

GTLI 2023-2024 Fall Series: The Future of Learning and Education in a Changing World

November 10: LEARNING IN A DIGITAL WORLD Dr. Julie Mueller

How do we learn/teach in a digital world?

Khirwadkar, A., Welbourn, S., MacLeod, K., Manners, A., **Mueller, J.**, & Yennemadi, K.^s (2022). Preamble: Conceptualizing a learner-centred model for designing digital instruction. In Jacobsen, M. & Smith, C. (Eds.) *Online Learning and Teaching from Kindergarten to Graduate School* (pp. 485-489). Canadian Association for Teacher Education. <http://dx.doi.org/10.11575/PRISM/40509>.

Mueller J., & Yennemadi, K.^s (2022). Using Design Thinking as a Lens to Examine Faculty Members' Experiences Teaching During Covid-19. In Jacobsen, M. & Smith, C. (Eds.) *Online Learning and Teaching from Kindergarten to Graduate School* (pp. 577-602). Canadian Association for Teacher Education. <http://dx.doi.org/10.11575/PRISM/40509>

Hennessey, E.^s, & **Mueller, J.** (2020). Teaching and learning design thinking (DT): How do educators see DT fitting into the classroom? *Canadian Journal of Education*, 43(2), 498-521.

Mueller, J., Wood, E., Willoughby, T., Ross, C., & Specht, J. (2008). Identifying discriminating variables between teachers who fully integrate computers and teachers with limited integration. *Computers & Education*, 51, 1523-1537.

What do we learn/teach in a digital world?

Mueller, J., Beckett, D., Hennessey, E., & Shodiev, H. (2017) Assessing computational thinking across the curriculum. In P. Rich & C B. Hodges, (Eds.), *Emerging research, practice, and policy on computational thinking* (pp. 251-267). Springer.

Hennessey, E. ^s, **Mueller, J.**, Beckett, D., & Fisher, P. ^s (2017). Hiding in Plain Sight: Identifying Computational Thinking in the Ontario Elementary School Curriculum. *Journal of Curriculum and Teaching*, 6(1), 79-96.

Hirschhorn, M. & **Mueller, J.** Eds. (2016). What should Canada's teachers know? Teacher capacities: Knowledge, beliefs and skills. Ottawa, ON: Canadian Association for Teacher Education. <http://dx.doi.org/10.11575/PRISM/38780>

Why do we learn/teach in a digital world?

Mueller, J., & Nickel, J., Eds. (2019). *Globalization and Diversity in Education: What Does It Mean for Canadian Teacher Education?* Ottawa, ON: Canadian Association for Teacher Education. <http://dx.doi.org/10.11575/PRISM/38779>

Inspiring Lives

Resources to check out:

Bias in Algorithms

TED Talk https://www.ted.com/talks/joy_buolamwini_how_i_m_fighting_bias_in_algorithms

The Conversation <https://theconversation.com/facebook-whistleblower-frances-haugen-testified-that-the-companys-algorithms-are-dangerous-heres-how-they-can-manipulate-you-169420>

Computational Thinking:

CT Student Quiz https://www.callysto.ca/wp-content/uploads/2020/10/Resource_Callysto-CTt_Instrument_Student_version-1.pdf

CT Teacher Quiz https://www.callysto.ca/wp-content/uploads/2020/10/Resource_Callysto-CTt_Instrument_Teacher_version-1.pdf

Ethics of Artificial Intelligence:

UNESCO <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>

Moral Machine <https://www.moralmachine.net/>

Let's Talk Science <https://letstalkscience.ca/educational-resources/backgrounders/introduction-artificial-intelligence>

UN Sustainability Goals

17 SDGs <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>