

BIBLIOGRAPHY

NOTE: Only those authors and articles directly quoted from have been included in the bibliography.

- ACSM (1993): Surveying and Mapping Education in the United States, *American Congress on Surveying and Mapping*, USA.
- ACSQ (1991): *Draft Policy on Surveying Education in Queensland*, Association of Consulting Surveyors, Queensland.
- AKCLIS (1992): *Annual Report*, Australian Key Centre in Land Information Studies, Queensland.
- Allaburton, R. (1990): Cartographic Education and Training - The Challenge of Change, *The Globe*, 33, 50-54.
- Anderson, A. A. (1991a): Three Kinds of Goodness: Clustering Courses as a Model for Contemporary Higher Education, *Studies In Higher Education*, 16(3), 309-318.
- Anderson, A. E. (1992): Delivering Information Technology to the Community, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), 114-121.
- Anderson, D. (1991b): Universities and the Professions, *Australian Educational Researcher*, 18(1), 1-15
- Anderson, J. M. (1991c): Undergraduate Cartographic Education in Canada, *CISM Journal ACSGC*, 45(1), 157-160.
- Anson, R. W. (1991): Cartography at Oxford Polytechnic, 1987-91, *The Cartographic Journal*, 28, 67-71.
- Atkinson, R., Latchem, C. and Davy, G. (1991): Live -Net and Beyond: a University and TAFE Video Conferencing Consortium in WA, Quality in Distance Education, *ASPESA Forum 91*, (Atkinson, R., McBeath, C. and Meacham, D.), Bathurst, NSW, 20-31.
- Australian Educational Council Review Committee (1991): *Young Peoples Participation in Post-Compulsory Education and Training*, (T. B. Finn - Chair), Government Publishing Services.
- Back, D. and Timmers S. (1991): Quality, Cost and Volume: What Can We Learn From the Open Learning Institute of Hong Kong? Quality in Distance Education, *ASPESA Forum 91*, (Atkinson, R., McBeath, C. and Meacham, D.), Bathurst, NSW, 32-41.
- Baker, D. and McLaughlin, J. (1991): *Geomatics 2000 - Towards the Spatial Information Marketplace of the Next Decade*, *AURISA 91: 19th Australian Conference on Urban and Regional Information Systems*, Wellington, 1-12.
- Balle, G. (1994): New Challenges in Education Programme for Surveyors and Planners, *Proceedings of the XX FIG International Congress*, Melbourne, Section 206.2: 179-187.
- Bedard, Y., Gagnon, P. and Gagnon, P. A. (1988): Modernising Surveying and Mapping Education : The Programs in Geomatics at Laval University, *CISM Journal ACSGC*, 42(2), 105-114.
- Beletech, A. (1995): Paraprofessional Training for the Surveyor in NSW TAFE Commission, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 59-62.

