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#### PhD Project:

**Working title of the PhD project: Development, application and evaluation of instruments that conduct scientific competence of teacher students**

The overall research question the project aims to answer is: What kind of competence can provide teacher students and teachers with the ability to scientifically reflect their pedagogical practice? What are the dimensions of that construct of teacher students and thus also teachers and how are they to be measured?

An analysis of existing theories concerning reflective teacher education (e.g. Schön, 1983; Tom, 1985; Zeichner & Liston, 1987; Copeland et al., 1993 ) as well as recent results of first qualitative and explorative studies aiming to conduct reflective processes of teacher students (e.g. Gitlin et al., 1999; Gläser-Zikuda, 2007; Schneider & Wildt, 2009), reveal that scientific reflection of pedagogical practice is based on specific knowledge about educational science (e.g. Altrichter & Mayr, 2004; Seidel & Shavelson, 2007; Meyer, 2003), specific epistemological beliefs (e.g. Dick, 2003) and a certain kind of motivation and willingness to reflect the own professional practice (e.g. Copeland et al., 2003; Wiater, 2007; Gröschner, 2008 ). The PhD project aims at (1) clarifying what exactly constitutes these three dimensions and (2) operationalising these dimensions by the development and application of a quantitative questionnaire for teacher students as well as (3) making statements about the teacher students' degree of scientific competence in the specific dimensions.

On the base of the pilot results of the first teacher survey of PARS in 2010, it can be concluded, that in their professional work, teachers do not use strategies generated by science intensively but rather by cooperation. The question that is to be answered by the teacher student main survey is about the reasons for the lack of scientific approaches to teachers' daily work, since such an approach is considered as being the basis of scientific reflection of pedagogical work. In order to answer this question it has to be looked at the students' knowledge about educational science, their epistemological beliefs and their motivation in terms of their own research.

#### Curriculum Vitae:

- Education:
  - 2005: Abitur at Goethe-Gymnasium Dortmund
  - 2008: Bachelor of Arts (teacher for the first secondary level: Social Sciences, English, German), TU Dortmund
  - 2009: Master of Education, TU Dortmund
- Work experience:
  - 2005-2009: several practical trainings at secondary schools
  - 08/2007-09/2007: stay abroad in New York
  - 2008-2009: Student Assistant at the Institute for School Development Research (IFS)
  - 2009-2010: Research Assistant in the projects "GIVE" and "dortMINT" at IFS

## Publications and Presentations:

- Presentations:
- Klukas, S., Gebauer, M. & Bos, W. (2009, September). *Umgang mit Heterogenität durch verschiedene Differenzierungsformen an Gesamtschulen*. [Postersession] 73. Tagung der Arbeitsgruppe für Empirische Pädagogische Forschung (AEPF). Bochum, 28.-30.09.2009.
- Gebauer, M. & Klukas, S. (2010, August). *What Do Math Teacher Trainees Know About Empirical Research? Development of an Instrument for Testing Scientific Competence of Math Teacher Trainees*. Paper presented at the European Conference on Educational Research (ECER), 23.-27.08.2010.

## Further Information:

<http://www.ifs-dortmund.de/928.html>