

1. PERSONAL DETAILS

Name: Jillian Beryl Adler, nee Smidt.

Current Position: Division Head: Mathematics and Science Education; Chair of Mathematics Education, Chair of Research Committee; School of Education, University of the Witwatersrand.

Date and Place of Birth: 31 January 1951, Johannesburg, South Africa.

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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

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 RECENT PUBLICATIONS (books, book chapters; peer-reviewed papers)

Vithal, R., Adler, J. and Keitel, C. (Eds.) (2005) *Researching mathematics Education in South Africa: Perspective, practices and possibilities*. HSRC. Pretoria.

Adler, J. & Reed, Y. (Eds) (2002) *Challenges of teacher development: an investigation of take-up from a practice-based research project in South Africa*. Van Schaik: Pretoria.

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

Adler, J & Lerman, S. (2003) Getting the description right and making it count: Ethical practice in mathematics education research. In Bishop, A., Keitel, C., Leung, F. & Kilpatrick, J. (Eds.) *Second International Handbook of Mathematics Education*. Kluwer. Dordrecht.

Adler, J. and Davis, Z. (in press). Opening another black box: Researching mathematics for teaching in mathematics teacher education. *Journal for Research in Mathematics Education*.

Adler, J. (2005) Mathematics for teaching: What is it and why? is it important that we talk about it? *Pythagoras*. 62. 2 – 11.

Adler, J., Ball, D., Krainer, K., Lin, F.L. & Novotna, J. (2005) Reflections on an emerging field: Researching mathematics teacher education. *Educational Studies in Mathematics*. 61, 3, 359 – 381.

Parker, D. and Adler, J. (2005) Constraint or catalyst: The regulation of teacher education in South Africa. *Journal of Education*. 36. 59-78.

Adler, J. and Setati, M. (2005) Mathematics as filer of equity – an 'old' story and new telling. Response to Kahn, A Class Act. *Perspectives in Education*. 23. 3. 149 – 152.

Mwakapenda, W. and Adler, J. (2003) Using concept mapping to explore student understanding and experiences of school mathematics. *African Journal of Research in Mathematics, Science and Technology Education*. 7, 51-62.

Setati, M., Adler, J, Reed, Y. and Bapoo, A. (2002) Incomplete journeys: code-switching and other language practices in multilingual classrooms in South Africa. *Language and Education*. 16. 128-149

Setati, M. & Adler, J. (2001) Between languages and discourses: Code-switching practices in primary mathematics classrooms in South Africa. *Educational Studies in Mathematics*. 43. 3. 243-269.

Adler, J. (2000) Conceptualising resources as a theme for mathematics teacher education. *Journal of Mathematics Teacher Education*. 3, 3, 205-224.

Adler, J. (1999) Seeing and seeing through talk: The teaching dilemma of transparency in multilingual mathematics classrooms. *Journal for Research in Mathematics Education*. 30, 1, 47-64.

Adler, J. (1998) A language of teaching dilemmas: unlocking the complex multilingual secondary mathematics classroom. *For the Learning of Mathematics*, 18, 1, 24-33.

Adler, J. (1997) A participatory-inquiry approach and the mediation of mathematical knowledge in a multilingual classroom. *Educational Studies in Mathematics*, 33, 235-258.

5. INTERNATIONAL COMMITTEES

ICMI – Vice-President 2003-2006

International Programme Committee for ICME-10 Copenhagen 2004

6. INTERNATIONAL JOURNAL EDITORIAL BOARDS – CURRENT

Educational Studies in Mathematics

For the Learning of Mathematics

Mathematics Education Research Journal (international Journal running from Australia).

(also national journal Pythagoras)

7. CURRENT RESEARCH ACTIVITY

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). In the past five years, I have delivered a number of national and international plenary and keynote addresses on this research. The intersection of language and learning in a multilingual society such as South Africa is pivotal to educational practice, and thus a phenomenon that enters all research and teaching practice. The cognitive, pedagogical and political dimensions of learning in more than one language are increasingly significant issues for mathematics and science education across ranging urban contexts.

Professional development research and the mathematical work of teaching

As mentioned earlier, from 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 (and 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 is the central focus of my current research programme. I am currently directing a national research team in an investigation into the nature of mathematical knowledge for teaching and the complex relationship between mathematics in teacher education, and teachers’ mathematical practices. The research has so far focused on how such knowledge is conceptualised and operationalised in teacher education in South Africa. This research is currently being written up and has been done in collaboration with colleagues across Universities in South Africa, in particular Dr Zain Davis, University of Cape Town, Diane Parker, University of KwaZulu-Natal (and current PhD student). International collaborators (in varying degrees) have included Professor Steve Lerman, London Southbank University, United Kingdom; Professor Margaret Brown, Kings College, United Kingdom. Professors Deborah Ball and Hyman Bass have been pivotal in the work of this project. The study is currently being extended so as to be able to investigate and work with excellence, diversity and disadvantage in mathematics teacher education itself. In South Africa, one of the problems we face in education is not only the quantity and quality of our teaching corps in mathematics but also *who* are our teachers of mathematics, what have been their opportunities for developing and influencing mathematics teacher expertise, and how they can and do act as role models for all our learners in social and educational contexts that are increasingly diverse.

8. RECENT REGIONAL DEVELOPMENT

In 2005, I chaired the overall and scientific committee of the 1st African Regional Congress of ICMI, hosted at Wits University, thus playing a significant role in the stimulation of ICMI and mathematical education activity in Africa