Towards a Competency Model for Teaching Computer Science

To address the special challenges of teaching computer science, adequate development of teachers’ competencies during their education is extremely important. In particular, pedagogical content knowledge and teachers’ beliefs and motivational orientations play an important role in effective teaching. This research field has been sparsely investigated up to now and there exists no consistent competency model for teaching computer science in Germany. Therefore, this paper describes the development of competency in the areas of pedagogical content knowledge, teachers’ beliefs, and motivational orientations with regard to computer science. Competency-relevant factors for teaching computer science are theoretically derived and concretely formulated with the help of expert interviews conducted according to the critical incident technique and analyzed using techniques of qualitative content analysis.