

## REFERENCES

- ACCUPLACER, 2002. Administrator's Manual for the Companion to ACCUPLACER, The College Board, College Entrance Examination Board and Educational Testing Service Services, USA.
- ADEA (Association for the Development of Education in Africa), 1997. *Tertiary Distance Learning in Africa*, ADEA Working Group on Higher Education Report, Senegal.
- Adams, D. & Hamm, M. 2000. Numeracy, Literacy, Mathematics, and Technology. In *Media & Literacy*, Charles C. Thomas, pp. 92 - 116.
- Ahmed, A., Holton, D. & Williams, H. 2002. Developing active learners. In P. Kahn & J. Kyle (Eds.) *Effective learning & teaching in mathematics & its applications*, The Institute for Learning and Teaching in Higher Education; The Times Higher Education Supplement, Kogan Page Limited (UK), Stylus Publishing Inc. (USA), pp. 34 - 48.
- Amoah, V. K. 1998. Prediction of first year mathematics course performance from mathematics placement test at the University of the Western Cape. In N. A. Ogude & C. Bohlmann (Eds.) *Proceedings of the Sixth Annual Meeting of the Southern African Association for Research in Mathematics and Science Education*, University of South Africa, pp. 47 - 49.
- Anderson, N. J. 1999. Improving reading speed: activities for the classroom. *English Teaching Forum*, Vol. 37, pp. 2 - 5.
- Anthony, G. 2000. Factors influencing first-year students' success in mathematics. *International Journal of Mathematical Education in Science and Technology*, Vol. 31, No. 3, pp. 3 -14.
- Appleby, J. & Cox, W. 2002. The transition to higher education. In P. Kahn & J. Kyle (Eds.) *Effective learning & teaching in mathematics & its applications*, The Institute for Learning and Teaching in Higher Education; The Times Higher Education Supplement, Kogan Page, pp. 3 - 19.
- Badsha, N. & Yeld, N. 1991. The alternative admissions research project (AARP) at UCT. *Bulletin for Academic Staff*, Vol. 12, No. 2, p. 32.

Bain, B. & Yu, A. 1980. Cognitive consequences of raising children bilingually: One parent, one language. *Canadian Journal of Psychology*, Vol. 34, pp. 304 - 313.

Bartolini Bussi, M. G. 1998. Verbal interaction in the mathematics classroom: a Vygotskian analysis. In H. Steinbring, M. G. Bartolini Bussi, & A. Sierpinska (Eds.) *Language and Communication in the Mathematics Classroom*, The National Council of Teachers of Mathematics, Reston, Virginia, pp. 65 - 84.

Bates, A. W. 1990. Video cassettes in OU courses. In A. W. Bates (ed.) *Media & Technology in European Distance Education*, Proceedings of the European Association of Distance Teaching Universities (EADTU) workshop on Media, Methods and Technology of Distance Teaching Universities (EADTU) workshop on Media, Methods and Technology, EADTU, Heerlen, The Netherlands.

Baumslag, B. 2000. Education Systems in Brief. In *Fundamentals of Teaching Mathematics at University Level*, Imperial College Press, Sweden, pp. 199 - 205.

Beevers, C. & Paterson, J. Assessment in mathematics. In P. Kahn & J. Kyle (Eds.) *Effective learning & teaching in mathematics & its applications*, The Institute for Learning & Teaching in Higher Education, and The Times Educational Supplement, Kogan Page Limited (UK), Stylus Publishing Inc. (USA), pp. 49 - 61.

Beller, M. 2001. Admission to Higher Education in Israel and the Role of the Psychometric Entrance Test: educational and political dilemmas. *Assessment in Education*, Vol. 8, No.3, pp. 315 - 337.

Bergman, R. E. & Moore, T. V. 1990. *Managing Interactive Video/Multimedia Projects*, Educational Technology Publications, Inc., Engelwood Cliffs, New Jersey.

Bisseker C. 2003. Future Imperfect. In C. Southey (ed.) *Financial Mail*, September 12, pp. 22 - 24.

Boaler, J. 1998. Open and closed mathematics: student experiences and understandings. *Journal for Research in Mathematics Education*. Vol. 29, No. 1, pp. 41 - 62.

Boaler, J. 2002. Looking to the Future. In *Experiencing School Mathematics, Revised and Expanded Edition: Traditional and Reform Approaches to Teaching and Their Impact on Student Learning*. Lawrence Erlbaum Associates, Inc., New Jersey, pp. 177 - 188.

Boero, P., Douek, N. & Ferrari, P. L. 2002. Developing Mastery of Natural Language: Approaches to Theoretical Aspects of Mathematics. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 241 - 268.

Bohlmann, C. A. 2001. Creating foundation level, user-friendly mathematics study material in English for distance learners whose primary language is not English. In *Conference Proceedings of the South African Science Education Network Conference*, University of the Western Cape, pp. 58 - 66.

Bohlmann, C. A. & Pretorius, E. J. 2002. Reading Skills and Mathematics. *South African Journal of Higher Education*, Vol. 16, No. 3, pp. 196 - 206.

Bohlmann, C. A. & Pretorius, E. J. 2003. A Reading Intervention Programme for Mathematics Students, *South African Journal of Higher Education*, Vol. 17, No. 2, pp. 226 - 236.

Brodie, K. 1997. A new mathematics curriculum: reflecting on outcomes in process. *Pythagoras: Journal of the Association for Mathematics Education of South Africa*, No. 43, pp. 29 - 37.

Butterworth, B. 1999. *The Mathematical Brain*, Macmillan, London.

Central Queensland University Handbook, 2005. *Student Handbook*. Retrieved November 11, 2005, from Central Queensland University on the World Wide Web: <http://handbook.cqu.edu.au>.

Clark, M. 1998. Making mathematics accessible. In H. Steinbring, M. G. Bartolini Bussi, & A. Sierpiska (Eds.) *Language and Communication in the Mathematics Classroom*, The National Council of Teachers of Mathematics, Reston, Virginia, pp. 289 - 302.

Clarkson, P. C. 1991. Bilingualism and learning. In *Bilingualism and Mathematics Learning*. Victoria, Australia: Deakin University Press, pp. 9 - 16.

