in UCN Campus, there was an even mix of positive and neutral comments. No negative comments were shared.

Workshops held at Crossroads Learning Centre had only one participant, who reported increased internet use, confidence, skills, and ability to make informed decisions online.

Recommendations

This study provides insights into the results of TechManitoba's DigitALL workshops in different communities across Manitoba. The information included in this report will assist TechManitoba in evaluating workshops and planning future initiatives that encourage digital literacy across the province. To aid TechManitoba in planning we offer the following recommendations.

Recommendations for TechManitoba

We recommend that TechManitoba:

- Continue to offer workshops on relevant topics to communities across Manitoba. Respondents commented on the helpfulness of these workshops, highlighting these features:
  - Practical/Useful
  - Inclusive
  - Competent Instructors
  - Professional
  - Informative
- Consider offering supports for participants who have learning difficulties or need language assistance.
  - One participant from UCN Campus wrote: " I am embarrassed to say I only picked up about 20% of the content due to a learning disability. I do intend on attending future classes as soon as Covid-19 epidemic has ended."
- Consider expanding workshops to include multiple devices. Internet use is increasingly available through smart phones. TechManitoba might consider workshops that teach the same content but through multiple devices.
  - One participant from Winnipeg wrote: "I enjoyed the classes as they spoke about security and privacy. But I only use it on my phone so I am not able to use the full features learned in the sessions."
- Develop a feedback form for workshop participants that requires more formal consent and questions that could be used to establish a base-line so that follow-up research could draw comparisons to how technology usage has increased as a result of workshop participation.
- Follow-up research could be conducted at six week and six month intervals and that participants are made aware of the need for the research and the benefits that they might experience or others in their demographic might experience as a result of more accurate data collection.

Recommendations for future research

The following topics may be of interest to TechManitoba:

How has the support of TechManitoba made a difference for teachers and their personal and professional use of technology?

Understanding how teachers have accessed and used the supports offered through TechManitoba may lead to increased opportunities. Questions that may guide this research could include: (1) How have the TechManitoba workshops for teachers augmented the support that they can access through their school division, or groups like Manitoba Association of Computing Educators (ManACE)? And (2) How has the support of TechManitoba changed teachers' professional and personal technology use? This research would lead to greater understanding of whether technology support by technology specialists is as valuable for teachers and their professional use of technology as support by educators, who are technology specialists. Understanding the possibilities for success with engaging technology specialists in supporting professional educators' use of technology would be helpful for school division leaders. Furthermore, it would be interesting to establish an understanding of how the two forms of support could work together to provide affordable and engaging technology education that would translate into enhanced classroom instruction.

How do different pedagogical or androgogical approaches affect the learning outcomes achieved by the TechManitoba workshops?

The goal of technology training events is to meet learning objectives and to change the way that participants engage with technology. Therefore, it is important to understand which teaching approaches have the greatest impact on participant behaviour. Both positive experiences and increased usage are important factors in understanding whether or not participants will continue to explore their newly acquired skills. Furthermore, it would be interesting to establish an understanding of how the two forms of support could work together to provide affordable and engaging technology education that would translate into enhanced classroom instruction.

What is the current state of technology and internet connectivity in schools and school divisions across Manitoba?

Understanding the current connectivity and devices being used by schools and divisions across Manitoba will establish an important baseline to determine current needs and to measure growth over time. This may be of interest to Rural Development Institute at Brandon University.

How is internet access and use changing due to Covid-19?

> This unprecedented closure of businesses, schools, and public places has undoubtedly had a technological effect. Not only are more people working or studying from home but many are relying on technology to maintain social contacts. Each of these activities may be requiring increased internet, or other technological supports. In addition, the pandemic may be causing an increased gap between those who have access to technology and internet, and those without.

What factors affect a culture of internet or technology use and adoption in Manitoba?

> This research direction would explore factors that affect people's opinions of, and willingness to engage with technology and the internet in Manitoba. Understanding these factors would help create targeted approaches that can overcome barriers to adoption and use, and can build on strengths and opportunities identified through the research.

Appendix A: Survey Results

Q1. Which workshop did you attend?

