

# Curriculum Vitae

---

Sue Thomson

Principal Research Fellow

National and International Surveys

Australian Council for Educational Research (ACER)

Private Bag 55 Camberwell 3124

Phone 9277 5727

email [thomson@acer.edu.au](mailto:thomson@acer.edu.au)

---

## Academic Qualifications

PhD	Monash University, 1998
MEdStudies	Monash University, 1994
GradDip MathEd	Deakin University, 1992
DipEd	Monash University, 1982
BAppScience (Mathematics)	RMIT, 1981
Cert III Frontline Management	Chisholm Institute of Technology, 2002

## Professional Positions

2005 -	Principal Research Fellow <i>Australian Council for Educational Research</i>
2002- 2004	Senior Research Fellow <i>Australian Council for Educational Research</i>
1998 -2001	Research Fellow <i>Australian Council for Educational Research</i>
1998	Statistical and Research Consultant <i>Department of Community Medicine and General Practice Monash University</i> Lecturer (Educational Statistics) <i>Faculty of Education Monash University, Clayton</i> Project Officer (Development of Australian Coursework Postgraduate Survey) <i>Council of Australian Postgraduate Associations</i>
1997 – 1998	Lecturer (Statistical Methods) <i>Swinburne University of Technology</i>
1996 – 1997	Lecturer (Statistical Methods) <i>Department of Psychology, Australian Catholic University</i>
1994 - 1996	Research Assistant <i>Monash University</i>
1993	Lecturer (Mathematics) <i>Swinburne University of Technology</i>
1990 – 1992	Secondary school teacher (Mathematics and Science)
1983 – 1985	<i>Victorian Department of Education</i>

## Awards

1998	Monash University Honorary Junior Research Associate Monash University Postgraduate Publications Award
1996	Mathematics Education Research Group of Australasia Early Career Award for outstanding paper and presentation by a beginning researcher
1995 – 1998	Australian Postgraduate Award

## Current ACER responsibilities

National Research Coordinator – TIMSS & PIRLS 2011 Australia  
National Project Manager – PISA 2009, PISA 2012 Australia  
Associate Project Manager – PISA 2012, TIMSS 2011, PIRLS 2011  
Dubai and the United Arab Emirates  
DEECD Microanalysis of NAPLAN data  
Dubai: PISA 2009 Educators' Report, Director's Report, Summary Report

## Previous ACER research activities and projects

PISA 2003, 2006  
TIMSS 2003, 2007  
FaHCSIA: Outcomes for Australian Indigenous students – A multilevel analysis  
Ministerial Advisory Committee on Mathematics and Science/ DEECD: TIMSS 2007 correlation study of high-achieving countries  
Dubai: TIMSS 2007 Educators' Report, Director's Report, Summary Report  
Indonesia: Performance in TIMSS, PIRLS and PISA – National Reports  
Expert writer, National Numeracy Review Report  
Longitudinal Surveys of Australian Youth  
Schools around the World  
TIMSS Follow up study  
Panel Study in Teaching and Learning  
Postgraduate Research Experience Questionnaire  
Literacy Advance

## Publications

### Book chapters

Thomson S (2009) Teaching and learning science : PISA and the TIMSS Video Study. In 'PISA science 2006 : implications for science teachers and teaching' edited by R W Bybee and B J McCrae, pages 163-176. Arlington Va : NSTA Press

### Reports

Thomson, S. & Hillman, K. (In press). *Success despite the odds? Post-school pathways of low mathematics achievers in Australia*. NCVER.  
De Bortoli, L & Thomson, S. (2010). *Contextual factors that influence the achievement of Australia's Indigenous students: Results from PISA 2000 – 2006*. Camberwell: ACER.  
Thomson, S. (2009). *TIMSS educators' report: Dubai 2007*. Knowledge &

