

## Curriculum Vitae

# MIWA AOKI TAKEUCHI

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Werklund School of Education  
University of Calgary  
EDT 840, 2500 University Drive NW, Calgary AB  
T2N1N4 Canada

Office Phone: +1-403-210-9201  
Email: [miwa.takeuchi@ucalgary.ca](mailto:miwa.takeuchi@ucalgary.ca)  
Personal Website & Blog:  
<https://miwatakeuchi.com/>

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## EDUCATIONAL HISTORY

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Doctor of Philosophy (Ph.D.) June, 2012	<b>University of Toronto, Ontario Institute for Studies in Education</b>
Master of Arts (M.A.) November, 2007	<b>University of Toronto, Ontario Institute for Studies in Education</b>
Bachelor of Science in Education March, 2004	<b>Hokkaido University, Japan</b>

## ACADEMIC POSITIONS

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July 2019 – Current	<b>Werklund School of Education, University of Calgary</b> Associate Professor
May 2017 – June 2019	<b>Werklund School of Education, University of Calgary</b> Assistant Professor
September 2014 – April 2017	<b>Werklund School of Education, University of Calgary</b> Postdoctoral Scholar/Adjunct Assistant Professor/Sessional Instructor
April 2012 – August 2014	<b>Japan Society for the Promotion of Science</b> Research Fellow

Host Institutions:  
Rikkyo University, Tokyo, Japan  
University of Toronto, Ontario Institute for Studies in Education

## PUBLICATIONS

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\*\* indicates graduate/undergraduate students I supervised/mentored (student status at the time of publication)  
⌘ indicates postdoctoral scholars I worked with/mentored  
# indicates community partners I worked with  
For all the co-authored publications listed here, I have made substantive contributions.  
Most of my publications are available online for Open Access: <https://miwatakeuchi.com/publications/>

## Refereed Journal Articles

- 1) \*\*Thraya, S., Takeuchi, M.A., & Rahm, J. (under review). Relational ways of (re)connecting to the land: Translanguaging pedagogy with whole hearts. *Journal of Research in Science Teaching*.
- 2) Takeuchi, M.A., \*\*Dadkhahfard, S., #Kopparla, M., & \*\*Elhowari, R. (2024). Intergenerational transdisciplinary knowing toward stewarding the land of refuge: Learning through the pandemic. *Cultural Studies in Science Education*. Advance online publication: <https://doi.org/10.1007/s11422-024-10218-2> (full-text available for viewing: <https://rdcu.be/dKh2H>)
- 3) Takeuchi, M.A., & Ishiguro, H. (2023). 社会環境デザインとしての学習—学習研究はなぜ公正と権力を問わなければならないのか [Learning as socio-environmental design: Toward the research on equity and power in learning in the context of Japan]. *認知科学 [Cognitive Studies]*, 30(2), 124–136. Online publication: [https://www.jstage.jst.go.jp/article/jcss/advpub/0/advpub\\_2022.089/\\_pdf-char/ja](https://www.jstage.jst.go.jp/article/jcss/advpub/0/advpub_2022.089/_pdf-char/ja)

**Note:** The discussion around power, equity, and justice in learning is still scarce in the context of Japanese cognitive sciences and learning sciences. This publication written intentionally in Japanese in a well-regarded Japanese journal is one way to evoke the conversations around power that ubiquitously shapes what is learned, how learning happens, and who learners become through learning, reflecting in the unique geopolitical contexts of Japan. This paper was written during my invited visiting scholarship in 2022.

- 4) Dominguez, H., Takeuchi, M.A., & Civil, M. (2023). Three embodied voices speaking on/to research on language, mathematics, and the learner. *ZDM – Mathematics Education*, 55, 1037–1051. <https://doi.org/10.1007/s11858-023-01525-z>

**Note:** This article is an introductory literature review for the Special Issue in ZDM – Mathematics Education on *Reconceptualizing the Relationship Between Language, Mathematics, and the Learner in Mathematics Education Research*. As invited guest editors, we oversaw from conceptualization, invitation, and peer-review processes for this Special Issue featuring diverse theories and Global voices (a total of 10 articles) that are transforming the portraits of language in mathematics education.

- 5) \*\*Liu, S., & Takeuchi, M.A. (2023). Embodied mathematical pedagogy to liberate racialized and multilingual bodies. *Educational Studies in Mathematics*, 112, 267–287. <https://doi.org/10.1007/s10649-022-10185-x>

**Note:** *Educational Studies in Mathematics* is a well-respected international mathematics education journal. The European Mathematical Society selected this journal as one of the two highest quality journals in mathematics education (Scimago Journal Rank: Q1). This work was supported by the Social Sciences and Humanities Research Council and supported a graduate student, Shimeng Liu's publication in an international journal.

- 6) Davis, B., Francis, K., Towers, J., Markle, J., Boháč-Clarke, V., & Takeuchi, M.A. (2023). Learning metaphors and classroom enactments: Understanding webs of association and their entailments for school mathematics. *Asian Journal for Mathematics Education*, 2(4), 469–491.
- 7) Kim, B., \*\*Bastani, R., & Takeuchi, M.A. (2023). Embodied mathematical practices in (re)designing board games in a linguistically diverse classroom. *Pedagogies: An International Journal*, 18(2), 289–310. <https://doi.org/10.1080/1554480X.2021.2013232>

- 8) Takeuchi, M.A., Kayumova, S., De Araujo., & Madkins, T. (2022). Going beyond #RetireELL: A call for anti-colonial approaches to languages in STEM education. *Journal of Research in Science Teaching*, 59(5), 876–879. <https://doi.org/10.1002/tea.21764>
- 9) \*\*Langevin, N., Takeuchi, M.A., \*\*Yuen, J., & #Jaques, S. (2021). Fostering genetic mathematical understanding through the early STEM classroom. *Delta-K Journal of the Mathematics Council of the Alberta Teacher's Association*, 57(1), 29–34.

**Note:** Nicole Langevin (a BEd student in the Werklund School of Education) and Jenny Yuen (a BEd alumni and a teacher in the Palliser School Division) were both the Program for Undergraduate Research Experience (PURE) and Werklund School of Education Undergraduate Research Award recipients. This publication is based on our summer research projects with our co-author and collaborator, Shayla Jaques (a teacher in the Calgary Board of Education).

- 10) Takeuchi, M.A. & #Aquino Ishihara, V. (2021). Learning to assemble the hidden bodies: Embodied and emplaced mathematical literacy in transnational migrant activism. *Journal of the Learning Sciences*, 21 (1), 103–124. <https://doi.org/10.1080/10508406.2020.1820341>

**Note:** The *Journal of the Learning Sciences* is a highly regarded and well-read international journal in the field of the learning sciences (Scimago Journal Rank: Q1). I co-authored this work with a community collaborator, Virgie Aquino Ishihara (Filipino Migrant Center, Japan). This work was circulated through News media such as Big News Network, The Japan Herald, and The Conversation (Altmetric: 34).

- 11) Takeuchi, M.A. (2021). Geopolitical configuration of identities and learning: Othering through the institutionalized categorization of “English language learners.” *Cognition and Instruction*, 39(1), 85–112. <https://doi.org/10.1080/07370008.2020.1825438>

**Note:** *Cognition and Instruction* is a well-respected and well-read international journal in the field of the learning sciences and education at large (Scimago Journal Rank: Q1).

- 12) Takeuchi, M.A. & \*\*Liu, S. (2021). “I’m more of a visual learner”: The disciplinary values and identity in school mathematics learning and group work. *Journal of Mathematical Behavior*, 61 (100835), 1–10. <https://doi.org/10.1016/j.jmathb.2020.100835>

**Note:** The *Journal of Mathematical Behavior* is one of the well-regarded international journals in mathematics education (Scimago Journal Rank: Q1). This work was funded by the Insight Development Grant [Grant Number: 430-2015-00151] by the Social Sciences and Humanities Research Council and supported a graduate student, Shimeng Liu’s publication in an international journal.

- 13) Takeuchi, M.A., Sengupta, P., Shanahan, M-C., Adams, J.D., & \*\*Hachem, M. (2020). Transdisciplinarity in STEM education: A critical review. *Studies in Science Education*, 56(2), 213–253. <https://doi.org/10.1080/03057267.2020.1755802>

**Note:** *Studies in Science Education* is a well-regarded and well-read international journal in STEM education and science education (Scimago Journal Rank: Q1).

- 14) Translanguaging Study Group (de Araujo, Z., Gomez, N., Li, J-Y., Miller, E., Morales, H., Roberts, S., Smith, E., Takeuchi, M.A., Truxaw, M., & Willey, C.). (2020). Translanguaging and the mathematics classroom. *Teaching for Excellence and Equity in Mathematics*, 11(2), 8–15.

- 15) Takeuchi, M.A., \*\*Bryan, V., \*\*Valera, S., & \*\*Dadkhahfard, S. (2019). Immigrant students' stories about learning mathematics in groups. *Canadian Journal of Science, Mathematics and Technology Education*, 19(3), 237–253. <https://doi.org/10.1007/s42330-019-00056-8>

**Note:** *Canadian Journal of Science, Mathematics and Technology Education* is a national STEM education journal. This work was funded by the Insight Development Grant [Grant Number: 430-2015-00151] by the Social Sciences and Humanities Research Council and supported graduate and undergraduate students' (Venice Bryan, Sylvana Valera, and Shima Dadkhahfard's) publication.

- 16) Takeuchi, M.A., & \*\*Bryan, V. (2019). Video-mediated interviews to reveal multiple voices in peer collaboration for mathematics learning in groups. *International Journal of Research & Method in Education*, 42 (2) 124–136. <https://doi.org/10.1080/1743727X.2018.1445218>

**Note:** This work was funded by the Insight Development Grant [Grant Number: 430-2015-00151] by the Social Sciences and Humanities Research Council and supported a doctoral student's (Venice Bryan) publication in an international journal on research methodology (Scimago Journal Rank: Q1).

- 17) #Jaques, S., Kim, B., #Shyleyko-Kostas, A., & Takeuchi, M.A. (2019). "I just won against myself!": Fostering early numeracy through boardgame play and redesign. *Early Childhood Education*, 46(1). 22–29.

**Note:** In collaboration with Shayla Jaques and Anna Shyleyko-Kostas (teachers in the Calgary Board of Education), we conducted a design-based research project (funded by Alberta Education) and published an article in a practitioner-oriented journal of the Alberta Teachers Association.

- 18) Takeuchi, M. A. (2018). Power and identity in immigrant parents' involvement in early years mathematics learning. *Educational Studies in Mathematics*, 97 (1), 39–53. <https://doi.org/10.1007/s10649-017-9781-4>

**Note:** *Educational Studies in Mathematics* is a well-respected international mathematics education journal. The European Mathematical Society selected this journal as one of the two highest quality journals in mathematics education (Scimago Journal Rank: Q1). This work was supported by the Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research.

- 19) Towers, J., Takeuchi, M.A., & Martin, L.C. (2018). Examining contextual influence on students' emotional relationships with mathematics in the early years. *Research in Mathematics Education*, 20 (2), 146–165. <https://doi.org/10.1080/14794802.2018.1477058>

**Note:** *Research in Mathematics Education* is an international mathematics education journal (Scimago Journal Rank: Q1).

- 20) Takeuchi, M.A., Towers, J., & \*\*Plosz, J. (2016). Early years students' relationships with mathematics. *Alberta Journal of Educational Research*, 62 (2), 168–183. Retrieved from <http://www.ajer.ca>

- 21) Preciado Babb, A.P., Takeuchi, M.A., Alonso-Yáñez, G., Francis, K., Gereluk, D., & Friesen, S. (2016). Pioneering STEM education for pre-service teachers. *International Journal of Engineering Pedagogy*, 6 (4), 4–11. <https://doi.org/10.3991/ijep.v6i4.5965>

**Note:** *International Journal of Engineering Pedagogy* is an international Open Access journal in the field of STEM education.

- 22) Takeuchi, M. A. (2016). Friendships and group work in linguistically diverse mathematics classrooms: Opportunities to learn for English language learners. *Journal of the Learning Sciences*, 25 (3), 411–437. <https://doi.org/10.1080/10508406.2016.1169422>

**Note:** The *Journal of the Learning Sciences* is a highly regarded and well-read journal in the field of the learning sciences (Scimago Journal Rank: Q1).

- 23) Takeuchi, M. (2016). Transformation of discourse: Multilingual resources and practices among Filipino mothers in Japan. *International Journal of Bilingual Education and Bilingualism*, 19 (3), 235–248. <https://doi.org/10.1080/13670050.2014.978262>

**Note:** The *International Journal of Bilingual Education and Bilingualism* is a well-regarded bilingual education journal (Scimago Journal Rank: Q1). This work was supported by the Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research.

- 24) Takeuchi, M. (2015). The situated multiliteracies approach to classroom participation: English language learners' participation in classroom mathematics practices. *Journal of Language, Identity and Education*, 14 (3), 159–178. <https://doi.org/10.1080/15348458.2015.1041341>

**Note:** The *Journal of Language, Identity and Education* is a well-regarded journal in bilingual/second language education (Scimago Journal Rank: Q1).

- 25) Takeuchi, M., & Coyle, R. (2015). Learning elapsed time through afterschool activities. *Ontario Mathematics Gazette*, 54 (2), 9–13. Retrieved from <http://www.oame.on.ca/main/index1.php?lang=en&code=pubsecond>

**Note:** In collaboration with an elementary school teacher in the Toronto District School Board, we conducted a research project and published an article in a practitioner-oriented journal by the Ontario Association for Mathematics Education.

