

Full-time Teacher

Assistant Professor Seokmin Kang



Job Title: Assistant Professor
Education: Ph.D. in Human Cognition and Learning
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Extension:

Research Areas

- Detecting interaction quality from nonverbal behaviors
Intelligent tutoring system
Learning from observing other's errors (Vicarious learning)
Collaborative learning in small/whole group discussion
Embodies cognition
- Courses Handled
Studies in Cognitive Psychology
Studies in Educational Psychology
Studies in Problem Solving

Research Results

A. Journal Article

VanLehn, K., Burkhardt, H., Cheema, S., **Kang, S.**, Pead, D., Schoenfeld, A., & Wetzel, J. (2019). Can an orchestration system increase collaborative, productive struggle in teaching-by-eliciting classrooms?, *Interactive Learning Environments*, DOI: 10.1080/10494820.2019.1616567

Wetzel, J., Burkhardt, H., Cheema, S., **Kang, S.**, Pead, D., Schoenfeld, A., & VanLehn, K. (2018). A Preliminary evaluation of the usability of an AI-infused orchestration system. In Rosé, C. P., Martínez-Maldonado, R., Hoppe, H. U., Luckin, R., Mavrikis, M., Porayska-Pomsta, K., McLaren, B., & du Boulay, B. (Eds.). *Artificial Intelligence in Education*. London, UK: AIED.

Chi, M. T. H., Adams, J., Bogusch, E. B., Bruchok, C., **Kang, S.**, Lancaster, M., Levy, R., Li, N., McEldoon, K., Stump, G. S., Wylie, R., Xu, D., & Yaghmourian, D. L. (2018). Translating the ICAP theory of cognitive engagement into practice. *Cognitive Science*, 42, 1777-1832.

Stump, G. S., Li, N., **Kang, S.**, Yaghmourian, D., Xu, D., Adams, J., McEltoon, K., Lancaster, M., & Chi, M.T.H. (2018). Coding dosage of teachers' implementation of activities using ICAP: A video analysis. In Manalo, E., Uesaka, Y., & Chinn, C. A. (Eds.). *Promoting spontaneous use of learning and reasoning strategies: Theory, research, and practice*. Singapore: Routledge.

Chi, M. T. H., **Kang, S.**, & Yaghmourian, D. (2017). Why students learn more from dialogue- than monologue-videos: Analyses of peer interactions. *Journal of the Learning Sciences*, 26, 10-50. doi:10.1080/10508406.2016.1204546

Kang, S., & Tversky, B. (2016). From hands to minds: Gestures promote understanding. *Cognitive Research: Principles and Implications*, 1:4. doi: 10.1186/s41235-016-0004-9.

Kang, S., Tversky, B., & Black, J. B. (2015). Coordinating gesture, word, and diagram: Explanations for experts and novices. *Spatial Cognition and Computation*, 15, 1-26.

Kang, S., Hallman, G. L., Son, L. K., & Black, J. B. (2013). The different benefits from different gestures in understanding a concept. *Journal of Science Education and Technology*, 22, 825-837.

Tversky, B., Jamalain, A., & **Kang, S.** (2012). Some ways gestures guide thought. *Cognitive Processing*, 13, S32-S32.

Kang, S., & Han, K. (2001). The effects of explanation on declarative knowledge acquisition. *The Korean Journal of Experimental and Cognitive Psychology*, 13, 133-145.

Manuscripts Submitted

Cheema, S., Wetzal, J., **Kang, S.**, VanLehn, K., Pead, D., Burkhardt, H., & Schoenfeld, A. (2019). Using Learning Dashboards for Classroom Orchestration.

Manuscripts In-Preparation

- Benefit of generating gestures in learning
- Comparing students' learning outcomes from working with a physical and a virtual tool
- Supporting formative assessments with a web-based classroom orchestration system
- Bodily indication of cognitive engagement.
- The learning benefit of observing a tutee's errors.