- Human Development Authority: Dubai, UAE.
- Thomson, S. & Buckley, S. (2009). *Informing mathematics pedagogy: TIMSS 2007 Australia and the world*. Camberwell: ACER.
- Thomson, S. & Buckley, S. (2009). *Informing science pedagogy: TIMSS 2007 Australia and the world*. Camberwell: ACER.
- De Bortoli, L & Thomson, S. (2009). *The achievement of Australia's Indigenous students in PISA 2000- 2006*. Camberwell: ACER.
- Thomson, S., Wernert, N., Underwood, C. & Nicholas, M. (2008). *TIMSS 2007: Taking a closer look at mathematics and science in Australia*. Camberwell: ACER.
- Thomson, S. & De Bortoli, L. (2007). *PISA 2003 Australia : ICT Use and Familiarity at School and Home*. Camberwell: ACER.
- Thomson, S. and De Bortoli, L. (2007) *Exploring Scientific Literacy: How Australia measures up. The PISA 2006 survey of students' scientific, reading and mathematical literacy skills*. Camberwell: ACER.
- Thomson, S. (2006). *Australian Students' Achievement in the TIMSS 2002 Mathematics Cognitive Domains*. Camberwell: ACER.
- Thomson, S., McKelvie, P. & Murnane, H. (2006). *Achievement of Australia's Early Secondary Indigenous Students: Findings from TIMSS 2003*. Camberwell: ACER
- Thomson, S. (2005). *Pathways from school to further education or work: Examining the consequences of Year 12 course choices*. (LSAY Research Report No. 42). Camberwell: ACER.
- Thomson, S., Rowe, K. J., Underwood, C., & Peck, R. (2005). *Numeracy in the early years: Project Good Start* (Final report to the Australian Government Department of Education, Science and Training). Camberwell, VIC: ACER.
- Thomson, S. & DeBortoli, L. (2004). *Facing the future: A focus on mathematical literacy among Australian 15-year-old students*. Camberwell, ACER.
- Thomson S. & Fleming, N. (2004). *Summing it up: Mathematics achievement in Australian schools in TIMSS 2002*. TIMSS Australia Monograph No. 6). Camberwell: ACER.
- Thomson S. & Fleming, N. (2004). *Examining the evidence: Science achievement in Australian schools in TIMSS 2002*. TIMSS Australia Monograph No. 7). Camberwell: ACER.
- Thomson, S. (2005). *Pathways from school to further education or work: Examining the consequences of Year 12 course choices*. (LSAY Research Report No. 42). Camberwell: ACER.
- Thomson, S. Rowe, K.J., Underwood, C., Searle, D. & Peck, R. (2004). *Numeracy in the early years: Project Good Start. First Year of School Interim Progress Report*. Camberwell, VIC: Australian Council for Educational Research.
- Fullarton, S., Walker, M., Ainley, J. & Hillman, K. (2003). *Patterns of Participation in Year 12* (LSAY Research Report No 33). Camberwell: ACER
- Fullarton, S., Rowe, K.J., Underwood, C., & Peck, R. (2003). *Numeracy in the early years: Project Good Start. Fourth interim progress report to the Australian Department of Education, Science and Training*. Camberwell, VIC: Australian Council for Educational Research.
- Rowe, K.J., Fullarton, S., Underwood, C., & Peck, R. (2003). *Numeracy in the early years: Project Good Start. Third interim progress report to the Commonwealth Department of Education, Science and Training*.

- Camberwell, VIC: Australian Council for Educational Research.
- Fullarton, S. (2002). *Student engagement with school: Individual and school-level influences* (LSAY Research Report No. 27). Camberwell, Vic: Australian Council for Educational Research.
- Fullarton, S. (2001). *VET in Schools: Participation and pathways* (LSAY Research Report No. 21), Camberwell: ACER
- Fullarton, S., Lokan, J., Lamb, S., and Ainley, J. (2001) *Lessons from the Third International Mathematics and Science Study. TIMSS Australia Monograph No. 4*. Camberwell: Australian Council for Educational Research.
- Fullarton, S. & Ainley, J. (2000). *Subject choice by students in year 12 in Australian secondary schools*. LSAY Research Report No 15. Camberwell: ACER.
- Fullarton, S. (1999). *Work experience and work placements in secondary school students*. LSAY Research Report No 10. Camberwell: ACER.
- Ainley, J., Fullarton, S., Frigo, T. & Owen, J. (1999). *Literacy Advance: Reviewing the literature*. East Melbourne: CECV.
- Fullarton, S. (1998). *Identifying the needs of coursework postgraduate students*. Melbourne: Monash University.
- Fullarton, S. (1993). *Confidence in Mathematics: The effects of gender*. Geelong: Deakin University National Centre for Research and Development in Mathematics Education.