#### Publications prior to PhD

- 26) Takeuchi, M. & Esmonde, I. (2011). Professional development as discourse change: Teaching mathematics to English learners. *Pedagogies: An International Journal*, 6 (4), 331–346. <https://doi.org/10.1080/1554480X.2011.604904>
- 27) Esmonde, I., Takeuchi, M., & Radakovic, N. (2011). Getting unstuck: Histories of engagement and mathematics learning in groups. *Mind, Culture, and Activity: An International Journal*, 18 (3), 237–256. <https://doi.org/10.1080/10749031003790128>
- 28) Takeuchi, M. (2010). Equity in learning opportunities: Examining Learning Opportunity Index designed by Toronto District School Board. *Journal of Studies on Canadian Education*, 8, 49–52 [in Japanese]
- 29) Takeuchi, M. (2010). The social organization of mathematics classroom and English language learners' opportunity to participate. *Canadian Journal for New Scholars in Education*, 3 (1), 1–9. Retrieved from <http://www.cjnse-rcjce.ca>
- 30) Takeuchi, M. (2010). Reviewing “Multilingualism in mathematics classrooms: Global perspectives.” *Canadian Journal of Science, Mathematics and Technology Education*, 10 (2), 173–176. <https://doi.org/10.1080/14926151003778290>

- 31) Esmonde, I., Brodie, K., Dookie, L., & Takeuchi, M. (2009). Social identities and opportunities to learn: Student perspectives on group work in an urban mathematics classroom. *Journal of Urban Mathematics Education*, 2 (2), 18–45. Retrieved from <https://journals.tdl.org/jume/index.php/JUME>

**Note:** *Journal of Urban Mathematics Education* is an Open Access journal that is committed to fostering equity and social justice in mathematics education.

- 32) Takeuchi, M. (2008). Access to creativity: Position of technology in the Ontario curriculum for English language learners. *E-Learning and Digital Media*, 5 (4), 492–496. <https://doi.org/10.2304/elea.2008.5.4.492>
- 33) Mayuzumi, K., Nagayama, C., Motobayashi, K., & Takeuchi, M. (2007). Transforming diversity in Canadian higher education: A dialogue of Japanese women graduate students. *Teaching in Higher Education*, 12 (5-6), 581–592. <https://doi.org/10.1080/13562510701595200>

**Note:** *Teaching in Higher Education* is an international journal in the area of higher education (Scimago Journal Rank: Q1). As a collective of racialized and gendered graduate students and reflected on our lived experiences, we advocated for equity and diversity in higher education.

### Invited, Refereed Encyclopedia Entries

- 1) Takeuchi, M.A., Osibodu, O., & Kopparla, M. (in press). Mathematical literacies for justice: Global perspectives. In M. T. Winn, & L. T. Winn. (Eds.). *Bloomsbury Encyclopedia of Social Justice in Education* (Section Editors: J.R. Lizárraga, & A. Cortez)
- 2) Takeuchi, M.A. & Marin, A. (2022). “Globalization,” coloniality, and decolonial love in STEM education. *Oxford Research Encyclopedia of Education*. <https://doi.org/10.1093/acrefore/9780190264093.013.1655>

### Invited, Refereed Book Chapters

- 1) Takeuchi, M.A., Thraya, S., & Langevin, N. (accepted). “Can the plants talk?”: Liberatory design and emergence of linguistic queering. In S. Vogel, E. Suárez, B. Semel, C. Proctor (Eds.). *Learning machines: Sociology of language perspectives on digitally mediated learning*. de Gruyter Mouton.
- 2) Kopparla, M., Takeuchi, M.A., Yuen, J., Thraya, S., & Chowdhury, A. (in press). Play, Joy, and Creativity in Land-based STEM Learning: Reconnecting with Intergenerational Knowledge for Refugee Learners. In J. Adams, & C. Siry (Eds.). *Wondering sciences: Creativity, imagination and future thinking in sciences education*. New York: Springer.
- 3) Takeuchi, M.A. & Dadkhahfard, S. (2019). Rethinking bodies of learners through STEM education. In P. Sengupta., M-C. Shanahan., & B. Kim (Eds.). *Critical, transdisciplinary and embodied approaches in STEM education* (pp.199–216). New York, NY: Springer.
- 4) Takeuchi, M. (2018). Conversions for life: Transnational families’ mathematical funds of knowledge. In T.G. Bartell (Ed.), *Toward equity and social justice in mathematics education* (pp.127–143). Cham, Switzerland: Springer.
- 5) Towers, J., Takeuchi, M. A., Hall, J., & Martin, L. (2017). Students’ emotional experiences learning mathematics in Canadian schools. In U. Xolocotzin (Ed.), *Understanding emotions in mathematical thinking and learning* (pp.163–186). Waltham, MA: Elsevier Academic Press.



- 6) Caswell, B., Esmonde, I., & Takeuchi, M. (2011). Towards culturally relevant and responsive teaching of mathematics. In C. Rolheiser, M. Evans, & M. Gambhir (Eds.), *Inquiry into practice: Reaching every student through inclusive curriculum practices* (pp. 64–71). Toronto, CA: Ontario Institute for Studies in Education.

### Invited Commentaries

- 1) Takeuchi, M.A. & Leyva, L.A. (2022). Queering disciplinary languages: A critical orientation to languages in mathematics education. *International Journal of Qualitative Studies in Education*. Advance online publication: <https://doi.org/10.1080/09518398.2022.2127030>

### Refereed Conference Proceedings

- 1) Takeuchi, M., \*\*Thraya, S., & Mambo, T. (in press). Learning to see beyond anthropocentric views on bodies through transdisciplinary soil-centered pedagogy. To appear in *The 18<sup>th</sup> International Conference of the Learning Sciences 2024 proceedings*. Buffalo, NY: International Society of the Learning Sciences.
- 2) Vadeboncoeur, J., Takeuchi, M., Rahm, J., Marin, A., Curnow, J., \*\*Chowdhury, A., #Kopparla, M., \*\*Thraya, S., Czuy, K., El Halwany, S., Edino, R., Marlow, S., Turner, K., Adams, J., Qureshi, N., & Schaffer, K. (2023). Reimagining learning research in “Canada” as “road making”: Opportunities to move toward equity through walking methodologies. In P. Blikstein, J. Van Aalst, R. Kizito, & K. Brennan (Eds.), *The 17<sup>th</sup> International Conference of the Learning Sciences 2023 proceedings* (pp. 1613–1621). Montreal, Canada: International Society of the Learning Sciences.
- 3) \*\*Thraya, S., Takeuchi, M., #Kopparla, M., \*\*Chowdhury, A. (2023). Co-fostering translanguaging spaces through design for embodied (re)connection. In P. Blikstein, J. Van Aalst, R. Kizito, & K. Brennan (Eds.), *The 17<sup>th</sup> International Conference of the Learning Sciences 2023 proceedings* (pp. 361–368). Montreal, Canada: International Society of the Learning Sciences.
  - This paper was nominated for the Outstanding Student Paper Award for Sophia Thraya.
- 4) \*\*Chowdhury, A., Takeuchi, M., #Kopparla, M., \*\*Thraya, S., & #Edworthy, S. (2023). Arts as critical transdisciplinary pedagogy: Awakening relationality through the anti-oppressive facilitation of soil painting on the land. In P. Blikstein, J. Van Aalst, R. Kizito, & K. Brennan (Eds.), *The 17<sup>th</sup> International Conference of the Learning Sciences 2023 proceedings* (pp. 1557–1560). Montreal, Canada: International Society of the Learning Sciences.
- 5) Mochizuki, T., Yuki, N., Egi, H., Ishii, Y., Kubota, Y., Kato, H., Takeuchi, M.A. (2023). Investigating relationship development processes between 3D conversational agents and learners in collaborative discussions. In C. Damşa, M. Borge, E. Koh, & M. Worsley (Eds.), *The Proceedings of the 16<sup>th</sup> International Conference on Computer-Supported Collaborative Learning 2023* (pp. 201–204). Montreal, Canada: International Society of the Learning Sciences.
- 6) \*\*Thraya, S., & Takeuchi, M.A. (2022). Translanguaging as a tool to (re)connect: Co-designing land-based learning environments with refugee children. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *The 16<sup>th</sup> International Conference of the Learning Sciences 2022 proceedings* (pp. 615–622). Hiroshima, Japan: International Society of the Learning Sciences.
- 7) \*\*Dadkhahfard, S., & Takeuchi, M.A. (2022). Iterative, reflexive, and generative processes of participatory design of arts: Interrogating racial ideologies in design. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *The 16<sup>th</sup> International Conference of the Learning Sciences 2022 proceedings* (pp. 1021–1024). Hiroshima, Japan: International Society of the Learning Sciences.

- 8) #Kopparla, M., Takeuchi, M.A., \*\*Yuen, J., & \*\*Chowdhury, A. (2022). Co-construction of third space of joy and playfulness through critical transdisciplinarity: Land-based STEM learning with refugee children. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *The 16<sup>th</sup> International Conference of the Learning Sciences 2022 proceedings* (pp. 1305–1308). Hiroshima, Japan: International Society of the Learning Sciences.
- 9) Ali, A., Davis, N., Takeuchi, M.A., Avraamidou, L., Marin, A., Martins, I., Philip, T., & Vossoughi, S. (2022). Seeing histories in bodies, places, and disciplinary learning: Historicizing methodologies. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *The 16<sup>th</sup> International Conference of the Learning Sciences 2022 proceedings* (pp. 1723–1730). Hiroshima, Japan: International Society of the Learning Sciences.
- 10) Takeuchi, M.A., & \*\*Dadkhahfard, S. (2021). Critical envisioning of embodiment in mathematics teaching. In D. Kolloosche (Ed.), *Exploring new ways to connect: Proceedings of the Eleventh International Mathematics Education and Society Conference* (Vol. 3, pp. 1005–1014). Tredition. <https://doi.org/10.5281/zenodo.5416820>
- 11) Takeuchi, M. A., \*\*Elhowari, R., & \*\*Yuen, J. (2021). Embodied and emplaced mathematical literacy: A refugee family's funds of knowledge toward regenerative farming. In D. Kolloosche (Ed.), *Exploring new ways to connect: Proceedings of the Eleventh International Mathematics Education and Society Conference* (Vol. 1, pp. 235–238). Tredition. <https://doi.org/10.5281/zenodo.5392987>
- 12) Takeuchi, M.A., Adams, J., Alley, Z., Baker, K., Gutiérrez, K., Lehrer, R., Leyva, L., Rahm, J., Sengupta, P., Shanahan, M-C., Tagalik, S., Yin, P., & Kayumova, S. (2020). Rethinking transdisciplinarity in the learning sciences: Critical and emergent perspectives. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) Volume 3* (pp. 1463–1470). Nashville, Tennessee: International Society of the Learning Sciences.
- 13) \*\*Liu, S., & Takeuchi, M.A. (2020). Intellectual emancipation and embodiment in early mathematics learning. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) Volume 4* (pp. 2061–2068). Nashville, Tennessee: International Society of the Learning Sciences.
- 14) Curnow, J., Jurow, S., #Aquino-Ishihara, V., Meixi, Melendez, J., Redes de Tutoria, M., Kirshner, B., Pham, J., Philip, T., Rincon Gallardo, S., Takeuchi, M.A., Tivaringe, T., & Uttamchandani, S. (2020). Global perspectives on social movement: Collective action as learning. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) Volume 5* (pp. 2539–2546). Nashville, Tennessee: International Society of the Learning Sciences.
- 15) \*\*Dadkhahfard, S., & Takeuchi, M.A. (2020). Visual counter-storytelling toward equity and teaching. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) Volume 5* (pp. 2373–2374). Nashville, Tennessee: International Society of the Learning Sciences.
- 16) Takeuchi, M.A. (2016). Parents' involvement in early years mathematics learning: The case of Japanese immigrant parents. In M.B. Wood, E. E. Turner, M. Civil, & J.A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1115–1118). Tucson, AZ: The University of Arizona.



- 17) Takeuchi, M.A., Towers, J., & Martin, L. (2016). What contributes to positive feelings towards mathematics: Examining mathematics autobiographies. In M.B. Wood, E. E. Turner, M. Civil, & J.A. Eli (Eds.), *Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1119–1122). Tucson, AZ: The University of Arizona.
- 18) Takeuchi, M. A. (2016). Multimodality in mathematics classroom discourse: An ethnographic study. In C. Csikos, A. Rausch, & J. Sztányi (Eds.), *Proceedings of the 40th Conference of the International Group for the Psychology of Mathematics Education, Volume 1* (p. 205). Szeged, Hungary: Psychology of Mathematics Education.
- 19) Takeuchi, M.A., Towers, J., & Martin, L. (2016). Images of mathematics learning revealed through students' experiences of collaboration. In C. Csikos, A. Rausch, & J. Sztányi (Eds.), *Proceedings of the 40th Conference of the International Group for the Psychology of Mathematics Education, Volume 4* (pp.267–274). Szeged, Hungary: Psychology of Mathematics Education.
- 20) Takeuchi, M.A., & Towers, J. (2016). Students' experiences of group work revealed through mathematics autobiographies. In M. Takeuchi, A. P. Preciado Babb, & J. Lock (Eds.), *Proceedings of the IDEAS: Designing for Innovation* (pp.224–233). Calgary, Canada: Werklund School of the Education, University of Calgary.
- 21) Preciado Babb, A., Takeuchi, M., Gereluk, D., Alonso Yáñez, G., Francis, K., & Friesen, S. (2016). Pioneering STEM education: A course for pre-service teachers. *Proceedings of the IEEE Global Engineering Education Conference 2016* (pp. 324–331). Abu Dhabi, UAE: IEEE Educon.
- 22) Takeuchi, M. (2015). Non-dominant students' and their parents' mathematical practices at home. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 566–570). East Lansing, MI: Michigan State University.
- 23) Takeuchi, M., & Towers, J. (2015). Immigrant students' mathematics learning experiences in Canadian schools. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 592). East Lansing, MI: Michigan State University.
- 24) Towers, J., Takeuchi, M., Hall, J., & Martin, L. (2015). Exploring the culture of school mathematics through students' images of mathematics. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 570–574). East Lansing, MI: Michigan State University.
- 25) Plosz, J., Towers, J., & Takeuchi, M. (2015). Students' images of mathematics explored through drawings. In T. G. Bartell, K. N. Bieda, R.T. Putnam, K. Bradfield, H. Dominguez (Eds.), *Proceedings of the 37th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 590). East Lansing, MI: Michigan State University.
- 26) Takeuchi, M. (2015). Intergenerational analysis of mathematical cultural tool appropriation in transnational families. In S. Mukhopadhyay, & B. Greer (Eds.), *Proceedings of the Eighth International Conference of Mathematics Education and Society* (pp. 954–965). Portland, OR: Portland State University.

