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## Education

Ph.D. (Learning Sciences and Human Development), School of Education, University of Colorado Boulder, 2024.

Dissertation: *Exploration of the structure-agency dialectic across three STEM development contexts focused on equity and identity development.*

MA (Public Policy), School of Public Policy, Oregon State University, 2015

Thesis: *Public participation in the siting of liquefied natural gas (LNG) facility on the Columbia river.*

BA (International Studies), University of Da Nang, Viet Nam, 2012

Thesis: *Learning about the South Korean chaebol model and its applications to the government-sponsored economic groups in Vietnam.*

Certificate, National Center for Education Statistics (NCES) Data Institute: Using Federal Datasets to Support Research on Postsecondary Education, 2021.

## Professional Experiences and Appointments

Assistant Research Professor, Education Policy 2025 – present

Institute of Social and Economic Research, University of Alaska Anchorage

Graduate Research Assistant 2020 – 2024

School of Education, University of Colorado Boulder

Research Professional 2016 – 2024

Institute of Social and Economic Research, University of Alaska Anchorage

Research Assistant

Oregon State University Policy Analysis Laboratory (OPAL), Oregon State University. 2014 – 2016

## Publications

### Peer-reviewed Journal Articles and Book Chapter

- DeFeo, D., Gerken, S., Tran, T. C., Khodyakov, D., Fink, A. (2025). General Education Biology Labs: A Delphi Study of Student Learning Outcomes. *Discover Education*, 4(1), 55-72.
- Tran, T. C., Penuel, W. R., Singleton, C., Bell, P., & Leonhart, S. (2025). Studying the Implementation of Equity Projects in Science Education in Divisive Political Contexts. *Science Education*, 109(2), 627-649.
- DeFeo, D., Watson, B., Gerken, S., & Tran, T. C. (2024). Spillover Effects: A Comparison of Course and Institutional Outcomes for Traditional and Intensive Introductory Biology. *The Journal of Higher Education*, 1-28.
- DeFeo, D., Dogbey-Gakpetor, J., Duffield, S., & Tran, T.C. (2024). The Impact of Disrupted Student Teaching on Preservice Teacher Self-efficacy. *Teaching and Teacher Education*, 142, 104546.
- DeFeo, D., Gerken, S., Mason, L., & Tran, T. C. (2024). Involuntary Online Learners Engaging Online Students Who Prefer F2F Science Classes During the Global Pandemic. *Journal of Science Education and Technology*, 1-17.
- Tran, T. C., Williams, J., Middleton, K., Clark-Taylor, A., & Priddie, C. (2023). Examining factors that influence BIPOC students' enrollment in STEM postsecondary majors. *The AIR Professional File*. Spring 2023. Association for Institutional Research.
- DeFeo, D., Mammo, B., & Tran, T. C. (2022). Developing Preservice Teacher Self-Efficacy Through Peer Tutoring. *The Teacher Educator*, 1-25.
- Tran, T.C. & DeFeo, D. J. (2021). Rural students' postsecondary transitions: A human ecological perspective. *Journal of College Student Development*, 62(4), 455-468.
- DeFeo, D. J., Tran, T. C., & Gerken, S. (2020). Mediating Students' Fixation with Grades in an Inquiry-Based Undergraduate Biology Course. *Science & Education*, 1-22.
- Tran, T., Taylor, C. L., Boudet, H. S., Baker, K., & Peterson, H. L. (2019). Using Concepts from the Study of Social Movements to Understand Community Response to Liquefied Natural Gas Development in Clatsop County, Oregon. *Case Studies in the Environment*. (This manuscript was chosen by the journal as one of the two runner-ups for most outstanding case study for 2019-2020)
- DeFeo, D. J., & Tran, T. C. (2019). Recruiting, Hiring, and Training Alaska's Rural Teachers: How Superintendents Practice Place-Conscious Leadership. *Journal of Research in Rural Education*, 35(2), 1-17.
- Boudet, H., Tran, T., & Gaustad, B., (2018). Protest in the Siting of Liquefied Natural Gas Terminals in Oregon. *Fractured Communities: Risk, Impacts, and Protest Against Hydraulic Fracking in US Shale Regions*, 248. New Brunswick, NJ: Rutgers University Press.

