

THE ICMI STUDIES AND THE STUDY VOLUMES

1. The influence of computers and informatics on mathematics and its teaching

Strasbourg (France), 25- 30 March, 1985.

Discussion Document: CIEM (1984). An introduction to the ICMI Study on the computer and informatics, *L'Enseignement Mathématique*, s. 2, 30, 159-160.

Resulting publications: - Churchhouse, R. F., Cornu, B., Howson, A. G. Kahane, J.-P., van Lint. J. H., Pluvinage, F., Ralston, A. & Yamaguti, M. (Editorial Board). (1986). *The influence of computers and informatics on mathematics and its teaching*. Cambridge/etc: Cambridge University Press, ICMI Study series.

- Second edition: Cornu, B. & Ralston, A. (1992). Paris: UNESCO, Science and Technology Education 44.

2. School mathematics in the 1990s

No general Study Conference. The Study Volume was prepared by the editors after an international symposium held in Kuwait (1-6 February, 1986).

Discussion Document: Howson, A. G., Nebres, B. & Wilson, B. J. (Eds.). *School mathematics in the 1990s*, Southampton: The University of Southampton (UK)/ Secretariat of ICMI, 29 pages.

Resulting publication: -Howson. A. G. & Wilson, B. J. (1986). *School mathematics in the 1990s*. Cambridge/etc: Cambridge University Press, ICMI Study series.

3. Mathematics as a service subject

Udine (Italy), 6-10 April, 1987.

Discussion Document: Howson, A. G., Kahane, J.-P., Kelly, P. J., Lauginie, P., Nemetz, T., Simons, F. H., Taylor, C. A. & de Turckheim, E. (1986). Mathematics as a service subject. *L'Enseignement Mathématique*, s. 2, 32, 159-172.

Resulting publications: - Howson, A. G. (Ed.). (1988). *Mathematics as a service subject*. Cambridge: Cambridge University Press, ICMI Study series.

- Clements, R. R., Lauginie, P. & de Turckheim, E. (1988). *Selected papers on the teaching of mathematics as a service subject*. (CISM Courses and Lectures 35). New York/etc/: Springer-Verlag.

4. Mathematics and cognition

No general Study Conference. A group of PME members working on the same theme put together an outline and ideas for each chapter.

There was no discussion document. Instead, the themes and contributors were selected at the PME meeting in Montreal in 1987.

Resulting publication: -Nesher, P. & Kilpatrick, J. (Eds.). (1990). *Mathematics and cognition. A research synthesis by the International Group for the Psychology of Mathematics Education*. Cambridge: Cambridge University Press, ICMI Study series.

5. The popularization of mathematics

Leeds (UK), 17- 2 September, 1989.

Discussion Document: Howson, A. G., Kahane, J.-P. & Pollak, H. (1988). The popularization of mathematics. *L'Enseignement Mathématique*, s. 2, 34, 205-213.

Resulting publication: - Howson, A. G. & Kahane, J.-P. (Eds.). (1990). *The popularization of mathematics*. Cambridge/etc.: Cambridge University Press, ICMI Study series.

6. Assessment in mathematics education

Calonge (Spain), 11-16 April, 1991.

Discussion Document: Commission Internationale de l'Enseignement Mathématique (The International Commission on Mathematical Instruction). (1990). Assessment in mathematics education and its effects. Discussion Document. *L'Enseignement Mathématique*, s. 2, 36, 197-206. International Program Committee: Alsina, C., Broomes, D., Burkhard, D., Niss, M., Romberg, T. A., Robitaille, D. & Szendrey, J.

Resulting publications: - Niss, M. (1993). *Cases of assessment in mathematics education*. Dordrecht/etc.: Kluwer Academic Publisher, New ICMI Studies series 1.

- Niss, M. (1993). *Investigations into assessment in mathematics education*, Dordrecht/etc.: Kluwer Academic Publisher, New ICMI Studies series 2.

7. Gender and mathematics education

Höör (Sweden), 7-12 October, 1993.

