

**Cong Wang, PhD****EDUCATION**

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|------|--|---|
| 2019 | Ph.D. Educational Psychology                   | Purdue University—West Lafayette, IN      |
| 2019 | M.S. Applied Statistics                        | Purdue University—West Lafayette, IN      |
| 2013 | M.Ed. Developmental and Educational Psychology | Beijing Normal University, Beijing, China |
| 2010 | B.S. Applied Psychology                        | Sun Yat-Sen University, Guangzhou, China  |

**EMPLOYMENT**

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| Northwestern University | 2024.7 - 2024.2 - 2024.6 | Research Assistant Professor, <u>Department of Psychology</u>               |
| University of Michigan  | 2023-2024                | Research Associate, <u>Department of Psychology</u>                         |
|                         | 2021-2023                | Assistant Research Scientist, <u>Department of Psychology</u>               |
| Yale University         | 2020                     | Research Fellow, <u>Department of Psychology</u>                            |
| Purdue University       | 2019                     | Postdoctoral Associate, <u>STEM Program Evaluation &amp; Research Lab</u>   |
|                         |                          | Postdoctoral Research Associate, <u>Center for Instructional Excellence</u> |

**EXPERIENCE**

Born into a working-class family in China, I am the first in my family to attend college. Despite facing numerous academic, social, language, and cultural challenges, obtaining a quality education has opened many doors for me, transforming not only my life but also that of my family. Motivated by the desire to extend this transformative impact to students from less privileged backgrounds, I am committed to enhancing students' learning experiences through improved teaching methods. I have extensive experience in program evaluation, demonstrated by my involvement in several high-impact initiatives, such as the "Success through Transformative Education and Active Mentoring (STEAM)" program, funded by the U.S. Department of Education, and the "Creating Change in Education Systems: Can Leadership-Level Inclusion Training Reduce Achievement Gaps?" program, funded by National Science Foundation (NSF). Through a decade of interdisciplinary training, active involvement in large-scale grant-funded projects, and 23 peer-reviewed publications, I have developed a comprehensive approach to promoting student success and addressing educational disparities. My research aims to make a meaningful impact on the lives of students and contribute to creating a more just and equitable educational landscape for all.

**EXPERTISE**

Advanced statistical analysis, assessment & evaluation, motivation, evidence-based teaching

**SELECTED PROJECT EXPERIENCE****2024-present Using Pedagogical Alignment to Enhance Educators' Adoption of Culturally Responsive Practices**

- Funded by American Institutes for Research (\$400,335 with \$76,490 allocated to Wang)
- Principal Investigator: Laura M. Brady
- My Role: Co-Investigator (Quantitative Lead)

This multi-study project, led by Dr. Laura Brady from the American Institutes for Research (AIR), aims to develop and validate a scale to assess educators' perceived pedagogical alignment (PA) with culturally responsive teaching practices and test an intervention to support educators in cultivating PA. As a key staff member on the project, I co-lead study design and data collection and lead quantitative work, drawing on expertise in measurement development. Specifically, I will conduct a series of exploratory (EFA) and confirmatory factor analyses (CFA) to assess the measure's structural validity. Additionally, I will perform equivalence tests for diverse subgroups to ensure the measure's cultural appropriateness for educators from various backgrounds. Furthermore, I will utilize structural equation modeling (SEM) to assess the scale's concurrent validity, examining the relationships between PA and educators' culturally inclusive beliefs and practices.

**2023-present COLLABORATIVE RESEARCH: Improving Engagement with Equity-Focused Professional Development Programs by Attending to Teachers' Psychosocial Experiences**

- Funded by National Science Foundation (\$345,457)
- My Role: Co-Principal Investigator
- Other Principal Investigators: Stephanie A. Fryberg, Laura M. Brady

This NSF-funded project investigates how educators' psychosocial experiences in equity-focused professional learning programs affect their engagement and outcomes. Utilizing focus groups, surveys, and randomized controlled experiments, the research aims to identify strategies for enhancing educators' engagement with equity-focused programs and integrating equity-enhanced practices into their classrooms. In my role as a Co-Principal Investigator, my responsibilities include overseeing project design, implementation, and assessment; providing mentorship to junior team members; managing a budget of \$345,457; and communicating findings to various stakeholders.