### Conference Proceedings

- Boateng, A. A., Curnow, J., Chen, A., Folger, R., Jones, S., Lee, S., Melon, N., Kennedy, R., Leibovitz, T., McKoy, A., Polman, J., Salazar, B., Tran, T.C., Miller, K., and Mitchell, N. (in press). Developing approaches to racial justice in the learning sciences. In A. Rajala, A. Cortez, R. Hofmann, A. Jornet, H. Lotz-Sisitka, & L. Markauskaite, *Proceedings of the 19th International*

- Conference of the Learning Sciences - ICLS 2025*. International Society of the Learning Sciences. Symposium.
- Kyza, E. A., Varda, C., Yoon, S. A., Shim, J., Zhang, W., Leung, V., Nguyen, Z., Törmänen, T., Järvenoja, H., Teo, C. L., Chan, C., Ong, A., Tran, T. C., Polman, J. L., Tabak, I., Reznick, N., Radinsky J., and Hammer, D. (in press). Exploring the intersection of emotions and epistemic engagement. In A. Rajala, A. Cortez, R. Hofmann, A. Jornet, H. Lotz-Sisitka, & L. Markauskaite, *Proceedings of the 19th International Conference of the Learning Sciences - ICLS 2025*. International Society of the Learning Sciences. Symposium.
- Killen, H., Arnold, S., Nguyen, V., Quiterio, A., Tran, T. C., McKoy, A. & Kennedy, R. (in press). A world-making lens towards relational understandings of data. In A. Rajala, A. Cortez, R. Hofmann, A. Jornet, H. Lotz-Sisitka, & L. Markauskaite, *Proceedings of the 19th International Conference of the Learning Sciences - ICLS 2025*. International Society of the Learning Sciences. Symposium.
- Stamatis, K., Polman, J., Tran, T.C., Hernandez, J. M., (2024). Looking back to see myself: Analepsis as tool to deepen proleptic notions of identity development. Learning as a cornerstone of healing, resilience, and community. *Proceeding of the 18<sup>th</sup> International Conference of the Learning Sciences (ICLS) 2024*. International Society of the Learning Sciences (Buffalo, NY). Outstanding Design Paper Finalists.
- Miller, K. M., Polman, J. L., Tran, T. C., Yoon, S. Shim, J., Leung, V. Y., Nguyen, Y., Rubin, A., Higgins, T., Podworny, S., Fleischer, Y., Biehler, R., Vacca, R., Desportes, K., Matuk, C., Silander, M., Amato, A., Woods, P., Dikker, S., Romero, E., Ochoa, X., Fernandez, C., Eloy, A., Blikstein, P., Lopes, R., Walker, J. T., Acquah, A., Scarola, A., Reza, S., Barany, A., Radinsky, J., Tabak, I., Karch, J. M., Hammerman, J. K. L., Lee, V. R., Demsky, D., Levine, S. and Louie, J. (2024). Data and social worlds: How data science education supports civic participation and social discourse. *Proceeding of the 18<sup>th</sup> International Conference of the Learning Sciences (ICLS) 2024*. International Society of the Learning Sciences (Buffalo, NY). Symposium.
- Tran, T. C., Palomar, M., McKoy, A., Aguirre-Marmolejo, O., Sheperd, B. Song M., (2023). Pláticas and counterstories: talking and writing about experiences of nondominant learners in STEM. *Building knowledge and sustaining our community: Proceeding of the 17<sup>th</sup> International Conference of the Learning Sciences (ICLS) 2023*. International Society of the Learning Sciences (Montréal, Canada).
- Stamatis, K., Clarke, S., Polman, J., Gates, Z., Lee, U.S., Van, M., Nagashima, T., Yadav, G., Aleven, V., Oswald, E., Esborg, L., Pierroux, P., Riedy, R., Farrell, C., Penuel, W., Fox-Resnick, A., Sushil, S., Sommer, S., Tran, T.C., Palomar, M., Mckoy, A., Padilla-Chavez, A., Widman, S., Yu, J., Chan, J., Y.C., Closser, A., Ngo, V., Smith, H., Liu, A.S., and Ottmar, E.R. (June 2023). *Designing to Disrupt While Encountering Disruption: Engaging with the Unexpected in Educational Research and Practice*. International Conference of the Learning Sciences. (Montréal, Canada). Symposium.
- Polman, J. L., Tabak, I., Tran, T. C., Amato, A., Silander, M., Matuk, C., Beale, J. DesPortes, K., Orfanos, M., Tes, M., Vacca, R., Woods, P. J., Pimentel, D. R., Reigh, E., Lee, V. R. Brown, B. A., Dubovi, I., Radinsky, J., Greenberg, D., Calabrese Barton, A., Herrenkohl, L., Kyza, E. A., Varda, C. Rubin, A., Mann, M. Sommer, S., Graville, C., Yoon, S., Chinn, C., Cottone, A. M., Richman, T., Noushad, N., Hussain-Abidi, H., Wei, X. McBride, C., Bakal, M., Roberto, C.,