- 27) Hall, J., Towers, J., Takeuchi, M., & Martin, L. C. (2015). Investigating students' positive relationships with mathematics. In K. Beswick, T. Muir, & J. Wells (Eds.), *Proceedings of the 39th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 1, p. 164). Tasmania, Australia: University of Tasmania.
- 28) Esmonde, I., Takeuchi, M., & Dookie, L. (2012). Integrating insights from critical race and queer theories with cultural-historical learning theory. In J. Aalst, K. Thompson, M.J. Jacobson, & P. Reimann (Eds.), *Conference Proceedings of the International Conference of the Learning Sciences*. (pp. 491–492). Sydney, Australia: University of Sydney.

### Invited or Editorial, Non-Refereed Publications

- 1) Czuy, K., Kim, E.A., Meadows, M.L., & Takeuchi, M.A. (forthcoming). Creativity, interdisciplinarity, and love in critical STEM education research: A metalogue. In J. Adams (Ed.), *Critical transdisciplinary approaches to urban STEM education*. Rotterdam, the Netherland: Sense.
- 2) Takeuchi, M.A., Sengupta, P., Adams, J., & Shanahan, M-C. (2022). Critical and emergent perspectives to transdisciplinarity in the learning sciences. In M-C. Shanahan, B. Kim, M.A. Takeuchi, K. Koh, P. Preciado-Babb, & P. Sengupta (Eds.). *The learning sciences in conversation: Theories, methodologies, and boundary spaces* (pp. 19–26). Routledge.
- 3) Takeuchi, M.A., Vadeboncoeur, J., Krishnamoorthy, R., Hladik, S., Rahm, J., Kim, B., & Clark, D. (2022). Refiguring and transforming the learning sciences: A dialogical field-in-the-making. In M-C. Shanahan, B. Kim, M.A. Takeuchi, K. Koh, P. Preciado-Babb, & P. Sengupta (Eds.). *The learning sciences in conversation: Theories, methodologies, and boundary spaces* (pp. 256–266). Routledge.
- 4) Adams, J., Takeuchi, M.A., El Howany, S., & Kopparla, M. (2022). Transcending disciplinarity: An epilogue for epistemological, ontological and axiological expansions. In M-C. Shanahan, B. Kim, M.A. Takeuchi, K. Koh, P. Preciado-Babb, & P. Sengupta (Eds.). *The learning sciences in conversation: Theories, methodologies, and boundary spaces* (pp. 59–64). Routledge.
- 5) Sengupta, P., Takeuchi, M.A., Kim, B., Shanahan, M-C., Koh, K., & Preciado-Babb, P. (2022). Knowing and learning in proleptic boundary spaces: Re-imagining the learning sciences. In M-C. Shanahan, B. Kim, M.A. Takeuchi, K. Koh, P. Preciado-Babb, & P. Sengupta (Eds.). *The learning sciences in conversation: Theories, methodologies, and boundary spaces* (pp. 3–17). Routledge.
- 6) Cummins, J. & Takeuchi, M. (2019). Teaching mathematics to “English language learners”. In M. Sack (Ed.), *My best idea: Mathematics educators share ideas that changed their classrooms* (pp.92–103). Toronto, Canada: Rubicon.

**Note:** This invited chapter was for the goal of wide circulation in schools and for teachers. My co-author, Dr. Jim Cummins (University of Toronto) has used this chapter for the keynote talk with the Ontario Mathematics Coordinators Association to promote linguistic diversity in mathematics classrooms.

### Non-Refereed Conference Proceedings

- 1) Plosz, J., Towers, J. (Jo) M., Czuy, K., Aljarrah, A., Vorhies, A., & Takeuchi, M. (2018). Students' relationships with mathematics revealed through drawing. In J. Holm, S. Mathieu-Soucy, & S. Oesterle (Eds.). *Proceedings of the Canadian Mathematics Education Study Group/Groupe Canadien d'Étude en Didactique des Mathématiques* (pp. 285–286). Montreal, Canada: McGill University. Retrieved from <http://www.cmesg.org/wp-content/uploads/2018/05/CMESG-2017.pdf>

- 2) Takeuchi, M.A. (2018). “Perimeter is easier to work with than area”: Students’ language use in group work. In J. Holm, S. Mathieu-Soucy, & S. Oesterle (Eds.). *Proceedings of the Canadian Mathematics Education Study Group/Groupe Canadien d’Étude en Didactique des Mathématiques* (pp. 289–290). Montreal, Canada: McGill University. Retrieved from <http://www.cmesg.org/wp-content/uploads/2018/05/CMESG-2017.pdf>

## Editorial Works

- Shanahan, M-C., Kim, B., Takeuchi, M.A., Koh, K., Preciado-Babb, P., & Sengupta, P. (2022). *The learning sciences in conversation: Theories, methodologies, and boundary spaces*. New York: Routledge.

**Note:** This book project started as the collective efforts made by the University of Calgary, Learning Sciences Specialization faculty members. From the beginning to the end, I served as a lead editor for the section of Transdisciplinarity and a coordinator for the book project. In addition to editing the section, I was also the lead organizer for international symposiums at AERA and ISLS with Dr. Kris Gutiérrez (University of California Berkeley), Dr. Rich Lehrer (Vanderbilt University), Dr. Luis Leyva (Vanderbilt University), and Dr. Jrene Rahm (Université de Montréal).

- An invited guest editor for the Special issue for 2023: Reconceptualizing the relationship between language, mathematics, and the learner in mathematics education research in *ZDM: Mathematics Education* — with Dr. Higinio Dominguez (Michigan State University) and Dr. Marta Civil (University of Arizona)

## Project Websites for Knowledge Mobilization

Soil Camp: Listening Together to the Voices of the Soil, Community, and Silenced Histories with the Land  
<https://www.soilcamp.ca/>

- For the project funded by Social Sciences and Humanities Research Council of Canada, Partnership Development Grant, *Learning with the Land and Understanding the Soil Toward Refugee Integration and Diversity*
- Built collectively by a number of project team members (paid from the grant) including Anika Haroon, Ruth Panaguiton, Janice Hor, and Diana Larrivee
- Contributed to posts, pedagogical resources, and conceptualization for knowledge mobilization efforts
- Since the launch of our website in 2021, the website attracted 200 weekly visits on average, mainly from Canada and the United States but all across the world

Illustrate STEM for Diversity  
<https://www.illustratestem.net/>

- For the project funded by Social Sciences and Humanities Research Council of Canada, Insight Grant, *Envisioning Inclusive Mathematics Education with Digital Illustrated Stories*
- Built collectively by a number of project team members (paid from the grant) including Nicole Langevin and Shima Dadkhahfard
- Contributed to a number of blog posts, pedagogical resources, and conceptualization for knowledge mobilization efforts

## RESEARCH GRANTS

### External Research Grants [totaling \$758,539]

#### Principal Investigator

Title	Learning with the Land and Understanding the Soil Toward Refugee Integration and Diversity
Year	2022–ongoing
Source	Social Sciences and Humanities Research Council of Canada, Partnership Development Grant
Role	<p>Principal Investigator</p> <p>With Co-Applicants and Collaborators:            Dr. Teri Balser (Faculty of Science, University of Calgary)            Dr. Kori Czuy (Director, Indigenous Science Connections, TELUS Spark Science Center)            Dr. Tatenda Mambo (Sustainability Studies, University of Calgary)            Dr. Ananda Marin (School of Education and Information Studies, University of California Los Angeles)            Dr. Jrene Rahm (Faculté des sciences de l'éducation, Université de Montréal)            Dr. Cesar Suva (The Immigrant Education Society)            Dr. Mathew Swallow (Department of Earth and Environmental Studies, Mount Royal University)            Dr. Steven Vamosi (Faculty of Science, University of Calgary)</p> <p>With Partner Organizations:            Biogeoscience Institute/University of Calgary, CCIS, Mount Royal University, TELUS Spark Science Center, The Immigrant Education Society, Weklund School of Education/University of Calgary, YYC Growers and Distributors</p> <p>With Funded Mentees:            Dr. Mahati Kopparla (Postdoctoral Scholar); Dr. Deborah Dutta (Postdoctoral Scholar); Sophia Thraya (PhD student/MA student); Anita Chowdhury (MA student); Abisola Allison (MSc student); Janice Hor (BEd student); Nicole Langevin (BEd student); Afoke Oyibocha (BA student); Bezawit Baze (BSc student)</p> <p>With Elder and Knowledge Keepers:            Elder Herman Many Guns (The Piikani Nation)            Liana Wolf Leg (The Blackfoot Nation)</p> <p>Website: <a href="https://www.soilcamp.ca/">https://www.soilcamp.ca/</a></p>
Amount	\$ 200,000 CAD
Purpose	<p>This project has developed around our common vision: 1) to design and study land-based learning opportunities for refugee children and youth, 2) to deepen teacher candidates' understanding of the soil, ecosystem and biodiversity, and 3) to advocate for socio-environmental justice and (bio)diversity on a public regenerative farm with racialized children and youth. This farm – Land of Dreams – is a 30-acre community urban farm, where newcomers participate in local and sustainable agriculture with visions for decolonization and reconciliation with Indigenous communities (cf. Call 93 of the Truth and Reconciliation Commissions of Canada: Calls to Action). Due to the transdisciplinary nature of this project, we have intentionally partnered with organizations and researchers who carry</p>

	<p>respective knowledge(s) that can be shared to deepen both program design as well as research analysis. These intentional cross-sectoral and transdisciplinary partnerships provide rich opportunities for both participants and partners and address the complex gaps in the field of refugee resettlement and educational research and practices. Together, we will foster a network for research and program design at the municipal, national, and international levels. We believe this project will eventually lead to civic actions for food justice and environmental restoration as well as civic actions for decolonization and reconciliation. This grant will plant seeds for these future actions.</p>
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Title	Storying the Soil: Actions and Voices from the Global Indigenous Perspectives
Year	2023–ongoing
Source	Environmental and Climate Change Canada - Mobilizing Alberta Climate Action Grant
Role	<p>Principal Investigator</p> <p>With Co-Applicants: Dr. Mathew Swallow (Mount Royal University) With Community Partner: Calgary Catholic Immigration Society, Land of Dreams (Representative: Rod Olson)</p> <p>With Collaborator: Dr. Tatenda Mambo (Sustainability Studies, University of Calgary)</p>
Amount	\$50,000 CAD
Purpose	The goals of this grant are for 1) running new agro-ecological experiments to investigate approaches to improve soil function and climate services, and 2) storytelling the agri-ecological approaches rooted in Global Indigenous perspectives with racialized refugee and immigrant communities, for wider knowledge mobilization.

Title	Envisioning Inclusive Mathematics Education with Digital Illustrated Stories
Year	2020–ongoing
Source	Social Sciences and Humanities Research Council of Canada, Insight Grant [Grant Number: 430-2020-0134]
Role	<p>Principal and sole investigator</p> <p>With Funded Mentees: Shima Dadkhahfard (PhD student); Nicole Langevin (BEd student); Ehisann El-Birani (BEd student)</p>
Amount	\$88,986 CAD
Purpose	This project will demonstrate how digital illustrated stories can be utilized as a tool to unveil traditionally unseen mathematics knowledge and history of (im)migrant and refugee families. The project will utilize these digital stories as a catalyst for public engagement to collectively envision equitable spaces and practices in mathematics and STEM learning environments with teachers, teacher candidates and (im)migrant and refugee families.

Title	Interaction and Collaboration for Mathematics Learning in Diverse Canadian Classrooms
Year	2015–2018
Source	Social Sciences and Humanities Research Council of Canada, Insight Development Grant [Grant Number: 430-2015-00151]
Role	Principal and sole investigator  With Funded Mentees: Venice Bryan (PhD student); Shima Dadkhahfard (PhD student); Shimeng Liu (MA student); Jenny Yuen (BEd student); Sylvana Valera (BEd student); Diana Larrivee (BEd student)
Amount	\$41,204 CAD
Purpose	Many Canadian classrooms are linguistically and racially diverse. How can we design pedagogy to facilitate mathematics learning for all students in these diverse Canadian classrooms? The findings gained from this proposed research helped to develop pedagogy for collaboration for richer language activities and mathematics learning in Canadian diverse classrooms.