Cleghorn, A. & Dube, R. 1998. Codeswitching in mathematics lessons in Zimbabwe. In N. A. Ogude & C. A. Bohlmann, C. (Eds.) *Proceedings of the 6<sup>th</sup> Annual Meeting of the Southern African Association for Research in Mathematics and Science Education*, University of South Africa, Pretoria, pp. 121 - 125.

Clements, M. A. & Ellerton, N. F. 1996. *Mathematics Education Research: Past, Present and Future*, UNESCO.

Cliff, A. 2003. First report to the Health Sciences Consortium on the use of the Health Sciences Placement Tests in 2003. Alternative Admissions Research Project, University of Cape Town.

Cliff, A., Visser, A., Hanslo, M. & Yeld, N. 2003. The Balancing of Excellence with Equity: The Alternative Admissions Research Project. Unpublished report, University of Cape Town.

Chaudary, N. 1995. Student Support Services in Open University Education. In B Singh (ed.) *New Horizons in Distance Education*, Uppal Publishing House, New Delhi, pp. 76 - 90.

Cohen, L. & Manion, L. 1995. *Research methods in education*. Routledge, London and New York

Cooper, P. A. T. 1996. In search of sufficient vocabulary: Testing the vocabulary levels of undergraduate students. *South African Journal of Linguistics*, Supplement 26, pp. 25 -37.

Council on Higher Education. 2001. A New Academic Policy for Programmes and Quality in Higher Education: discussion document. Pretoria.

Council on Higher Education. 2004. Policy Advice Report: Advice to the Minister of Education on Aspects of Distance Education Provision in South African Higher Education, CHE, Pretoria.

Crandall J., Dale T. C., Rhodes N. C. & Spanos, G. A. 1980. The Language of Mathematics: the English Barrier. In A. LaBarca & L. M. Bailey (Eds.) *Issues in L2: Theory as Practice, Practice as Theory*, Norwood, NJ, pp. 129 - 150.

Cummins, J., 1981. The role of primary language development in promoting educational success for language minority students. In *Schooling and Language Minority Students: A theoretical framework*, ed. by California State Department of Education, Office of Bilingual Bicultural Education. Los Angeles: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles, pp. 3 - 49.

Dale, T. C. & Cuevas, G. J. 1987. ESL through content area instruction. In J. Crandall (ed.) *Integrating Language and Mathematics Learning*, Engelwood Cliffs, New Jersey, Prentice Hall Regents, pp. 9 - 54.

Daneman, M. 1991. Individual differences in reading skills. In Barr R. et al. (ed.) *Handbook of Reading Research*, Vol. 2, London: Longman.

Dangarembga, T. 1988. *Nervous Conditions*, London: The Women's Press.

Daniel, J. S. 1996. The Mega-Universities. In *Mega-Universities and Knowledge Media*, Kogan Page, London, pp. 29 - 45.

Dawe, L. 1983. Bilingualism and mathematical reasoning in English as a second language. *Educational Studies in Mathematics*, Vol. 14, pp. 325 - 353.

de Lange, J. 1987. *Mathematics, Insight and Meaning*. Vakgroep Onderzoek Wiskundeonderwijs en Onderwijscomputercentrum, Rijksuniversiteit, Utrecht.

Delta Foundation in partnership with the University of Port Elizabeth and the University of Missouri, Kansas City, 2001. Video Supplemental Instruction: Ready for Business, Workshop Manual.

Delvare, I. 1995. *Spotlight, No. 1/95: Tertiary Pass Rates in South Africa*, South African Institute of Race Relations, Braamfontein.

Delvare, I. 1996. *Spotlight, No. 1/96: Addressing Tertiary Failure Rates in South Africa*, South African Institute of Race Relations, Braamfontein.

Department of Education, 2002. Mathematics. Second draft subject statement. In *National Curriculum Statement, Grades 10 – 12 (Schools)*. Department of Education, Pretoria. Retrieved October 9 2004 from the World Wide Web:

[http://education.pwv.gov.za/DoE\\_Sites/FET\\_Folder](http://education.pwv.gov.za/DoE_Sites/FET_Folder)

Department of Education, 2004. Subject statistics for the 2002 and 2003 senior certificate examinations. Retrieved January 27 from the World Wide Web:

<http://education.pwv.gov.za>

Directory of Science, Engineering and Technology Foundation Programmes, 2001. *Proceedings of the 'Indaba' of Science, Education and Texhnology Foundation Programmes*, University of the Witwatersrand.

Dodds, T. 1991. The development of distance teaching: an historical perspective. In J. Jenkins & B. N. Koul (Eds.) *Distance Education: A Review*, Indira Ghandi National Open University, New Delhi and the International Extension College, Cambridge, pp. 6 - 12.

Dunbar, S. B. & Witt, E. A., 1993. Design Innovations in Measuring Mathematics Assessment. In *Measuring What Counts*, MSEB & NRC, National Academy Press, Washington DC, pp. 175 - 223.

Duran, R. P. 1988. Bilinguals' logical reasoning ability: A construct validity study. In R. R. Cocking & J. P. Mestre (Eds.) *Linguistic and Cultural Influences on Learning Mathematics*, Lawrence Erlbaum, Hillsdale, N. J., pp. 241 - 58.

EduSource, 1997. *Mathematics and Science Teachers: Demand, Utilisation, Supply and Training in South Africa*. In A. Arnott, Z. Kubeka, M. Rice & G. Hal (Eds.). A report sponsored by the Danish International Development Agency for the Department of Education and Training, and the Department of Arts, Culture, Science and Technology, EduSource, Craighall.

Ellerton, N., Clarkson, P. & Clements, M. A. 2000. Language factors in mathematics education. In K. Owens & J. Mousley (Eds.) *Research in mathematics education in Australasia 1996 – 1999*, Sydney: MERGA, pp. 22 - 36.

Ellerton N. F. & Clements, M. A. 1988. The influence of language factors on children's constructions of mathematical problems: A longitudinal study. Paper presented at the Sixth International Congress on Mathematical Education, Budapest.

