

Developments and Challenges

Gard Brekke and Gunnar Gjone

Technology is reshaping research communities. Technology has made it easier for researchers to find out about events and to communicate their research. Obtaining information about, and registering for, conferences is now often done via electronic mail.

The Journal for Research in Mathematics Education (JRME) will be published electronically in the future. The first three issues this year will be published on the home page of the National Council of Teachers of Mathematics (NCTM): <http://www.nctm.org>. These issues will be accessible at no charge. A subscription system for the later electronic issues will be developed. (See the editorial in JRME, January 1998). NCTM will continue to publish a printed version of JRME.

Further more, conferences will have their proceedings published on CD-ROMs. Computer conferences have been leading this development, but conferences in other scientific areas are following. In mathematics education we observe that it sometimes takes years before a conference report is published in a proceedings. We also observe that individuals publish their papers on their home pages. One could ask if one reason for this is the extensive publishing process of journals and conference reports. It is also possible to subscribe to specific content in journals on the Internet. More and more of the information that reaches us is in "electronic form".

Will there be a future for journals published on paper? We see that many journals develop home pages on the Internet, where at least the contents and information about ordering are presented, and sometimes an article to give details of the content. Therefore, we are now thinking about the future of NOMAD. In the not too distant future, there could probably be a NOMAD homepage. Should there be an electronic version of the journal?

Many questions come to mind concerning the electronic future. Papers can be published much quicker on the Internet, but articles in print are more lasting and can not be changed. Having the article on paper is also a type of quality control, with reviews and careful editing. We see the review process as being very important for the sci-

entific quality of research published, which will be difficult to maintain on reports presented on personal homepages. A problematic condition arises, however, when the contents of an article have been known “by everyone” for several years before the article appears on paper.

Researchers in all fields have always communicated informally via copies of their work to colleagues, a long time before this work has been published as a paper. Now the channels for electronic publishing are open for everyone - almost.

We believe that there is need for journals like NOMAD also in the future. The quality issue is one argument, another is that a journal has many more functions. Journals will create a research community, and mathematics educators can identify with something “concrete”. However, the challenges of electronic publishing are not to be overlooked.

It has only been possible to produce three issues of NOMAD in 1997. This situation is due to the number of manuscripts we receive and to an extensive review process to maintain the quality of the journal. In December and January we have received several papers which are now being reviewed. The prospect of being able to produce four issues of high quality for volume 6 now looks promising.

This issue of volume 5 contains two submitted articles. *Snorre Ostad* gives us a review of research on strategic competence in relation to arithmetic. Accompanying theories are presented to highlight the various arithmetic strategies that have been investigated. The characteristics of children are discussed from a developmental perspective.

The theme of the second article, written by *Tasos Patronis*, is the role of the context in mathematics education. The notions of local and global view of the context are defined and discussed, and the contexts in teaching and learning are considered from these different viewpoints. Both these viewpoints are used in an attempt to relate context to the metonymic transformation of the meaning of words used in mathematics. Various mathematical and empirical examples from the classroom are discussed and reinterpreted.

The editors are interested in obtaining information about conferences and arrangements in mathematics education for publication in NOMAD. Please send announcement to: Gunnar.Gjone@ils.uio.no