

Curriculum Vitae

MIWA AOKI TAKEUCHI

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

Research Statement: Through my research, I aim to question the disciplinary norms in mathematics and STEM more broadly and leverage learners' embodied and emplaced disciplinary experiences into critical transdisciplinary imagination toward social and environmental justice. I engage in transnational scholarship that brings forth anti-colonial portraits of learning by interrogating the power that shapes learner bodies, identities and disciplinary knowledge. I value working collaboratively with learners and their families, teachers, community organizations.

EDUCATIONAL HISTORY

Doctor of Philosophy (Ph.D.) June, 2012	University of Toronto, Ontario Institute for Studies in Education (Supervisor: Dr. Indigo Esmonde)
Master of Arts (M.A.) November, 2007	University of Toronto, Ontario Institute for Studies in Education (Supervisor: Dr. Jim Cummins)
Bachelor of Science in Education March, 2004	Hokkaido University, Japan

CURRENT POSITION

July 2019 – Current	Werklund School of Education, University of Calgary Associate Professor
May 2017 – June 2019	Werklund School of Education, University of Calgary Assistant Professor

PREVIOUS ACADEMIC EMPLOYMENT

September 2014 – April 2017	Werklund School of Education, University of Calgary Postdoctoral Scholar/Adjunct Assistant Professor/Sessional Instructor
April 2012 – August 2014	Japan Society for the Promotion of Science Research Fellow

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

PUBLICATIONS

** indicates graduate/undergraduate students I supervised or mentored

Refereed Journal Articles

- 1) 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 one of the three top journals in the field of the learning sciences (5-year Impact Factor: 3.88). According to the Scimago Journal Rank, *Journal of the Learning Sciences* is considered as Q1 (impact factor: 2.57).

- 2) 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. doi: [10.1080/07370008.2020.1825438](https://doi.org/10.1080/07370008.2020.1825438)

Note: *Cognition and Instruction* is a highly regarded journal in the field of the learning sciences. The 2019 impact factor is 2.516. According to the Scimago Journal Rank, *Cognition and Instruction* is considered as Q1 (impact factor: 1.22).

- 3) 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. Advanced online publication in *the Journal of Mathematical Behavior*. <https://doi.org/10.1016/j.jmathb.2020.100835>

Note: The *Journal of Mathematical Behavior* is one of the well-regarded journals in mathematics education. According to the Scimago Journal Rank, *Journal of Mathematical Behavior* is considered as Q1 (impact factor: 1.28).

- 4) 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. doi: 10.1080/03057267.2020.1755802

Note: *Studies in Science Education* is a well-regarded education journal (5-year Impact Factor: 3.7). According to the Scimago Journal Rank, *Studies in Science Education* is considered as Q1 (impact factor: 2.32).

- 5) 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. doi: 10.1007/s42330-019-00056-8 (Published online on July 24, 2019)

- 6) 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. doi: 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. The work supported a doctoral student’s publication in an international journal. According to the Scimago Journal Rank, *International Journal of Research & Method in Education* is considered as Q1 (impact factor: 0.69).

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

Note: *Educational Studies in Mathematics* is a well-regarded mathematics education journal (5-year Impact Factor: 1.37). The European Mathematical Society selected this journal as one of the two highest quality journals in mathematics education. According to the Scimago Journal Rank, *Educational Studies in Mathematics* is considered as Q1 (impact factor: 1.06).

- 8) 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. doi:10.1080/14794802.2018.1477058

- 9) 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>

- 10) 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. doi: 10.3991/ijep.v6i4.5965

- 11) 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. doi: 10.1080/10508406.2016.1169422

Note: The *Journal of the Learning Sciences* is one of the three top journals in the field of the learning sciences (5-year Impact Factor: 3.88). According to the Scimago Journal Rank, *Journal of the Learning Sciences* is considered as Q1 (impact factor: 1.81).

- 12) 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. doi: 10.1080/13670050.2014.978262

Note: The *International Journal of Bilingual Education and Bilingualism* is a well-regarded bilingual education journal (5-year Impact Factor: 1.64). According to the Scimago Journal Rank, *International Journal of Bilingual Education and Bilingualism* is considered as Q1 (impact factor: 0.66).

- 13) 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. doi: 10.1080/15348458.2015.1041341

Note: The *Journal of Language, Identity and Education* is a well-regarded journal in bilingual/second language education. According to the Scimago Journal Rank, *Journal of Language, Identity and Education* is considered as Q1 (impact factor: 0.41).

