

PREFACE

These are the Proceedings of the PATT-16 conference that was held in conjunction with ITEA 2006 Annual Conference in Baltimore, USA, March 23-25, 2006. The theme of this PATT-16 conference was: Research for Standards-based Technology Education. We are pleased that we can present the papers here. All papers have been peer refereed. We thank dr. Kenneth Starman for working with us in reviewing the papers.

The Standards for Technological Literacy are a major step in the development of technology education in the USA. For other countries worldwide it serves as a model and source of inspiration. The Standards for Technological Literacy not only deal with the goals of education about technology, but also are a resource for curriculum development and teacher education. For an effective development another component is necessary: educational research.

The Annual ITEA conferences are a meeting place where technology educators share ideas about all aspects related to the teaching and learning about technology. Research is one of those aspects. The PATT-16 conference serves as that part in program where research is presented and discussed. For the 2006 conference the focus was on research that contributes to technology education that is aimed at realizing the Standards for Technological Literacy.

Three subthemes have been defined for this conference.

1. Research on the content of Standards

The content of Standards for Technological Literacy has been determined on the basis of a careful consideration of historical, philosophical and educational literature about the nature of technology. This research is a continuing effort, as our knowledge of the nature of technology keeps growing. In this subtheme papers will be presented that are of a more theoretical nature and deal with the historical, philosophical and educational basis for Standards.

2. Research curriculum content and on classroom practice

Standards become practice in the classroom. What can be done in class is described in the curriculum. Here again research can play an important part. How are Standards properly translated into curriculum content? Does classroom practice reflect that content? Is there any evidence that Standards are realized in classroom practice? This subtheme will have paper that focus on such questions.

3. Research and teacher education

In this subtheme papers will be presented that deal with relationships between educational research and teacher education. In the first place research can be part of teacher education, when teacher are trained to do classroom-based research to support their own teaching practice. But also the outcomes of educational research can be fed into teacher education. Does that happen in practice? How can we keep teacher education programs up-to-date with respect to the latest insights that are gained in research?

In the first subtheme we find the papers by Williams and by Reed and Sontos. Williams investigated the applicability of the USA standards to a wider international context. Reed and Sontos show the variety of Standards-related research topics that have been covered in the course of more than a century of USA graduate research.

The second subtheme clearly found most interest in paper submissions. Two papers deal with primary education. Khunyakari, Mehrotra, Natarajan and Chunawala did a study on the effect of practical classroom activities in Indian primary schools. Holland and Berlin focused on gifted and talented elementary school children. The next two papers deal with secondary school level. Taylor and Blue studied the effects of the TECH-know material on pupils' technological literacy. Hummel investigated the effect of the use of digital imagery on the students' achievements.

For subtheme 3, teacher education, we only received one paper. Barlex and Rutland describe their study on the effects of three projects at Roehampton University on the professional development of technology teachers.

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