- Bhargava, P., Wilkerson, M., Philip, T. (2022). Cultivating critical, justice-oriented data literacies in a post-truth world. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.). *International Collaboration Toward Educational Innovation for All: Proceedings of the 16th International Conference of the Learning Sciences (ICLS) 2022* (pp. 1699-1706). International Society of the Learning Sciences (Hiroshima, Japan). Symposium.
- Tran, T. C., Polman, J. L., & Knight, D. (2022). Organizing outreach for cultural transformation: The design of a STEM education learning pathway. In Chinn, C., Tan, E., Chan, C., & Kali, Y. (Eds.). *International Collaboration Toward Educational Innovation for All: Proceedings of the 16th International Conference of the Learning Sciences (ICLS) 2022* (pp. 1157-1160). International Society of the Learning Sciences (Hiroshima, Japan).

### Technical Reports and Media Outreach

- Tran, T., Polman, J., Miller, K., McIntyre, C. (2025). “Middle school students see themselves as “data people.” Concord Consortium Blog, 18 March 2025.
- Polman, J., Tran, T., & Miller, K. (2023). Data stories and interdisciplinary project-based learning. @Concord, 27(2), 12–13. <https://concord.org/newsletter/2023-fall/data-stories-and-interdisciplinary-project-based-learning/>
- Tran, T., Mejia, D., & Zigarelli, J. (2022). *Youth Healing Day of Remembrance: Process Evaluation Report*. Renée Crown Wellness Institute. Boulder, CO.
- DeFeo, D & Tran, T. (2020). *COVID-19's spring 2020 school closures: The effect on teacher candidates*. Anchorage, AK: University of Alaska Anchorage Center for Alaska Education Policy Research.
- DeFeo, D. & Tran, T. (2019). *Growing your own: Recruiting Alaska's youth and paraprofessionals into teaching*. Anchorage, AK: University of Alaska Anchorage Center for Alaska Education Policy Research.
- Tran, T. & Hill, L. (2019). *Alaska High School Graduation Rate Trends*. Anchorage, AK: University of Alaska Anchorage Center for Alaska Education Policy Research.
- DeFeo, D. & Tran, T. (2019). *Dual Enrollment in Alaska: A 10-year retrospective and outcome analysis*. Anchorage, AK: University of Alaska Anchorage Center for Alaska Education Policy Research.
- Guettabi, M., Tran, T. & Leask, L. (2018). *How Does Alaska's Spending Compare?* Anchorage, AK: University of Alaska Anchorage Institute of Social and Economic Research.
- DeFeo, D., Tran, T., Hirshberg, D., Cope, D. & Pam Cravez (2017). *The cost of teacher turnover in Alaska*. Anchorage, AK: University of Alaska Anchorage Center for Alaska Education Policy Research.
- Archambault, K., Gaustad, B. Kelly, A., Tran, T. (2014). *Crossing the Finish Line: On-time Graduation Rate in Corvallis, Oregon*. Corvallis, Oregon: Oregon State University Policy Analysis Laboratory.

### Conference Papers and Presentations

- DeFeo, D., Tran, T.C., & Rhinehart, A. (2025, March). Community-led curriculum design: Community & teacher perspectives on place-based education. In Venturing beyond boundaries to explore inclusive practices in science education. Related-paper set presentation at NARST 2025. (Washington, DC).