- 14) Takeuchi, M. & Esmonde, I. (2011). Professional development as discourse change: Teaching mathematics to English learners. *Pedagogies: An International Journal*, 6 (4), 331-346. doi: 10.1080/1554480X.2011.604904

- 15) 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. doi: 10.1080/10749031003790128

Note: The *Mind, Culture, and Activity: An International Journal* is a well-regarded journal in sociocultural theory of learning and cultural historical activity theory. According to the Scimago Journal Rank, *Mind, Culture, and Activity: An International Journal* is considered as Q1 (impact factor: 0.55).

- 16) 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]
- 17) 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>
- 18) Takeuchi, M. (2010). Reviewing "Multilingualism in mathematics classrooms: Global perspectives." *Canadian Journal of Science, Mathematics and Technology Education*, 10 (2), 173-176. doi: 10.1080/14926151003778290
- 19) 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 <http://ed-osprey.gsu.edu/ojs/index.php/JUME/article/view/46>
- 20) 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. doi: 10.2304/elea.2008.5.4.492
- 21) 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. doi: 10.1080/13562510701595200

Note: According to the Scimago Journal Rank, *Teaching in Higher Education* is considered as Q1 (impact factor: 0.83).

Refereed Book Chapters

- 1) 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.
- 2) 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.
- 3) 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.

- 4) 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.

Practitioner-oriented Publications

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

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 elementary school teachers, we performed research and published an article in a provincial practitioner-oriented journal.

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.

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, we performed research and published an article in a provincial practitioner-oriented journal.

Conference Proceedings

- 1) 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.
- 2) **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.
- 3) 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.
- 4) **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.

- 5) 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>
- 6) 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>
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) 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.
- 12) 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.
- 13) 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.
- 14) 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.

- 15) 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.
- 16) 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.
- 17) 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.
- 18) 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.
- 19) 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.

Editorials

- 1) Willey, C., Takeuchi, M.A., & Maldonado, L. (ongoing). Special Issue: Critical orientation to language and mathematics. *International Journal of Qualitative Studies in Education*.
- 2) Takeuchi, M.A. & Prasow, C. (2019). From the editor's desk. *Early Childhood Education*, 46, 2-3.
- 3) Takeuchi, M.A. & Prasow, C. (2018). From the editor's desk. *Early Childhood Education*, 45, 2-3.
- 4) Takeuchi, M.A. & Prasow, C. (2017). From the editor's desk. *Early Childhood Education*, 44, 2-3.
- 5) Takeuchi, M., Preciado Babb, A.P., & Lock, J. (Eds.) (2016, May). *Proceedings of the IDEAS: Designing for Innovation*. Calgary, Canada: Werklund School of Education, University of Calgary.
- 6) Preciado Babb, A. P., Takeuchi, M. & Lock, J. (Eds.) (2015, June), *Proceedings of the IDEAS: Designing Responsive Pedagogy*. Calgary, AB: Werklund School of Education, University of Calgary.

Forthcoming Refereed Journal Articles and Book Chapters

- 1) Czuy, K., Kim, E.A., Meadows, M.L., Adams, J., & Takeuchi, M.A. (submitted, under review). 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) **Langevin, N., Takeuchi, M. A., & Yuen, J. (submitted, under review). Fostering genetic mathematical understanding through the early STEM classroom. Submitted for *Delta-K Journal of the Mathematics Council of the Alberta Teacher's Association*.

Note: Nicole Langevin and Jenny Yuen were the undergraduate research award recipients. This publication is based on our summer research projects.

- 3) **Liu, S., & Takeuchi, M.A. (submitted, under review). Embodied mathematics learning for developing agency: Temporally and spatially expanded collective learning for emergent bilingual learners. Submitted for *Educational Studies in Mathematics*.
- 4) Takeuchi, M.A., **Elhowari, R., & **Yuen, J. (submitted, under review). Regenerating the land of refuge in an era of pandemic: Intergenerational STEM epistemology. Submitted for *Mind, Culture and Activity: An International Journal*.

Note: Raneem Elhowari and Jenny Yuen were the undergraduate research award recipients. This publication is based on our ongoing research projects.