#### Conference papers

- Thomson, S. & Hillman, K. (2009, December). *Tracking PISA low-achievers: Does a low score predict failure? Presentation at AARE Conference, Canberra.*
- Thomson, S. & Hillman, K. (2009, September). *Success despite the odds? Outcomes for low-performing students in Australia. Presentation at PISA Research Conference, Kiel, Germany.*
- Thomson, S. & Hillman, K. (2009, September). *Pathways of PISA low-achievers: Success despite the odds? Presentation at Transitions in Youth Annual Workshop, Dijon, France.*
- Thomson, S. (2008, January). *Australian students' performance in international achievement assessments. Presentation to DEST Summer Schools for Teachers of Mathematics, University of New England.*
- Thomson, S. (2008, February). *Engagement in science: Evidence from PISA 2006. Presentation at the Annual conference of the American Association for the Advancement of Science, Boston.*
- Thomson, S. (2008, May). *Stormy skies, looming skills shortages – What can PISA tell us? Presentation at the VISTA Annual Conference, Lorne.*
- Thomson, S. (2008, September). *Science self-efficacy, interest and achievement in PISA 2006. Presentation at the 11th Annual Conference on Motivation, Turku, Finland.*
- Thomson, S. (2008, September). *Examining Gender Differences in Year 8 Science Achievement in Australia: TIMSS 1995 – 2003. Presentation at the IEA International Research Conference, Taipei.*
- Ainley J & Thomson S ( 2007 ) *Differences in science teaching and learning across Australian states*. In: 'The second IEA international research conference : proceedings of the IRC-2006: volume 1 : Trends in International Mathematics and Science Study

- (TIMSS)' edited by P Wagemaker, pages 89-98. Amsterdam : International Association for the Evaluation of Educational Achievement (IEA)
- Thomson S ( 2007 ) *Achievement of Australia's junior secondary school Indigenous students : evidence from TIMSS*. In: 'The second IEA international research conference : proceedings of the IRC-2006: volume 1 : Trends in International Mathematics and Science Study (TIMSS)' edited by P Wagemaker, pages 215-227. Amsterdam : International Association for the Evaluation of Educational Achievement (IEA)
- Thomson S ( 2006 ) *Science achievement in Australia : evidence from national and international surveys*. In 'Boosting science learning : what will it take? : Conference proceedings' edited by C Glascodine and K-A Hoad, pages 61-65. Melbourne : ACER
- Thomson, S. (2006, September). *Disentangling language background and socioeconomic status in Australian TIMSS mathematics achievement*. Presentation at the European Conference on Educational Research, Geneva.
- Hillman, K. & Thomson, S. (2006, September). *Pathways from PISA: The 2003 Australian PISA sample two years on*. Presentation at the European Conference on Educational Research, Geneva.
- Thomson, S. (2006, November). *Disentangling language background and socioeconomic status in Australian TIMSS mathematics achievement*. Presentation at the IEA International Research Conference, Brookings Institute, Washington DC.
- Ainley, J. & Thomson, S. (2006, November). *Differences in Science Teaching and Learning among Australian States*. Presentation at the IEA International Research Conference, Brookings Institute, Washington DC.
- Thomson, S. (2005, January). *TIMSS 2002 – Mathematics achievement of Australian students in an international context*. Presented at the Annual Conference of the Australian Association of Mathematics Teachers, Sydney.
- DeBortoli, L. & Thomson, S. (2005, January). *PISA 2003: Results from an International Study*. Presented at the Annual Conference of the Australian Association of Mathematics Teachers, Sydney.
- Thomson, S. (2005, September). *Examining the evidence: Finding explanations for gender differences in year 8 science achievement in Australia*. Presentation at the European Conference on Educational Research, Dublin.
- Fullarton S ( 2004 ) *Closing the gaps between schools : accounting for variation in mathematics achievement in Australian schools using TIMSS 95 and TIMSS 99*. In 'Proceedings of the IRC-2004 Conference, volume 1, TIMSS' edited by C Papanastasiou, pages 16-31. Nicosia Cyprus : University of Cyprus
- Fullarton, S. & Peck, R. (2004, January). *Project Good Start – Numeracy in the transition from Pre-school to Primary school*. Presentation at the Annual Conference of the Association for Research in Early Childhood Education (ARECE), Frankston.
- Fullarton, S. (2003, July). *Improving learning, fostering the will to learn through engagement with school*. Presentation at the Annual Conference of the European Association for Research on Learning and Instruction (EARLI), Padua, Italy.
- Ainley, J., Elsworth, G. & Fullarton, S. (2001, April). *Choosing vocational*