Title	Social Design to Optimize Mathematics Learning for Linguistic Minority Learners
Year	2012–2014
Source	Japan Society for the Promotion of Science, Grants-in-Aid for Scientific Research [Grant number: 12 J02927]
Role	Principal and sole investigator
Amount	3,760,000 yen (Approximately \$49,024 CAD)
Purpose	The goal of this study was to propose the social design to bridge in- and out-of-school mathematics learning for linguistic minority students. Both in Japan and in Canada, I examined (im)migrant parents' involvement in early mathematics learning and designed workshops for parents to reflect on and share their mathematical funds of knowledge that can simultaneously leverage in-school mathematics learning.

### Co-Principal Investigator

Title	Creating Public Methodologies for Reimagining Histories: Toward Justice and a Transformative View of the Possible in Education
Year	2023–ongoing
Source	Spencer Foundation Conference Grant
Role	Principal Investigators: Dr. Arshad Ali (George Washington University), Dr. Natalie Davis (Georgia State University), Dr. Miwa A. Takeuchi (University of Calgary) Collaborators: Dr. Lucy Avraamidou (University of Groningen), Dr. Ananda Marin (University of California Los Angeles), Dr. Isabel Martins (University of Rio de Janeiro), Dr. Thomas Philip (University of California Berkeley), Dr. Shirin Vossoughi (Northwestern University)
Amount	\$50,000 USD (Approximately \$67,000 CAD)
Purpose	Through this grant, we reconceptualize methodologies in educational research toward anti-colonialism and racial equity. We cultivate the collective of researchers, artists, and educators to advance transformative views of the possible in educational justice. We ask; how can we, as students of the learning sciences and research methodology, shift away from the damaging narrative of deficiency, incompleteness and insufficiency imposed upon learners of color under the guise of development and learning? What transformative ways of



	conceptualizing learning and development can emerge through a deeply historicized view of the possible?
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### Co- Investigator

Title	Developing Mathematical Literacy and Mathematics Identity through Game Design
Year	2017–2018
Source	Research Partnership Program, Alberta Education
Role	Principal Investigator: Dr. Beaumie Kim Co-investigators: Drs. Barb Brown, Ronna Mosher (Calgary Board of Education), Miwa Aoki Takeuchi
Amount	\$49,825 CAD
Purpose	The focus of this project was to use a game design approach for developing mathematical literacy and mathematics identity. We engaged students in mathematics learning by connecting their supposedly out-of-school practices (game play) with school education activities. The design and development was through collaboration between school teachers and university researchers, and we involved learners throughout the design process.

Title	Examining Teacher and Student Learning in Mathematics through Design-Based Research
Year	2017–2018
Source	Research Partnership Program, Alberta Education
Role	Principal Investigator: Dr. Ronna Mosher (Calgary Board of Education), Dr. Armando Paulino Preciado Babb, Dr. Sharon Friesen (University of Calgary) Co-investigators: Drs. Barb Brown, Krista Francis, Miwa Aoki Takeuchi
Amount	\$50,000 CAD
Purpose	This research study examined teacher and student learning in mathematics. In this study researchers documented and analyzed principled and practical knowledge of teaching mathematics (the know-how and the know-why) enacted by participant teachers involved in a mathematics professional learning series while gathering resultant evidence of student mathematical understandings.

### **Sponsored Grant**

#### Principal Investigator

Title	STEM Equity and Diversity
Year	2019–ongoing
Source	Endowed Gift Agreement
Role	Principal investigator
Amount	\$162,500 CAD
Purpose	The goal of this project is to foster equity and diversity in STEM learning through research activities that involve: <ul style="list-style-type: none"> <li>- Partnerships with under-resourced public schools and non-profit organizations</li> <li>- Leadership exercised by people who have been traditionally excluded from STEM disciplines (visible minorities, LGBTQ2S communities, economically-disadvantaged communities and refugee and migrant communities)</li> </ul>

	- Knowledge mobilization beyond academic journals to facilitate conversations with the general public.
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### Internal Research Grant [Totaling \$76,951]

#### Principal Investigator

Title	Imagining Critical Learning Sciences of Mobility, Globalization and Design
Year	2019–2020
Source	Outbound Fellowship, University of Calgary
Role	Principal and sole investigator
Amount	\$6,500 CAD
Purpose	The goal of this study was to cultivate an international network with scholars who bridge critical learning sciences and critical early childhood education.

Title	Envisioning Equitable Practices in Early Childhood Education
Year	2019–2021
Source	Scholarship of Teaching and Learning Grant, University of Calgary
Role	Principal and sole investigator
Amount	\$7,000 CAD
Purpose	Through this study, I aimed to foster cross-cultural competencies in undergraduate, pre-service teacher education courses by: 1) bringing theoretical and research-based discussion on equity in early childhood education, 2) discussing classroom videos to facilitate discussion on equitable teaching practices.

Title	Fostering Mathematical Literacy in the Early Years through Digital Storytelling
Year	2018–2019
Source	University Research Grants Committee Research Grant
Role	Principal and sole investigator
Amount	\$14,923 CAD
Purpose	I partnered with a public elementary school (Kindergarten to Grade 2) located in an economically under-resourced, linguistically and racially diverse area in a Canadian city. The goal was to find ways to deepen these students' mathematics learning to address educational inequity, by enriching mathematics pedagogy in the early years.

Title	Rethinking Transdisciplinarity in STEM Education
Year	2018–2019
Source	Office of Research Mentorship and Collaboration Grant
Role	Principal Investigator: Miwa Aoki Takeuchi Co-Investigators: Drs. Pratim Sengupta, Marie-Claire Shanahan, Jennifer Adams  With Funded Mentee: Maryam Hachem (PhD student)

Amount	\$7,467 CAD
Purpose	We collaborated to provide an literature review on what has been done in research on STEM education over the past ten years and also propose a theoretical construct to rethink transdisciplinarity in STEM education from critical epistemologies and ontologies.

### Co-Investigator

Title	International Collaborative for Equity in STEM Education and Research
Year	2020–2021
Source	International Research Partnership Workshop Grant
Role	Principal Investigator: Dr. Jennifer Adams (University of Calgary) Collaborators: Drs. Miwa Aoki Takeuchi, Wendy Benoit, Laleh Behjat, Pratim Sengupta, Marie-Claire Shanahan, Sean Stotyn, Rain Prud'homme-Cranford (University of Calgary), Lucy Avraamidou, Maria Ioannou, Mary Lee (University of Groningen), Christina Siry (University of Luxembourg)
Amount	\$ 10,000 CAD
Purpose	Achieving equitable learning opportunities and outcomes for all students is one of the most pressing challenges facing science education in North America and Europe, with Equity also being one of the most ubiquitous, and yet undertheorized concepts in science education. STEM learning and participation are equitable when there are no barriers to or differentials in achievement in STEM along social and demographic characteristics. This workshop brings together scholars from Europe, the Universities of Groningen and Luxembourg specifically, and the University of Calgary dialogue and develop collaborative projects that centre equity and social justice-oriented research in order to re-vision inclusive STEM education.

Title	Preservice Teacher's Conceptualizations of Disability and Inclusion
Year	2018–2019
Source	Teaching and Learning Grants, Taylor Institute for Teaching and Learning
Role	Principal Investigator: Dr. Man-Wai Chu (University of Calgary) Co-investigators: Drs. Jennifer Lock, Miwa Aoki Takeuchi
Amount	\$ 31,061 CAD
Purpose	This research study examined preservice teachers' initial and developing conceptualizations of disability and inclusion in the medium of artistic renderings. Based on the findings, we redesigned a teacher education course on inclusive education.

### **Visiting Professorship**

Invited and Funded Visiting Professorship in Rikkyo University, Tokyo, Japan (Fund received approximately \$5,525 CAD 540,790 YEN) – 2022

- In collaboration with scholars at Rikkyo University and University of Tokyo, we offered symposiums to advance scholarships on the learning sciences and social justice in the unique context of Japan. We are working toward the publication of a textbook to be used for undergraduate and graduate education in the learning sciences in Japanese universities.

## ACADEMIC AWARDS AND SCHOLARSHIPS

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**Total Amount: \$439,690 CAD**

### **External [Total: \$268,267 CAD]**

- Invited Visiting Scholar – \$5,525 CAD – Rikkyo University (2022)
- Early Career Award – The International Society of the Learning Sciences (2021)
- Research Fellowship – Japan Society for the Promotion of Science (2012-2014) – 13,032,000 yen (Approximately \$169,917 CAD)
- Early Career Researcher Travel Fund – The International Society of the Learning Sciences (2012) – \$1,000 USD (Approximately \$1,316 CAD)
- Government of Canada Award – Canadian Government (2006-2007) – \$24,123 CAD
  - This scholarship was awarded by the Canadian Government for international students who were not eligible to apply for SSHRC scholarships. This scholarship program was terminated in 2007.
- Ambassadorial Scholarship – Rotary International (2004-2006) – \$27,000 USD (Approximately \$35,555 CAD)
- Takenaka Ikueikai Scholarship – Takenaka Corporation, Japan (2001-2004) – 2,520,000 Yen (Approximately \$32,856 CAD)

### **Internal [Total: \$171,423 CAD]**

- University of Calgary Teaching Award (Associate Professor) – University of Calgary (2021)
- Teaching Excellence Award – Students' Union, University of Calgary (2021)
- Werklund Teaching Excellence Award – University of Calgary (2020) – \$2,000 CAD
- University Research Grants Committee conference travel fund – University of Calgary (2015) – \$1,026 CAD
- Leithwood Award (for an outstanding doctoral dissertation) – Nominated and selected as a departmental representative (was not selected as the finalist) – OISE, University of Toronto (2013)
- Doctoral Completion Award – University of Toronto (2011-2012) – \$26,886 CAD
- Mary Stager Graduate Student Award (awarded for an outstanding doctoral research project in urban education) – OISE, University of Toronto (2011) – \$4,265 CAD
- University of Toronto Funding Grant (2007-2011) – \$135,246 CAD [tuition fee + guaranteed funding of \$15,000 CAD for four years]
- Academic Excellence Award (awarded for excellence in securing external funding) – OISE, University of Toronto (2005/2006) – \$4,000 CAD
- Clark Memorial Award (awarded for the highest academic achievement in the department) – Hokkaido University (2004)
- Lane Award (awarded for the highest academic achievement in the department) – Hokkaido University (2002)

## TEACHING EXPERIENCE

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### **Graduate Courses**

EDER 779.05 Introduction to the Learning Sciences  
 EDER 679.35 Conceptualizing the Learning Sciences  
 EDER 603.07 & 701.12 Ethnographic Research Approach  
 EDER 689.99 Analytical and Algorithmic Reasoning (with Department of Mathematics)  
 EDER 678.30 Instructional Design and Development  
 EDER 689.74 Introduction to Mathematics Education Research

EDER 600.01 Research Methodology in Education  
EDER 693.32 Contemplative Roots of Eco-Social Justice in Education

Independent Study Courses

EDER 603.11 Arts-Based Research Methodology  
EDER 678. 06 Advanced Topics in Learning Sciences: Critical Interaction Analysis  
EDER 678. 06 Advanced Topics in Learning Sciences: Interaction Analysis  
EDER 678. 06 Advanced Topics in Learning Sciences: Mathematics Education

**Undergraduate Courses**

EDUC 427 STEM Education  
EDUC 460.01 Specialization I  
EDUC 535.01 Specialization II  
EDUC 450 Diversity in Learning

**Graduate Supervision (Complete)**

Shimeng Liu, MA. (Werklund School of Education, University of Calgary, 2020) – Currently, Eyes-High Postdoctoral Scholar at the Werkbund School of Education, University of Calgary  
Thesis Title: Intellectual emancipation and embodiment in early mathematics learning  
Nominated for the Governor General's Gold Medal Award

Christopher Ostrowdun, Ph.D. (Werklund School of Education, University of Calgary, 2021) – Currently, Lecturer in Education at the School of Education, University of Leeds  
Co-Supervision with Dr. Jennifer Lock  
Thesis Title: Navigating figured worlds: Preservice teachers' understandings of disability and inclusion through representations  
Recipient of the 2019 EdCan Network Pat Clifford Award for Early Career Research in Education and (Featured in [UToday](#)) and SSHRC Joseph-Armand Bombardier Canadian Graduate Doctoral Scholarship (2018-2020).