Discussion Document: Commission Internationale de l'Enseignement Mathématique (The International Commission on Mathematical Instruction). (1992). Gender and mathematics education. Key issues and questions. Discussion document for an ICMI Study. *L'Enseignement Mathématique*, s. 2, 38, 189-198. International Program Committee: Hanna, G., Howson, A., H.-G. Steiner, Verhage, H., Niss, M.

Resulting publications: - Hanna, G. (Ed.). (1996). *Towards gender equity in mathematics education. An ICMI study*. Dordrecht/etc.: Kluwer Academic Publisher, New ICMI Studies series 3.

- Grevholm, B. & Hanna, G. (Eds.). (1995). *Proceedings of the Study Conference*. Lund: Lund University Press.

8. What is research in mathematics education and what are its results?

College Park/ Washington, DC (USA), 8-11 May, 1994.

Discussion Document: Balacheff, N., Howson A. G., Sfard, A. Steinbring, Kilpatrick, J. & Sierpiska, A. (1993). What is research in mathematics education, and what are its results? Discussion document for an ICMI Study. *L'Enseignement Mathématique*, s. 2, 39, 179-186.

Resulting publication: - Sierpiska, A. & Kilpatrick, J. (1998). *Mathematics education as a research domain: a search for identity: an ICMI study*. Dordrecht/etc.: Kluwer Academic Publisher. New ICMI Studies series 4.

9. Perspectives on the teaching of geometry for the 21st century

Catania (Italy), 27 September 2 October, 1995.

Discussion Document: Commission Internationale de l'Enseignement Mathématique (The International Commission on Mathematical Instruction). (1994). Perspectives on the teaching on geometry for the 21st century. Discussion document for an ICMI Study. *L'Enseignement Mathématique*, s. 2, 40, 345-357. International Program Committee: Villani, V. Mammana, C., Douady, R., Hansen, V. L., Hershkowitz, R., Malkevitch, J., Osta, I. & Niss, M.

Resulting publication: - Mammana, C. & Villani, V. (Eds.). (1998). *Perspectives on the Teaching of Geometry for the 21st Century: An ICMI Study*. Dordrecht/etc.: Kluwer Academic Publishers, New ICMI Studies series 5.

10. The role of the history of mathematics in the teaching and learning of mathematics

Luminy (France), 20- 25 April, 1998.

Discussion Document: Fauvel, J. & van Maanen, J., with the help of A. Arcavi, E. Barbin, A. Buccino, R. Calinger, J.-L. Dorier, F. Fasanelli, A. Garciadiego, T. Heiede, V. Katz, M. Kronfellner, R. Laubenbacher, D. Robertson, A. Sfard, D. Struppa. (1997). The role of the history of mathematics in the teaching and learning of mathematics. Discussion Document for an ICMI Study (1997-2000). *L'Enseignement Mathématique*, s. 2, 43, 199-203.

Resulting publication: - Fauvel, J. & van Maanen, J. (Eds.). (2000). *History in mathematics education. The ICMI Study*. Dordrecht/etc.: Kluwer Academic Publishers, New ICMI Studies series 6.

11. The teaching and learning of mathematics at university level

Singapore, 8-12 December, 1998.

Discussion Document: Commission Internationale de l'Enseignement Mathématique (The International Commission on Mathematical Instruction). (1997). ICMI Study on the teaching and learning of mathematics at university level. Discussion Document. *L'Enseignement Mathématique*, s. 2, 43, 381-390. International Program Committee: Aguilera, N., Artigue, M., Barrington, F., El Tom, M. A., Hillel, J., Kirchgraber, U., Lee, P. Y., Schoenfeld, A., Wallin, H., Ye, Q.-X. & Niss, M.

Resulting publications: - Holton, D. (2001). *The teaching and learning of mathematics at university level: An ICMI study*, Dordrecht/etc.: Kluwer Academic Publishers, New ICMI Studies series 7.