**2021 - 2022 Creating change in education systems: Can leadership-level inclusion training reduce achievement gaps?**

- Funded by National Science Foundation (#2013753; \$462,110)
- Principal Investigator: Stephanie A. Fryberg, Laura M. Brady
- My Role: Postdoctoral Researcher

Funded by NSF, this project addresses problems of educational inequality by examining the immediate and longer-term impacts on students of having school leaders trained in culturally inclusive teaching practices. As a key investigator, my duties include data analysis, disseminating findings through presentations and publications, crafting grant proposals to extend the project's reach, and mentoring graduate and undergraduate research assistants. To evaluate the impacts of the "train the trainer" professional learning model on educators and students, I conducted advanced statistical analyses, including multilevel structural equation modeling (MSEM) and hierarchical linear modeling (HLM), to examine the downstream effects of the leadership-level training on teachers' adoption of culturally inclusive beliefs and practices, as well as students' social-emotional and academic outcomes. Notably, many of the measures to be used in the proposed work were developed and validated through this project, and our findings have been published in the Proceedings of the National Academy of Sciences in 2024.

**2015 - 2019 Success through Transformative Education and Active Mentoring (STEAM).**

- Funded by Department of Education (#P116F140459; \$2,300,000)
- Principal Investigator: Chantal Levesque-Bristol
- My Role: Graduate Research Assistant & Postdoctoral Research Associate

This course transformation program seeks to refocus the campus culture on students' needs and student success and to increase student engagement, competence, and learning gains. By 2019, a total of 348 faculty members engaged in the initiative had successfully transformed 301 distinct courses. Over the span of 2015 to 2019, I contributed to the program's assessment team, focusing on evaluating the program's impact on student outcomes. In this role, my responsibilities encompassed data analysis and the communication of findings through comprehensive reports, engaging conference presentations, and producing peer-reviewed publications.

**PEER-REVIEWED PUBLICATIONS**

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1. Zhang, Y., **Wang, C.**, Hannauer, D. I., & Graham, M. J. (2024). Course-Based Undergraduate Research Experiences (CUREs) and Student Interest Development: A Longitudinal Study Investigating the Roles of Challenge, Frustration, and Meaning Making. *Studies in Higher Education*.  
<https://doi.org/10.1080/03075079.2024.2361328>
2. Brady, L. M., **Wang, C.**, Griffiths, C. M., Yang, Y., Markus, H., & Fryberg, S. A., (2024). A Leadership-Level Culture Cycle Intervention Changes Teachers' Culturally Inclusive Beliefs and

- Practices. *Proceedings of the National Academy of Sciences*. <https://doi.org/10.1073/pnas.2322872121>
3. Reeves, P. M., Bauer, M., Gill, J. C., **Wang, C.**, Hanauer, D. I., & Graham, M. J. (2024, April). More frequent utilization of evidence-based teaching practices leads to increasingly positive student outcomes. In *Frontiers in Education* (Vol. 9, p. 1337703). Frontiers Media SA.
  4. Zhang, Y., Shen, F., & **Wang, C.** (2024). Appreciation of differences: Promoting diversity and flourishing among college students. *Journal of Applied Research in Higher Education*. <https://doi.org/10.1108/JARHE-09-2023-0439>
  5. Reeves, P. M., Cavanagh, A. J., Bauer, M., **Wang, C.**, & Graham, M. J. (2023). Cumulative Cross Course Exposure to Evidence-Based Teaching is Related to Increases in STEM Student Buy-in and Intent to Persist. *College Teaching*. <https://doi.org/10.1080/87567555.2021.1991261>
  6. **Wang, C.**, Cho, H.J., Wiles, B., et al. Competence and autonomous motivation as motivational predictors of college students' mathematics achievement: from the perspective of self-determination theory. *IJ STEM Ed* 9, 41 (2022). <https://doi.org/10.1186/s40594-022-00359-7>
  7. **Wang, C.**, Cavanagh, A. J., Bauer, M., Reeves, P. M., Gill, J. C., Chen, X., ... & Graham, M. J. (2021). A Framework of College Student Buy-in to Evidence-Based Teaching Practices in STEM: The Roles of Trust and Growth Mindset. *CBE—Life Sciences Education*, 20(4), ar54.
  8. Cho, H. J., **Wang, C.**, Bonem, E. M., & Levesque-Bristol, C. (2021). How can we support students' learning experiences in higher education? Campus wide course transformation program systematic review and meta-analysis. *Innovative Higher Education*. <https://doi.org/10.1007/s10755-021-09571-9>
  9. **Wang, C.**, Yan, W., Guo, F., Li, Y., & Yao, M. (2020). Service-learning and Chinese college students' knowledge transfer development. *Front. Psychol.* 11:606334. DOI: 10.3389/fpsyg.2020.606334
  10. **Wang, C.**, Bauer, M., Burmeister, A.R., Hanauer, D.I., & Graham, M.J. (2020). College Student Meaning Making and Interest Maintenance During COVID-19: From Course-Based Undergraduate Research Experiences (CUREs) to Science Learning Being Off-Campus and Online. *Front. Educ.* 5:590738. doi: 10.3389/educ.2020.590738
  11. **Wang, C.**, Zhang, Y., Moss, J. D., Bonem, E. M., & Levesque-Bristol, C. (2020). Multilevel factors affecting college students' perceived knowledge transferability: From the perspective of self-determination theory. *Research in Higher Education*, 61, 1002-1026. <https://doi.org/10.1007/s11162-020-09592-x>
  12. Stamper, T., Weidner, L. M., Nigoghosian, G., Johnson, N., **Wang, C.**, & Levesque-Bristol, C. (2020). Towards understanding how to instruct students in dichotomous identification keys in a mixed STEM forensic science education environment. *The Journal of Forensic Science Education*, 2(1).
  13. Levesque-Bristol, C., Richards, K.A.R., Zissimopoulos, A., **Wang, C.**, & Yu, S.. (2020) An evaluation of the integrative model for learning and motivation in the college classroom. *Curr Psychol* 41, 1447–1459. <https://doi.org/10.1007/s12144-020-00671-x>
  14. Guo, F., Li, Y., **Wang, C.**, Zong, X., Yao, M., & Yan, W. (2020). Service participation among adolescents in mainland China. *Journal of Social Service Research*, 46(1), 41-54. DOI: 10.1080/01488376.2018.1524812
  15. **Wang, C.**, Hsu, H. K., Bonem, E. M., Moss, J. D., Yu, S., Nelson, D. B., & Levesque-Bristol, C. (2019). Need satisfaction and need dissatisfaction: A comparative study of online and face-to-face learning contexts. *Computers in Human Behavior*, 95, 114-125. DOI: <https://doi.org/10.1016/j.chb.2019.01.034>

