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Special issue on “Research and Developments in Probability Education”

International Electronic Journal of Mathematics Education (IEJME)

Volume 4, Number 3, October 2009, www.iejme.com

The Future of Interactive, Electronic Publishing Research

Many of the ideas and papers of the topic study group on probability at ICME 11 have been developed further for this publication, by the driving ideas of interactivity and use of the potential of electronic publishing. As often happens, the medium of research influences the results and thus – not surprisingly – the research changes its character during this process. This special issue of the electronically published journal IEJME provides a comprehensive summary of the main threads of research in probability education across the world and the result of an experiment in electronic communication. For convenience of international readers, abstracts in Spanish and German have been supplied, as well as hints for navigation to linked electronic materials. The papers are grouped under the following topics.

- Conditional Probability and Bayes’ Theorem
- The School Perspective: Pre- and Misconceptions
- The Teachers’ Perspective: Pre- and In-Service Courses
- Impact of Technology

With the possibilities of modern technology, scientific publications and journals lag far behind modern hypertext textbooks and interactive learning programmes. At best and quite rarely, verbal information in a static layout is only occasionally opened up by explanatory diagrams and tables. In this special issue of the electronically published journal IEJME, the reader will find an interactive hypertext with many diagrams, links to related topics and links within the text. If it was useful to explain either the research method or the research results, animated diagrams were also introduced.

Furthermore, there was some experimentation with citations. On the one hand, links to the full papers were given if the referenced papers are available on the Internet. On the other hand, the old-fashioned footnotes, not directly needed in the text, were outsourced to a companion paper. With such an approach, it is possible to give much more than the source reference to a statement; it is possible – without leading away from the principal idea of the main text – to embed the citation: why the author cites this and not another paper, how this paper is related within some approach to an issue, which other approaches would be sensible etc.

Electronic publishing knows no limits with respect to quantity as compared to publishing in paper form. The editors used this feature to invite authors to offer more material of the background of the papers. Thus, illustrating programmes, questionnaires, exemplary solutions, or case studies were integrated to represent an authentic flavour of the presented research.

It will be interesting how the scientific community will receive this experiment to publish scientific results in a strongly visual interactive hypertext, as contained in all the papers in this issue of IEJME.

KEYWORDS. Research, probability education, electronic publishing, interactivity.