Edited Book in Progress

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

Under the contract with Routledge, we are currently working on an edited book that aims to look deeply at the ongoing changes in the field of the learning sciences in action. We have invited scholars with long histories in the learning sciences and those experienced in other fields and disciplines who are at various stages of coming to see themselves as learning scientists. These scholars' contributions are organized into four general thematic areas (Transdisciplinarity, Design, Technology and Cognition) that capture key elements of Learning Sciences scholarship. Together with Dr. Jennifer Adams, Dr. Pratim Sengupta, and Dr. Marie-Claire Shanahan, I am leading the section on transdisciplinarity. Contributors to this section include Dr. Kris Gutiérrez, Dr. Rich Lehrer, Dr. Luis Leyva, and Dr. Jrene Rahm.

RESEARCH GRANTS

External Research Grants

Principal Investigator

Title	Envisioning Inclusive Mathematics Education with Digital Illustrated Stories
Year	2020 – ongoing
Source	Social Sciences and Humanities Research Council of Canada, Insight Grant
Role	Principal and sole investigator
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 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
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 richer language activities and intercultural collaboration for mathematics learning in Canadian diverse classrooms.
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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 immigrant 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-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 is 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 will be through collaboration between school teachers and university researchers, and we plan to involve 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.

Internal Research Grant

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 is 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 aim 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 will partner 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 is 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
Amount	\$7,467 CAD
Purpose	We will collaborate 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	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 will examine preservice teachers' initial and developing conceptualizations of disability and inclusion in the medium of artistic renderings. Based on the findings, we will design and redesign a teacher education course on inclusive education.

Visiting Professorship

Visiting Professorship in Rikkyo University, Tokyo, Japan (Fund received approximately \$4,000) – Scheduled for January, 2022

- In collaboration with scholars at Rikkyo University and University of Tokyo, we will offer 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

Total Amount: \$435,190 CAD

External [Total: \$263,767 CAD]

- 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]

- Teaching Excellence Award – Students' Union, University of Calgary (2020)
- 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

Course Instructor

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

Undergraduate Courses

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

Supervision and Mentoring

Graduate Supervision (Ongoing)

1. Co-supervisor with Dr. Jennifer Lock for Christopher Ostrowdun (PhD student) Werklund School of Education, University of Calgary
2. Supervisor for Shima Dadkhahfard (PhD student) Werklund School of Education, University of Calgary
3. Supervisor for Luke Muscat (EdD student) Werklund School of Education, University of Calgary
4. Supervisor for Shauna Philip (EdD student) Werklund School of Education, University of Calgary
5. Supervisor for Xiao Wang (MA student) Werklund School of Education, University of Calgary

Graduate Supervision (Complete)

1. Supervisor for Shimeng Liu (MA student) Werklund School of Education, University of Calgary

Supervisory Committee (Ongoing)

1. PhD Supervisory Committee for Marilu Lam Herrera (Supervisor: Dr. Pratim Sengupta)
2. PhD Supervisory Committee for Stefan Rothschuh (Supervisor: Dr. Brent Davis & Dr. Krista Francis)
3. EdD Supervisory Committee for Zandra Cerpa Gomez (Supervisor: Dr. Marie-Claire Shanahan)
4. EdD Supervisory Committee for Yoni Porat (Supervisor: Dr. Marie-Claire Shanahan)
5. PhD Supervisory Committee for Dylan Paré (Supervisor: Dr. Pratim Sengupta)
6. PhD Supervisory Committee for Basak Helvaci Ozacar (Supervisor: Dr. Pratim Sengupta)
7. EdD Supervisory Committee for Kirsten Funke-Robinson (Supervisor: Dr. Jennifer Lock)
8. EdD Supervisory Committee for Somi Lee (Supervisor: Dr. Beaumie Kim)

Supervisory Committee (Completed)

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

Examiner

- PhD Candidacy Exam, Internal Examiner (Joshua Markle)
- EdD Candidacy Exam, External Examiner (Joshua DiPasquale)
- PhD Candidacy Exam, External Examiner (Rhonda Fischer)
- PhD Candidacy Exam, External Examiner (Mackenzie Sapacz)
- EdD Candidacy Exam, Internal Examiner (Karena Munroe)
- MA Final Oral Exam, External Examiner (Kelsey Gould)
- EdD Candidacy Exam, Internal Examiner (Greg Hardy)
- EdD Candidacy Exam, Internal Examiner (Thomas Kennedy)
- PhD Candidacy Exam, Internal Examiner (Meghan Suehn)
- EdD Candidacy Exam, Internal Examiner (Michael Cutler)
- PhD Candidacy Exam, Internal Examiner (Alamr Hebah)
- PhD Candidacy Exam, Internal Examiner (Lake Yeworiew)
- MA Final Oral Exam, External Examiner (Katrina Boutillier)

