

# Veröffentlichungen Kristin Altmeyer, Stand 31.05.2023

## ZEITSCHRIFTENARTIKEL (PEER-REVIEWED)

Barz, M., Bhatti, O., Tusfiqur Alam, H., Nguyen, H., **Altmeyer, K.**, Malone, S., Sonntag, D. (submitted). *eyeNotate: Interactive Machine Learning Tool for Fixation-to-AOI Mapping in Mobile Eye Tracking*.

Edelsbrunner, P., Malone, S., Hofer, S., Küchemann, S., Kuhn, J., Schmid, R., **Altmeyer, K.**, Brünken, R., Lichtenberger, A. (accepted). The Relation of Representational Competence and Conceptual Knowledge in Female and Male Undergraduates. *International Journal of STEM Education*.

**Altmeyer, K.**, Barz, M., Lauer, L., Peschel, M., Sonntag, D., Brünken, R., & Malone, S. (2023). Digital ink and differentiated subjective ratings for cognitive load measurement in middle childhood. *The British journal of educational psychology*, e12595.

Javaheri, H., Lehmann, J., **Altmeyer, K.**, Müller, L. M., Brünken, R., & Lukowicz, P. (2022). Design of Augmented Reality based Environment to Promote Spatial Imagination for Mathematics Education in Elementary School. In *Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers* (pp. 274-277).

Thees, M., **Altmeyer, K.**, Kapp, S., Rexigel, E., Beil, F., Klein, P., ... & Kuhn, J. (2022). Augmented reality for presenting real-time data during students' laboratory work: comparing a head-mounted display with a separate display. *Frontiers in Psychology*, 13.

Lauer, L., **Altmeyer, K.**, Malone, S., Barz, M., Brünken, R., Sonntag, D., & Peschel, M. (2021). Investigating the Usability of a Head-Mounted Display Augmented Reality Device in Elementary School Children. *Sensors*, 21(19), 6623.

Thees M., Kapp S., **Altmeyer K.**, Malone S., Brünken R. and Kuhn J. (2021) Comparing Two Subjective Rating Scales Assessing Cognitive Load During Technology-Enhanced STEM Laboratory Courses. *Front. Educ.* 6:705551. doi: 10.3389/educ.2021.705551

Lauer, L., Peschel, M., Malone, S., **Altmeyer, K.**, Brünken, R., Javaheri, H., ... & Lukowicz, P. (2020). Real-time visualization of electrical circuit schematics: An augmented reality experiment setup to foster representational knowledge in introductory physics education. *The Physics Teacher*, 58(7), 518-519.

Barz, M., **Altmeyer, K.**, Malone, S., Lauer, L., & Sonntag, D. (2020). Digital Pen Features Predict Task Difficulty and User Performance of Cognitive Tests. In *Proceedings of the 28th ACM Conference on User Modeling, Adaptation and Personalization* (pp. 23-32).

**Altmeyer, K.**, Kapp, S., Thees, M., Malone, S., Kuhn, J., & Brünken, R. (2020). The use of augmented reality to foster conceptual knowledge acquisition in STEM laboratory courses—Theoretical background and empirical results. *British Journal of Educational Technology*. doi: 10.1111/bjet.12900

Malone, S., **Altmeyer, K.**, Vogel, M., & Brünken, R. (2020). Homogeneous and Heterogeneous Multiple Representations in Equation-Solving Problems - An Eye Tracking Study. *Journal of Computer Assisted Learning*, 36(6), 781-798.

## TAGUNGSBEITRÄGE (AUSWAHL, PEER-REVIEWED)

**Altmeyer, K.**, Barz, M., Malone, S., Lauer, L., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2023). *Integrative Processes in Primary School Children during AR-supported Lab Work: An Eye-Tracking Study* [Paper presentation]. EARLI Conference, Thessaloniki, Greece.

**Altmeyer, K.**, Malone, S., Lauer, L., Peschel, M., & Brünken, R. (2023). *Warum nutzen Lehrkräfte Augmented Reality (nicht)? – Eine multimethodische Untersuchung von Gelingensfaktoren* [Paper Präsentation]. GEBF Tagung, Essen, Deutschland.

**Altmeyer, K.**, Müller, L., Javaheri, H., & Brünken, R. (2022). *Evaluation of an AR-based learning environment on cube buildings to promote the use of spatial skills* [Paper presentation]. International Symposium on Augmented and Virtual Reality in Mathematics Education, Online.

**Altmeyer, K.**, Malone, S., Kapp, S., Barz, M., Lauer, Luisa., Thees, M., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2021). *Augmented Reality zur Förderung globaler Kohärenzbildung beim Experimentieren im Sachunterricht* [Paper Präsentation]. DGPs-Kongress, Hannover, Deutschland.

**Altmeyer, K.**, Malone, S., Kapp, S., Lauer, L., Barz, M., Thees, M., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2022). *The effect of augmented reality on global coherence formation processes in elementary school pupils* [Poster presentation]. JURE Conference, Porto, Portugal.

**Altmeyer, K.**, Malone, S., Kapp, S., Lauer, L., Barz, M., Thees, M., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2022). *Die Rolle von visuell-räumlichen Fähigkeiten und phonologischem Gedächtnis für das Lernen durch Experimentieren in Augmented Reality bei Grundschulkindern* [Paper Präsentation]. GEBF Tagung, Bamberg, Deutschland.