- Selected papers presented at the Study Conference published as a special issue of *The International Journal of Mathematical Education in Science and Technology*, 31, 1-160.

12. The future of the teaching and learning of algebra

Melbourne (Australia), 9-14 December, 2001.

Discussion Document: (2000). Discussion Document for the twelfth ICMI Study on the future of the teaching and learning of algebra. *L'Enseignement Mathématique*, s. 2, 46, 209-217. International Program Committee: Stacey, Carlson, D., Drouhard, J.-P., Fearnley-Sander, D., Fujii, T., Kieran, C., Kissane, B., Lins, R., Rojano, T., Puig, L., Hodgson, B. & Chick, H.

Resulting publications: Stacey, K., Chick, H. M & Kendal, M. (2004). *The future of the teaching and learning of algebra. The 12th ICMI Study*. Dordrecht/etc.: Kluwer Academic Publishers, New ICMI Studies series 8.

13. Mathematics education in different cultural traditions: A comparative Study of East Asia and the West

Hong Kong (SAR China), 20-25 October, 2002.

Discussion Document: Commission Internationale de l'Enseignement Mathématique (The International Commission on Mathematical Instruction). (2001). Discussion Document for the thirteenth ICMI Study Mathematics education in different cultural traditions: A comparative study of East Asia and the West. *L'Enseignement Mathématique*, s. 2, 47, 185-201. International Program Committee: Bessot, A., Bishop, A., Fan, L., Fischer, W., Graf, K.-D., Hodgson, B., Leung, F., Lin, F. L., López-Real, F. J., Park, K., Shimizu, K., Stigler, J., Wu, M., Zhang, D.

Resulting publication: - Leung, F. K. S. Graf, K.-D. & López-Real, F. J. (Eds.). (2006). *Mathematics education in different cultural traditions. The 13th ICMI Study*. New York/etc.: Springer, New ICMI Studies series 9.

14. Applications and modelling in mathematics education

Dortmund (Germany), 13-17 February, 2004.

Discussion Document: Blum, W., Alsina, C., Biembengut, M. S., Bouleau, N., Confrey, J., Galbraith, P., Ikeda, T., Lingefjärd, T., Muller, E., Niss, M., Verschaffel, L., Wang, S., Hodgson, B. R. & Henn, H.-W. (2002). ICMI Study 14: Applications and modelling in mathematics education - Discussion Document. *Educational Studies in Mathematics*, 51, 149-171.

Resulting publication: - Blum, W., Galbraith, P. L., Henn, H.-W. & Niss, M. (Eds.). (2007). *Modelling and applications in mathematics education. The 14th ICMI Study*. New York/etc.: Springer, New ICMI Studies series 10.

- Henn, H.-W. & Blum, W. (2004). *ICMI Study 14: Applications and modeling in mathematics education*. Dortmund: University of Dortmund.

NOTES

- The Discussion Documents are also published in the *ICMI Bulletins* and in journals of mathematics education. Translations into various languages are published in national journals.
- Reports of the ICMI Study may be found in *L'Enseignement Mathématique*.
- In some cases the Discussion Documents report explicitly authors names, in other cases there is only the indication of the International Program Committee.
- In the occasion of some ICMI Studies preliminary publications or pre-proceedings were issued.
- Information on the past ICMI Studies, Studies to come, Study Conferences and Study Volumes in progress is found in:
- http://www.mathunion.org/ICMI/ICMIstudies_org.html
- For an overview of the ICMI Studies see:

Hodgson, B. R. (1991). Regards sur les études de la CIEM. *L'Enseignement Mathématique*, s. 2, 37, 89-107.

Hodgson, B. R. (1999). The ICMI Studies: Background information and projects. *ICMI Bulletin* 46.

Hodgson, B. R. (2001). Rapports sur les activités de la CIEM pour les années 1999-2000. *L'Enseignement Mathématique*, s. 2, 47, 89-107.

Kahane, J.-P. (1988). ICMI and recent developments in mathematics education. *Occasional Paper 116*. Bielefeld: University of Bielefeld.