Xiao Wang, M.A. (Werklund School of Education, University of Calgary, 2023)  
Thesis Title: The role of colonial ideologies in mediation: Racialized young learners' sense-making during collective reading of science and mathematics picture books – Completed in June, 2023

Sophia Thraya, M.A. (Werklund School of Education, University of Calgary, 2023)  
Thesis Title: Translanguaging as a tool to (re)connect: Co-designing land-based learning environment with refugee children – Completed in June, 2023  
Recipient of SSHRC Canada Graduate Scholarship (CGS) - Master's (\$17,500 for 2022-23)

Shima Dadkhahfard (PhD candidate) Werklund School of Education, University of Calgary  
Project Title: Designing art-based mediational tool toward critical transdisciplinarity  
Recipient of Alberta Graduate Student Excellence Award (\$15,000 for 2020-21)

**Graduate Supervision (Ongoing)**

Luke Muscat (EdD candidate) Werklund School of Education, University of Calgary  
Project Title: Embodied storytelling: Fostering queer movements in early childhood  
Recipient of Ethel King-Shaw Doctoral Scholarship in Literacy (\$17,500 for 2022-23)  
Recipient of SSHRC Canada Graduate Scholarship (CGS) - Doctoral (\$35,000 for 2023-25)

Anita Chowdhury (MA student) Werklund School of Education, University of Calgary  
Project Title: Arts as critical transdisciplinary pedagogy: Awakening relationality through the anti-oppressive facilitation of soil painting on the land

Sophia Thraya (PhD student) Werklund School of Education, University of Calgary

Project Title: Translanguaging toward eco-social justice and (re)connection: Co-fostering land-based STEM learning spaces with multilingual refugee children  
Recipient of The President's Doctoral Recruitment Scholarship in Transdisciplinary Research (\$48,000 for 2023-27)

### **BEd Honors Supervision (Complete)**

Allehea Bowen (BEd student) Werklund School of Education, University of Calgary  
Project Title: Beyond boundaries—Integrating social and disability justice in outdoor environmental learning

### **Supervisory Committee (Ongoing)**

- PhD Supervisory Committee for Bogusia Gierus (Supervisor: Dr. Brent Davis)
- PhD Supervisory Committee for Stefan Rothschuh (Supervisor: Dr. Brent Davis & Dr. Krista Francis)
- EdD Supervisory Committee for Zandra Cerpa Gomez (Supervisor: Dr. Marie-Claire Shanahan)
- EdD Supervisory Committee for Yoni Porat (Supervisor: Dr. Marie-Claire Shanahan)

### **Supervisory Committee (Completed)**

#### Internal

PhD Supervisory Committee for Dr. Dylan Paré (Supervisor: Dr. Marie-Claire Shanahan)  
“Reorienting Toward Queerness: Learning with Virtual Reality and Multi-Agent Simulations of Gender and Sexuality”

PhD Supervisory Committee for Dr. Marilu Lam Herrera (Supervisor: Dr. Pratim Sengupta)  
“Grafemos: Centering perspectives from rural Guatemala in educational design for complexity education”

MA Supervisory Committee for Suyeon Cho (Supervisor: Dr. Darren Lund)  
“Development of critical consciousness in youth through student-centered learning: A qualitative case study”

EdD Supervisory Committee for Dr. Rhonda Fisher (Supervisor: Dr. Kim Lenters)  
“Supporting Multimodal Literacies in Early Learning Settings”

EdD Supervisory Committee for Dr. Elaine Kessy (Supervisor: Dr. Jennifer Lock & Dr. Sarah Eaton)  
“Understanding high school teacher professional learning experiences: A case study of school-based professional learning communities”

EdD Supervisory Committee for Dr. Karena Moonre (Supervisor: Dr. Michele Jacobsen)  
“School wellness action research: From an arts-based transformative activist stance”

#### External

PhD Examiner for Dr. Arundhati Velamur (Supervisor: Dr. Jasmine Ma, New York University, Steinhardt),  
Completed in 2024  
“Mathematics in the margins: Politics and the production of subjectivity”

PhD Examiner for Dr. Trang Chau Tran (Supervisor: Dr. Joseph Polman, University of Colorado Boulder),  
Completed in 2024  
“Explorations of the structure-agency dialectic across three stem education contexts focused on equity and identity development”

PhD Examiner for Dr. ArulGanesh S S (Supervisors: Dr. Tathagata Sengupta and Dr. Ayush Gupta, Homi Bhabha Centre for Science Education, Tata Institute for Fundamental Research), Completed in 2025  
“Social, political and economic management of uncertainty and mathematics education”



## Supervision/Mentoring for the Postdoctoral Fellow

Dr. Mahati Kopparla (currently Assistant Professor in the School of Education, University of Pittsburgh)

- PhD in Mathematics Education at the Texas A&M University
- Eyes High Postdoctoral Fellow (Fund Matching Program) at the Werklund School of Education, University of Calgary
- September 2021– July 2023

Dr. Deborah Dutta

- PhD in Science Education at Homi Bhabha Center for Science Education, Tata Institute for Fundamental Research
- Eyes High Postdoctoral Fellow (Fund Matching Program) at the Werklund School of Education, University of Calgary
- May 2024 – ongoing

## Examiner

Candidacy Exam:

- EdD Candidacy Exam, External Examiner (Ann Jirousek – Supervisor: Dr. Karlee Fellner)  
“Iinii Wakkioo Sisapo’koo Ipahka’pii [Buffalo Walking Through the Storm]: Indigenous ways of knowing and doing for collective wellness in the classroom”
- PhD Candidacy Exam, External Examiner (Francesca Patten – Supervisor: Dr. Kaela Jubas)  
“Social media and critical digital museum pedagogy: A multicase study of institution in Calgary, Alberta”
- PhD Candidacy Exam, External Examiner (Moonkyung Min – Supervisor: Dr. Xu Zhao)  
“East Asian LGBTQ individuals’ coming out experiences to parents”
- PhD Candidacy Exam, External Examiner (Stacey Hanzel– Supervisor: Dr. Kimberly Lenters)  
“Playful literacies: Embodied literacies in the early years classroom”
- PhD Candidacy Exam, Internal Examiner (Joshua Markle – Supervisor: Dr. Jo Towers)  
“Spatial capability as embodied understanding: A carnal hermeneutic approach”
- EdD Candidacy Exam, External Examiner (Joshua DiPasquale – Supervisor: Dr. Doug Clark)  
“Designing for ideological expansion and convergence: A case study of intertextual integration with pre-service teachers in the context of bullying”
- PhD Candidacy Exam, External Examiner (Rhonda Fischer – Supervisor: Dr. Kimberly Lenters)  
“Supporting multimodal literacies in early learning settings”
- EdD Candidacy Exam, Internal Examiner (Karena Munroe – Supervisor: Dr. Michele Jacobsen)  
“Arts-based wellness action: Research from a transformative activist stance”
- EdD Candidacy Exam, Internal Examiner (Greg Hardy – Supervisor: Dr. Olive Chapman)  
“Exploring professional identity development in medical laboratory professional students of Newfoundland and Labrador”
- EdD Candidacy Exam, Internal Examiner (Thomas Kennedy – Supervisor: Dr. Jennifer Lock)  
“Identity development within the maker learning environment”
- MA Final Oral Exam, External Examiner (Kelsey Gould – Supervisor: Dr. Michelle Drefs)  
“Finding a common discourse: How do school psychologists and teachers conceptualize number sense”

- PhD Candidacy Exam, Internal Examiner (Megan Suehn – Supervisor: Dr. Anusha Kassan)  
“Exploring identity development from the standpoints of individuals who identify with multiply-marginalized groups”
- EdD Candidacy Exam, Internal Examiner (Michael Cutler – Supervisor: Dr. Pratim Sengupta)  
“The musical imagination: Re-imagining a sound education through boundary play”
- PhD Candidacy Exam, Internal Examiner (Alamr Hebah – Supervisor: Dr. Marie-Claire Shanahan)  
“Figured worlds of STEM for Saudi high school girls: Identity formation in formal and informal communities of practice”
- PhD Candidacy Exam, Internal Examiner (Lake Yeworiew – Supervisor: Dr. Kim Koh)  
“Mathematics teachers’ knowledge, skill, and practice on assessment for learning in the Ethiopian primary schools”

#### Final Oral:

- PhD Final Oral Exam, Internal Examiner (Emily Maine – Supervisor: Dr. Dennis Sumara)  
“Is this a good place to live?: A queer narrative hermeneutics of geographies, homes, and bodies”
- MA Final Oral Exam, External Examiner (Katrina Boutillier– Supervisor: Dr. Shelly Russel-Mayhew)  
“Hungry for education: Healthy weight discourses among students in graduate level, mental health focused, education programs”
- MA Final Oral Exam, External Examiner (Mackenzie Sapacz – Supervisor: Dr. Tom Strong)  
“Mostly symbiotic but partly parasitic: Construction of cell phone use”

#### Neutral Chair

- PhD Final, Neutral Chair (Victorial Nieborowska)
- EdD Final, Neutral Chair (Lilyam Jardine)
- MSc Final, Neutral Chair (Nikki Bergstrom)
- EdD Final, Neutral Chair (Cheryl Kinzel)
- EdD Candidacy Exam, Neutral Chair (Robert Wensreen)
- EdD Candidacy Exam, Neutral Chair (Lois Fearon)
- PhD Final, Neutral Chair (Glory Ovie)
- MA Final, Neutral Chair (Jennifer Plosz)
- MA Final, Neutral Chair (Kirsten Neprily)
- EdD Candidacy Exam, Neutral Chair (Tom Guzowski)

#### Mentorship for Teaching and Research Assistantship

##### Mentorship for the Graduate Assistant Research

- Anita Chowdhury (MA student, September 2021– current) Werklund School of Education, University of Calgary
- Sophia Thraya (MA student, May 2021– current) Werklund School of Education, University of Calgary
- Mariam Yamout (PhD student, June 2022– current) Werklund School of Education, University of Calgary
- Shima Dadkhahfard (PhD student, January 2018 – current) Werklund School of Education, University of Calgary
- Luke Muscat (EdD student, May 2021– August 2022 & May – December 2024) Werklund School of Education, University of Calgary

- Shimeng Liu (MA student, September 2018 – August 2020) Werklund School of Education, University of Calgary
- Maryam Hachem (PhD student, January 2018 – April 2019) Werklund School of Education, University of Calgary
- Venise Bryan (PhD student, September 2016 – June 2019) Werklund School of Education, University of Calgary
- Teresa Fowler (PhD student, April 2016 – September 2016) Werklund School of Education, University of Calgary
- Donghyun Seo (PhD student, March 2018 – June 2019) Werklund School of Education, University of Calgary

#### Mentorship for the Undergraduate Research Awards and Research Assistantship

- Chris Joshna (BEd student, May 2024 – ongoing) Werklund School of Education, University of Calgary: RA advisor
- Afoke Oyibocha (BA student, May 2024 – ongoing) Werklund School of Education, University of Calgary: RA advisor
- Janicer Hor (BEd student, September 2022 – June 2023) Werklund School of Education, University of Calgary: RA advisor
- Ehisann El-Birani (BEd student, September 2021 – June 2023) Werklund School of Education, University of Calgary: RA advisor
- Nicole Langevin (BSc/BEd student, May 2020 – June 2023) Department of Mathematics, University of Calgary (t): supervised for the Program for Undergraduate Research Experience (PURE) Award and RA advisor
- Anita Chowdhury (BEd student, August 2021 – June 2022) Werklund School of Education, University of Calgary: RA advisor
- Raneem Elhowari (BEd student, July 2020 – April 2022) Werklund School of Education, University of Calgary: supervised for the Werklund Undergraduate Research Award and RA advisor
- Jenny Yuen (BEd student, March 2019 – September 2020) Werklund School of Education, University of Calgary: supervised for the Werklund Undergraduate Research Award and RA advisor
- Maria Fernanda Arellano (BEd student, December 2016 – August 2018) Werklund School of Education, University of Calgary: RA advisor
- Stephanie Innes (BEd student, December 2016 – April 2017) Werklund School of Education, University of Calgary: RA advisor
- Silvana Carolina Valera (BEd student, December 2016 – April 2017) Werklund School of Education, University of Calgary: supervised for the Program for Undergraduate Research Experience (PURE) Award and RA advisor

#### Mentorship for the Canada Summer Jobs Youth and Project Assistantship Beyond the University

- Anika Haroon (Calgary Public Library)
- Afoke Oyibocha
- Liana Wolfleg (Siksika Board of Education)
- Bezawit Baye

#### Mentorship for the Teaching Assistant

- Stephanie Hladik (former PhD student) Werklund School of Education, University of Calgary (June 2020 – August 2020)
- For the *Introduction to the Learning Sciences* (Doctoral-level course)

## CONFERENCE PRESENTATIONS, PAPERS, AND POSTERS

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### Invited Talks

2025

An invited Presidential Session

Ma, J., Gholson, M., Kelton, M., Takeuchi, M.A., Vossoughi, S., Erevelles, N., Pham, J., & Rogers, A. (2025). *Critical and ethical perspectives on the role of embodiment in learning*. Presidential session at the annual meeting of American Educational Research Association, Denver.