**Altmeyer, K.**, Kapp, S., Thees, M., Malone, S., Kuhn, J., & Brünken, R. (2021). *Augmented Reality zur Förderung des Konzeptverständnisses beim Lernen durch Experimentieren in der Physik* [Paper Präsentation]. DigiGEBF, Online.

**Altmeyer, K.**, Malone, S., Kapp, S., Barz, M., Lauer, L., Thees, M., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2021). *Augmented Reality zur Förderung globaler Kohärenzbildung beim Experimentieren im Sachunterricht* [Paper Präsentation]. Tagung der Fachgruppe Pädagogische Psychologie, Online.

**Altmeyer, K.**, Malone, S., Kapp, S., Barz, M., Lauer, L., Thees, M., Kuhn, J., Peschel, M., Sonntag, D., & Brünken, R. (2021). *The effect of augmented reality on global coherence formation processes during STEM laboratory work in elementary school children* [Paper presentation]. International Cognitive Load Theory Conference, Kingston, Ontario, Canada.

Malone, S., **Altmeyer, K.**, Barz, M., Lauer, L., Sonntag, D., Peschel, M., & Brünken, R. (2021). *Measuring Intrinsic and Extraneous Cognitive Load in Elementary School Students Using Subjective Ratings and Smartpen Data* [Paper presentation]. International Cognitive Load Theory Conference, Kingston, Ontario, Canada.

Lauer, L., **Altmeyer, K.**, Malone, S., Brünken, R., & Peschel, M. (2021). *Affordances and Limitations of Head-Mounted Augmented Reality Devices for Primary School Children – Technical Usability Assessment of the Microsoft HoloLens 2* [Paper presentation]. ECER Conference, Geneva, Swiss.

- Lauer, L., Peschel, M., Seibert, J., Lang, V., Eichinger, A., **Altmeyer, K.**, ... & Kay, C. W. (2021). *Untersuchung der Wirkungen von AR-Visualisierungstechniken in der Primarstufe*. In S. Habig (Hrsg.), *Naturwissenschaftlicher Unterricht und Lehrerbildung im Umbruch?* Gesellschaft für Didaktik der Chemie und Physik. Jahrestagung in Aachen 2020. (41. Aufl., Bd. Gesellschaft für Didaktik der Chemie und Physik, S. 378-381). Regensburg: Gesellschaft für Didaktik der Chemie und Physik (GDGP).
- Thees M., Kapp S., **Altmeyer K.**, Beil, F., Malone S., Brünken R. and Kuhn J. (2021) *Augmented Reality as Assistive Tool for Electricity Lab Courses* [Paper presentation]. AAPT Summermeeting, Online.
- Malone, S., Edelsbrunner, P., Lichtenberger, A., Küchemann, S., Kuhn, J., Vaterlaus, A., Stern, E., Schmid, R., Schumacher, R., **Altmeyer, K.**, & Brünken, R. (2021). *The Relation of Representational Competence and Conceptual Knowledge about Electromagnetism* [Poster presentation]. EARLI Conference, Online.
- Altmeyer, K.**, Barz, M., Malone, S., Lauer, L., & Brünken, R. (2020). *Using Smartpen Features to Predict Elementary School Children's Performance in Sketching Tasks* [Poster presentation]. EARLI SIG 27 Conference. Online.
- Altmeyer, K.**, Malone, S., Kapp, S., Thees, M., Kuhn, J., & Brünken, R. (2020). *Der Einfluss von räumlichen Fähigkeiten auf kognitive Belastung und Lernerfolg beim Experimentieren in Augmented Reality* [Poster Präsentation]. DGPs-Kongress, Wien, Österreich (Konferenz abgesagt).
- Altmeyer, K.**, Malone, S., Vogel, M., & Brünken, R. (2020). *Gaze Switches within Homogeneous and Heterogeneous Multiple Representations of Systems of Equations*. [Paper presentation]. JURE Conference. Porto, Portugal (Conference canceled).
- Altmeyer, K.**, Malone, S., Vogel, M. & Brünen, R. (2020) *Solving Math Problems With Heterogeneous and Homogeneous Multiple Representations* [Poster presentation]. AERA Annual Meeting, San Francisco, CA <http://tinyurl.com/qlhm5wr> (Conference Canceled).
- Altmeyer, K.**, Barz, M., Malone, S., Lauer, L., & Brünken, R. (2020) *Cognitive Load Messung bei Grundschulkindern via Selbstbericht und Smartpendaten* [Poster Präsentation]. GöMaEs Treffe, Essen, Deutschland.
- Malone, S., **Altmeyer, K.**, Vogel, M., & Brünken, R. (2019). *The Use of Text, Formula, and Graphic in Equation-Solving Problems*. [Poster presentation]. AERA Annual Meeting. Toronto, Canada.
- Altmeyer, K.**, Malone, S., Vogel, M. & Brünen, R. (2019) *Multiple Repräsentationen linearer Gleichungssysteme: Text, Formel und Grafik*. [Poster Präsentation]. GEBF Nachwuchstagung, Köln, Deutschland.
- Altmeyer, K.**, Malone, S., Vogel, M., & Brünken, R. (2019). *Blickwechsel bei homogenen und heterogenen multiplen Repräsentationen* [Paper Präsentation]. Tagung der Fachgruppe Pädagogische Psychologie, Leipzig, Deutschland.