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Science Education: from the past, through the present, to the future

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Special Issue

**Science Education: from the past, through the present,
to the future**

*John K. Gilbert (Editor-in-Chief), David F. Treagust (Australasian Editor),
Janice Gobert (North American Editor)*

This Special Issue is to mark twenty-five years of the publication of the International Journal of Science Education and its predecessor, the European Journal of Science Education. The first Editor, Richard Kempa (University of Keele, UK), who founded the enterprise, handed over to John Gilbert (The University of Reading, UK) in 1991, the latter being supported for many years by Kate Johnson (University of Liverpool, UK) as Associate Editor. The growth of the Journal, initially slow, has gained in momentum: Volume 1 had 476 pages in four Issues whilst Volume 24 had 1332 pages in 12 Issues. The Journal, in keeping with its first title, initially only published papers from European countries: now they are from throughout the world.

This growth in size and complexity has drawn many people in, especially through the appointment of Regional Editors with powers of decision – taking. Chris Dawson (University of Adelaide, Australia) and later Beverley Bell (University of Waikato, NZ) were the Regional Editors for ‘Australia and New Zealand’. The growth in research productivity of Asian countries was recognised by renaming it ‘Australasia and the Pacific Rim’, with David Treagust as Regional Editor. The major role played by North America in science education research was recognised by the appointment of Gaalen Erickson (University of British Columbia, Canada) as the first Regional Editor for North America. He was succeeded by the joint appointment of Kathleen Fisher (University of California at San Diego, USA) and James Wandersee (State University of Louisiana at Baton Rouge, USA), whilst they, in turn, have been followed by Janice Gobert (Concord Consortium, USA). The whole enterprise is made academically possible by the members of the Editorial Board. They review the manuscripts submitted and are listed in the front of each Issue. Their painstaking, prompt, and tactful, work, undertaken anonymously, is much appreciated by both the Editors and the authors of articles. The contribution of the staff of Taylor and Francis Ltd. must be acknowledged, not least that of the successive Managing Editors of the journal, successively Malcolm Clarkson, Richard Steele, Graham Hobbs, and currently Ian White.

It was decided to mark the Twenty-Fifth Anniversary of the publication of the Journal with a series of invited articles that looked at where science education has come from, where it is now, and where it ought to be in the future. When we came

to look at Volume 1, Issue 1, long after this decision had been taken, we were surprised by the similarity of and the relationship between the themes that were and are addressed. Derek Hodson's article on the curriculum echoes Dowdeswell (1979), who wrote:

'While syllabuses adequately reflect modern science teaching, and teachers have at least become aware of the need to present the subject in a "scientific manner", none the less the outcome tends to be lacking in humanity'

The paper by Schaeffer (1979), the first of very many in the Journal about concept acquisition, is brought up to date by Reinders Duit and David Treagust. The importance of language in teaching and learning addressed by Galton and Eggleston (1979) is echoed in the overview of Larry Yore, Gay Bisanz and Brian Hand. Whilst digital technology was unknown in the classroom of 1979, so that Marcia Linn's review of the rapid progress that has been made since could not have been anticipated, concern to improve the quality of teaching and learning was reflected in the educational technology of its day, the Keller Plan (Casanova et al, 1979). Informal learning, recognised in concern about environmental education (Eulefeld, 1979), has become steadily more significant since –hence the article by Leonnie Rennie and Susan Stocklmayer. These parallels serve to illustrate how far science education research, at world level, has come in a quarter of a century.

What of the future? The Journal will continue to grow and evolve. Volume 26, for 2004, will have fifteen Issues and about 1890 pages of articles. In 2004, Jan van Driel (University of Leiden, The Netherlands) will become the first Book Reviews Editor, thus enabling the journal to celebrate another dimension of research and development in science education. Some things will continue unchanged: the Journal will emphasise philosophically based, empirically sound, research with implications for policy and practice. Some things ought to change: more articles from currently under-represented parts of the world (e.g. Africa, South America), more articles on a broader range of provision of science education (e.g. in Universities, for lifelong learning). There are battles to be fought, for example, between the preservation and extension of the perception of science as a major human achievement and pressures to emphasise its utilitarian value. However, what is published can only reflect the perceptions, ambitions, and skills, of the contributors to the journal. The future of the Journal is, dear readers, ultimately in your hands.

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