

## Publications

### Charleen Brand

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#### Journal Articles with Strict peer Review

**Brand, C.**, Hartmann, C., Loibl, K., & Rummel, N. (2025). Investigating learner characteristics and processes in Productive Failure and Vicarious Failure to design adaptive guidance. *Learning and Instruction*, 95, 102052.  
<https://doi.org/10.1016/j.learninstruc.2024.102052>

**Brand, C.**, Hartmann, C., Loibl, K., & Rummel, N. (2023). Do students learn more from failing alone or in groups? Insights into the effects of collaborative versus individual problem solving in productive failure. *Instructional Science*. Advance online publication. <https://doi.org/10.1007/s11251-023-09619-7>

#### Contributions to Conference Proceedings with Strict Peer Review

**Brand, C.**, Loibl, K., & Rummel, N. (2024). Learning in Vicarious Failure: How Intermediate Knowledge Links Prior Knowledge Activation And Conceptual Knowledge. In *Proceedings of the 18th International Conference of the Learning Sciences-ICLS 2024*, pp. 578-585. International Society of the Learning Sciences.

**Brand, C.**, Hartmann, C., Loibl, K., & Rummel, N. (2021). Observing or Generating Solution Attempts in Problem Solving Prior to Instruction: Are the Preparatory Processes Comparable? In E. de Vries, J. Ahn, & Y.Hod (Eds.), *15<sup>th</sup> International Conference of the Learning Sciences – ICLS 2021* (pp. 115-122). International Society of the Learning Sciences, 2021.

**Brand, C.**, Massey-Allard J., Perez S., Rummel N., Roll I. (2019). What Inquiry with Virtual Labs Can Learn From Productive Failure: A Theory-Driven Study of Students' Reflections. In Isotani, S. Millán E., Ogan A., Hastings P., McLaren B., Luckin R. (eds) *Artificial Intelligence in Education. AIED 2019. Lecture Notes in Computer Science*, vol 11626. Springer, Cham. [https://doi.org/10.1007/978-3-030-23207-8\\_6](https://doi.org/10.1007/978-3-030-23207-8_6)

**Brand, C.**, Hartmann, C., & Rummel, N. (2018). *Exploring relevant problem-solving processes in learning from Productive Failure*. In Kay, J. and Luckrin, R. (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count. Proceedings of the 13th International Conference of the Learning Sciences (ICLS) 2018*, Vol. 2, pp. 1125-1128. London, UK: International Society of the Learning Sciences, Inc.

Hartmann, C., Olsen, J. K., **Brand, C.**, Aleven, V., & Rummel, N. (2017). Examining Positive and Negative Interdependence in an Elementary School CSCL Setting. In Smith, B. K., Borge, M., Mercier, E., and Lim, K. Y. (Eds.). (2017). *Making a*

*Difference: Prioritizing Equity and Access in CSCL*, 12th International Conference on Computer Supported Collaborative Learning (CSCL) 2017, Volume 2. Philadelphia, PA: International Society of the Learning Sciences.

### Conference Contributions (without Proceedings)

**Brand, C.,** Loibl, K. & Rummel, N. (2024, August). *Prior Knowledge Activation as Mechanism in PS-I: The Role of Goal Formulations*. In Symposium “Problem-Solving before Instruction: Investigating Mechanisms and new Application Areas “ Presentation at the Conference of the Special Interest Groups (SIG) 6 & 7 of the European Association for Research on Learning and Instruction (EARLI) 2024, Tübingen, Germany.

**Brand, C.,** Loibl, K. & Rummel, N. (2024, August). *Identifying Starting Points for Designing Adaptive Guidance in Productive and Vicarious Failure*. In Symposium “Advancing Adaptivity of Support in Digital Learning Environments: Focusing on the Adaptivity Design“ Presentation at the Conference of the Special Interest Groups (SIG) 6 & 7 of the European Association for Research on Learning and Instruction (EARLI) 2024, Tübingen, Germany.

**Brand, C.,** Loibl, K., & Rummel, N. (2024, March). Relevante Vorwissensaktivierung durch fehlerhafte Lösungsbeispiele als Vorbereitung auf das Lernen beim Problemlösen vor Instruktion. Presentation at the 11th Conference of the Society for Empirical Educational Research (Gesellschaft für Empirische Bildungsforschung, GEBF), Potsdam, Germany.

**Brand, C.,** Loibl, K. & Rummel, N. (2023, September). *Der Einfluss der Breite von relevanter Vorwissensaktivierung als Vorbereitung auf das Lernen im ‘Problemlösen vor Instruktion’-Ansatz*. Presentation at the Joint Conference of the Sections Developmental Psychology & Educational Psychology (PAEPS 2023), Kiel, Germany.

**Brand, C.,** Loibl, K. & Rummel, N. (2023, August). *The role of students’ breadth of prior knowledge activation in preparation for learning*. In Symposium “Problem-solving prior to instruction as an example of composite instructional designs“ Presentation at the Conference of the European Association for Research on Learning and Instruction (EARLI) 2023, Thessaloniki, Greece.

**Brand, C.,** Loibl, K. & Rummel, N. (2022, August). *Activation of Relevant Prior Knowledge as Preparation for Learning in Problem Solving Prior to Instruction*. Presentation at the joint Special Interest Group Meeting of the European Association for Research on Learning and Instruction (EARLI) Special Interest Group (SIG) 6 & 7, 2023, Zollikofen, Switzerland.

**Brand, C.,** Loibl, K. & Rummel, N. (2022, July). *Goal Formulations in Problem Solving Prior to Instruction*. Presentation at the Junior Researcher (JURE) Conference of the European Association for Research on Learning and Instruction (EARLI) 2022, Porto, Portugal.

**Brand, C.**, Loibl, K. & Rummel, N. (2021, August). *Studying Diverse Solution Attempts as Preparation for Learning from Subsequent Instruction*. Presentation at the Junior Researcher (JURE) Conference of the European Association for Research on Learning and Instruction (EARLI) 2021, online.

**Brand, C.**, Hartmann, C., Loibl, K. & Rummel, N. (2018, November). *Do Students Learn More from Failing Alone or in Groups? - Effects of the Social Form of Learning in Productive Failure*. Presentation at the 1st Productive Failure symposium, Zurich, Switzerland.

**Brand, C.**, Massey-Allard J., Perez S., Rummel N., Roll I. (2018, November). *Exploring similarities between PF and Inquiry Learning*. Presentation at the 1st Productive Failure symposium, Zurich, Switzerland.

**Brand, C.**, Hartmann, C., & Rummel, N. (2017, September). *Zur Bedeutung der Evaluation eigener Lösungsansätze für das Lernen im Productive Failure-Ansatz*. Presentation at the Joint Conference of the Sections Developmental Psychology & Educational Psychology (Paepsy 2017), Münster, Germany.