Ellerton, N. F. & Clements, M. A. 1991. Towards a model relating language, mathematics and mathematics education. In *Mathematics in language: A Review of Language Factors in Mathematics Learning*, Deakin University, pp. 18 - 52.

English, L. 2002. Priority Themes and Issues in International Research in Mathematics Education. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 3 - 15.

English, L., Jones, G. A., Lesh, R., Tirosh, D & Bartolini Bussi, M. 2002. Future Issues in International Mathematics Education Research. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, pp. 787 - 812.

Evans, T. 1994. Play/time: study as leisure or the loss of leisure? In *Understanding Learners in Open and Distance Education*, Kogan Page, pp. 97 - 107.

Even R. & Tirosh, D. 2002. Teacher Knowledge and Understanding of Students' Mathematical Learning. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 219 - 240.

Fischbein, E. 1993. The interaction between the formal, the algorithmic and the intuitive components in a mathematical activity. In R. Biehler, R. Scholz, R. Straser & B. Winkelmann (Eds.) *Didactics of mathematics as a scientific discipline*, Dordrecht, The Netherlands: Kluwer Academic, pp. 231 - 245.

Foxcroft, C. D. 1999. Placement assessment: Lessons learned in a South African context. Paper presented at the 9<sup>th</sup> Annual National ACCUPLACER Conference, Denver, Colorado, 29 - 31 July, 1999.

Foxcroft, C. D. 2004. Admissions and placement assessment programme (APAP). Unpublished report, University of Port Elizabeth.

Foxcroft, C. D., Watson S. R., Davies, C. & Beneke, T. 2002. Building bridges for admissions and placement assessment to effectively inform learner development and progress, University of Port Elizabeth (Unpublished report).

Foxcroft, C., Watson, A. & Seymour, B. 2002. APAP Report: Risk profile of the 2002 first-year intake, University of Port Elizabeth (Unpublished report).

Foxcroft, C., Seymour, B. & McSorley, M. 2003. APAP Report: Risk profile of the 2003 first-year intake, University of Port Elizabeth (Unpublished report).

Freeman, R. 1994. How to Learn Maths. National Extension College, London.

Frobisher, L. 1994. Problems, Investigations and an Investigative Approach. In A. Orton & G. Wain (Eds.) *Issues in Teaching Mathematics*, Cassell, London, pp. 150 - 173

Frawley, W. 1992. Lexicography and Mathematics Learning: A Case Study of *Variable*. *Applied Linguistics*, Vol. 13, No. 4, Oxford University Press, pp. 385 - 402.

Freitag, M. 1997. Reading and writing in the Mathematics classroom. *The Mathematics Educator*, Vol. 8, pp.16 - 21.

Friel, S. N., Curcio, F. R. & Bright, G. 2001. Making Sense of Graphs: Critical factors Influencing Comprehension and Instructional Implications. *Journal for Research in Mathematics Education*, Vol. 32, No. 2, pp. 124 - 158.

Furman, G. C. 1994. Outcomes-based education and accountability. *Education and Urban Society*, Vol. 26, No. 4, Sage Publications, Inc., pp. 417 - 437.



Garaway, G. B. 1994. Language, culture and attitude in mathematics and science learning: a review of the literature. *The Journal of Research and Development in Education*, Vol. 27, No. 2, pp.102 - 111.

Garrison, D. R. 1995. Constructivism and the role of self-instructional course materials: A reply. *Distance Education*, Vol. 16, No. 1, pp. 136 - 140.

Gibbs, W. & Orton, J. 1994. Language and Mathematics. In T. Orton, and G. Wain, (Eds.) *Issues in teaching mathematics*, Cassell, pp. 95 - 115.

Ginsburg, H. P. Posner, J. K. & Russell, R. L. 1981. The development of knowledge concerning written arithmetic: A cross-cultural study. *International Journal of Psychology*, Vol. 16, pp. 13 - 34.

Geva, E. & Ryan, E. B. 1985. Use of conjunctions in expository texts by skilled and unskilled readers. *Journal of Reading Behavior*, Vol. 17, pp. 331 - 346.

Glatthorn, A. A. 1993. Outcome-based education: Reform and the curriculum process. *Journal of Curriculum and Supervision*, Vol. 8, No. 4, pp. 354 - 363.

Global Network Academy, 2005. Distance education directory. Retrieved November 11, 2005 from the World Wide Web: <http://www.gnacademy.org/>.

Goldin, G. A. 2002. Representation in Mathematical Learning and Problem Solving. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 197 - 218.

Gorard, S, 2001. *Quantitative Methods in Educational Research*. Continuum, London, New York.

Government Communication and Information System (GCIS) 2003. *Pocket Guide to South Africa*. STE Publishers, Pretoria. [<http://www.gcis.gov.za>]

Grayson, D. 1992. The Science Foundation Programme – a Holistic Approach. The Second Human Sciences and Resource Council (HSRC) Seminar on Academic Support Programmes and Bridging Courses in Tertiary Education for Mathematics, Science and Engineering. Proceedings of a seminar held at the HSRC on 27 November 1992, pp. 19 - 26.

Grayson, D. J. 1996. A holistic approach to preparing disadvantaged students to succeed in tertiary science studies. Part I. Design of the Science Foundation Programme (SFP). *International Journal of Science Education*, pp. 993 - 1013.

Grayson, D. J. 1997. A holistic approach to preparing disadvantaged students to succeed in tertiary science studies. Part II. Outcomes of the Science Foundation Programme. *International Journal of Science Education*, pp. 107 - 123.

Greenes, C. 1995. Mathematics, Learning and Knowing. *Journal of Education*, Vol. 177, No. 1, pp. 85 - 106.

Hackworth, R. D. 1992. Learning Strategies For Mathematics. In *Math Anxiety Reduction*, H & H Publishing Company, pp. 63 - 77.

Hacquebord, H. 1994. AL<sup>1</sup> reading in the content areas: text comprehension in secondary education in The Netherlands. *Journal of Research in Reading*, No. 17, pp. 83 - 98.

Hafiz, F. M. & Tudor, I. 1989. Extensive reading and the development of language skills. *English Language Teaching Journal*, Vol. 43, pp. 4 - 11.