Neutral Chair

- 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 through Graduate Assistant Research

1. Shima Dadkhahfard (PhD student) Werklund School of Education, University of Calgary (January 2018 – current)
2. Shimeng Liu (MA student) Werklund School of Education, University of Calgary (September 2018 – August 2020)
3. Maryam Hachem (PhD student) Werklund School of Education, University of Calgary (January 2018 – April 2019)
4. Venise Bryan (PhD student) Werklund School of Education, University of Calgary (September 2016 – June 2019)
5. Teresa Fowler (PhD student) Werklund School of Education, University of Calgary (April 2016 – September 2016)
6. Donghyun Seo (PhD student) Werklund School of Education, University of Calgary (March 2018 – June 2019)

Mentorship through Undergraduate Research Awards and Research Assistantship

1. Raneem Elhowari (BEd student) Werklund School of Education, University of Calgary (July 2020 – current): supervising for the Werklund Undergraduate Research Award
2. Nicole Langevin (BSc student) Department of Mathematics, University of Calgary (May – September 2020): supervised for the Program for Undergraduate Research Experience (PURE) Award
3. Jenny Yuen (BEd student) Werklund School of Education, University of Calgary (March 2019 – September 2020): supervised for the Werklund Undergraduate Research Award
4. Maria Fernanda Arellano (BEd student) Werklund School of Education, University of Calgary (December 2016 – August 2018)
5. Stephanie Innes (BEd student) Werklund School of Education, University of Calgary (December 2016 – April 2017)
6. Silvana Carolina Valera (BEd student) Werklund School of Education, University of Calgary (December 2016 – April 2017): supervised for the Program for Undergraduate Research Experience (PURE) Award

Invited Guest Lectures

Course: Apprenticeship to Research on Language and Culture (by Dr. Theresa Austin)

University of Massachusetts Amherst

- Conducted a guest lecture based on my research on the situated, multiliteracies approach to English language learners' participation in elementary mathematics classroom learning

Course: EDUC 535 Specialization II Elementary Mathematics (by Dr. Jo Towers)

University of Calgary

- Conducted a lecture on the role of language in classroom mathematics learning

Course: EDRD 8310-005 Theoretical Models and Process of Literacy Learning (by Dr. Gertrude Tinker-Sachs)

Georgia State University

- Conducted a guest lecture on Bakhtinian perspectives on discourse analysis

Course: CTL 3000H Foundation of Bilingual and Multicultural Education (by Dr. Jim Cummins)

Ontario Institute for Studies in Education, University of Toronto

- Conducted a guest lecture on multiculturalism and mathematics education in a graduate course

Course: Graduate Seminar in Educational Research (by Dr. Kazuko Sawamoto)

Japan Women's University

- Conducted a guest lecture on multilingualism and mathematics education

Teacher Professional Development Experiences

2021	Faculty Advisor and the Planning Committee <ul style="list-style-type: none"> • “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 <ul style="list-style-type: none"> • “Anti-Racist and Anti-Homophobic Public Pedagogy for Food and Environmental Justice: A Panel Discussion” – in collaboration with partners from Calgary Board of Education, and Community Food Centers Canada, and TELUS Spark • For 66 teacher candidates at the University of Calgary
2020	Faculty Advisor and the Planning Committee <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 12 sessions on mathematics teaching in the early years between 2017 and 2018
2017	Guest Speaker, Early Childhood Education Council Calgary Regional <ul style="list-style-type: none"> • Perspectives on spatial reasoning: Connections to language and mathematics
2015	Guest Speaker, Cecil Swanson Elementary School, Calgary, Canada <ul style="list-style-type: none"> • Teaching mathematics to English Language Learners
2013	Guest Speaker, Professional Development Seminar for Teacher Lesson Study, Japan <ul style="list-style-type: none"> • Presented classroom research and analysis methods to teachers and university researchers who are undertaking a “lesson study” professional development
2009 – 2011	Research Fellowship and Graduate Assistant, Department of Curriculum, Teaching and Learning, OISE, University of Toronto <ul style="list-style-type: none"> • Helped to organize inquiry-based teacher professional development for Culturally Responsive and Relevant Pedagogy for teaching mathematics and Teaching Mathematics for Social Justice • Conducted research on teacher professional development
2009 – 2010	Major Research Assistant, Department of Curriculum, Teaching and Learning, OISE, University of Toronto <ul style="list-style-type: none"> • Conducted research on teacher professional development sessions on Culturally Responsive and Relevant Pedagogy for teaching mathematics