16. **Wang, C.**, Zhang, X., & Yao, M. (2019). Enhancing Chinese college students' transfer of learning through service-learning. *Studies in Higher Education*, 44(8), 1316–1331. <https://doi.org/10.1080/03075079.2018.1435635>
17. Hsu, H. K., **Wang, C. V.**, & Levesque-Bristol, C. (2019). Reexamining the impact of self-determination theory on learning outcomes in the online learning environment. *Education and Information Technologies*, 24(3), 2159-2174. DOI: 10.1007/s10639-019-09863-w
18. Fedesco, H. N., Bonem, E. M., **Wang, C.**, & Henares, R. (2019). Connections in the classroom: Separating the effects of instructor and peer relatedness in the Basic Needs Satisfaction scale. *Motivation and Emotion*, 43(5), 758-770. DOI: <https://doi.org/10.1007/s11031-019-09765-x>
19. Tan, D., Yough, M., & **Wang, C.** (2018) International students in higher education: Promoting their willingness to communicate in classrooms, *Journal of Applied Research in Higher Education*, 10(4), 430-442. DOI: 10.1108/JARHE-01-2018-0008
20. Krishnan, L. A., Masters, C., Holgate, H., **Wang, C.**, & Calahan, C. A. (2017). Structured study abroad enhances intercultural competence. *Teaching and Learning in Communication Sciences & Disorders*, 1(1), Art.5. DOI: [doi.org/10.30707/TLCSD1.1Krishnan](https://doi.org/10.30707/TLCSD1.1Krishnan)
21. Li Y, Guo F, Yao M, **Wang C.**, & Yan, W. F. (2016). The role of subjective task value in service-learning engagement among Chinese college students. *Front. Psychol.* 7:954. DOI: 10.3389/fpsyg.2016.00954
22. Guo, F. F., Yao, M.L., **Wang, C.**, Yan, W. F., & Zong, X. L. (2016). The effects of service learning on student problem solving: The mediating role of classroom engagement. *Teaching of Psychology*, 43(1), 16-21. DOI: 10.1177/0098628315620064
23. **Wang, C.**, Yao, M.L., Guo, F.F., Yan, W.F., Weng, C., & Zhao, F. H. (2013). Students' social service experiences and the effects on their civic action intentions: The mediating role of community service perspectives. *Psychological Development and Education*, 3(29), 53-60. [In Chinese]

## **SKILLS & SOFTWARES**

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| <b>Statistical skills</b> | Factor Analysis (EFA, CFA), Structural Equation Modeling (SEM), Multilevel Modeling (MLM), Latent Profile Analysis, Meta-Analysis, Item Response Theory (IRT) |
| <b>Programming</b>        | R, Python, SPSS, Mplus, SAS, LISREL, JavaScript, Node, SQL, MongoDB, React  |
| <b>Research Software</b>  | Qualtrics, Overleaf, E-Prime, NVivo, IRT, CMA, Dedoose  |