

Booklists

The first part of this document contains the core mathematics reading lists for three different HEIs

Institution A

Course Readers

The secondary mathematics PGCE course is designed around two course readers that are **essential purchases**. These are:

Johnston-Wilder, S., Johnston-Wilder, P., Pimm, D. and Westwell, J. (Eds) (1999), *Learning to Teach Mathematics in the Secondary School: a companion to school experience*. London: Routledge.

You are also **encouraged to buy**:

Haggarty, L. (Ed) (2002) *Aspects of Teaching and Learning Secondary Mathematics*. London: RoutledgeFalmer.

Other useful texts (which you might like to buy) include:

Askew, M. and Wiliam, D. (1995), *Recent Research in Mathematics Education 5-16*. London: HMSO.

French, D. (2002), *Teaching and Learning Algebra*. London: Continuum.

Gates, P. (Ed) (2001), *Issues in Mathematics Teaching*. London: RoutledgeFalmer.

Oldknow, A. and Taylor, R. (2003), *Teaching Mathematics with ICT*. 2nd Ed. London: Continuum.

Nickson, M. (2000), *Teaching and Learning Mathematics: a teacher's guide to recent research and its application*. London: Cassell.

Tanner, H., Jones, S. and Davies, A. (2002), *Developing Numeracy in the Secondary School: a practical guide for students and teachers*. London: David Fulton.

Watson, A. and Ollerton, M. (2001), *Inclusive Mathematics 11-18*. London: Continuum.

Journals

There are a range of journals that contain teaching ideas and articles written by practicing teachers. The most relevant for secondary mathematics teachers are:

Mathematics in School	http://www.m-a.org.uk/resources/periodicals/mathematics_in_school/
Mathematics Teaching	http://www.atm.org.uk/journals/mathematicsteaching.html
MicroMath	http://www.atm.org.uk/journals/micromath.html
Teaching Mathematics and its Applications	http://www3.oup.co.uk/teamat/current/
Teaching Statistics	http://science.ntu.ac.uk/rsscse/TS/

Institution B

- Abramsky, J. (Ed.), (2002), *Reasoning, Explanation and Proof in School Mathematics and their Place in the Intended Curriculum*, QCA
- Anghileri, J., (2001), *Principles and Practices in Arithmetic Teaching* OUP
- Association of Teachers of Mathematics, (1995), *Teaching, Learning and Mathematics*, ATM
- Committee of Inquiry into the Teaching of mathematics in Schools ('Cockcroft Report'), (1982), *Mathematics Counts*, HMSO
- Gates, P. (Ed.), (2002), *Issues in Mathematics Teaching*, RoutledgeFalmer [click here for review](#)
- Goulding, M., (1997), *Learning to Teach Mathematics* David Fulton
- Haggarty, L., (2002), *Teaching Mathematics in Secondary Schools: a reader* OU/RoutledgeFalmer [click here for review](#)
- Haggarty, L. (2002) *Aspects of Teaching Secondary Mathematics* OU/RoutledgeFalmer
- Kay, J. & Yeo, D, (2003), *Dyslexia and mathematics* David Fulton
- Ledwick, M. (2001), *Numeracy Across the Curriculum*, Mathematical Association
- Maso, J. & Sutherland R., (2002), *Key Aspects of Teaching Algebra in Schools*, QCA
- Nelson, D, Joseph, G. and Williams J., (1993), *Multicultural Mathematics*
- Perks, P & Prestage, S. (2001) *Teaching the National Numeracy Strategy at Key Stage 3: a Practical Guide*, David Fulton
- Shan, S-J and Bailey P, 1991 *Multiple Factors Classroom Mathematics for Equality and Justice*, Trentham
- Selinger, M., (1994), *Teaching Mathematics* Routledge
- Tall, D & Thomas, M, (Eds), (2002), *Intelligence, Learning and Understanding in Mathematics* Old Post Pressed
- Tanner, H. and Jones, S., (2000), *Becoming a Successful Teacher of Mathematics* Routledge Falmer

Journals

For teachers:

Mathematics in school, Mathematical Gazette Equals – from The Mathematical Association

Mathematics Teaching, Micromath from the Association of Teachers of Mathematics

Teaching statistics – from RSS Centre for Statistics education, University of Nottingham

For pupils:

Mathematical Pie

Symmetry Plus

Spectrum

Research journals in library

For the Learning of Mathematics

Education Studies in Mathematics

Journal for Research in Mathematics Education

Institution C

Haggarty, L. (ed.) (2002) *Aspects of Teaching Secondary Mathematics*. London: RoutledgeFalmer

Haggarty, L. (ed.) (2002) *Teaching Mathematics in Secondary Schools*. London: RoutledgeFalmer

These two books provide an excellent overview of current knowledge about the teaching and learning of secondary mathematics.

Gates, P. (ed.) (2001) *Issues in Mathematics Teaching*. London: RoutledgeFalmer

This informs students' development by collecting chapters about many of the issues which frame current mathematics teaching in schools, especially strong on social and political issues.

Hart, K.(ed.)(1981) *Children's Understanding of Mathematics 11-16*. London: John Murray

We assume students have regular access to this book which contains detailed information about learners' most common difficulties in understanding some key mathematical topics. It is not complete, and we do not suggest that you take these 'misconceptions' for granted – they are not inevitable.