Hakuta, K. & Diaz, R. 1984. The relationship between the degree of bilingualism and cognitive ability: A critical discussion and some longitudinal data. In K. Nelson (ed.) *Children's Language*, Hillsdale, NJ: L. Erlbaum.

Harry, K. 1990. The Open University, United Kingdom. In B. N. Koul & J. Jenkins (Eds.) *Distance Education: A Spectrum of Case Studies*, Kogan Page, London, pp. 14 - 22.

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<sup>1</sup> AL refers to reading in a second, or alternative, language. In this thesis the term L2 has been used in the same way.

- Hauser, I. 2002. Every Class is an English Class. In D. Worsley (ed.) *Teaching for Depth*, Heinemann, pp. 32 - 46.
- Holmberg, B. 1995. Open Universities: their rationale, characteristics and purpose. In B. Singh (ed.) *New Horizons in Distance Education*, Uppal Publishing House, New Delhi, pp. 151 - 166.
- Honwana, L. B. 1997. Opening Address. In the National Access and Retention in Science, Engineering and Technology (NARSET) Report: *Issues relating to access and retention in science, engineering and technology in higher education*. Proceedings of a consultative conference, Department of Arts, Culture, Science and Technology (DACST) & the Foundation for Research and Development (FRD), Pretoria, p. iv.
- Horne, T. J. 2001. The language transferee. Hough & Horne Consultancy. Alberton. (unpublished).
- Houston, 2003. Math Preparatory Program. Retrieved November 11, 2005 from Houston on the World Wide Web: <http://hs.houstonisd.org>.
- Houston, S.K. 1998. Get students to do the teaching. In P. Galbraith (ed.) *Mathematical Modelling: Teaching and assessment in a technology-rich world*, Horwood, Chichester, pp. 45 - 54.
- Howie, S. J. 1997. *Mathematics and Science Performance in the Middle School Years in South Africa*: A Summary Report on the performance of South African students in the Third International Mathematics and Science Study (TIMSS). Human Sciences Research Council, Pretoria.
- Howie, S. J. 2001. *Mathematics and Science Performance in Grade 8 in South Africa 1998/1999, TIMSS-R 1999, South Africa*, Human Sciences Research Council, Pretoria.
- Isaacs, T. 2001. Entry to University in the United States: the role of SATs and Advance Placement in a competitive sector. *Assessment in Education*, Vol. 8, No. 3, pp.391 - 406.

- Jablonka, E. 2003. Mathematical Literacy. In A. J. Bishop, M. A. Clements, C. Keitel, L. Kilpatrick & F. K. S. Leung (Eds.) *Second International Handbook of Mathematics Education*, The Netherlands, Dordrecht: Kluwer Academic Publishers, pp. 79 - 102.
- Kahn, M. 2001. Constraints, views and practices: A perspective on student demographics in the areas of mathematics and physical science. In *The Challenges of Admissions and Access*, South African Universities Vice-Chancellors Association, pp. 13 - 26.
- Kahn, P. 2002. Designing courses with a sense of purpose. In P. Kahn & J. Kyle (Eds.) *Effective learning & teaching in mathematics & its applications*, The Institute for Learning and Teaching in Higher Education; The Times Higher Education Supplement, Kogan Page Ltd., London; Stylus Publishing Inc., USA, pp. 92 - 105.
- Kaldrimidou, M. & Ikonou, A. 1998. Epistemological and metacognitive factors involved in the learning of mathematics: the case of graphic representations of functions. In H. Steinbring, M. G. Bartolini Bussi, & A. Sierpiska (Eds.) *Language and Communication in the Mathematics Classroom*, The National Council of Teachers of Mathematics, Reston, Virginia, pp. 271 - 288.
- Keegan, K. & Rumble, G. 1982. The DTUs: An appraisal. In G. Rumble & D. Keegan (Eds.) *The Distance Learning Universities*, London: Croom Helm, pp. 225 - 249.
- King, V. 1997. The impact of Dogon religious beliefs on their concept of numbers. *Pythagoras*, No. 44, pp. 24 - 26.
- Koch, E. & Snyders, M. 2001. The effect of video supplemental instruction on the academic performance in mathematics of disadvantaged students. *South African Journal of Higher Education*, Vol. 15, No. 1, pp. 138 - 146.
- Koch, S. E. & Foxcroft, C. D. (2002). Undergraduate admission requirements, University of Port Elizabeth (Unpublished report).
- Kotecha, P. 1997. Synthesis. In the National Access and Retention in Science, Engineering and Technology (NARSET) Report: *Issues relating to access and retention in science, engineering*

*and technology in higher education*. Proceedings of a consultative conference, Department of Arts, Culture, Science and Technology (DACST) & the Foundation for Research and Development, Pretoria, pp. 1 - 14.

Krashen, S. 1993. *The power of reading*. Englewood, Colorado: Libraries Unlimited.

Krussel, L. & Dick, T. 1998. Teaching the Language of Mathematics. *Mathematics Teacher*, Vol. 91, No. 5, pp. 436 - 442.

Kulandai Swamy, V. C. 1995. Communication Technology and Productivity in Distance Education. In B. Singh (ed.) *New Horizons in Distance Education*, Uppal Publishing House, New Delhi, pp. 37 - 44.

Laridon, P. & Presmeg, N. 1998. Mathematics from cultural practices for classroom use in Curriculum 2005: Mountain Bike Mathematics. *Pythagoras: Journal of the Association for Mathematics Education of South Africa*, No. 46/47, pp. 47 - 51.

Laurillard, D. 1993. *Rethinking University Teaching: a framework for the effective use of educational technology*, Routledge, London,

Lesh, R. 2002. Research Design in Mathematics Education: Focusing on Design Experiments. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 27 - 50.

Lesiak, J. & Bradley-Johnson, S. 1983. *Reading assessment for placement and programming*. Springfield: Charles C. Thomas.

Lewin, K. M. 1997. Improving the supply of qualified scientists and engineers in South Africa: Issues and reflections. In the National Access and Retention in Science, Engineering and Technology (NARSET) Report: *Issues relating to access and retention in science, engineering and technology in higher education*. Proceedings of a consultative conference, Department of Arts, Culture, Science and Technology (DACST) & the Foundation for Research and Development (FRD), Pretoria, pp.157 - 165.