43 participants responded to this question. Most participants who responded (43.49%, or 23 respondents) attended workshops based in Winnipeg.
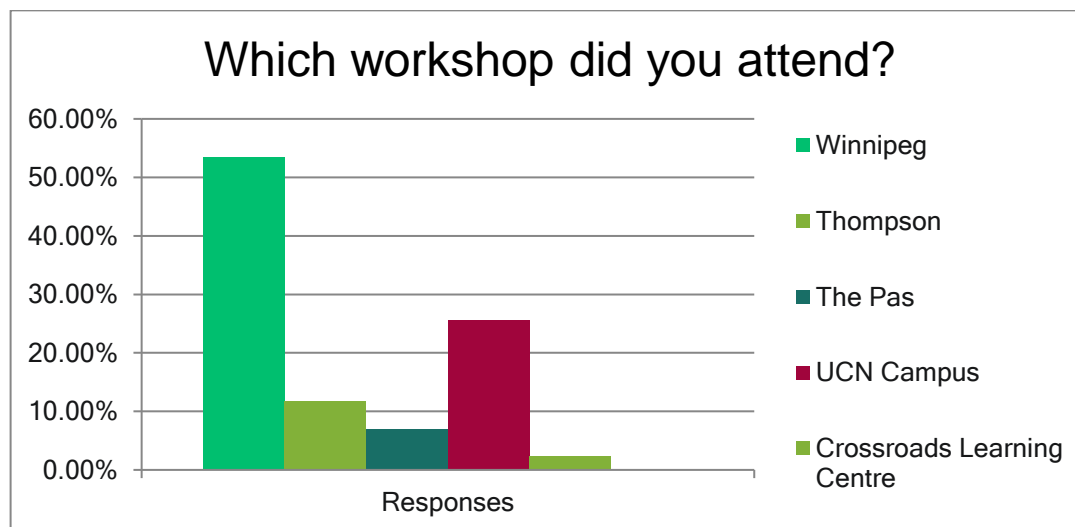

Q2. How often do you use the internet per week?

46 participants responded to this question. The majority use the internet 10+ times per week (60.87% or 28 respondents). 11 participants (23.91%) use the internet 2-10 times per week. 7 participants (15.22%) use the internet only once per week. No participants never use the internet.
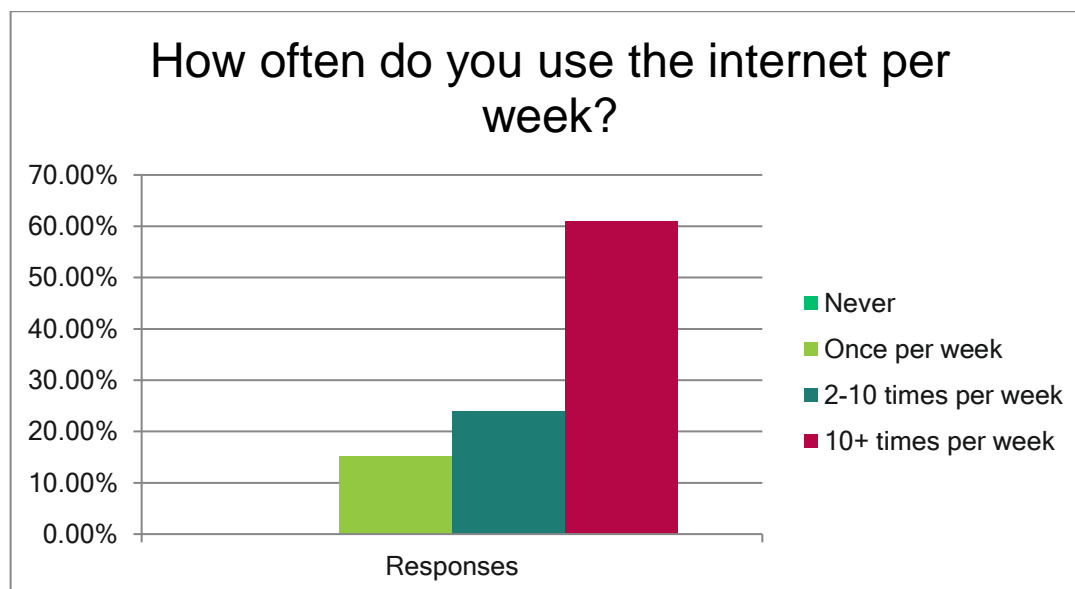
Q3. After you finished your workshop with TechManitoba, did your internet use increase?