- Tran, T.C., Polman, J., Miller, K. (2025, February). Towards Inquiry into Data Identity in Interdisciplinary Project-based Learning. Data Science Education K-12 (San Antonio, TX).
- Miller, K., Polman, J. Tran, T.C., Folger., R., Kennedy, R., Grein, L., Templeton, J., & Dorsey, C. (2025, February). Workshop Panel: Co-Design Principles for a Research-Practice-Developer Partnership Integrating Data Practices in Humanities Curriculum. Data Science Education K-12 (San Antonio, TX).
- Gerken, S., DeFeo. D. J., Tran, T. C., & McElroy., H. (2024, November). Identifying the learning objectives of biology laboratories in the general education curriculum and exploring gaps between objectives and practice. Poster presented at the National Association of Biology Teachers annual conference. (Anaheim, CA).
- Tran, T.C., Penuel, B., & Singleton, C. (2024, April). Studying the implementation of equity initiatives in science education amid divisive political contexts. American Educational Research Association (Philadelphia, PA).
- Polman, J., Tran, T.C., Miller, K., & Dorsey, C. (2024, April). The role of data stories in interdisciplinary project-based learning. American Educational Research Association (Philadelphia, PA).
- Miller, K., Polman, J., & Tran, T. (2024, April). Constructing Educational Possibilities with Teachers at the Center of PBL Design and Enactment. American Educational Research Association (Philadelphia, PA).
- Tran, T. C. (2023, October). Towards Critical Data Literacy in Data-Infused, Project-based Interdisciplinary Learning about Japanese American Internment. Learning Science Graduate Student Conference (Iowa City, IA).
- Tran, T. C., Aguirre-Ortega, B., McKoy, A., Padilla-Chavez, A., Palomar, M. (2023, April). Tracing the Women of Color Plática: A Loving and Healing Circle. American Educational Research Association (Chicago, Illinois).
- DeFeo, D. J., Watson, B., Tran, T. C., & Gerken, S. (2023, April). Spillover effects: A comparison of course and institutional outcomes for traditional and intensive introductory biology. American Educational Research Association (Chicago, Illinois).
- Stamatis, K. M., Polman, J. L., & Tran, T. C. (2023, April). Viviendo Aquí: Youth as Cultural Curators Restorying Museums Toward Historical Activism. In Svihla, V. "Whose Agency? What Learning? Whence Power?" Symposium presentation at American Educational Research Association 2022 (Chicago, Illinois).
- Raza, A., Salinas Del Val, Y., Penuel, W., Sumner, T., Tran, T., & Campanella, M. (2022, October). Understanding teachers' sensemaking to equity analytics in science classrooms. Learning Sciences Graduate Student Conference (Bloomington, IN)
- DeFeo, D. & Tran, T. Postsecondary transitions for rural students: what students and the staff who serve them identify as supports, barriers, and opportunities. Alaska Commission on Postsecondary Education (Anchorage, AK, 2022); Alaska Postsecondary Access and Completion Network (Anchorage, AK, 2018); Alaska Association for Career and Technical Education (Anchorage, AK, 2018)