Lockwood, F. 1995. A Cost Benefit Analysis Model to describe the perception and use of Activities in self-instructional texts. *European Journal of Psychology of Education*, Vol. 10, No. 2, pp. 145 - 152.

Lockwood, F. 1997. *Making Materials-Based Learning Work*. Kogan Page.

Macintyre, C. 2000. *The Art of Action Research in the Classroom*, David Fulton Publishers Ltd, London.

Malloy, C. E. 2002. Democratic Access to Mathematics Through Democratic Education: An Introduction. In L. English, L. (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 17 - 25.

Mamona-Downs, J. & Downs, M. 2002. Advanced Mathematical Thinking With a Special Reference to Reflection on Mathematical Structure. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 165 - 195.

Marland, P., Patching, W., Putt, I. & Putt, R. 1990. Distance learners' interactions with text while studying. *Distance Education*, Vol. 11, No. 1, pp. 71 - 91.

Marton, F. & Saljö, R. 1984. Approaches to Learning. In F. Marton, D. Hounsell & N. Entwistle (Eds.) *The Experience of Learning*, Edinburgh: Scottish Academic Press, pp. 36 - 55.

Mason, J. H. 2002. *Mathematics Teaching Practice: A Guide for University and College Lecturers*, Horwood Publishing Limited, England.

Mason, B. & Krashen, S. 1997. Extensive reading in English as a foreign language. *System*, Vol. 25, No. 1, pp. 91 -102.

Mathematical Sciences Educational Board (MSEB), 1993. *Measuring What Counts*, National Research Council, National Academy Press, Washington DC.

Matjila D. S. & Pretorius, E. J. Bilingual and biliterate? An exploratory study of Grade 8 reading skills in Setswana and English (In process).

McKenzie, J., Grussendorf, S. & Grayson, D. 1996. Students as markers. In Proceedings of the Fourth Annual Meeting of the Southern African Association for Research in Mathematics and Science Education, pp. 197 - 203. University of Natal, 1996.

McNiff, J. (with Whitehead, J.) 2002. *Action Research: Principles and Practice* (second edition). Routledge Falmer, London and New York.

Melton, R. 1991. An alternative approach to assessment. In Jenkins, J. & Koul, B. N. (Eds.) *Distance education: A review*. Indira Gandhi National Open University, New Delhi, and International Extension College, Cambridge, pp. 128 - 135.

Meyer, B. J. F., Brandt, D. M. & Bluth, G. J. 1980. Use of top-level structure in text: Key for reading comprehension of ninth-grade students. *Reading Research Quarterly*, Vol.16, pp. 72 - 103.

Mokhobo-Nomvete, S. 1999. Assessment in an Outcomes-based Education and Training System. In *SAQA Bulletin*, Vol. 2, No. 3.

Moran, L. 1990. Deakin University, Australia. In B. N. Koul & J. Jenkins (Eds.) *Distance Education: A Spectrum of Case Studies*, Kogan Page, London, pp. 67 - 78.

Mousavi, S. Y., Low, R. & Sweller, J. 1995. Reducing Cognitive Load by Mixing Auditory and Visual Presentation Modes. *Journal of Educational Psychology*, Vol. 87, No. 2, pp. 319 - 334.

Mphalhele, M. K. 1994. Access, Equity and Redress in Science Academic Development programmes: Critical Issues and Concerns. In S. Levy, *Projects speak for themselves 1993/1994* (2<sup>nd</sup> edition), *Science and mathematics education in the transition*, Levy, Houghton, pp. 49 - 54.

Murray, H. 2003. Word problems: A problem! *Pythagoras: Journal of the Association for Mathematics Education of South Africa*, No. 58, pp. 39 - 41.

Muthukrishna, N. 1994. Metacognitive theory: a framework for mathematics instruction. *Pythagoras: Journal of the Association for Mathematics Education of South Africa*, Vol. 33, pp. 37 - 41.

NARSET Report, 1997. *Issues relating to access and retention in science, engineering and technology in higher education*. Proceedings of a consultative conference, Department of Arts, Culture, Science and Technology (DACST) and the Foundation for Research and Development (FRD), Pretoria.

Nation, P. & Hwang, K. 1997. Where would general service vocabulary stop and special purposes vocabulary begin? *System*, Vol. 23, No. 1, pp. 35 - 41.

Nation, P. & Newton, J. 1997. Teaching vocabulary. In J. Coady & T. Huckin (Eds.) *Second Language Vocabulary Acquisition*. Cambridge: Cambridge University Press, pp. 238 - 254.

National Council of Teachers of Mathematics, 2000. Retrieved August 15, 2003, from the World Wide Web: <http://standards.nctm.org/document/>

National University of Samoa, 2005. Foundation Year Programme. Retrieved November 11, 2005, from the National University of Samoa on the World Wide Web: <http://www.nus.edu.ws/programs/foundation.html>.

Norwich University Graduate Programme, 2004. Preparatory Mathematics. Retrieved November 11, 2005 from Norwich University on the World Wide Web: <http://www.norwich.edu/>.

Oakes, J. 1990. The Effects of Student Characteristics on Opportunity. In *Multiplying Inequalities: The Effects of Race, Social Class and Tracking on Opportunities to Learn Mathematics and Science*, The RAND Corporation, Santa Monica, pp. 13 - 25.

Oakhill, J. V. & Cain, K. 1997. Assessment of comprehension in reading. In J. R. Beech & C. Singleton (Eds.) *The psychological assessment of reading*, Routledge: London.

Orton, A. 1994. Learning Mathematics: Implications for Teaching. In A. Orton & G. Wain (Eds.) *Issues in Teaching Mathematics*, Cassell, London, pp. 35 - 57.



