

Dr. phil. Laura Brandl

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L.Brandl@psy.lmu.de

Curriculum Vitae

Personal Data

Name **Laura Brandl**

Year of birth **1997**

ORCID <https://orcid.org/0000-0001-7974-7892>

ResearchGate https://www.researchgate.net/profile/Laura_Brandl

LinkedIn <https://de.linkedin.com/in/laura-brandl-723456205>

Research Interests

- Collaborative Problem-Solving
- Simulations and simulation-based learning
- Adaptive learning support & Personalized education
- Learning analytics

Short Bio

Laura Brandl studied Educational Sciences in her Bachelor's and Psychology: Learning Sciences in her Master's at LMU Munich. In 2021, she started working as a research associate with Professor Frank Fischer in the DFG funded project COSIMA. Her research interests are learning analytics, simulation-based learning and adaptive instructional support, with a focus on collaborative problem-solving skills.

Academic Qualification

11/2021 – **LMU Munich (Germany), PhD student in Psychology**
02/2025
1st Supervisor: Prof. Dr. Frank Fischer
Degree: Dr. phil (summa cum laude)
Date of Doctoral Defense: 12.02.2025

10/2019 – **LMU Munich (Germany), Master of Science Student**
09/2021
Subject: Psychology: Learning Sciences
Degree: M.Sc. (1.28)

10/2015 – **LMU Munich (Germany), Bachelor of Arts Student**
03/2019
Subjects: educational sciences (major), communication science (minor)
Degree: B.A (1.57)

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Work Experience

- Since 10/2021 **LMU Munich (Germany), Education and Educational Psychology, work unit of Prof. Dr. Frank Fischer**
Research Associate
- 02/2024 – 03/2024 **Monash University (Australia), Centre for Learning Analytics, work unit of Prof. Dr. Dragan Gasevic**
Visiting Researcher
- 01/2023 – 12/2023 **University of Luxembourg (Luxemburg), Psychology & Educational Assessment, work unit of Prof. Dr. Samuel Greiff**
Support for programming and evaluation of PISA 2025
- 04/2018 – 09/2021 **LMU Munich (Germany), Education and Educational Psychology, work unit of Prof. Dr. Frank Fischer**
Research Assistant

List of courses taught

- Courses (German-speaking)*
- Projektseminar „Didaktisches Handeln“ (TutorInnen-Ausbildung Empirische Forschungsmethoden) [Project Seminar "Teaching practice" (Tutor Training Empirical Research Methods)] (B.A. Educational science): Winter term 2023/24, Summer term 2024
- Übung „Empirische Forschungsmethoden I -1“ [Seminar for Empirical Research Methods I -1] (B.A. Educational science): Winter term 2021/22, Winter term 2022/23, Winter term 2024/25
- Übung zu Empirische Forschungsmethoden I-2 [Seminar for Empirical Research Methods I -2] (B.A. Educational science): Summer term 2022, Summer term 2023
- Seminar „Einführung in die med. Psychologie und Soziologie“ [Seminar 'Introduction to Medical Psychology and Sociology'] (Medical Education): Summer term 2020

Language skills

- | | |
|---------|-----------------|
| German | Native |
| English | Fluent |
| Spanish | Basic knowledge |

Academic self-administration

- 08/2022 – 03/2025 Gleichstellungsbeauftragte [Equal Opportunities Officer] of the DFG Researchgroup COSIMA

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From 10/2023 Stellvertretende Beauftragte für die Gleichstellung von Frauen in Wissenschaft und Kunst [Deputy Representative for the Equality of Women in Science and Art] of the Faculty for Psychology and Educational Science at LMU Munich (Germany)

Prices

2023 GEBF-Preis für interdisziplinäre Forschung (COSIMA Projekt) [Prize for interdisciplinary research of the Association of Empirical Educational Research (COSIMA Project)]

Reviewer

Journals International Journal of Computer Supported Collaborative Learning, Journal of Educational Psychology

Conferences ISLS 2023, ISLS 2024, ISLS 2025, LAK2024, LAK2025

Publications

Journal articles with peer-review (8)

Published (5)

