

2017

Abbrev: CURRICULUM VITAE

PROFESSOR JILL ADLER

1. PERSONAL DETAILS

Name: Jillian Beryl Adler, nee Smidt.

Position: SARChI Chair of Mathematics Education, School of Education, University of the Witwatersrand, South Africa. Visiting Professor of Mathematics Education, Kings College London, School of Education and Professional Studies, UK.

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2. QUALIFICATIONS

PhD 1996. University of the Witwatersrand (Rand). *Secondary teachers' knowledge of the dynamics of teaching and learning mathematics in multilingual classrooms.*

M.Ed 1985. University of the Witwatersrand (Rand). Dissertation, **with distinction**. *Mathematics by newspaper in South Africa: junior secondary mathematics for adults through the medium of a newspaper.*

B.Sc 1972. University of the Witwatersrand. Mathematics and Psychology (majors)

S.T.D 1973. Secondary Teacher's Diploma. University of Cape Town (mathematics)

3. RECENT AWARDS

Hans Freudenthal Medal awarded by the International Commission of Mathematics Instruction – ICMI, and named after the eighth president of ICMI - (1967-1970), in recognition of a major cumulative program of research and its impact.

Svend Pedersen Lecture Award 2015, Department of Mathematics and Science Education, University of Stockholm, for research that has made a significant and lasting contribution to the Department's research and teacher education.

ASSAf Gold Medal for Science in the Service of Society, October 2012

Research A2-rating, 2011: National Research Foundation, South Africa

Vice Chancellor's Research Award for 2003, University of the Witwatersrand.

Vice Chancellor's Academic Citizenship Team Award for 2003 – Awarded to the Mathematics Education Unit that in 2003 was under Prof Adler's leadership.

4. SELECTED PUBLICATIONS

4.1. Books

Adler, J. (2001) *Teaching mathematics in multilingual mathematics classrooms*. KluwerAcademic Publishers. Dordrecht.

Adler, J. & Sfard, A. (Eds.) (2017) *Research for educational change: Transforming researchers' insights into improvement in mathematics teaching and learning*. Routledge: London.

4.2. Book Chapters:

Adler, J. & Ronda, E. (2017) Mathematical discourse in instruction matters. In Adler, J. & Sfard, A. (Eds.) *Research for educational change: Transforming researchers' insights into improvement in mathematics teaching and learning*. (pp. 64-81) Routledge: London.

Adler, J. (2015) Turning mathematical knowledge for teaching social. In Jorgensen, R. & Gates, P. (Eds.) *Shifts in the Field of Mathematics Education: Stephen Lerman and the turn to the social*. Springer. Dordrecht. Pp. 139-150.

Adler, J. and Venkat, H. (2014) Teachers' mathematical discourse in instruction: Focus on examples and explanations. In Venkat, H., Rollnick, M., Loughran, J. and Askew, M. (2014) *Exploring mathematics and science teachers' knowledge: Windows into teacher thinking*. Oxford: Routledge. Pp. 132-146.

4.3. Journal articles:

Adler, J., Alshwaikh, J., Gcasamba, L. & Essack, R. (2016) Mathematics education research in South Africa 2007-2015: Review and reflection. *African Journal of Research in Mathematics, Science and Technology Education*, <http://dx.doi.org/10.1080/18117295.2016.1265858>

Lerman, S. & Adler, J. (2016) Policy and standards debate: Mapping changes in assessment. *Research in Mathematics Education*, 18, 2, 182-199.

Le Roux, K. & Adler, J. (2016) A critical discourse analysis of practical problems in a foundation mathematics course at a South African university. *Educational Studies in Mathematics*. 91, 2, 227-264. DOI 10.1007/s10649-015-9656-5

Adler, J., & Ronda, E. (2015) A framework for describing Mathematics Discourse in Instruction and interpreting differences in teaching. *African Journal of Research in Mathematics, Science and Technology Education*. 19, 3, 237-254. doi:DOI:10.1080/10288457.2015.1089677

Parker, D. & Adler, J. (2014) Sociological tools in the study of knowledge and practice in mathematics teacher education. *Educational Studies in Mathematics*. 87, 2, 203-219.

Adler, J., Hossain, S., Stevenson, M., Clarke, J., Archer, R. and Grantham, B. (2014) Mathematics for teaching and deep subject knowledge: Voices of Mathematics Enhancement Course students in England. *Journal of Mathematics Teacher Education*. 17, 2, 129-148.

5. INVITED KEYNOTE AND/OR PLENARY ADDRESSES:

- *One framework, multiple practices: The case for a common discursive resource*. Invited lecture as Freudenthal awardee. **International Congress of Mathematics Education, Hamburg, July 2016**.
- *Researching and doing professional development using a shared discursive resource*. Keynote address, **Mathematics Education Research Group of Australasia (MERGA) Conference, Sunshine Coast, June 2015**.
- *From mathematics and language, to mathematical knowledge for teaching and back again: A (South African) research journey*. **Svend Pederson award lecture, University of Stockholm, May 2015**.
- *Bridging contexts, connecting research and practice: Reflections on mathematics teacher education and professional development*. Invited plenary presentation, **Eighth British Congress of Mathematics Education (BCME8), Nottingham, April 2014**
- *Access, equity and knowledge-in-use: Reflections from a research-based teacher professional development project in post-Apartheid South Africa*. **Moore Distinguished Lecture, North Carolina State University, September 2012**.

- **GRADUATES:** I have successfully supervised 18 PhDs and 29 M Ed or M Sc to completion

- **INTERNATIONAL EXECUTIVE POSITION (Current)**

President: International Commission on Mathematical Instruction (ICMI) January 2017 – Dec 2020)

- **RESEARCH ACTIVITY**

The underlying 'problematic' in my research work over time is (re)sourcing complex practice in and across varying pedagogic sites (school classrooms and teacher education).

Earlier research: Teaching mathematics in multilingual classrooms

My first major research project concerned issues related to teaching mathematics in multilingual classrooms. This research began in 1991 and culminated in an academic book published by Kluwer Academic Publishers (see above). The intersection of language and learning in a multilingual society is pivotal to educational practice, and thus a phenomenon that enters all research and teaching practice. This early work infuses current research, where semiotics is increasingly relevant.

Current: Professional development research, the mathematical work of teaching and its effects

This has been the focus of my work since the mid 1990s. Between 1996-1999 I directed a research project that has since culminated in a book entitled: *Challenges of teacher development: An investigation of take-up from formalised in-service in South Africa*. (See above). The contents of this book and the multiple authors of its various chapters reflect the inter-disciplinary nature of this research and its team-work, as do a number of journal papers. A key "finding" of the study was the complexity of the relationship between subject knowledge development in teacher education programmes, teachers' classroom practices and learner performance. Despite claims and the widely held view that "more" subject knowledge equals better teaching (no one disputes the significance of subject knowledge for teaching) how much "more" and what kind of "more" remained questions for research.

The vexed nature of the mathematical work that teachers do, its relationship to the quality of instruction in their specific contexts, and their learners' learning is the focus of my current research and development Chair, where in its first phase 2010 – 2014 my research and development team worked with mathematics teachers in ten schools, researching the process of professional development and related learner's learning with them. In the current phase of this work, 2015 – 2019, we are working on ways of expanding the sphere of influence of the work done in the first phase, including working with a larger group of teachers across many more schools, and related lesson study in clusters of schools, again researching the process and outcomes of this work.