



99.2 RESEARCH IN PHYSICS EDUCATION

(Adopted by the Council of the American Physical Society on May 21, 1999)

In recent years, physics education research has emerged as a topic of research within physics departments. This type of research is pursued in physics departments at several leading graduate and research institutions, it has attracted funding from major governmental agencies, it is both objective and experimental, it is developing and has developed publication and dissemination mechanisms, and Ph.D. students trained in the area are recruited to establish new programs. Physics education research can and should be subject to the same criteria for evaluation (papers published, grants, etc.) as research in other fields of physics. The outcome of this research will improve the methodology of teaching and teaching evaluation.

The APS applauds and supports the acceptance in physics departments of research in physics education. Much of the work done in this field is very specific to the teaching of physics and deals with the unique needs and demands of particular physics courses and the appropriate use of technology in those courses. The successful adaptation of physics education research to improve the state of teaching in any physics department requires close contact between the physics education researchers and the more traditional researchers who are also teachers. The APS recognizes that the success and usefulness of physics education research is greatly enhanced by its presence in the physics department.

JOINT STATEMENT ON THE EDUCATION OF FUTURE TEACHERS

In 1999, the AIP member societies, including the American Institute of Physics (AIP), the American Association of Physics Teachers (AAPT), and the APS endorsed the following statement about science teacher preparation.

The scientific societies listed below urge the physics community, specifically physical science and engineering departments and their faculty members, to take an active role in improving the pre-service training of K-12 physics/science teachers. Improving teacher training involves building cooperative working relationships between physicists in universities and colleges and the individuals and groups involved in teaching physics to K-12 students. Strengthening the science education of future teachers addresses the pressing national need for improving K-12 physics education and recognizes that these teachers play a critical education role as the first and often-times last physics teacher for most students. While this responsibility can be manifested in many ways, research indicates that effective pre-service teacher education involves hands-on, laboratory-based learning. Good science and mathematics education will help create a scientifically literate public, capable of making informed decisions on public policy involving scientific matters. A strong K-12 physics education is also the first step in producing the next generation of researchers, innovators, and technical workers.

(endorsed by 7 physics societies and over 300 institutions to date)

**PHYSICAL REVIEW SPECIAL TOPICS - PHYSICS EDUCATION RESEARCH
(MARCH 15, 2005)**

The American Physical Society is pleased to announce the start of a new peer reviewed electronic-only journal: Physical Review Special Topics - Physics Education Research. This is the second Special Topics journal published by the American Physical Society, the first being Physical Review Special Topics - Accelerator and Beams. The journal will be distributed without charge, and financed by publication charges to the authors or to the authors' institutions.

The introduction of Physical Review Special Topics - Physics Education Research is the result of discussions between the American Physical Society, the American Association of Physics Teachers (AAPT), and the APS Forum on Education on the need for a wide ranging and widely distributed peer review journal for researchers in this field. The journal will be sponsored and partially supported by the AAPT and the APS Forum on Education.

We are especially fortunate that Professor Robert Beichner of North Carolina State University has accepted the position of Editor of the journal. He was recently elected to be an APS Fellow for his efforts in advancing the field of physics education research and promoting the application of its findings in the nation's classrooms.

The criteria for acceptance of articles will include the high scholarly and technical standards of our other Physical Review journals. The scope of the journal will cover the teaching and/or learning of physics and the full range of experimental and theoretical research. Review articles, replication studies, descriptions of the development and use of new assessment tools, presentation of research techniques, and methodology comparisons/critiques are welcomed.

The Physical Review will begin receiving submissions later this spring and anticipates publication in the summer of 2005. Instruction for submittals will appear soon at publish.aps.org.