Professional Development Courses and Certificates

Personal Effectiveness in the Academy

January to April 2016 (15 hours), Academic Leadership Academy, University of Calgary

Teaching Online

February to April 2015 (40 hours), Taylor Institute for Teaching and Learning, University of Calgary

Course Design

October and November 2014 (12 hours), Taylor Institute for Teaching and Learning, University of Calgary

Teaching Controversial Subjects

October 5, 2015 & December 3, 2015 (4 hours), Taylor Institute for Teaching and Learning, University of Calgary

Documenting Quality Teaching Using a Dossier

February 10, 2016 (2 hours), Office of Teaching and Learning, Werklund School of Education, University of Calgary

CONFERENCE PRESENTATIONS, PAPERS, AND POSTERS

Invited Talks

- 1) Takeuchi, M.A. (2021). *Missing voices in STEM: Historically marginalized STEM knowledge as a lens for disrupting dilemmas in global food production*. An invited speech at 2021 Gordon Research Conference (GRC) on Chemistry Education Research and Practice (CERP) – postponed to 2023
- 2) Takeuchi, M.A. (2020). *Unveiling hidden epistemologies*. In an invited special session on learning and identity: Imagining socio-political and ethical horizons of the learning sciences with Kris Gutiérrez (University of California, Berkeley), Victoria Hand (University of Colorado Boulder), Susan Jurow (University of Colorado Boulder), José Lizarraga (University of Colorado Boulder), Ananda Marin (University of California, Los Angeles), Na'ilah Suad Nasir (President, Spencer Foundation), Kalonji Nzinga (University of Colorado Boulder), Pratim Sengupta (University of Calgary), Jennifer Vadeboncoeur (University of British Columbia), Sepehr Vakil (Northwestern University), and Shirin Vossoughi (Northwestern University). *At the International Conference of the Learning Sciences 2020*.
- 3) Sengupta, P., Shanahan, M-C., & Takeuchi, M.A. (2019, August). *Local theories in STEM education: A critical phenomenological perspective*. Paper presented at the 13th Conference of the European Science Education Research Association, Bologna, Italy. [August 27, 2019]
- 4) Sengupta, P., Takeuchi, M.A., & Shanahan, M-C. (2019, April). *Knowledge in pieces and chronotope: A possible friendship*. Paper presented at the pre-conference of the American Educational Research Association, Toronto, Canada. [April 4, 2019]
- 5) Takeuchi, M. (2018, July) *Why ideology matters for learning?* The Journal of the Learning Sciences Webinar (with Thomas Philip (University of California, Berkeley), Ayush Gupta (University of Maryland), Andrew Elby (University of Maryland), Chandra Turpen (University of Maryland), Philip Bell (University of Washington), Donna Riley (Purdue University), Flavio Azevedo (University of Texas Austin).
- 6) Takeuchi, M. (2018, February) *STEAM punks, critical educators, environmental creativity, love and care in educational research*. Creativity, Science and Social Science: Empowering Pedagogies for Youth and Educators (with Jennifer Adams and Shirley Steinberg). Calgary, Canada.

Refereed Conference Presentations

** indicates graduate and undergraduate students I supervised or mentored

- 1) Takeuchi, M., Adams, J., & Sengupta, P (Co-Chairs). (2021, April). *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.era21.net/>
- 2) **Dadkhahfard, S., & Takeuchi, M. (2021, April). *The role of research-informed illustrated stories for equitable embodied mathematics learning*. American Educational Research Association Virtual Conference. <https://www.era21.net/>
- 3) 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.
- 4) **Yuen, J., & Takeuchi, M. (2020, July 9–11). *Owning STEM: Pre-service teacher's professional development through a collaborative research project*. STEM 2020 Conference, Vancouver, Canada. <http://stem2020.ubc.ca/> (Conference postponed due to COVID-19)