- Pliszka, H., Okorn, K., Hannigan, M., Polman, J., Tran, T., Coffey, E., & Knight, D. (2022, May). Air Quality InQuiry: Adapting air quality sensors for use in high school settings in the United States and universities in Mongolia. Air Sensors International Conference (Davis, CA).
- DeFeo, D., Mammo, B., & Tran, T. (2022). Developing Preservice Teacher Self-Efficacy Through Peer Tutotting. American Educational Research Association (San Diego, CA); Northeastern Conference on Research in Undergraduate Mathematics Education (online).
- DeFeo, D., Dogbey-Gakpetor, J., Duffield, S., & Tran, T. (2022, April). The Impact of Disrupted Student Teaching on Preservice Teacher Self-efficacy. American Educational Research Association (San Diego, CA).
- Polman, J. L., Tran, T. C., & Knight, D. W. (2022, April). Place-based air quality inquiry in U.S. rural contexts. In Miller, K. M. Data Literacy in Context: Culturally Oriented and Place-Based Learning Through Data. Symposium presentation at American Educational Research Association 2022 (San Diego, CA).
- Ceperich, R., Tran, T., Del Val, Y. S., Penuel, W. (2022, February). Science education leaders' sense-making and noticing for equity. In ACESSE project's Supporting Expansive Conceptions of Science Teaching and Learning for Equity. Related-paper set presentation at NARST 2022 (Vancouver, BC).
- DeFeo, D. J., Tran, T., & Hirshberg, D. (2022). Cost of teacher turnover in Alaska. Testimony to the Legislature of the State of Alaska, the Senate Education Committee. (Juneau, AK)
- Okorn, K., Tran, T., Polman, J., Knight, D. & Hannigan, M. (2021, October). Changing learning opportunities and outcomes with varying levels of remote and in-person engineering education outreach. *2021 IEEE Frontiers in Education Conference (FIE)*. Lincoln, NE: IEEE.
- Clark-Taylor, A., Middleton, K., Priddie, C., Tran, T., & Williams, J. (2021). Factors Influencing Racially Minoritized Undergraduate Postsecondary STEM Enrollment. National Center for Education Statistics. Washington, DC: NCES Data Institute. (virtual meeting due to covid-19 pandemic).
- Tran, T. & DeFeo, D. (2021, April). Rural Students' Post-secondary Transitions: A Human Ecological Perspective. American Educational Research Association. (virtual meeting due to covid-19 pandemic); (Roundtable discussion chair)
- Tran, T. & Hill, L. (2019). *Alaska High School Graduation Rate Trends*. Alaska Association for Career and Technical Education (Anchorage, AK) and the Alaska Association of School Business Officials (Anchorage, AK).
- DeFeo, D. & Tran, T. (2019). *Dual Enrollment in Alaska: A 10-year retrospective and outcome analysis*. Alaska Association for Career and Technical Education (Anchorage, AK).
- DeFeo, D., Tran, T., Hirshberg, D., Cope, D. & Pam Cravez (2017). *The cost of teacher turnover in Alaska*. Alaska Association of School Business Officials (Anchorage, AK).
- Boudet, H. S., Tran, T., Gaustad, B. & Peterson, H. (2016/2017). The long shadow of unconventional hydrocarbon development: Contentious politics in liquefied natural gas (LNG) facility siting in Oregon. International Symposium on Society and Resource Management (Houghton, MI); American Sociological Association (Seattle, WA); Energy Impacts Symposium (Columbus, OH).

## Filmology

### Producer

The American War (2018) – A feature documentary that tells the story of the Vietnam War from the perspective of the North Vietnamese veterans. Director: Daniel Bernardi.

### Associate producer

Foghorn (2021) – A story of friendship and loneliness, George Carl Wenzlaff was a Navy veteran and postal service worker with unique artistic talents and an amazing past. Director: Diana Sánchez.

A collection of my father (2020) – This short film tells the story of Vincent Faulls, a soldier, husband and father, through the eyes of his daughter. Director: Jesse Sutterley.

The War to End all Wars (2020) – A feature documentary that uses archival footage to tell the story for first World War. Director: Daniel Bernardi.

Rudy Hernandez (2020) – A story of heroism, perseverance and service, Hernandez proved that even in the most dire circumstances a wounded soldier can accomplish his mission and go on to greater service as a veteran. Director: David de Rozas.

Frank Maselskis: From WWII POW to Chosin Reservoir Survivor (2020) – This short film tells the story of Frank Maselskis who was a prisoner of war in World War II. Director: Andrés Gallegos.

Ralph Parr: Fighter Ace of the Twentieth Century (2020) – This short film is the story of a Korean War, WWII, Vietnam War Fighter Pilot. Director: Alexander Zane Irwin.

## Research funding

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| 2022 | <i>Sharing through a plática: Nondominant students' experiences in a STEM collegiate outreach program.</i> Funding agency: CU Boulder's Center to Advance Research and Teaching in the Social Sciences (CARTSS). Amount: \$750.                                                                           |
| 2022 | <i>Plática, storytelling, and illustration: Nondominant students' experiences in a STEM collegiate outreach program.</i> Funding agency: CU Boulder's School of Education. RFP to Address the Growing Movement to Ban Teaching About Race, Gender Identity, Sexual Orientation and More. Amount: \$9,682. |

## Service

### Professional service

- Invited manuscript peer reviewer
  - Journal of Science Education and Technology (2025)
- Invited talk
  - *Humanizing pedagogies: Learning for whom and toward what ends?* (2024) San Francisco State University School of Cinema. CINE 852.

### Professional membership

- International Society of the Learning Sciences
- American Education Research Association
- National Association for Research in Science Teaching

### Legislative testimony

- Alaska's cost of teacher turnover. (2022, March 18). Invited testimony to the Alaska Senate Education Committee.