- (1) **Brandl, L.**, Richters, C., Radkowsch, A., Obersteiner, A., Fischer, M.-R., Schmidmaier, R., Fischer, F., & Stadler, M. (2021). Simulation-Based Learning of Complex Skills: Predicting Performance With Theoretically Derived Process Features. *Psychological Test and Assessment Modeling*, 63(4), p. 542-560
- (2) Stadler, M., **Brandl, L.**, & Greiff, S. (2023). 20 years of interactive tasks in large-scale assessments: Process data as a way towards sustainable change? *Journal of Computer Assisted Learning*, 1–8.
<https://doi.org/10.1111/jcal.12847>
- (3) Stadler, M., Pickal, A., **Brandl, L.**, & Krieger, F. (2024). VOTAT in Action - Exploring Epistemic Activities in Knowledge-Lean Problem-Solving Processes. *Zeitschrift Für Psychologie*, 232(2), 109–119.
- (4) **Brandl, L.**, Stadler, M., Richters, C., Radkowsch, A., Fischer, M. R., Schmidmaier, R., & Fischer, F. (2024). Collaborative Problem-Solving in Knowledge-Rich Domains: A Multi-Study Structural Equation Model. *International Journal of Computer-Supported Collaborative Learning*.
<https://doi.org/10.1007/s11412-024-09425-4>
- (5) **Brandl, L.**, Stadler, M., Richters, C., Radkowsch, A., Fischer, M. R., Schmidmaier, R., & Fischer, F. (2024). Correction: Collaborative Problem-Solving in Knowledge-Rich Domains: A Multi-Study Structural Equation Model. *International Journal of Computer-Supported Collaborative Learning*. Advance online publication. <https://doi.org/10.1007/s11412-024-09439-y>

Accepted (1)

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- (1) Horrer, A., **Brandl, L.**, Reichow, I., Sailer, M., Sailer, M., Heene, M., van Gog, T., Fischer, M.R., Fischer, F., & Zottmann, J. (accepted). ASSESSRA - A Case-Based Approach for the Assessment of Students' Scientific Reasoning and Argumentation Skills

Under review (1)

- (1) Holzberger, D., **Brandl, L.**, Stadler, M., Obersteiner, A., Chernikova, O., Pickal, A., Nickl, M., Richters, C., Kron, S., Wecker, C., Heitzmann, N., Irmer, M., Corves, C., Neuhaus, B., Fischer, M., Ufer, S., Fischer, F., Sommerhoff, D., & Seidel, T. (under review). The interplay between expectancy and value and its generalizability across simulation-based learning environments: An individual participant data meta-analysis [registered report]. *Journal of Educational Psychology*

Submitted (0)

In preparation (1)

- (1) Özsoy, M., Pickal, A., **Brandl, L.**, Richters, C., Engelmann, K., Neuhaus, B., Stadler, M., Schmidmaier, R., Fischer, M., Fischer, F., Wecker, C., & Sailer, M. (in preparation). Collaborative Diagnostic Reasoning in Different Collaboration Scenarios and Domains

Chapters in books and peer-reviewed proceedings (3)

- (1) Vogel, F., Weinberger, A., Hong, D., Wang, T., Glazewski, K., Hmelo-Silver, C. E., Uttamchandani, S., Mott, B., Lester, J., Oshima, J., Oshima, R., Yamashita, S., Lu, J., **Brandl, L.**, Richters, C., Stadler, M., Fischer, F., Radkowitsch, A., Schmidmaier, R., . . . Noroozi, O. (2023). Transactivity and Knowledge Co-Construction in Collaborative Problem Solving [Symposium]. In Proceedings of the International Conference on Computer-supported for Collaborative Learning, Proceedings of the 16th International Conference on Computer-Supported Collaborative Learning - CSCL 2023 (pp. 337–346). International Society of the Learning Sciences. <https://doi.org/10.22318/cscl2023.646214>
- (2) Richters, C., Stadler, M., **Brandl, L.**, Radkowitsch, A., Schmidmaier, R., Fischer, M.R., Fischer, F. (2023). Reflection on collaborative action: Fostering collaborative diagnostic reasoning in an agent-based medical simulation. Proceedings of Computer Supported Collaborative Learning (CSCL) 2023. Montreal, Canada: International Society of the Learning Sciences. <https://doi.org/10.22318/cscl2023.596913>
- (3) **Brandl, L.**, Stadler, M., Richters, C., Radkowitsch, A., Schmidmaier, R., Fischer, M. R., & Fischer, F. (2024). Collaborative Diagnostic Reasoning in a CSCL environment: A Multi Study Structural Equation Model. In Proceedings of the International Conference on Computer-supported for Collaborative Learning, Proceedings of the 17th International Conference on Computer-Supported Collaborative Learning - CSCL 2024 (pp. 403–404). International Society of the Learning Sciences. <https://doi.org/10.22318/cscl2024.951812>

Conferences (12)

Past Conferences (7)

