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(SGER) Theoretical Frameworks for Conducting Research in Physics Education

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Title:
(SGER) Theoretical Frameworks for Conducting Research in Physics Education

Project Participants

Senior Personnel

Name: Harrington, Randal
Worked for more than 160 Hours: Yes
Contribution to Project:

Post-doc

Graduate Student

Name: Prather, Edward
Worked for more than 160 Hours: Yes
Contribution to Project:

Name: Kaback, Stephen
Worked for more than 160 Hours: Yes
Contribution to Project:

Undergraduate Student

Technician, Programmer

Other Participant

Research Experience for Undergraduates

Organizational Partners

Other Collaborators or Contacts

Fred Goldberg, San Diego State Univerisity, CPU Project
Marcia Linn, University of California Berkeley, WISE project
Roy Pea, SRI
Jim Minstrell, FACETS

Activities and Findings

Research and Education Activities:

Travel to Education Research Groups to observe curriculum development and research activities and to discuss theoretical frameworks.

Findings:

Theory driven curriculum development was most evident at SRI under Roy Pea (situated motivation) and Marcia Linn at UC Berkeley (cognitive scaffolding, evidence based reasoning). CPU project and FACETS were more practice based- although they did have theoretical frameworks. Their development work was more closely aligned with classroom practice and empirical evidence of effectiveness.

Training and Development:

Broad overview of current research in the field of science education informed the PI's research and teaching practices as well as those of his graduate students.

Outreach Activities:

This project formed part of the foundation of the grant proposal that was funded to create the Maine Center for Science and Mathematics Education Research that is currently (2005) in it's fourth year. See http://www.umaine.edu/center/

Journal Publications

R.R. Harrington, "A Framework for Conducting Research in Physics Education", Physics Education Research Conference, Conference Proceedings, p. 55, vol. , (1999). Published,

Books or Other One-time Publications

Web/Internet Site

Other Specific Products

Contributions

Categories for which nothing is reported:

Organizational Partners

Any Book

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