Miguel Vaca, Rosendo Monroy-Loperena, Arturo Jimeacutenez-Gutieacuterrez

An implementation variant of the polynomial finite difference method with orthogonal collocation and adjustable element length.

Bericht des ZUMA Nachrichten

Kurzfassung

The article presents an analysis of practices in teaching with computer-supported collaborative inquiry learning environments. We describe the role of the teacher in computer-supported collaborative inquiry learning by five principles which span the whole instructional process, from the preparation of the lesson up to the assessment of learning achievement. For successful implementation of computer-supported projects the teacher has to (1) envision the lesson, (2) enable collaboration, (3) encourage students, (4) ensure learning, and (5) evaluate achievement. We analyse classroom scenarios provided by eight teachers or mentors who implemented one of four different approaches developed by multimedia researchers: WISE, Modeling Across the Curriculum, Co-Lab, or ReCoIL. Teachers or mentors responded to a semistructured questionnaire about their experiences in implementing the inquiry lesson. A comparison of different classroom scenarios according to the mentioned five principles informed our analysis of teacher activities that contribute to the success of student inquiry while using such technology-enhanced approaches. We conclude with a discussion of the often neglected role of the teacher in computer-supported learning.