An invited speaker for the University of Toronto IEPI (Munk School of Global Affairs and Public Policy) and CIDECE (Ontario Institute for Studies in Education)

***Toward Transnational and Trans-disciplinary Possibilities of Socio-Environmental Justices***

<https://www.oise.utoronto.ca/cidece/about/events/02-25-25-toward-transnational-trans-disciplinary-possibilities-socio>

2024

An invited speaker for the University at Buffalo Graduate School of Education Dean's Lecture Series  
***A Just Society: Equity, Belonging, and Community***

An invited speaker for the Community-Based Research Canada

***Transdisciplinarity in Community-Building Research***

An invited panelist for ***Tri-Council Institutional Equity, Diversity, and Inclusion Action Plans*** at the 2024 Canadian Association of Research Administrators Conference  
Moderator: Dr. Malinda Smith (University of Calgary)

An invited speaker for University of Lethbridge Department of Anthropology Speaker Series

***Transdisciplinarity in Listening to the Voice of the Soil***

Dr. Kori Czuy (Manager, Indigenous Science, TELUS Spark Science Centre), Dr. Tatenda Mambo (The Simpson Centre for Food and Agricultural Policy), and Dr. Miwa Aoki Takeuchi (University of Calgary)

2023

An invited webinar for ZDM – Mathematics Education Webinar on Special Issue: ***Reconceptualizing the Relationship Between Language, Mathematics, and the Learner in Mathematics Education Research***  
“Three embodied voices speaking on/to research on language, mathematics, and the learner” presented by Dr. Higinio Dominguez (Michigan State University), Dr. Miwa Aoki Takeuchi (University of Calgary), Dr. Marta Civil (University of Arizona)  
Available at  
[https://www.youtube.com/watch?v=AOX\\_3frbLWk](https://www.youtube.com/watch?v=AOX_3frbLWk)

An invited speaker for the Rutgers Graduate School of Education Learning Sciences Lunch and Learn  
***Reimagining learning toward social and environmental justice by fostering transdisciplinary and transnational collaborations***

An invited speaker for Presidential Session at the International Conference of the Learning Sciences 2023  
***Reexamining core constructs in the Learning Sciences: Building bridges to sustain our community***  
Available at  
[https://www.youtube.com/watch?v=EW0H8XnAa9A&list=PLWOHqDLWdKMjmWY2\\_eqH89HulW](https://www.youtube.com/watch?v=EW0H8XnAa9A&list=PLWOHqDLWdKMjmWY2_eqH89HulW)

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Dr. Joshua Danish (Indiana University Bloomington), Dr. Jasmine Ma (New York University), Dr. Tanner Vea (Penn State University), Dr. Miwa Aoki Takeuchi (University of Calgary), Dr. Areej Mawasi (Technion's Faculty of Education in Science and Technology), Dr. Sakinah Alhadad (Griffith University), Dr. Justice Toshiba Walker (The University of Texas El Paso)

2022

An invited speaker for *AERA 2022 Presidential Session Symposium*

***20 years of the war on terror: Reflections on militarism, schooling, and Muslim communities in the United States*** (Symposium chair: Dr. Arshad Ali (The George Washington University), Panelists: Dr. Thea Renda Abu El-Haj (Columbia University), Dr. Tracy Buenavista (California State University), Dr. Mariam Durranti, Dr. Muhammad Khalifa (The Ohio State University), Dr. Marc Lamont Hill (Temple University), Dr. Miwa Aoki Takeuchi (University of Calgary)

An invited speaker for *International Society of the Learning Sciences Japan Affiliate symposium*

***Equity and social justice in learning. 学びにおける公正 (equity) のあり方***

2021

An invited speaker at *An Invited Panel on Social Justice the International Conference of the Learning Sciences*  
***Expanding conceptions of learning: Colonialism, social movements, and possible futures.***

Available at: <https://www.isls.org/annual-meeting/highlights/>

Dr. Thomas Philip (University of California Berkeley), Dr. Lucy Avraamidou (University of Goningen), Dr. Arshad Ali (The George Washington University), Dr. Natalie R. Davis (Georgia State University), Dr. Ananda Marin (University of California Los Angeles), Isabel Martins (Universidade Federal do Rio de Janeiro), Dr. Audrey Msimanga (University of the Witwatersrand), Dr. Miwa Aoki Takeuchi (University of Calgary), and Dr. Shirin Vossoughi (Northwestern University)

2020

Takeuchi, M.A. (2020, June). [\*Unveiling hidden epistemologies.\*](#)

An invited speaker at the *International Conference of the Learning Sciences*

***Learning and Identity: Imagining socio-political and ethical horizons of the learning sciences***

Available at: <https://www.isls.org/annual-meeting/icls/icls-2020-online-conference/>

Dr. Kris Gutiérrez (University of California, Berkeley), Dr. José Lizarraga (University of Colorado Boulder), Dr. Ananda Marin (University of California, Los Angeles), Dr. Na'ilah Suad Nasir (President, Spencer Foundation), Dr. Kalonji Nzinga (University of Colorado Boulder), Dr. Pratim Sengupta (University of Calgary), Dr. Jennifer Vadeboncoeur (University of British Columbia), Dr. Sepehr Vakil (Northwestern University)

## Invited Guest Lectures

Course: Interactional Analysis (by Dr. Andrew Elby at the University of Maryland)

Course: Inquiry into Education (by Dr. Jessica Watkins at Vanderbilt University)

Course: Research in Mathematics Education (by Dr. Oyemolade Osibodu at York University)

Course: Apprenticeship to Research on Language and Culture (by Dr. Theresa Austin at University of Massachusetts Amherst)

Course: Theoretical Models and Process of Literacy Learning (by Dr. Gertrude Tinker-Sachs at Georgia State University)

Course: Foundation of Bilingual and Multicultural Education (by Dr. Jim Cummins at the Ontario Institute for Studies in Education, University of Toronto)

Course: Graduate Seminar in Educational Research (by Dr. Kazuko Sawamoto at Japan Women's University)

### Refereed Conference Presentations (Excluding Presentations with Proceedings Publications)

- 1) Takeuchi, M.A., & \*\*Thraya, S. (2024, April 11–14). *Linguistic queering to unveil the hidden: Listening to the voice of plants through programming*. Paper presented at American Educational Research Association Annual Meeting, Philadelphia.
- 2) \*\*Dadkhahfard, S., & Takeuchi, M.A. (2024, April 11–14). *Power of illustrated stories to illuminate agency by Afghan refugee/immigrant girls navigating schooling*. Paper presented at American Educational Research Association Annual Meeting, Philadelphia.
- 3) \*\*Dadkhahfard, S., Takeuchi, M.A., \*\*Thraya, S., Kopparla, M. (2024, April 11–14). *Collective illustrating of socioecological care toward pluriversal speculations*. In T. Jen (chair), Speculative science education toward socioecological care. Structured Poster Session at American Educational Research Association Annual Meeting, Philadelphia.
- 4) \*\*Chowdhury, A., #Edworthy, S., Takeuchi, M.A., & \*\*Thraya, S. (2023, February 16–17). *Soil camp: Land-based pedagogy for equity, diversity, and anti-oppression*. Session presented at the Calgary City Teachers' Convention, Calgary.
- 5) #Kopparla, M., \*\*Thraya, S., Takeuchi, M., Haroon, A., \*\*Chowdhury, A., & Panaguiton, R. (2023, April 13–16). *Designing anti-colonial, land-based and culturally sustaining STEM learning*. In J. Adams (chair), Re-engaging (with) care in equity-based STEM research. Structured Poster Session at American Educational Research Association Annual Meeting, Chicago.
- 6) Takeuchi, M.A., Kayumova, S., de Araujo, Z., Madkins, T. (Co-Chairs), Bratton, J., Civil, M., Ortiz, N., Storm, K., Suárez, E., Quintos, B. & Warren, B. (2022, April). *Critical orientations to language in STEM education: Praxis beyond replacement of labels*. Symposium presented at American Educational Research Association Annual Meeting, San Diego.
- 7) Takeuchi, M.A., #Kopparla, M., & \*\*Elhowari, R. (2022, April). *Against the grain: Refugee family's learning through the land during the pandemic*. Paper presented at American Educational Research Association Annual Meeting, San Diego.
- 8) \*\* Dadkhahfard, S., & Takeuchi, M. (2022, April). *Generative process of designing illustrated story book in arts-based research toward equitable teaching*. Paper presented at American Educational Research Association Annual Meeting, San Diego.
- 9) \*\*Muscat, L., \*\*Thraya, S., Takeuchi, M., & \*\*Wang, X. (2022, April). *Linguistic queering to disrupt normative STEM disciplinary practices in a Kindergarten classroom*. Paper presented at a symposium on Interaction as a site for ideological negotiation and transformation in science teachers' learning at American Educational Research Association Annual Meeting, San Diego.



- 10) \*\*Yuen, J., & Takeuchi, M. (2021, July 9–11). *Owning STEM: Pre-service teacher's professional development through a collaborative research project*. STEM 2021 Conference, Vancouver, Canada. <https://stem2021.ubc.ca/conference-theme/program-outline/>
- 11) \*\* Dadkhahfard, S., & Takeuchi, M. (2021, June 1). *Implicit and explicit talks on equity and teaching: A process of arts-based research with the designed illustrated story*. Paper presented at the annual conference of Canadian Society for the Study of Education, Edmonton, Canada.
- 12) \*\* Liu, S., & Takeuchi, M. (2021, June 1). *Embodied learning and classroom formative assessments: Examining emergent bilinguals' learning opportunities in the integrated STEM classroom*. Paper presented at the annual conference of Canadian Society for the Study of Education, Edmonton, Canada.
- 13) Takeuchi, M., Adams, J., & Sengupta, P (Co-Chairs). (2021, April 12). *Critical and emergent perspectives on Transdisciplinarity in learning* (Panelists include Gutierrez, K., Yin, P., Lehrer, R., Rahm, J., Kayumova, S., Shanahan, M-C., Leyva, L.). Symposium presented at American Educational Research Association Virtual Conference. <https://www.aera21.net/>
- 14) \*\*Dadkhahfard, S., & Takeuchi, M. (2021, April 11). *The role of research-informed illustrated stories for equitable embodied mathematics learning*. American Educational Research Association Virtual Conference. <https://www.aera21.net/>
- 15) Adams, J., Czuy, K., Alonso-Yanez, G., & Takeuchi, M.A. (2021, Feb 27). *Disrupting hegemonic/colonial learning relationships in STEM education*. STEM Education Conference, Rio Grande Valley, Texas.
- 16) #Jaques, S., Takeuchi, M., & \*\*Yuen, J. (2020, April 23–25). *Designing with empathy: STEM projects for the early years*. Early Childhood Education Council Conference, Banff, Canada. <https://www.ecec-ata.com/conference.html> (Conference canceled due to COVID-19)
- 17) \*\*Liu, S., & Takeuchi, M. (2020, April 17–21). *Trouble and repair: Emergent bilinguals as legitimate peripheral participants in mathematics classroom*. American Educational Research Association, San Francisco, United States. <https://www.aera20.net/> (Conference canceled due to COVID-19)
- 18) \*\*Ostrowdun, C., Chu, M-C., Takeuchi, M., & Lock, J. (2020, April 17–21). *What's in a word?: How preservice teachers understand inclusion across contexts*. American Educational Research Association, San Francisco, United States. <https://www.aera20.net/> (Conference canceled due to COVID-19)
- 19) Takeuchi, M., & #Aquino Ishihara, V. (2020, April 17–21). *Mobilizing the hidden bodies: Migrant women activism and learning critical mathematical literacy*. American Educational Research Association, San Francisco, United States. <https://www.aera20.net/> (Conference canceled due to COVID-19)
- 20) Sengupta, P., Shanahan, M-C., & Takeuchi, M.A. (2019, August). *Local theories in STEM education: A critical phenomenological perspective*. Paper presented at the 13<sup>th</sup> Conference of the European Science Education Research Association, Bologna, Italy.
- 21) \*\*Dadkhahfard, S., & Takeuchi, M. (2019, August 6). *Visual representation as counter-storytelling*. Poster presented at the World Education Research Association focal meeting, Tokyo, Japan.
- 22) Takeuchi, M., & #Aquino Ishihara, V. (2019, August 7). *Critical mathematical literacy development in transnational activism*. Paper presented at the World Education Research Association focal meeting, Tokyo, Japan.

- 23) Takeuchi, M. (2019, August 6). Resurgence of our historicity. In C. Lee (Chair), M. Bang, K. Gutiérrez, & N.S. Nasir. *Diversity, human development and opportunity to learn: International perspectives*. Symposium presented at the World Education Research Association focal meeting, Tokyo, Japan.
- 24) Preciado Babb, P., Brown, B., Friesen, S., Francis, K., Moscher, R., & Takeuchi, M.A. (2019, June 4). *Developing mathematics teachers' principled practical knowledge*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada.
- 25) Kim, B., \*\*Bastani, R., & Takeuchi, M.A. (2019, June 4). *Materializing and mathematizing board game design*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada.
- 26) Takeuchi, M.A., Kim, B., \*\*Bastani, R., Brown, B., & \*\*Dadkhahfard, S. (2019, June 4). *Mobilizing teacher dispositions toward mathematics thinking through games*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada.
- 27) \*\*Dadkahafard, S., \*\*Liu, S., \*\*Yuen, J., & Takeuchi, M.A. (2019, June 4). *Enriching interdisciplinary mathematical literacy through designing 2D and 3D storybooks*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada.
- 28) Takeuchi, M.A., & \*\*Dadkhahfard, S. (2019, April 6). *Labeling and learning: A multimodal poster*. Poster presented at the annual meeting of American Educational Research Association, Toronto, Canada.
- 29) Kim, B., \*\*Bastani, R., & Takeuchi, M.A. (2019, April 7). Mathematical and cultural practices of redesigning a board game: A new immigrant student's multimodal interactions. Paper presented at the annual meeting of American Educational Research Association, Toronto, Canada.
- 30) \*\*Valera, S., & Takeuchi, M.A. (2018, May). *Students' identities and collaboration in mathematics group work*. Paper presented at the annual conference of Canadian Society for the Study of Education, Regina, Canada.
- 31) Takeuchi, M.A., \*\*Valera, S., & \*\*Bryan, V. (2018, May). *Listening to students' experiences of group work in mathematics classrooms*. Paper presented at the annual conference of Canadian Society for the Study of Education, Regina, Canada.
- 32) Francis, K., Alonso-Yáñez, G., Chapman, O., Cherkowski, G., Dodworth, D., Friesen, S., Gereluk, D., Knowlton, P., Preciado Babb, A., Shanahan, M.-C., Takeuchi, M.A., Thomas, C., Turner, J. (2018, April). *Forming and transforming STEM teacher education: A follow up to pioneering STEM education*. Paper presented at the annual conference of the IEEE Global Engineering Education Conference (Educon) 2018, Canary Islands, Spain.
- 33) Takeuchi, M.A. (2017, September). *Rethinking bodies of learners through STEM Education*. Paper presented at the symposium of the International Society for STEM in Education, Banff, Canada.
- 34) Takeuchi, M.A., & \*\*Fowler, T.A. (2017, May). *Characteristics of friends working together: Group work in linguistically diverse mathematics classrooms*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Toronto, Canada.
- 35) Takeuchi, M.A., & \*\*Bryan, V. (2017, May). *Revealing multiple voices in peer collaboration in urban schools: Video-mediated interviews*. Paper presented at the annual conference of the Qualitative Inquiry, Chicago, the United States.