- (1) Bach, K., Wachholz, V., Pickal, A., Richters, C., Murböck, J., **Brandl, L.**, Stadler, M., & Sailer, M. (2025, January). Gendergerecht oder Gendergaga? Eine Metaanalyse über den Einfluss von geschlechtergerechter Sprache im Vergleich zum generischen Maskulinum auf die subjektive Wahrnehmung von Texten, das objektive Textverständnis und die Lesedauer [Gender-inclusive or gender gaga? A meta-analysis of the influence of gender-inclusive language compared to the generic masculine on the subjective perception of texts, objective text comprehension and reading time][Paper Presentation]. GEBF 2025, Mannheim, Germany
- (2) **Brandl, L.**, Richters, C., Radkowitsch, A., Obersteiner, A., Fischer, M.-R., Schmidmaier, R., Fischer, F., & Stadler, M. (2022, August/September). Complex Skills in Simulations: Predicting Performance with Theoretically Derived Process Features [Paper Presentation]. EARLI SIG 27 Conference, Southampton, England
- (3) **Brandl, L.**, Richters, C., Radkowitsch, A., Obersteiner, A., Fischer, M.-R., Schmidmaier, R., Fischer, F., & Stadler, M. (2022, September). Komplexes Problemlösen in Simulationen: Vorhersage von Performanz anhand theoriebasierter Prozessmerkmale [Complex Problem Solving in Simulations: Predicting Performance with Theoretically Derived Process Features] [Paper Presentation]. DGPS 2022, Hildesheim, Germany
- (4) **Brandl, L.**, Richters, C., Kolb, N. & Stadler, M. (2025). Can Generative Artificial Intelligence Ever Be a True Collaborator? Rethinking the Nature of Collaborative Problem-Solving. [Paper presented in the Gen-AI Workshop]. LAK 2025, Dublin, Ireland
- (5) **Brandl, L.**, Stadler, M., Richters, C., Radkowitsch, A., Fischer, M. R., Schmidmaier, R., & Fischer, F. (2025, January). Kollaboratives Problemlösen in wissensreichen Domänen: Ein Multi-Studien-Strukturgleichungsmodell [Collaborative Problem-Solving in Knowledge-Rich Domains: A Multi-Study Structural Equation Model.][Paper Presentation]. GEBF 2025, Mannheim, Germany
- (6) Richters, C., **Brandl, L.**, Stadler, M., Fischer, M.R., Schmidmaier, R., & Fischer, F. (2023, August). Effects of stimulated reflection on collaboration in an agent-based medical simulation [Paper presentation]. EARLI 2023, Thessaloniki, Greece.
- (7) Richters, C., Stadler, M., **Brandl, L.**, Radkowitsch, A., Fischer, M.R., Schmidmaier, R., & Fischer, F. (2023, September). Reflexion über kollaboratives Diagnostizieren: Vorwissensabhängige Effekte unterschiedlich stark strukturierter Reflexionsanleitung in einer agentenbasierten medizinischen Simulation [Reflection on collaborative diagnosis: Prior knowledge-dependent effects of varying degrees of structured reflection guidance in an agent-based medical simulation] [Symposium]. PAEPS 2023, Kiel, Germany.
- (8) Stadler, M. & **Brandl, L.** (2024, March). Enhancing Self-Regulated Learning through Theory-Based Prompting and Large Language Models: Insights from Medical Education [Paper presented in the CELLA Workshop]. LAK 2024, Kyoto, Japan

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- (9) Oezsoy, M., Pickal A. P., **Brandl, L.**, Richters, C., Engelmann, K., Neuhaus, B. Stadler, M. Schmidmaier, R., Fischer M., Fischer F., Wecker, C., & Sailer, M. (2024, August). Collaborative diagnostic reasoning in simulations: Insights from two disciplines [Poster Presentation]. EARLI Sig 6 & 7 Conference, Tübingen, Germany. <https://doi.org/10.17605/OSF.IO/GZYPD>
- (10) Oezsoy, M., Pickal A. P., **Brandl, L.**, Richters, C., Engelmann, K., Neuhaus, B. Stadler, M. Schmidmaier, R., Fischer M., Fischer F., Wecker, C., & Sailer, M. (2024, September). Kollaboratives diagnostisches Denken in Simulationen: Eine Betrachtung zweier Domänen [Collaborative diagnostic reasoning in simulations: Insights from two disciplines] [Presentation]. 53rd DGPs Congress/15th ÖGP Conference, Vienna, Austria.

Upcoming Conferences (5)

- (11) **Brandl, L.**, Stadler, M., Richters, C., Fischer, M. R., Schmidmaier, R., & Fischer, F. (2025, August). Success and Failure in Collaborative Diagnostic Reasoning from a Process Perspective [Submitted Paper presentation]. EARLI 2025, Graz, Austria
- (12) Milesi, M., Mejia-Domenzain, P., **Brandl, L.**, Echeverria, V., Jin, Y., Gašević, D., Tsai, Y., Käser, T., Martinez-Maldonado, R. (2025). Piecing Data Connections Together Like a Puzzle": Effects of Increasing Task Complexity on the Effectiveness of Data Storytelling Enhanced Visualisations [Accepted Paper presentation], CHI 2025
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Presentations

Invited Talks (2)

- (1) **Simulation-Based Learning of Collaborative Problem-Solving from a Process Perspective.** Talk given at Centre for Learning Analytics at Monash (CoLAM), Monash University, Melbourne (Australia) on the 13.03.2024
- (2) **Collaborative Diagnostic Reasoning from a Process Perspective.** Talk given at the University of Augsburg, Augsburg (Germany) on the 14.11.2024