

# A REFLECTION ON CYBERSECURITY INDIGENOUS EDUCATIONAL EXPERIENCES



## OBJECTIVES

Our two main objectives remained the same throughout the entirety of the project:

- 1 Indigenize educational materials related to cybersecurity, and
- 2 Provide workshops to rural Indigenous communities on cybersecurity.

## INTRODUCTION

In 2019, Drs. Plosker and Srivastava received a Community Investment Grant from the Canadian Internet Registration Authority (CIRA) for a knowledge-sharing community engagement project aimed at broadening public understanding of cybersecurity. The project was aimed specifically at facilitating broad-interest workshops on cybersecurity in rural First Nations communities in Western Manitoba. The workshops included a broad overview of information related to cybersecurity, such as practical information on security and data protection.

Drs. Plosker and Srivastava hired Indigenous Outreach Workshop Facilitators Farrah Huntinghawk (undergraduate Science student from Rolling River First Nation) and Candace Richards (undergraduate fine arts student from Sandy Bay) to Indigenize educational materials related to cybersecurity and to hold workshops where the materials would be used. They created pamphlets and Indigenized “Cybersecurity 101” notes that formed the main content of the workshops. They held two workshops with Dr. Plosker in Waywayseecappo First Nation in early 2020 prior to Covid-19 lockdowns. Other workshops scheduled for 2020 had to be postponed.

In 2022 the project resumed, and Indigenous Outreach Workshop Facilitators Alexis Cinq-Mars (an Assiniboine Community College graduate and Métis woman from Selkirk, Manitoba) and Kendra Simpson (Swampy Cree Bachelor of Nursing student from Norway House Cree Nation).

The project was slow to restart as the province (and the world) slowly re-opened post-Covid-19. Emeka Ezeh (Master’s in Development Practice student from the University of Winnipeg, from Nigeria, West Africa) joined the team during the summer of 2022 and created a slide show based on the pamphlets.

In Fall 2022, Kayleigh Tanner (undergraduate Science student from Waywayseecappo First Nation) was hired as the final Indigenous Outreach Workshop Facilitator. Tanner carried out the continuation of the facilitation of cybersecurity workshops in rural First Nation reserves as well as an urban friendship center that places emphasis on Indigenous people for the remainder of the grant, which expired at the end of 2023.

## THE FOUR R’S

It is important to include Indigenous peoples in the Canadian cybersecurity dialogue, couched in the Four R’s of First Nations and Higher Education: Respect, Relevance, Reciprocity, and Responsibility.

## WORKSHOPS

The Cybersecurity 101 notes were presented and pamphlets were handed out at all workshops, to students as well as teachers at each school.

- Birdtail Sioux First Nation: Three workshops aimed at Nursery through Grade 12. Included playtime activity with blocks for younger age group to demonstrate the concepts, and a Q&A period for the older age group with Tanner
- Sioux Valley Dakota Nation: Three workshops aimed at Kindergarten-Grade 6. Emphasis on cyberbullying due to community needs.
- Sandy Bay First Nation: Six workshops aimed at Grades 4-12.

- Brandon Friendship Center- Adult Education: Also featured a slideshow and informal discussion of personal experiences of the audience.

## CONCLUSION

Our study took us to four First Nation reserves and one urban Indigenous service center where we facilitated a total of 16 workshops. We presented for approximately 200 Indigenous students (from kindergarten to adult education) through an Indigenous framework by not only having the Indigenous outreach workshop facilitators (who they themselves are from First Nations communities) take the lead during workshops but by also affording schools the

## CONTEXT

Land Acknowledgement: The Indigenous communities visited throughout this project and Brandon University are located on both Treaty 1 and Treaty 2 territories. Although the communities of Birdtail Sioux, Sioux Valley and Waywayseecappo reside in Treaty 2 territory, Waywayseecappo is signed under Treaty 4 and both Birdtail Sioux and Sioux Valley are not signatory to any treaty. We at Brandon University acknowledge and respect the history, land and the people of this area.

Following the Truth and Reconciliation Commission of Canada: Calls to Action (2015), there is much interest in Indigenizing course content in all levels of public education, to develop culturally appropriate educational programming, and to eliminate educational gaps between Indigenous and non-Indigenous Canadians.

freedom to choose the participants and contribute topics to be discussed. We found that communities were very welcoming and thankful to be having a workshop of this nature provided to them.

Although the demand for cybersecurity education in rural Canada is still substantial, we believe our workshops and educational material developed will assist in reducing the disparity between rural Indigenous cybersecurity knowledge and the lack of research surrounding the topic.

## REFERENCES

- [1] More information can be found on our website: <https://www.brandonu.ca/indigenous-cybersecurity/>
- [2] K. Tanner, S. Plosker and G. Srivastava. *A Reflection on Cybersecurity Indigenous Educational Experiences*, in preparation
- [3] S. Plosker and G. Srivastava. *Cybersecurity Education in Rural Indigenous Canada*, Institute of Electrical and Electronics Engineers Canadian Conference of Electrical and Computer Engineering (IEEE CCECE) 2021
- [4] F. Huntinghawk, C. Richard, S. Plosker, and G. Srivastava. *Expanding Cybersecurity Knowledge Through an Indigenous Lens: A First Look*, IEEE CCECE 2020.

## ACKNOWLEDGEMENTS

This work was supported by a Community Investment Grant from the Canadian Internet Registration Authority (CIRA). The authors thank all school and center personnel involved in the coordination of the workshops.

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