- 36) Takeuchi, M.A., \*\*Plosz, J., Towers, J., & \*\*Seo, D. (2017, May). *Students' voices on mathematics teaching practices*. Paper presented at the IDEAS conference, Calgary, Canada.
- 37) Takeuchi, M. A. (2016, November). *Parents' involvement in early years mathematics learning: The case of Japanese immigrant parents*. Paper presented at the conference of Psychology of Mathematics Education North American Chapter, Tucson, the United States.
- 38) Takeuchi, M. A., Towers, J., & Martin, L. (2016, November). *What contributes to positive feelings towards mathematics: Examining mathematics autobiographies*. Paper presented at the conference of Psychology of Mathematics Education North American Chapter, Tucson, the United States.
- 39) Towers, J., Takeuchi, M. A., Czuy, K., & \*\*Vorhies, A. (2016, October). *What is mathematics? Students' perspectives in words and pictures*. Paper presented at the annual conference of the Mathematics Council of the Alberta Teachers' Association, Canmore, Canada.
- 40) Takeuchi, M. A. (2016, October). *Mathematics learning in groups: Addressing linguistic diversity*. Paper presented at the annual conference of the Mathematics Council of the Alberta Teachers' Association, Canmore, Canada.
- 41) Takeuchi, M. A. (2016, August). *Multimodality in mathematics classroom discourse: An ethnographic study*. Paper presented at the annual conference of the Psychology of Mathematics Education, Szeged, Hungary.
- 42) Takeuchi, M., Towers, J., & Martin, L. (2016, August). *Images of mathematics learning revealed through students' experiences of collaboration*. Paper presented at the annual conference of the Psychology of Mathematics Education, Szeged, Hungary.
- 43) Callaghan, T., McDermott, M., Simmons, M., & Takeuchi, M. (2016, May). *Students discovering diversity: Teacher preparation for social justice*. Panel presented at the annual conference of the Canadian Society for the Study of Education, Calgary, Canada.
- 44) Takeuchi, M., Czuy, K., & Towers, J. (2016, May). *Pre-service teachers' multimodal mathematics autobiographies: Emotion and learning and teaching mathematics*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Calgary, Canada.
- 45) Francis, K., Friesen, S., Gereluk, D., Preciado Babb, P., Sengupta, P., Alonso-Yáñez, G., D'Amour, L., Takeuchi, M., Dodsworth, D., Cherkowki, G., Turner, J., Mitchell-Pellett, M., Cockett, P., & Last, S. (2016, May). *Collaboratively designing and implementing a STEM education course*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Calgary, Canada.
- 46) Takeuchi, M., & Towers, J. (2016, May). *Students' experiences of group work revealed through mathematics autobiographies*. Paper presented at the IDEAS 2016 conference, Calgary, Canada.
- 47) Preciado Babb, A., Takeuchi, M., Gereluk, D., Alonso-Yáñez, G., Francis, K., & Friesen, S. (2016, April). *Pioneering STEM education: A course for pre-service teachers*. Paper presented at the annual conference of the IEEE Global Engineering Education Conference (Educon) 2016, Abu Dhabi, UAE.
- 48) Takeuchi, M., & Towers, J. (2015, November). *Immigrant students' mathematics learning experiences in Canadian schools*. Poster presented at the conference of Psychology of Mathematics Education North American Chapter, East Lansing, Michigan.
- 49) Towers, J., Takeuchi, M., Hall, J., & Martin, L. (2015, November). *Exploring the culture of school mathematics through students' images of mathematics*. Paper presented at the conference of Psychology

of Mathematics Education North American Chapter, East Lansing, Michigan.

- 50) \*\*Plosz, J., Takeuchi, M., & Towers, J. (2015, November). *Students' images of mathematics explored through drawings*. Poster presented at the conference of Psychology of Mathematics Education North American Chapter, East Lansing, Michigan.
- 51) Takeuchi, M. (2015, November). *Non-dominant students' and their parents' mathematical practices at home*. Paper presented at the conference of Psychology of Mathematics Education North American Chapter, East Lansing, Michigan.
- 52) Hall, J., Towers, J., Takeuchi, M., & Martin, L. (2015, July). *Investigating students' positive relationships with mathematics*. Paper presented at the annual conference of the Psychology of Mathematics Education, Tasmania, Australia.
- 53) Takeuchi, M. (2015, June). *Intergenerational analysis of mathematical cultural tool appropriation in transnational families*. Paper presented at the International Conference of Mathematics Education and Society, Portland, the United States.
- 54) Takeuchi, M. (2015, March). *Mediational role of heritage language for mathematic learning*. Paper presented at the annual conference of the American Association of Applied Linguistics, Toronto, Canada.
- 55) Takeuchi, M. (2014, May). *Transnational parents' involvement in students' mathematics learning*. Paper presented at the annual conference of the Canadian Society for the Study of Education, St. Catherine, Canada.
- 56) Takeuchi, M. & Coyle, R. (2014, April). *Multiliteracies approach in linguistically diverse mathematics classrooms*. Paper presented at the Toronto District School Board, Celebrating Linguistic Diversity Conference, Toronto, Ontario.
- 57) Takeuchi, M. (2014, April). *Transformation of immigrant families' discourse on linguistic resources*. Paper presented at the annual conference of the American Educational Research Association, Philadelphia, Pennsylvania.
- 58) Takeuchi, M. (2013, May). *Friendships and interactions in group work in multilingual mathematics classrooms*. Paper presented at the annual conference of the American Educational Research Association, San Francisco, California.
- 59) Takeuchi, M. (2013, March). *Facilitating the integration of language and content: Teacher strategies in multilingual mathematics classrooms*. Paper presented at the American Association of Applied Linguistics, Dallas, Texas.
- 60) Esmonde, I., Takeuchi, M., & Dookie, L. (2012, July). *Integrating insights from critical race and queer theories with cultural-historical learning theory*. Poster presented at the International Conference of the Learning Sciences, Sydney, Australia.
- 61) Takeuchi, M. (2012, May). *Social network and collaboration in group work: English language learners' opportunities to learn*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Waterloo, Canada.

- 62) Esmonde, I., Dookie, L., Takeuchi, M., Calix, J., Carlson, S., Eslinger, J., & McKean, S. (2012, April). *Learning to teach mathematics for social justice: A case study of teacher discourse*. Poster presented at the Research Pre-session of the Annual Meeting of the National Council of Teachers of Mathematics, Philadelphia, the United States.
- 63) Takeuchi, M. (2011, September). *Contexts of learning and social identity: English language learners' opportunities to learn*. Paper presented at the International Society for Cultural and Activity Research congress, Rome, Italy.
- 64) Takeuchi, M. (2011, June). *English language learners' language learning opportunities in mathematics classrooms*. Paper presented at the Canadian Association of Applied Linguistics conference, Fredericton, Canada.
- 65) Caswell, B., #Coyle, R., #McIntyre, R., & Takeuchi, M. (2011, May). *Mapping recess: Mathematical possibilities in an urban elementary school's Participatory Action Research project*. Paper presented at the annual meeting of the Ontario Association for Mathematics Education, Windsor, Canada.
- 66) Takeuchi, M. (2011, April). *Pedagogical contexts of mathematics classrooms and opportunities to learn for English language learners: An ethnographic study on teacher-student interactions*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.
- 67) Takeuchi, M. & Esmonde, I. (2010, April). *Social organization in mathematics classrooms and opportunity to learn for English language learners*. Poster presented at the annual conference of the American Educational Research Association, Denver, Colorado.
- 68) Takeuchi, M. (2009, June). *The social organization of learning and English language learners' participation in mathematics classroom practice*. Paper presented at the bi-annual conference of the International Association for the Improvement of Mother Tongue Education, Toronto, Canada.
- 69) Esmonde, I., Radakovic, N., & Takeuchi, M. (2009, May). *Getting unstuck: Development of collaborative repertoires of practice over time*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Ottawa, Canada.
- 70) Takeuchi, M. (2009, May). *Access to creativity: The role of technology in the Ontario curriculum for English language learners*. Paper presented at the annual conference of the Canadian Society for the Study of Education, Ottawa, Canada.
- 71) Esmonde, I., Brodie, K., Dookie, L., & Takeuchi, M. (2009, April). *Race, identity and collaboration: Student perspectives*. Paper presented at the Research Pre-session of the annual meeting of the National Council of Teachers of Mathematics, Washington, DC.
- 72) Takeuchi, M., & Ishiguro, H. (2008, August). *The self and the other in the Zone of Proximal Development: From the perspective of classroom learning*. Paper presented at the International Mikhail Bakhtin Conference, London, Canada.
- 73) Takeuchi, M., & Ishiguro, H. (2007, June). *Conceptualizing classroom learning as a socio-historically heterogeneous activity*. Paper presented at the annual conference of the International Society for Theoretical Psychology, Toronto, Canada.

### **Other Knowledge Mobilization Efforts: Public Seminars, Public Talk, and Colloquia**

The Journal of the Learning Sciences Webinar (May, 2021) — *Learning in and for collective action*

- Available at: [https://www.youtube.com/watch?v=Yp\\_IQqafMKM](https://www.youtube.com/watch?v=Yp_IQqafMKM)
- Organized with Dr. Joe Curnow (University of Manitoba), Dr. Susan Jurow (University of Colorado Boulder), Dr. Suraj Uttamchandani (Indiana University), Dr. Josephine Pham (California State University, Fullerton), Dr. José Meléndez (University of Oregon), Dr. Tafadzwa Tivaringe (Spencer Foundation), Dr. Ben Krishner (University of Colorado Boulder) and Dr. Miwa A. Takeuchi (University of Calgary).

Takeuchi, M.A. (2021, March). *International research in the learning sciences*. Presented at University of Colorado Boulder Learning Sciences Colloquia.

The Journal of the Learning Sciences Webinar (July, 2018) — *Why ideology matters for learning?*

- Available at: <https://www.youtube.com/watch?v=hAscCODTK1c&t=362s>
- Organized with Dr. Thomas Philip (University of California, Berkeley), Dr. Ayush Gupta (University of Maryland), Dr. Andrew Elby (University of Maryland), Dr. Chandra Turpen (University of Maryland), Dr. Philip Bell (University of Washington), Dr. Donna Riley (Purdue University), Dr. Flavio Azevedo (University of Texas Austin) and Dr. Miwa A. Takeuchi (University of Calgary).

Takeuchi, M.A. (2017, May). *Cultural and historical bodies of learners*. Presented at Emerging Insights into Mathematics Education (Public Talk organized by Dr. Brent Davis and Dr. Jo Towers), University of Calgary.

Takeuchi, M. (2014, February). *In and out-of-school learning among linguistically diverse families in an urban city of Japan*. Presented at the Comparative International and Development Education Centre, University of Toronto.

Takeuchi, M. (2014, February). *Rethinking multilingualism*. Presented at Kokugo Kyoshitsu Japanese heritage language school, Toronto, Canada.

Takeuchi, M. (2013, December). *Theoretical and practical issues to support linguistically and culturally diverse children in the school: A case study in multilingual classrooms in Toronto*. Presented at Symposium on Learning and Development of Linguistically and Culturally Diverse Children, Nagoya, Japan.

Takeuchi, M. (2013, October). *Rethinking bilingualism*. Presented at Kokugo Kyoshitsu Japanese heritage language school, Toronto, Canada.

Takeuchi, M. (2013, January). *Participatory action research in multilingual mathematics classrooms*. Presented at Jyugyo de Sodatsu Kyoshi no Kai (Teacher's Association of Lesson Study), Nagoya, Japan.