47 participants responded to this question. For 25 participants (53.19%), their internet use increased after their participation in the TechManitoba workshop. For 22 participants (46.81%), their internet use did not increase.

After you finished your workshop with Tech Manitoba, did your internet use increase?

- Yes. It went up.
- No. It stayed the same.

Responses
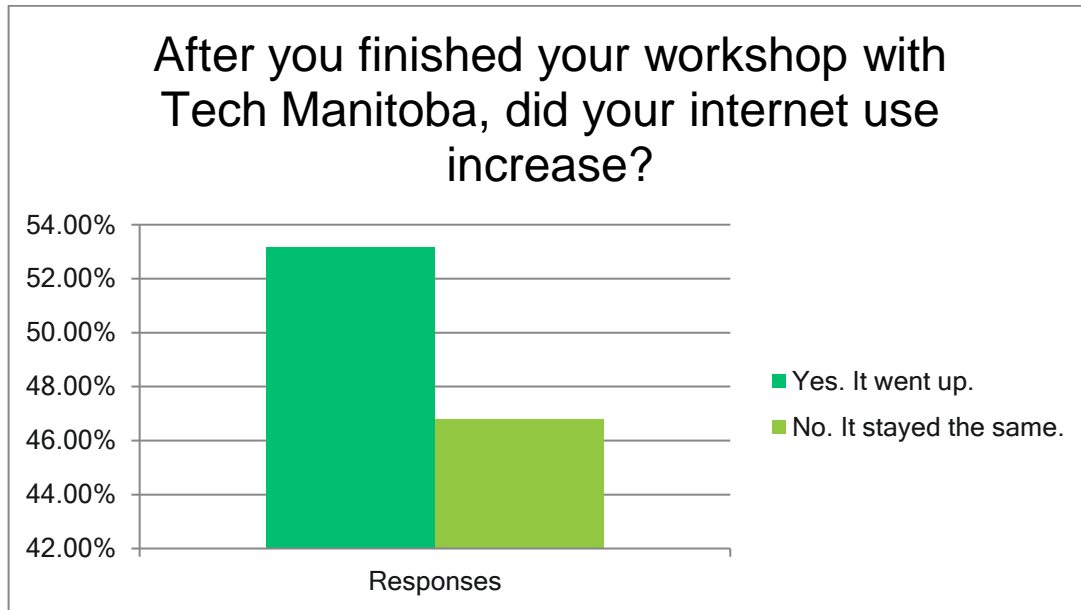
Q4. Did the workshop with Tech Manitoba increase your confidence in using the internet?

47 participants responded to this question. Most participants who responded (74.47%, or 35 respondents) said their confidence increased as a result of the workshop.

Did the workshop with Tech Manitoba increase your confidence in using the internet?

- Yes. My confidence went up.
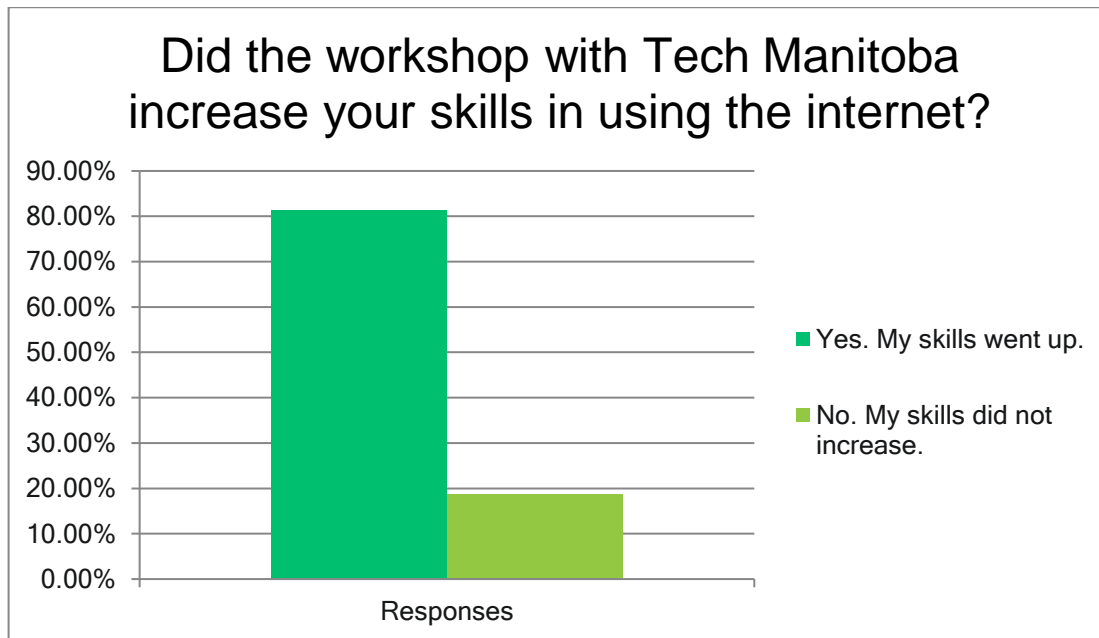- No. My confidence did not increase.