Ollerton, M. and Watson, A. (2001) *Inclusive Mathematics 11 - 18*, London: Continuum

This book provides practical descriptions of some real classroom practices which may challenge the way mathematics teaching is in your other experiences.

Prestage, S. and Perks, P. (2001) *Adapting and Extending Secondary Mathematics Activities: new tasks for old*, London: David Fulton

A very exciting book which enables you to develop good challenging tasks from ordinary textbook exercises, and this saves you time – you don't have to invent everything from scratch.

Perks, P. and Prestage, S. (2001) *Teaching the National Numeracy Strategy at Key Stage 3: a practical guide*, London: David Fulton.

This book provides a model for reacting critically and mathematically to new curriculum requirements which might be imposed upon you during your career.

Watson, A. & Mason, J. (1998) *Questions and Prompts for Mathematical Thinking*. Derby: ATM

How to make up really good mathematics questions, especially for whole class discussions, or for extended exploratory tasks.

Mason, J.H. (1998) *Learning and Doing Mathematics*, York: QED

A guide to working on mathematical ideas for yourself, especially if you need to refresh your mathematical 'self', and to think about what you would like your school pupils to do for themselves.

Other useful texts

This second part contains a list of books from other institutions and books from wider reading lists. It does not include books lists in the earlier sections of his document. This list includes books for enriching personal mathematics.

Allen, B. & Johnston-Wilder, S. (Eds.), (2004) *Mathematics Education: Exploring the Culture of Learning*, London: Routledge Falmer

Backhouse, J, Haggarty, L, Pirie S & Stratton J. (1992) *Improving the Learning of Mathematics* London: Cassell

Bolt, B., Any book on Mathematical Activities

ATM (1995) *Teaching, Learning and Mathematics with IT* Derby: ATM

Brown S. & Walter M., (1990) *The Art of Problem Posing* New Jersey: Lawrence Erlbaum

Buxton, L.(1981) *Do You Panic about Maths?* Oxford: Heinemann

- Cornelius, M. (1982) *Teaching Mathematics*, USA: Croom Helm
- Costello, J. (1991) *Teaching and Learning Mathematics, 11-16* London: Routledge
- Davis, P. J. & Hersh R. (1981) *The Mathematical Experience* Brighton: Harvest Press
- DES (1987) *Better Mathematics* London: HMSO
- Devlin, K., e.g. *Mathematics: the New Golden Age and others.*
- Dickson L. Brown M. & Gibson G. (1984) *Children Learning Mathematics* London: Cassell
- Durkin K. & Shire B. (1991) *Language in Mathematical Education* Milton Keynes: Open University Press
- Ernest, P. (1989) *Mathematics Teaching The State of the Art* London: Falmer Press
- Floyd, A. (1990) *Developing Mathematical Thinking* Milton Keynes: Open University
- Holt, J. (1990) *How Children Fail* London: Penguin
- Joseph, G. (1991) *The Crest of the Peacock: Non-European Roots of Mathematics* London: Penguin
- Hoyles, C., Morgan, C. & Woodhouse, G. (Eds) (1999) *Rethinking the mathematics Curriculum* Studies in Mathematics Education Series: 10 London: Falmer
- Koshy V. (2001) *Teaching Mathematics to Able Children* London: David Fulton
- Larcombe A. (1985) *Mathematical Learning Difficulties in the Secondary School* Milton Keynes: OUP
- Mann W. & Tall D. (1992) *Computers in the Mathematics Curriculum. A report of the Mathematical Association.* Leicester: Mathematical Association
- Mason J. (1982) *Thinking Mathematically* Harlow: Addison-Wesley
- Mason, J. & Johnston-Wilder, S. (Eds.) (2004) *Fundamental Constructs in Mathematics Education*, London: Routledge Falmer
- Mason, J. & Johnston-Wilder, S. (2004) *Designing Mathematical Tasks* Milton Keynes: Open University
- The Mathematical Association (1997) *Mental Methods in Mathematics: A First Resort* Leicester: The Mathematical Association
- Mottershead L., (1983) *Sources of Mathematical Discovery* Basil Blackwell
- Orton A., (1987) *Learning Mathematics* London: Cassell
- Papert S. (1982) *Mindstorms* Brighton: Harvester Press
- Pimm, D., (Ed), 1988, *Mathematics, Teachers and Children* London: Hodder & Stoughton
- Pimm D. & Love E., 1991, *Teaching and Learning School Mathematics* Milton Keynes: OUP
- Sawyer, W. W., e.g. *Vision in Elementary Maths* and others
- Shayer, M and Adey, P. (2002) *Learning Intelligence*, Milton Keynes: Open University Press
- Singh, S. (1998) *Fermat's Last Theorem*, London: Fourth Estate
- Skemp R. (1986) *The Psychology of Learning Mathematics* London: Penguin
- Stewart, I., e.g. *Problems of Mathematics, Does God Play Dice?* and others
- Stewart, I. (1997) *The Magical Maze* (seeing the world through mathematical eyes) Weidenfeld & Nicolson,
- Swan, M. & Green, M. (2002) *Learning Mathematics through Discussion and Reflection*, London: Learning and Skills Development Agency
- Tanner, H. & Jones, S. (2002) *Becoming a Successful Teacher of Mathematics*, London: Routledge Falmer
- Zaslavsky, C. (1999) *Africa Counts Number and Pattern in African Culture* USA: Lawrence Hill