## ACADEMIC SERVICES

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### Editorial Board

- Journal of the Learning Sciences

### Journal Reviewer

- American Educational Research Journal
- Canadian Journal of Education
- Canadian Journal of Science, Mathematics and Technology Education
- Cognition and Instruction
- Educational Studies in Mathematics
- International Journal of Research and Method in Education
- Journal of Research in Science Teaching



- Mind, Culture and Activity
- Research in Mathematics Education
- Pedagogies: An International Journal
- Teachers College Record
- Teaching for Excellence and Equity in Mathematics
- ZDM: Mathematics Education

### Internal Academic Services

2021 – Current	University of Calgary Teaching Academy
2020 – 2023	Werklund School of Education Undergraduate Program in Education Academic Coordinator
2021	University of Calgary Student Union Undergraduate Research Symposium Judge
2019 – 2021	Werklund School of Education Undergraduate Scholarship Review Committee
2019	Learning Sciences Program PhD Admission Review Committee
2019	Advisory Academic Selection Committee (for the position of Instructor, Statistics)
2018 – 2019	Research Advisory Committee
2018	Graduate Programs in Education Scholarship Review Committee
2018	Learning Sciences Program Master of Arts Admission Review Committee
2019	Learning Sciences Program Website Revitalization Committee
2017	Teaching Across Borders Program Adjudication Committee
2017	Advisory Academic Selection Committee (for the position of Professor, Learning Sciences)
2016 – 2017	Research Areas Working Group
2016	Academic Strategic Planning Committee
2015	Social Sciences and Humanities Research Council (SSHRC) Doctoral Scholarship Adjudication Committee
2015	Program for Undergraduate Research Experiences (PURE) Award Adjudication Committee
2015	Teaching Across Borders Program Committee

### External Academic Services

2023 – Current	Council of Canadian Academies Expert Panel (Evidence-based Equity, Diversity, and Inclusion Practices for Impactful Change in the Post-Secondary Research Ecosystem, sponsored by Social Sciences and Humanities Research Council; Natural Sciences and Engineering Research Council of Canada; Canadian Institutes of Health Research; Canada Foundation for Innovation; Innovation, Science and Economic Development Canada; National Research Council Canada; and Health Canada)
2021 – Current	International Society of the Learning Sciences, Board of Directors
2023 – Current	International Society of the Learning Sciences, Equity and Social Justice Committee Co-Chair
2017 – Current	International Society of the Learning Sciences (ISLS) Network of Academic Programs in the Learning Sciences (NAPLeS) University of Calgary Liaison
2013 – Current	Conference Senior Reviewer and Peer Reviewer, International Conference of the Learning Sciences
2020 – 2024	Network of the Learning Sciences in Canada Co-President

2023 – 2024	National Science Foundation CAREER award Advisory Board (for Dr. José Martínez Hinestroza at the Texas State University)
2024	Tenure and Promotion External Reviewer – University of Alberta
2024	The Social Sciences and Humanities Research Council of Canada Open Research Area 8 External Reviewer
2023	Tri-Agency New Frontiers in Research Fund (International Joint Initiative for Research in Climate Change Adaptation and Mitigation) External Reviewer
2021 – 2023	International Society of the Learning Sciences, Equity and Social Justice Committee
2022 & 2023	Spencer Foundation, a member of the Review Panel
2021 & 2023	International Society of the Learning Sciences Wallace Foundation Funded Emerging Scholar Adjudication Committee
2022	International Society of the Learning Sciences Emerging Scholar Mentor
2018 – 2022	Conference Peer Reviewer for SIG-Learning Sciences, American Educational Research Association
2020 – 2022	Committee Member, Alberta Advisory Committee for Educational Studies
2016 – 2022	Alberta Teachers' Association Early Childhood Council – Faculty Advisor
2022	Social Sciences and Humanities Research Council (SSHRC) External Reviewer
2021	Tenure and Promotion External Reviewer – University of Maryland, College Park
	Tenure and Promotion External Reviewer – Thompson River University, Canada
2021	Anti-Racism Unconference University of Calgary representative
2021	Accepted an invitation from the Centre for Newcomers, Immigrant Services Calgary, and The Immigrant Education Society to participate in the conference representing University of Calgary community
2021	Calgary East Zone Newcomers Collaboratives <ul style="list-style-type: none"> <li>• Provided research inputs to the ways to address and intervene the COVID-19 infection rises in Calgary's North East and South East communities</li> <li>• In collaboration with the Immigrant Education Society</li> </ul>
2021	<ul style="list-style-type: none"> <li>• Invited Grant Reviewer, Estonian Research Council</li> </ul>
2016 – 2019	Co-Editor, Early Childhood Education for the Alberta Teachers' Association
2016 – 2018	Conference Peer Reviewer, Psychology of Mathematics Education North American Chapter
2017 – 2018	Consultant for the Pan-Canadian Assessment Program (Mathematics), Council of Ministers of Education, Canada

### Community Engagement Efforts

Note: There are overlapping information in above sections (for Grants and Publications) to highlight Community Engagement aspects of my work.

#### Grants Received with Community Partners

Title	Learning with the Land and Understanding the Soil Toward Refugee Integration and Diversity
Year	2022-ongoing
Source	Social Sciences and Humanities Research Council of Canada, Partnership Development Grant
Role	Principal Investigator

	With Partner Organizations: Biogeoscience Institute/University of Calgary, CCIS, Mount Royal University, TELUS Spark Science Center, The Immigrant Education Society, Weklund School of Education/University of Calgary, YYC Growers and Distributors  Website: <a href="https://www.soilcamp.ca/">https://www.soilcamp.ca/</a>
Amount	\$ 200,000 CAD

Title	Storying the Soil: Actions and Voices from the Global Indigenous Perspectives
Year	2023-ongoing
Source	Environmental and Climate Change Canada - Mobilizing Alberta Climate Action Grant
Role	Principal Investigator  With Community Partner: CCIS, Land of Dreams
Amount	\$50,000 CAD

## Media

- CBC Calgary Asian Change Maker 2024 – Screened at the FascinAsian Film Festival (May 2, 2024)  
*How Miwa Takeuchi empowers through education:*  
<https://www.cbc.ca/player/play/video/1.7192392>
- *Soil builds prosperity from the ground up.* Interview in the yes! magazine article (written by Breanna Draxler, December 7, 2023)  
<https://www.yesmagazine.org/environment/2023/12/07/health-soil-farming-agriculture-regenerative>
- *What listening to the soil can tell us about our relationship with the land.* In The Conversation: <https://theconversation.com/what-listening-to-the-soil-can-tell-us-about-our-relationship-with-the-land-205457> (republished in the Globe and Mail, Yahoo News, Phys.org) (July 4, 2023)
- *Students get hands dirty at Soil Camp: Community partnership provides opportunities for refugee students to connect with the land.* In UToday: <https://werklund.ucalgary.ca/news/students-get-their-hands-dirty-soil-camp> (September 28, 2021)
- *Power in numbers: Making visible the violence against racialized women.* In The Conversation <https://theconversation.com/power-in-numbers-making-visible-the-violence-against-racialized-women-157749> (March 30, 2021)
- *Reimagining STEM: Werklund School of Education researchers are rethinking science, technology, engineering, and mathematics conventions by asking hard questions.* In UToday: <https://werklund.ucalgary.ca/news/reimagining-stem> (November 1, 2019)

## Community Engaged Research Report

Takeuchi, M.A., \*\*Chowdhury, A., #Kopparla, M., \*\*Thraya, S., \*\*Yuen, J., #Czuy, K., Mambo, T., #Olson, R., #Sobh, H., & #Fakih, A. (2021). *Soil camp: Learning with the land toward refugee integration, diversity and sustainability through community partnerships 2020–21*. University of Calgary.  
<http://hdl.handle.net/1880/113973>

**Note:** This is a community-based research report published in a timely manner toward public communication (within two months from the first iteration of the designed program) for and with community partners (Dr. Kori Czuy, the Indigenous Engagement Specialist at the TELUS Spark Science Center, Rod Olson, Land of Dreams/YYC Growers and Distributors, Hannan Sobh and Ahlam Fakih, CCIS).

**Note:** All the other publications and presentations with our community partners are indicated by # in this CV.

### Community Engagement Events and Community-based Conferences

April 24, 2024	Pathways to Inclusion Conference (organized by the Immigrant Education Society Transdisciplinary Collective Voices for Climate Actions and Food/Environmental Justices)
	Organized a panel to present together with: Chantal Eves (The Immigrant Education Society) Son Edworthy (Calgary Board of Education) Kheriya Khidr & Rod Olson (CCIS Alberta Land of Dreams) Liana Wolf Leg (Blackfoot Knowledge Keeper) Syma Habib (City of Calgary) Anika Haroon (Calgary Public Library) Mathew Swallow (Mount Royal University) Tatenda Mambo (The Simpson Center for Food and Agricultural Policy) Anita Chowdhury, Sophia Thraya (University of Calgary graduate students)
March 23, 2023	TELUS Spark Science Center Indigenous Science Night Seed Ball for Reciprocity Workshop with Soil Camp Team
August 31, 2021	The Immigrant Education Society Panel on Food Justice, Invited Speaker
June, 2021	CCIS Land of Dreams Family Day Event Exploring STEM on the land – with Dr. Tatenda Mambo

### Teacher Professional Development Facilitation

2023	Land-based Pedagogical Facilitation: Sensitivities for Historical Trauma <ul style="list-style-type: none"> <li>• with Son Edworthy (Calgary Board of Education), Sophia Thraya (University of Calgary), CCIS Social Workers</li> <li>• For facilitators at the Soil Camp project (including teachers and teacher candidates)</li> </ul>
2023	Co-presented at the Education Students' Association Professional Development <ul style="list-style-type: none"> <li>• with Anita Chowdhury (University of Calgary), Sophia Thraya (University of Calgary), and Jenny Yuen (Palliser School Division)</li> <li>• Session Title: <i>Land-based pedagogy for equity, diversity, and anti-oppression</i>.</li> </ul>
2023	Co-presented at the Calgary City Teachers' Convention

- With Anita Chowdhury (University of Calgary), Son Edworthy (Calgary Board of Education), Anika Haroon (Calgary Public Library) and Sophia Thraya (University of Calgary)
  - Session title: *Soil Camp: Land-based Pedagogy for Equity, Diversity and Anti-Oppression*
- 2022 Co-hosted with Education Students' Association, University of Calgary
- “Anti-Racist and Anti-Homophobic Public Pedagogy for Food and Environmental Justice: A Panel Discussion”
    - With Ruth Panaguiton (Tsuut'ina Education), Jenny Yuen (Palliser District Teachers' Convention), Sophia Thraya (University of Calgary), Syma Habib (Community Food Centers Canada)
    - For 50 teacher candidates at the University of Calgary
- 2021 Co-hosted with Education Students' Association, University of Calgary
- “Creative futures: Film screening and discussion on queering technologies in learning” by Dylan Paré, Werklund School of Education, University of Calgary
  - Served as a discussant and co-organizer
- 2021 Faculty Advisor and the Planning Committee
- “Adapting Your Class for COVID – 19 & Implications for Teaching Kindergarten” by Ms. Joy de Nance (Calgary Board of Education)
    - For 27 teacher candidates in the Early Childhood Education Council, University of Calgary
  - “Panel: Navigating the First Year as a Teacher during the Pandemic”
    - For 24 teacher candidates in the Early Childhood Education Council, University of Calgary
- 2021 Co-hosted with Education Students' Association, University of Calgary
- “Anti-Racist and Anti-Homophobic Public Pedagogy for Food and Environmental Justice: A Panel Discussion”
    - With Kori Czuy (Spark Science Center), Syma Habib (Community Food Centers Canada), Ruth Panaguiton (Tsuut'ina Education), Lena Shulyakovskaya (Calgary Board of Education)
    - For 66 teacher candidates at the University of Calgary
- 2020 Invited Speaker, Office of Teaching and Learning, Werklund School of Education
- Designing synchronous and asynchronous interaction – Online Pedagogy Series
- 2020 Faculty Advisor and the Planning Committee
- Math in Kindergarten by Ms. Joy de Nance (Calgary Board of Education)
    - For 30 teacher candidates in Early Childhood Education Council, University of Calgary
- 2018 Facilitator, Professional Learning for a Calgary Board of Education School
- 4 sessions on mathematics teaching in the early years through game design in 2018–19
- 2018 Facilitator, Professional Learning for a Calgary Board of Education School
- 4 sessions on mathematics teaching in the early years through game design in 2017–2018 and 2018–2019

- 2017 – 2018      Facilitator, Professional Learning Series for the Calgary Board of Education
  - 12 sessions on mathematics teaching in the early years between 2017 and 2018
- 2017              Guest Speaker, Early Childhood Education Council Calgary Regional
  - Perspectives on spatial reasoning: Connections to language and mathematics
- 2015              Guest Speaker, Cecil Swanson Elementary School, Calgary, Canada
  - Teaching mathematics to English Language Learners
- 2013              Guest Speaker, Professional Development Seminar for Teacher Lesson Study, Japan
  - Presented classroom research and analysis methods to teachers and university researchers who are undertaking a “lesson study” professional development
- 2009 – 2011      Research Assistant, Learning to Teach Mathematics for Social Justice
  - Helped to organize inquiry-based teacher professional development for the Knowles Science Teaching Foundation-funded project, *Learning to Teach Mathematics for Social Justice* (Dr. Indigo Esmonde, Principal Investigator) through the Research Fellowship and Graduate Assistant, Department of Curriculum, Teaching and Learning, OISE, University of Toronto
  - Conducted research on teacher professional development and co-authored journal article and book chapter publications
- 2009 – 2010      Research Assistant, Culturally Responsive and Relevant Pedagogy for Teaching Mathematics
  - Conducted research on teacher professional development sessions on culturally responsive and relevant pedagogy for mathematics led by Dr. Dr. Indigo Esmonde and Dr. Bev Caswell
  - Participated in the project through Major Research Assistant, Department of Curriculum, Teaching and Learning, OISE, University of Toronto (Funding: Council of Ontario Directors of Education, Dr. Indigo Esmonde (Principal Investigator))

#### Research Collaborator and Consultant

- Research collaborator/consultant (2020 – ongoing) – TELUS Spark Science Centre
- Research collaborator/consultant (2020 – ongoing) – Calgary Catholic Immigration Society (CCIS) Land of Dreams
- Research collaborator/consultant (2020 – ongoing) – The Immigrant Education Society

#### Support for Community-Based Grant Initiatives

The Canada Healthy Communities Initiatives Grant application by The Immigrant Education Society (2021)

- Served as a consultant (unpaid) and offered support (including writing a letter of support) in application

The UCseed Funding for Social Innovation application by YYC Growers and Distributors (2021)

- Served as a consultant (unpaid) and offered support (including writing a letter of support) in application

Government of Canada New Horizons for Seniors Program application by The Immigrant Education Society (2021)

- Served as a consultant (unpaid) and offered support (including writing a letter of support) in application