- Pagé, M. 1990. Methodological issues in testing comprehension of texts. In M. Spoelders (ed.) *Literacy acquisition*. Lier: Van In and C. & C.
- Perfetti, C. A. 1988. Verbal efficiency in reading ability. In M. Daneman, G. E. Mackinnon, G. E. & T. G. Waller (Eds.) *Reading Research: Advances in theory and practice*, Vol. 6, New York: Academic Press.
- Perraton, H. 1982. (ed.) *Alternative routes to formal education: distance teaching for school equivalency*, John Hopkins University Press, Baltimore, pp. 1 - 12.
- Perraton, H. 1991. The scope of distance teaching. In J. Jenkins & B. N. Koul (Eds.) *Distance Education, A review*, International Extension College and Indira Gandhi National Open University, pp.13 - 24.
- Perraton, H. 2000. *Open and distance learning in the developing world*, Routledge, London.
- Perry, B. & Dockett, S. Young Children's Access to Powerful Mathematical Ideas. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, pp. 81 -111.
- Pirie, S. E. B. 1998. Crossing the gulf between thought and symbol: Language as (slippery) stepping stones. In H. Steinbring, M. G. Bartolini Bussi, & A. Sierpiska (Eds.) *Language and Communication in the Mathematics Classroom*, The National Council of Teachers of Mathematics, Reston, Virginia, pp. 7 - 29.
- Polya, G. 1945. *How to solve it: a new aspect of mathematical method*. Princeton NJ: Princeton University Press.
- Pountney, D., Leinbach, C. & Etchells, T. 2002. The use of computer algebra systems. In P. Kahn & J. Kyle (Eds.), *Effective learning and teaching in mathematics and its applications*, The Institute for Learning and Teaching in Higher Education; The Times Education Supplement, Kogan Page Limited (UK), Stylus Publishing Inc. (USA), pp. 62 - 78.

PrepMath, 2005. Preparatory Mathematics Programme. Retrieved November 11, 2005 from Singapore Polytechnic on the World Wide Web: <http://prepmath.sp.edu.sg/>

Pretorius, E. J. 1994. A text linguistic perspective on causality: towards a taxonomy of causal relations. *South African Journal of Linguistics*, Supplement 22, pp. 81 - 122.

Pretorius, E. J., 2000a What they can't read will hurt them: reading and academic achievement. *Innovation*, Vol. 21, Editorial Committee, c/o University Library, University of Natal, pp. 33 - 41.

Pretorius, E. J. 2000b. Reading ability and academic performance in South Africa: Are we fiddling while Rome is burning? *Language Matters*. Vol. 33, pp. 169 - 196.

Pretorius E.J., 2002. The reading project of Flavius Mareka High School. Unpublished research report. Academic Literacy Research Unit, Department of Linguistics, UNISA, Pretoria.

Pretorius, E. J. & Machet, M. P. 2004. The socio-educational context of literacy accomplishment in disadvantaged schools: Lessons for reading in the early primary years. *Journal for Language Teaching* (in press).

Price, J. 1997. The NCTM Standards: Helping Shape a Mathematically Literate Society. *Notices of the American Mathematical Society*, Vol. 44, No. 4, pp. 455 - 458.

Prins, E. D. 1997. Linguistic and cultural factors that affect the readability of mathematics questions. In *The cultural context in foreign language teaching*, Duisberg Papers on Research in Language and Culture, 32, Peter Lang.

Pullin, D. 1993. Legal and Ethical Issues in Mathematical Assessment. In *Measuring What Counts: A conceptual guide for mathematics assessment*, National Academy Press, Washington DC, pp. 201 - 219.

Race Relations Survey, 1994. *Race Relations Survey, 1993/1994*, South African Institute of Race Relations, Johannesburg.

Ramsden, P. 1992. Approaches to learning. In *Learning to Teach in Higher Education*, Routledge, pp. 38 - 61.

READ, 1999. Annual Report, 1999. READ Educational Trust, Braamfontein.

Roschelle, J., Kaput, J. & Stroup, W. 2000. SimCalc: Accelerating students' engagement with the mathematics of change. In M. J. Jacobson & R. B. Kozma (Eds.) *Innovations in science and mathematics education: Advanced designs for technology of learning*, Mahwah, NJ: Lawrence Erlbaum Associates, pp. 44 - 75.

Roth, W.-M. & Bowen, G. M. 2001. Professionals Read Graphs: A Semiotic Analysis. *Journal for Research in Mathematics Education*, Vol. 32, No. 2, pp. 159 - 194.

Rowntree D. 1997. *Making Materials-Based Learning Work*, Kogan Page, London.

Rutherford, M. 1993. Making scientific language accessible to science learners. In. V. Reddy (ed.), *Proceedings of the First Annual Meeting of the Southern African Association for Research in Mathematics and Science Education*, pp. 280 - 288.

Rutherford, M. & Donald, C. 1993. Increasing access to tertiary education through a college of science. *South African Journal of Higher Education*, Vol. 7, No. 3, pp. 211 - 215. SA 2000-01. *South Africa at a glance*. Editors, Inc., Craighall, South Africa.

Sagor, R. 2000. *Guiding school improvement with action research*. Alexandria, VA: Association for Supervision and Curriculum Development.

Salomen, G. & Perkins, D. 1989. Rocky Roads to Transfer: Rethinking Mechanisms of a Neglected Phenomenon. *Educational Psychologist*, Vol. 24, No. 2, pp. 113 - 142.

South African Qualifications Authority, 2004. Retrieved October 9, 2004 from the World Wide Web: <http://www.saqa.org.za>.

Satyanarayana, P. & Koul, B. N. 1990. The Allama Iqbal Open University, Pakistan. In B. N. Koul. & J. Jenkins (Eds.) *Distance Education: A Spectrum of Case Studies*, Kogan Page, London, pp. 23 - 40.

Schoenfeld, A. 1992. Learning to think mathematically: Problem solving, metacognition, and sense making in mathematics. In D. Grouws (Ed.) *Handbook for research on mathematics teaching and learning*, Hillsdale, NJ: Lawrence Erlbaum Associates, pp. 334 - 370.

Secada, W. G. 1988. Diversity, equity, and cognitivist research. In E. Fennema, T. P. Carpenter & S. J. Lamon (Eds.) *Integrating research on teaching and learning mathematics. Proceedings of the First Wisconsin Symposium for Research on Teaching and Learning Mathematics*, Center for Education Research, University of Wisconsin, Madison: Wisconsin, pp. 32 - 64.

