TAL publications TAL I, II, and III

The learning-teaching trajectories of TAL I, II, and III are published in book form. Each book contains a cd-rom with a selection of videotaped examples of classroom practice.

TAL I

In 1997 a start was made with the development of a learning-teaching trajectory for whole-number calculation in the lower grades of primary school (K1 and 2 and grades 1 and 2). This trajectory was published in 1998. A year later it was followed by a commercial version.

Bibliographic reference:

Treffers, A., Van den Heuvel-Panhuizen, M., & Buys, K. (Eds.) (1999). *Jonge kinderen leren rekenen. Tussendoelen annex leerlijnen. Hele getallen onderbouw basisschool*. Groningen: Wolters-Noordhoff. (ISBN 90 01 85180 0)

TAL II

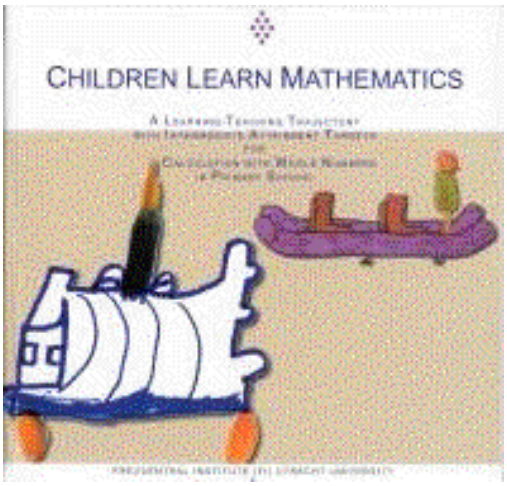
The trajectory for whole-number calculation in the higher grades of primary school (grades 3 to 6) was published in 2001.

Bibliographic reference:

Van den Heuvel-Panhuizen, M., Buys, K., & Treffers, A. (Eds.) (2001). *Kinderen leren rekenen. Tussendoelen annex leerlijnen. Hele getallen bovenbouw basisschool.* Groningen: Wolters-Noordhoff. (ISBN 90 01 85100 2)

English version TAL I and II

In 2001 an English version of both trajectories on whole-number calculation was released. This English version does not include the cd-rom with classroom video clips.



Bibliographic reference:

Van den Heuvel-Panhuizen (Ed.), M. (2001). *Children learn mathematics*. Utrecht: Freudenthal Institute, Utrecht University/SLO.

This book can be ordered from the Freudenthal Institute: see the FI shop on our website: http://www.fi.uu.nl/en/indexwinkel.html.

TAL III

The latest TAL publication is a learning-teaching trajectory for measurement and geometry in the lower grades of primary school (K1 and 2 and grades 1 and 2). This book has been released in January 2004.

Bibliographic reference:

Van den Heuvel-Panhuizen, M., & Buys, K. (Red.) (2004). *Jonge kinderen leren meten en meetkunde. Tussendoelen annex leerlijnen*. Groningen: Wolters-Noordhoff (ISBN 90 01 85102 9).

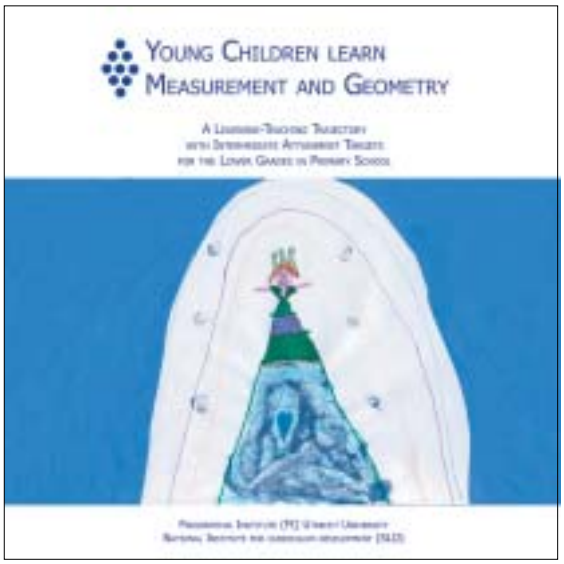
Together with this learning-teaching trajectory for measurement and geometry in the lower grades of primary school, a computer program called ‘Bouwen met blokken’ has been developed for building with blocks on the computer. The program is meant for first and second graders, but children of kindergarten age also like to play with it (to try it, go to: http://www.fi.uu.nl/publicaties/webwinkel/00372/).

Bibliographic reference:

Van den Brink, J. & Boon, P. (2003). *De computer als blokkendoos Meetkunde op de computer. Tussendoelen annex leerlijnen*. Groningen: Wolters-Noordhoff (ISBN 90 01 10937 3).
The cd-rom with the program “Bouwen met blokken” is included in this book.

English version TAL III

At the moment an English version of the learning-teaching trajectory for measurement and geometry in the lower grades of primary school is in preparation. This English version includes also the cd-rom with classroom video clips. The book will be released Autumn 2004.



Bibliographic reference:

Van den Heuvel-Panhuizen, M., & Buys, K. (Eds.) (2004). *Young children learn measurement and geometry*. Utrecht: Freudenthal Institute, Utrecht University/SLO.

Implementation materials connected to TAL (in Dutch)

For each learning-teaching trajectory, workshop materials have been developed that can be used by mathematics educators and teacher counselors to inform school teams about the learning-teaching trajectory.

In addition to this, modules on TAL have been developed within the NCRC Project. This project is aimed at developing an advanced course for primary school mathematics coordinators. For now all these implementation materials are in Dutch.

Reading materials about TAL (in English)

- Van den Heuvel-Panhuizen, M. (2001). A learning-teaching trajectory description as a hold for mathematics teaching in primary schools in the Netherlands. In M. Tzekaki (Ed.), Didactics of Mathematics and Informatics in Education. 5th Panhellenic Conference with International Participation (pp. 21-39). Thessaloniki: Aristotle University of Thessaloniki / University of Macedonia / Pedagogical Institute.
- Van den Heuvel-Panhuizen, M. (2002). From core goals to learning-teaching trajectories as a guide for teaching primary-school mathematics in The Netherlands. In A.D. Cockburn & E. Nardi (Eds.), Proceedings of the 26th Conference of the International Group for the Psychology of Mathematics Education. Volume 1 (pp. 191-196). Norwich: UEA.
- Van den Heuvel-Panhuizen, M. (2002). Realistic Mathematics Education as work in progress. In F.-L. Lin (Ed.), Common Sense in Mathematics Education. Proceedings of 2001 The Netherlands and Taiwan Conference on Mathematics Education, Taipei, Taiwan (pp. 1-42). Taipei, Taiwan: National Taiwan Normal University.
- Van den Heuvel-Panhuizen, M. (2002). Towards scientific research in classrooms? In S. Goodchild and L. English (Eds.), Researching Mathematics Classrooms: A Critical Examination of Methodology (pp.111-115). Westport CT/London: Praeger.
- Van den Heuvel-Panhuizen, M. (2003). Can research answer the 'what' question of mathematics education? Paper presented at the 10th Biennial Conference Earli, 26-30 August, 2003, Padova, Italy.
- Van den Heuvel-Panhuizen, M. (2003). Guides for didactical decision making in primary school mathematics education: the focus on the content domain of estimation. Skriftserie for Nasjonalt Senter for Matematikk i Opplaeringen, 1, 139-152.

Information

mw. dr. Marja van den Heuvel-Panhuizen
m.vandenheuvel@fi.uu.nl