Responses
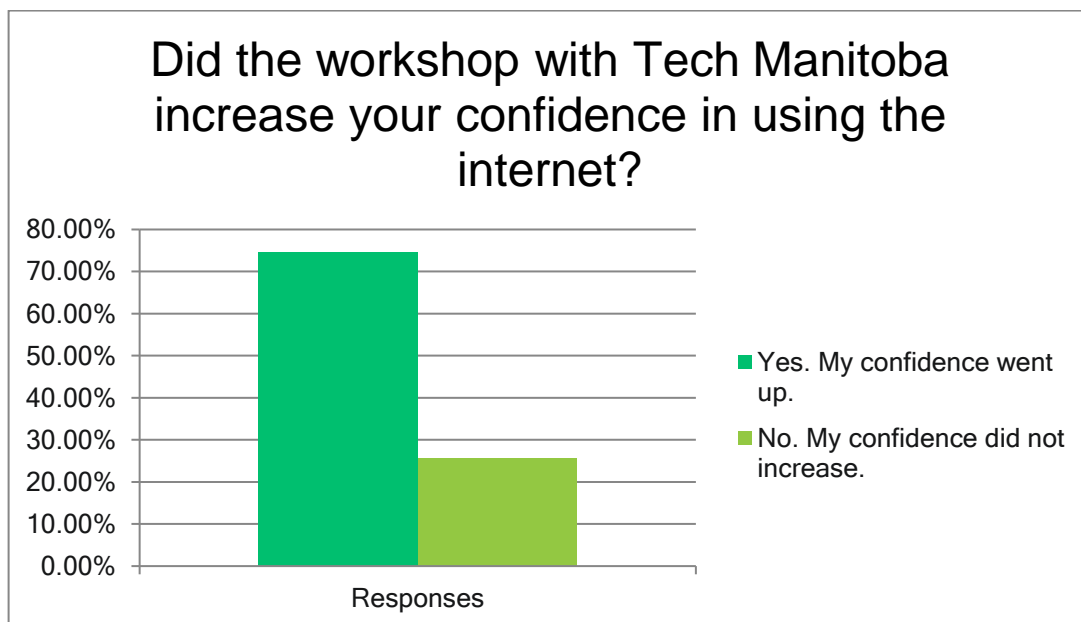
Q5. Did the workshop with Tech Manitoba increase your skills in using the internet?

48 participants responded to this question. Most participants who responded (81.25% or 39 respondents) said their skills increased as a result of the workshop.

Q6. Did the workshop with Tech Manitoba improve your understanding and ability to make informed decisions online?

48 participants responded to this question. Most participants who responded (85.42%, or 41 respondents) said their understanding and ability to make informed decisions increased as a result of the workshop.

Q7. Please list any other feedback about the workshop you attended through TechManitoba.

37 participants left feedback in response to this question. By categorizing each comment as either positive, negative, or neutral, most people (62%) feel positive about their experiences with the workshops they attended. 27% of participants were neutral, and 11% left negative responses. The most commonly used words are included below, with larger words appearing more frequently.