Secada, W. G. 1992. Race, ethnicity, social class, language and achievement in mathematics. In D. Grouws (ed.) *Handbook of research on mathematics teaching and learning*, New York: Macmillan, pp. 623 - 660.

Secada, W. G. & Berman, P.W. 1996. Ambitious Pedagogy in Mathematics Education: Issues for Research and Development. *Proceedings of the Fourth Annual meeting of the South African Association for Research in Mathematics and Science Education*. University of Natal, Pietermaritzburg, pp. 25 - 38.

Setati, M. 1998. Language practices in mathematics classrooms: Focus on code-switching, chanting and chorusing. In N. A. Ogude. & C. A. Bohlmann (Eds.) *Proceedings of the 6<sup>th</sup> Annual Meeting of the Southern African Association for Research in Mathematics and Science Education*, University of South Africa, Pretoria, pp. 431 - 439.

Sfard, A., Nesher, P., Streefland, L., Cobb, P. & Mason, J. 1998. Learning Mathematics through Conversation: Is It as Good as They Say? *For the Learning of Mathematics*, Vol. 18, No. 1, pp. 41 - 51.

Siegel, M. & Fonzi, M. 1995. The practice of reading in an enquiry-oriented mathematics class. *Reading Research Quarterly*, Vol. 30, No. 4, International Reading Association, pp. 632 - 673.

Sierpinska, A. 1998. Three epistemologies, three views of classroom communication: constructivism, sociocultural approaches, interactionism. In H. Steinbring, M. G. Bartolini Bussi & A. Sierpinska (Eds.) *Language and Communication in the Mathematics Classroom*, The National Council of Teachers of Mathematics, Reston, Virginia, pp. 30 - 62.

Singh, B. 1995. Distance Education: Some definitions and teaching-learning components. In B. Singh (ed.) *New Horizons in Distance Education*, Uppal Publishing House, New Delhi, pp. 7 - 20.

Singleton, J. E. & Bohlmann, C. A. 2000. *Book 1: Introduction*. Study Guide 1 for MAT011-K<sup>2</sup>. UNISA Press, Pretoria.

Singleton, J. E. & Bohlmann, C. A. 2000. *Book 2: Number Skills and Algebra Tools*. Study Guide 2 for MAT011-K. UNISA Press, Pretoria.

Singleton, J. E. & Bohlmann, C. A. 2000. *Book 3: More Algebra Tools*. Study Guide 3 for MAT011-K. UNISA Press, Pretoria.

Singleton, J. E. & Bohlmann, C. A. 2000. *Book 4: Graphs and Statistics*. Study Guide 4 for MAT011-K. UNISA Press, Pretoria.

Smith, M. & Seegal, R. 1994. University access and admissions policies. In *Challenging Educational Policies and Practices, South African Association for Academic Development Conference Proceedings*, Vol. 1, University of Natal, Durban, pp. 50 - 62.

South African Mathematical Society (SAMS), 2003. <http://science.up.ac.za/sams>.

*South Africa Survey 1996/7*, South African Institute of Race Relations, Johannesburg, 1997.

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<sup>2</sup> MAT011-K is the code for the Mathematics Access Module at UNISA.

Spady, W. G. 1994. What does Outcome-Based Education Really Mean? In *Outcome-Based Education: Critical Issues and Answers*. American Association of School Administration, pp. 1 - 25.

Steen, L. A. 1987. Foreword. In Tobias S. *Succeed with Math*, The College Board, USA, pp. xvii - xviii.

Steen, L. A. 2001. The Case for Quantitative Literacy. In L. A. Steen (ed.) *Mathematics and Democracy, the Case for Quantitative Literacy*, The National Council on Education and the Disciplines, USA, pp. 93 - 98.

Steen, L. A. 2004. How Mathematicians Can contribute to K-12 Education. *Notices of the American Mathematical Society*, Vol. 51, No. 8, p. 869.

Stewart, J., Redlin, L., & Watson, S. 2002. Preface, *Precalculus: Mathematics for Calculus, 4<sup>th</sup> Edition*, Brooks/Cole, pp. vii - xvi.

*Sunday Times*, 16 July 2000.

Sweller, J. 1989. Cognitive Technology: Some Procedures for Facilitating Learning and Problem Solving in Mathematics and Science. *Journal of Educational Psychology*, Vol. 81, No. 4, pp. 457 - 466.

Sweller, J. 1994. Cognitive Load Theory, Learning Difficulty and Instructional Design. *Learning and Instruction*, Vol. 4, pp. 295 - 312.

Tate, W. & Rousseau, C. 2002. Access and Opportunity: The Political and Social Context of Mathematics Education. In L. English (ed.) *Handbook of International Research in Mathematics Education*, Lawrence Erlbaum Associates, Inc., pp. 271 - 299.

Taylor, N. & Vijnervold, P. 1999. Teaching and Learning. In N. Taylor & P. Vijnervold (Eds.) *Getting Learning Right: report of the President's Education Initiative Research Project*, The Joint Education Trust, Wits, Johannesburg, pp. 131 - 162.

Taylor, N. 1999. Curriculum 2005: Finding a balance between school and everyday knowledges. In N. Taylor & P. Vijnovold (Eds.) *Getting Learning Right*, Joint Educational Trust, Wits, pp. 105 -130.

Thijs, G. D. 1997. Access Programmes and Mainstream: Do they articulate? National Access and Retention in Science, Engineering and Technology (NARSET) Report: *Issues relating to access and retention in science, engineering and technology in higher education*. Proceedings of a consultative conference, Department of Arts, Culture, Science and Technology (DACST) & the Foundation for Research and Development, Pretoria, pp. 143 - 154.

Thompson, D. J. 1994. 'And will we write a letter? Research to inform the selection of educational technologies'. In T. Evans & P. Murphy (Eds.) *Research in Distance Education 3*, Institute of Distance Education, Deakin University, Geelong, pp. 103 - 114.

Thorpe, M. 1995. Reflective Learning in Distance Education. *European Journal of Psychology of Education*, Vol. 10, No. 2, pp. 153 - 167.

