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featuring

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1st P.E.E.R. - The ZuS Research Camp Cologne 2017:

Conducting Research in Active and Inclusive Pedagogies

Leading Questions: How may I research inclusion? How to publish papers about educational settings?

Purpose: Careful attention to student learning – whether through principled observation of students in the classroom, analysis of written work, or research-based probes of understanding – serves both as a scholarship activity and a means for improving classroom practice and student learning. This workshop introduces participants to methods and practices for conducting research in active-learning and inclusive pedagogies. Methods range from quantitative surveys to qualitative video-data analysis. All aspects of a research project will be covered, including developing a research question, performing a literature review, data analysis software, writing as a mechanism for project development, and options for publishing. More broadly, this workshop fosters a research mindset, preparing participants to conduct their own research studies. While this mindset can result in publications and other traditional scholarly activities, it also facilitates formative evaluation of instructor practices and leads to improved classroom pedagogy and, ultimately, student learning.

Target audience: Workshop will be relevant to a broad range of participants, including:

- Pre-service teachers interested in learning how to rigorously assess and conduct action research on their teaching practice
- Current Education researchers interested in learning new methods (video data analysis, statistical analyses of big-data, etc.)
- STEM Educators interested in becoming active in discipline-based education research

Workshops structure: This will be an active workshop: during the workshop participants will develop a research project, perhaps on their current classroom practice. We start with interactive activities on developing and refining research interests into research questions, move through collecting real data and analysis, and conclude with targeted, individualized recommendations for publishing participant work in peer-reviewed journals. A variety of data types will be available for participants to access in developing their research question, including video data of small- and large-group student discussions, conceptual survey data from multiple US institutions, and student artifacts from STEM classes such as worked problems and guided reflections. Participants can augment or supplant these data with their own data collected during the workshop.

Workshop leaders will introduce topics with short lectures, and then lead small-group work on activities that introduce methods and data. Participants will present their ongoing work multiple times to the entire group, in the process learning how research questions evolve and develop. The workshop includes full day activities on the two weekends and guided individual work during the week.