- 5) 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)
- 6) **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)
- 7) **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)
- 8) 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)
- 9) **Dadkhahfard, S., & Takeuchi, M. (2019, August). *Visual representation as counter-storytelling*. Poster presented at the World Education Research Association focal meeting, Tokyo, Japan. [August 6, 2019]
- 10) Takeuchi, M., & Aquino Ishihara, V. (2019, August). *Critical mathematical literacy development in transnational activism*. Paper presented at the World Education Research Association focal meeting, Tokyo, Japan. [August 7, 2019]
- 11) Takeuchi, M. (2019, August). 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. [August 6, 2019]
- 12) Preciado Babb, P., Brown, B., Friesen, S., Francis, K., Moscher, R., & Takeuchi, M.A. (2019, June). *Developing mathematics teachers' principled practical knowledge*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada. [June 4, 2019]
- 13) Kim, B., **Bastani, R., & Takeuchi, M.A. (2019, June). *Materializing and mathematizing board game design*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada. [June 4, 2019]
- 14) Takeuchi, M.A., Kim, B., **Bastani, R., Brown, B., & **Dadkhahfard, S. (2019, June). *Mobilizing teacher dispositions toward mathematics thinking through games*. Paper presented at the annual conference of Canadian Society for the Study of Education, Vancouver, Canada. [June 4, 2019]
- 15) **Dadkhahfard, S., **Liu, S., **Yuen, J., & Takeuchi, M.A. (2019, June). *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. [June 4, 2019]
- 16) **Ostrowski, C. P., Chu, M-W., Lock, J., & Takeuchi, M. (June, 2019). *Preservice teachers' metaphors of inclusion*. Paper presented at the Canadian Society for the Study of Higher Education Conference, Vancouver, Canada. [June 4, 2019]

- 17) **Ostrowski, C., Lock, J., & Takeuchi, M. (May, 2019). *Supporting preservice teachers to connect their perspectives with field experience*. Paper presented at the University of Calgary Conference on Postsecondary Learning and Teaching. Calgary, Canada. [May , 2019]
- 18) Takeuchi, M.A., & **Dadkhahfard, S. (2019, April). *Labeling and learning: A multimodal poster*. Poster presented at the annual meeting of American Educational Research Association, Toronto, Canada. [April 5-9, 2019]
- 19) Kim, B., **Bastani, R., & Takeuchi, M.A. (2019, April). 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. [April 5-9, 2019]
- 20) **Ostrowski, C., Chu, M-W., Lock, J., & Takeuchi, M.A. (2019, April). *Understanding preservice teachers' conceptualizations of disability and inclusion through visual representations*. Paper presented at the annual meeting of American Educational Research Association, Toronto, Canada. [April 5-9, 2019]
- 21) **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.
- 22) 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.
- 23) 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.
- 24) 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.
- 25) 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.
- 26) 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.
- 27) 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.
- 28) 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.
- 29) 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.

- 30) 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.
- 31) 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.
- 32) 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.
- 33) 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.
- 34) 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.
- 35) 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.
- 36) 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.
- 37) Takeuchi, M., & Towers, J. (2016, May). *Students' experiences of group work revealed through mathematics autobiographies*. Paper presented at the IDEAS 2016 conference, Calgary, Canada.
- 38) 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.
- 39) 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.
- 40) 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.
- 41) **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.
- 42) 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.

- 43) 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.
- 44) 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.
- 45) 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.
- 46) 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.
- 47) 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.
- 48) 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.
- 49) 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.
- 50) 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.
- 51) 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.
- 52) 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.
- 53) 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.
- 54) 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.
- 55) 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.

- 56) 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.
- 57) 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.
- 58) 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.
- 59) 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.
- 60) 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.
- 61) 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.
- 62) 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.
- 63) 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.
- 64) 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.

Non-Refereed Conference Presentation

- 1) **Dadkafard, S., & Takeuchi, M.A. (2020, February). Designing visual counter-stories. Presented at the Tapestries of Learning Symposium, Calgary, AB. [February 21, 2020]
- 2) Kim, B. & Takeuchi, M. A. (2018, November). *Learners as game designers for mathematics*. Reporting at the Alberta Research Network meeting of Alberta Education, Edmonton, AB. [November 2, 2018]
- 3) Jaques, S., Kim, B., & Takeuchi, M. A. (2018, November). *Learning mathematics through game design*. Paper presented at the Alberta Teachers' Association Early Childhood Education Conference, Edmonton, AB. [November 3, 2018]
- 4) Takeuchi, M.A. (2017, June). *"Perimeter is easier to work with than area": Students' language use in group work*. Poster presented at the annual conference of the Canadian Mathematics Education Study Group, Montreal, Canada.