Tobias, S. 1987. Making Math Work for You. In *Succeed with Math: Every Student's Guide to Conquering Math Anxiety*, The College Board, New York, pp. 3 - 13.

Tobias, S. 1993. *Overcoming Math Anxiety*, W.W. Norton & Company, New York.

Tobias, S. 1994. The Primacy of Mathematics, or If I Could Do Math I Would ... . In *Overcoming Math Anxiety: revised and expanded*, W. W. Norton & Company, New York, pp. 31 - 49.

Towers, J. M. 1994. The perils of outcome-based teacher education. *Phi Delta Kappan*, Vol. 75, No. 8, pp. 624 - 627.

Trabasso, T., Van den Broek, P. & Suh, S.Y. 1989. Logical necessity and transitivity of causal relations in stories. *Discourse Processes*, Vol. 12, pp. 1 - 25.

Umalusi Report, 2004. An investigation into the standard of the senior certificate examination. A report on research conducted by Umalusi (Council for Quality Assurance in General and Further Education and Training), Unalusi, Pretoria.

UNISA, 2002. Report of Senate. In *UNISA Annual Report*, pp. 18 - 23.

UNISA, 2003. Assessment policy. Retrieved October 10, 2004 from the World Wide Web:

<http://www.unisa.ac.za>

United Kingdom Open University (UKOU), 2005. Starting with Mathematics. Retrieved November 13, 2005 from the UKOU on the World Wide Web: <http://www3.open.ac.uk/courses/>

University Access at Kings School, Oxford: Higher Education Foundation Programme. Retrieved October 10, 2005 from King's School on the World Wide Web:

<http://www.kings.oxi.net/courses/accesss.html>.

University of South Africa Pocket Statistics, 1999. University of South Africa.

University of South Africa Annual Report, 2002. Report of Senate, pp. 18 - 23.

University of Southern Queensland, 2005 Department of Mathematics & Computing: Course List. Retrieved November 11, 2005 from University of Southern Queensland on the World Wide Web: <http://www.sci.usq.edu.au/courses/>.

Usiskin, Z. (ed.) 1999. *Developments in school mathematics education around the world*, Vol. 4, Reston, VA: National Council of Teachers of Mathematics, pp. vii - viii.

Usiskin, Z. 2001. Quantitative Literacy for the Next Generation. In L. A. Steen (ed.) *Mathematics and Democracy, the Case for Quantitative Literacy*, The National Council on Education and the Disciplines, USA, pp. 79 - 86.



van den Heuvel-Panhuizen, M. 1996. Written assessment within RME – spotlighting short-task problems. In *Assessment and Realistic Mathematics Education*, Freudenthal Institute, Utrecht, pp. 133 - 185.

van Glaserfeld, E. 1990. An exposition of constructivism: Why some like it radical. In R. B. Davis, C. H. Maher & N. Noddings (Eds.) *Journal for Research in Mathematics Education Monograph No. 4: Constructivist Views on the Teaching and Learning of Mathematics*. Reston, VA: National Council of Teachers of Mathematics.

van Glaserfeld, E. 1995. A Constructivist Approach to Teaching. In L. P. Steffe & J. Gale (Eds.) *Constructivism in Education*, Hillsdale, NJ: Lawrence Erlbaum Associates, pp. 3 - 16.

Verhage H. & de Lange, J. 1997. Mathematics Education and Assessment. *Pythagoras: Journal of the Association for Mathematics Education of South Africa*, Vol. 42, pp. 14 - 20.

Volmink, J. D. 1999. School mathematics and outcomes-based education: A new view from South Africa. In Z. Usiskin (ed.) *Developments in school mathematics education around the world*, Vol. 4, Reston, VA: National Council of Teachers of Mathematics, pp. 84 - 95.

Vygotsky, L. S. 1978. Interaction between learning and development. In L. S. Vygotsky, *Mind in Society: the development of higher psychological processes*. (Original work in 1935: Eds. and Trans. M. Cole, V. J. Steiner, S. Scribner & E. Souberman), Cambridge, MA: Harvard University Press, pp. 79 - 91.

Webb, V. 1999. Language study and language use in South African schools: A view from the politics of language. Paper delivered at the 15<sup>th</sup> Annual Conference of the National Association of Educators of Teachers of English (NAETE), South African Council of Teachers of English (SACTE), Pretoria.

Webber, B. L. 1980. Syntax beyond the sentence: Anaphora. In R. J. Spiro, B. C. Bruce & W. F. Brewer (Eds.) *Theoretical issues in reading comprehension*. Hillsdale: Lawrence Erlbaum.

Wheatley, G. H. 1992. The Role of Reflection in Mathematics Learning. *Educational Studies in Mathematics*, Vol. 23, No. 1, pp. 529 - 541.

Whitehead, J. 2000. How do I improve my practice? Creating and legitimating an epistemology of practice. *Reflective Practice*, Vol. 1, No. 1, pp 91 - 104.

Wood, T. 1994. Semantics and the learner's interpretation of text. *South African Association for Academic Development (SAAAD) Conference Proceedings*, Vol. II, University of Natal, Durban, 30 November - 2 December, pp. 164 - 170.

Xue, G. & Nation, P. 1984. A university word list. *Language, Learning and Communication*, Vol. 3, No. 2, pp. 215 - 219.

Yeld, N. 2001. Equity, Assessment and Language of Learning: Key Issues for Higher Education Selection and Access in South Africa. Unpublished PhD thesis. Cape Town: University of Cape Town.

Young, M., Perraton, H., Jenkins, J. & Dodds, T. 1991. Correspondence Courses. In *Distance Teaching for the Third World: the Lion and the Clockwork Mouse*, International Extension College, Cambridge, pp. 35 - 45.

Yuill, N. & Oakhill, J. 1991. *Children's problems in text comprehension*. Cambridge: Cambridge University Press.

Zepp, R. 1989. *Language and Mathematics Education*, Hong Kong, API Press, 1989.

Zevenbergen, R. 2000. 'Cracking the Code' of mathematics classrooms: School success as a function of linguistic, social and cultural background. In J. Boaler (ed.) *Multiple perspectives on mathematics teaching and learning*, Westport, CT: Ablex, pp. 201 - 224.