- education: Issues of background, interest, and opportunity.* Paper presented at the Annual Conference of the American Educational Research Association, Seattle, Washington.
- Lamb, S. & Fullarton, S. (2001, April). *Classroom and school factors affecting mathematics achievement: A comparative study of the US and Australia.* Paper presented at the Annual Conference of the American Educational Research Association, Seattle, Washington.
- Fullarton S ( 2001 ) *Does VET in schools make a difference to post-school pathways?* In 'Understanding youth pathways : research conference 2001 : proceedings', pages 40-42. Melbourne Vic : ACER.
- Fullarton S; Lamb S (2000 ) *Factors affecting mathematics achievement in primary and secondary schools : results from TIMSS.* In 'Mathematics education beyond 2000 : proceedings of the Twenty-third Annual Conference of the Mathematics Education Research Group of Australasia Incorporated held at Fremantle, Western Australia, 5-9 July, 2000' edited by J Bana and A Chapman, pages 258-266. Perth WA : Mathematics Education Research Group of Australasia. Refereed paper.
- Lamb S; Fullarton S ( 2000 ) *Classroom and teacher effects in mathematics achievement : results from TIMSS.* In 'Mathematics education beyond 2000 : proceedings of the Twenty-third Annual Conference of the Mathematics Education Research Group of Australasia Incorporated held at Fremantle, Western Australia, 5-9 July, 2000' edited by J Bana and A Chapman, pages 355-362. Perth WA : Mathematics Education Research Group of Australasia Refereed paper.
- Fullarton S ( 2000 ) *Schools around the world : involving teachers in international professional development.* In 'Sydney 2000 papers and abstracts': Paper presented at the Annual Conference of the Australian Association for Research in Education, 4-7 December 2000, Sydney.
- Fullarton, S. (1999, September). *Mathematics education in Australia: Who's at risk?* Presentation to Annual Meeting of the British Educational Research Association, Brighton, England.
- Fullarton, S. (1997, December). *Sink or Swim: Alienation or engagement in the transition to secondary school mathematics.* Proceedings of the Annual Conference of the Mathematical Association of Victoria, Melbourne: MAV.
- Fullarton, S. (1996, July). *Perceived competence in the transition to secondary school mathematics.* In P. C. Clarkson (Ed.), Proceedings of the 19th Annual Conference of the Mathematics Education Research Group of Australasia, (pp. 208 - 214). Melbourne: MERGA.
- Fullarton, S. (1996, December). *Transition to secondary school: A help or hindrance to engagement in mathematics?* Proceedings of the Joint Annual Conference of the Australian Association for Research in Education and the Educational Research Association of Singapore, Singapore.
- Fullarton, S. (1994, December). *Motivation in Mathematics: Perceived Control, Engagement and Achievement in the Mathematics Classroom.* Proceedings of the Annual Conference of the Australian Association for Research in Education, Newcastle,

## Journal articles

NSW.

- Thomson, S. & DeBortoli, L. (2010). Two steps forward, one step back. *Inside Teaching* n. 1, p. 36 – 39.
- Thomson, S. (2009). International mathematics and science study shows mixed results for Australia. *Research Developments* n.20 p.16-19.
- Thomson, S. (2009). Improving on average : a close look at maths and science. *Teacher* n.200 p.20-23
- Thomson S (2008) Lessons to learn from high achievers. *Education Age* p.8-9
- Thomson S (2008) Exploring scientific literacy. *Research Developments* n.19 p.6-9.
- Thomson S (2008) International league : Australia's standing in international tests. *Teacher* n.188 p.40-43.
- Thomson, S. (2008). Examining the evidence from TIMSS: Gender differences in Year 8 science achievement in Australia. *Studies in Educational Evaluation*, 34(2), 73-81.
- Thomson S (2006) Aiming for equity : comparing Australia with the world. *Learning Matters* v.11 n.2 p.49-51.
- Thomson S (2006) When year twelves leave, where do they go? *Teacher* n.167 p.48-51
- Thomson, S. (2005). Engaging students with school life. *Youth Studies Australia*, 24(1), 10-15.
- Thomson S (2005) Examining the consequences of Year 12 course choices. *Research Developments* n.14 p.2-5.
- Thomson S (2005) International comparisons. *Teacher* n.156 p.18-21.
- Thomson S (2004) Numeracy in the early years : Project Good Start. *Australian Primary Mathematics Classroom* v.9 n.4 p.14-17
- Fullarton, S. (2003). Student engagement with school: Individual and school-level differences. *Learning Matters*, 8(1), 51-53.
- Fullarton, S. (2003). How do we engage students with school? *EQ Australia*, 2, 11-12.
- Lamb S; Fullarton S (2002) Classroom and school factors affecting mathematics achievement : a comparative study of Australia and the United States using TIMSS. *Australian Journal of Education* v.46 n.2 p.154-171 *Special issue on Inequality and Public Policy. Refereed article.*
- Fullarton S (2002) Vocational education and training : participation, achievement and pathways. *LSAY Briefing* n.7 p.1-6.
- Leder, G. C., Fullarton, S., & Taylor, P. (1994). Mathematically Gifted Students: Challenging the Stereotype. *Australian Senior Mathematics Journal*, 8(2), p 13-19.