- 5) **Plosz, J., Towers, J., **Czuy, K., **Akjarrah, A., **Vorhes, A., & Takeuchi, M.A. (2017, June). *Students' relationships with mathematics revealed through drawings*. Poster presented at the annual conference of the Canadian Mathematics Education Study Group, Montreal, Canada.
- 6) Takeuchi, M. (2012, November). *Classroom environment that facilitates expansive learning*. Poster presented at the annual meeting of the Japan Association of Educational Psychology, Naha, Japan [in Japanese].
- 7) Takeuchi, M. (2012, July). *Classroom activity systems and opportunities to learn in multilingual mathematics classrooms*. Poster presented at the Early Career Workshop of the International Conference of the Learning Sciences, Sydney, Australia.
- 8) 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.
- 9) Dookie, L., Brodie, K., Esmonde, I., & Takeuchi, M. (2009, April). *Race, gender, identity and learning together: Student perspectives on mathematical collaboration*. Paper presented at the Institute for Child Study Annual Research Conference, Toronto, Canada.

Internal Seminars, Public Talk, and Colloquia

- 1) Takeuchi, M.A. (2021, March). *International research in the learning sciences*. Presented at University of Colorado Boulder Learning Sciences Colloquia.
- 2) Takeuchi, M.A. (2017, May). *Cultural and historical bodies of learners*. Presented at Emerging Insights into Mathematics Education (Public Talk), University of Calgary.
- 3) Takeuchi, M. (2014, December). *Framing linguistically diverse students' learning in mathematics classrooms*. Presented at the EDSA Colloquia: Generating Possibilities through Postdoctoral Scholarship. Werklund School of Education, University of Calgary.
- 4) 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.
- 5) Takeuchi, M. (2014, February). *Rethinking multilingualism*. Presented at Kokugo Kyoshitsu Japanese heritage language school, Toronto, Canada.
- 6) 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.
- 7) Takeuchi, M. (2013, October). *Rethinking bilingualism*. Presented at Kokugo Kyoshitsu Japanese heritage language school, Toronto, Canada.
- 8) 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.
- 9) Takeuchi, M. (2013, September). *English language learners' participation in classroom mathematics practices: The situated multiliteracies approach*. Presented at the Centre for Educational Research on Language and Literacies, University of Toronto.

ACADEMIC SERVICES

Journal Reviewer

- Journal of the Learning Sciences
- Cognition and Instruction
- Teachers College Record
- Mind, Culture and Activity
- Journal of Research in Science Teaching
- ZDM: Mathematics Education
- Canadian Journal of Science, Mathematics and Technology Education
- Canadian Journal of Education
- International Journal of Research and Method in Education
- Pedagogies: An International Journal
- Teaching for Excellence and Equity in Mathematics

Internal Academic Services

2020 – current	Undergraduate Program Academic Coordinator
2019 – current	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

2021 – Current	International Society of the Learning Sciences, Board of Directors
2020 – Current	SIG-Learning Sciences, Canadian Society for the Study of Education President-Elect
2021 – Current	Calgary East Zone Newcomers Collaboratives <ul style="list-style-type: none"> ● Providing research inputs to the ways to address and intervene the COVID-19 infection rises in Calgary's North East and South East communities ● In collaboration with the Immigrant Education Society
2020 – Current	Committee Member, Alberta Advisory Committee for Educational Studies
2018 – Current	Conference Peer Reviewer for SIG-Learning Sciences, American Educational Research Association
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
2016 – Current	Alberta Teachers' Association Early Childhood Council – Faculty Advisor

- 2014 – Current Conference Peer Reviewer, Canadian Society for the Study of Education (SIG-Learning Sciences)
- 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

MEMBERSHIPS

American Educational Research Association
Canadian Society for the Studies of Education
Early Childhood Council (The Alberta Teachers' Association)
Mathematics Council (The Alberta Teachers' Association)
International Society of the Learning Sciences