- Bell, K. C. and Puniard, D. J. (1991): The Profession of Surveying: Are We Still Relevant?, Issues and Strategies, *33rd Australian Surveyors Congress*, Albury, Paper 32.
- Benson, R., Collis, M., Parer, M. S. and Robinson, M. (1991): Achieving Quality in Distance Education, Quality in Distance Education, *ASPESA Forum 91*, (Atkinson, R., McBeath, C. and Meacham, D.), Bathurst, NSW, 44-52.
- Bialousz, S and Czarnecki, K. (1994): LIS Oriented Courses at the Warsaw University of Technology - Cooperation Proposal with Central-and East-European Countries, *Proceedings of the XX FIG International Congress*, Melbourne, Section 204.3: 122-132.
- Blais, J. A. R. (1991): On Some Practical Applications of Information Theory in Geomatics, *CISM Journal ACSGC*. 45(2), 239-247.
- Blinn, C. R., Queen, P. L., Hegstad, R. L. and Fitzpatrick, D. J. (1992): Systematic Development of Education and Training Programs: A Key to Successful GIS Development, *URISA*, 4(2):59-67.
- Bottomley, J. (1991): But Are They Real Degrees? Quality Assurance in Laddered Degree Completion Programs, Quality in Distance Education, *ASPESA Forum 91*, (Atkinson, R., McBeath, C. and Meacham, D.), Bathurst, NSW, 72-79.
- Bowden, J. A. (1990): Curriculum Development for Conceptual Change Learning: A Phenomenographic Pedagogy, *Educational Research and Development Unit Occasional Paper 90.3*, Victorian University of Technology.
- Brennan, B. (1993): How Incompetent are Australian Professionals In Describing Their Own Practice?, *CPE Conference, University of New England Conference*, Coffs Harbour, 1-14.
- Bretreger, K. (1991): A Brief Chronology and Present Status of Surveying Education at the University of Queensland, *The Australian Surveyor*, 36(4), 291-298.
- Bretreger, K. (1993): The Structure and Content of Surveying Degree Courses in Australia and New Zealand, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 272-281.
- Brock, J. F. (1992): Professional Surveyors - Who Needs Them, *34th Australian Surveyors Congress: 18th National Surveying Conference*, Cairns, 309-319.
- Brunner, F. K., Trinder, J. C., Rizos, C. and Pollard, J. R. (1993): Surveying Education: Curriculum Development at the University of New South Wales, *Survey Review*, 32(247), 2-21.
- Burrough, P. A. (1987): Principles of Geographical Information Systems for Land Resources Assessment, *Monographs on Soil and Resources Survey*, No. 12, Oxford Science Publications, NY.
- Cameron, W. N. and Williams, B. J. (1989): New Bachelor of Land Information Degree at RMIT, *The Australian Surveyor*, 34(8), 828-833.
- Campion, M. and Kelly, M. (1988): Integration of External Studies and Campus Based Education in Australian Higher Education: The Myth and the Promise, *Distance Education*, 9(2), 171-201.
- Carter, J. R., and Moynihan, R. G. (1988): What Employers in the Surveying and Mapping Sciences Want in a Person Entering the Job Market, and How They See Those needs Changing in the Near Future, *Surveying and Mapping*, 48(4), 285-292.
- Cartwright, W. E. (1992): Desktop Publishing and Map Production: Automation of Practical Elements of an Undergraduate Cartographic Programme, *1st Australian Conference on*

- Mapping and Charting*, (Lock, B.), The Australian Institute of Cartographers, Adelaide, 202-219.
- Cassettari, S. (1991): Geographic Information Systems at Kingston, *The Cartographic Journal*, 28, 71-75.
- Castner, H. W. (1991): Cartographic Languages and Cartographic Education, *CISM Journal ACSGC*, 45(1), 81-88.
- Chapman, B. (1992): Bachelor of Technology - GIS: - A Suitable Vehicle for Cartography?, *1st Australian Conference on Mapping and Charting*, (Lock, B.), The Australian Institute of Cartographers, Adelaide, 280-281.
- Chen, Y. (1995): Education for Surveyors in the Hong Kong Polytechnic University, *The 5th South East Asian and 36th Australian Surveyors Congress: Networking Into The 21st Century*, Singapore, 569-578.
- Clarke, J. (1995): DEET News, Department of Employment, Education and Training.
- Clarsen, H. (1992): The Roles of the Private and Government sectors in Land Information Management, *AURISA News*, 40: 13.
- Colcord, J. E. (1988): Surveying Engineering Education for the 21st Century, *Journal of Surveying Engineering*, 114(1), 37-46.
- Coldeway, D. O. (1988): Methodological Issues in Distance Educational Research, *The American Journal of Distance Education*, 2(3), 45-53.
- Coleman, D. J. and McLaughlin, J. D. (1988): The Canadian Surveying and Mapping Industry in 1987, *The Australian Surveyor*, 34(1), 19-26.
- Cook, J. S and Dawson, P. W. (1992): Creating Incentives for Cadastral Reform, *34th Australian Surveyors Congress: 18th National Surveying Conference*, Cairns, 361-375.
- Coombes, P. (1995): Geomatics? Low Quality Students?, *The Australian Surveyor*, 40(2), 149-152
- Cooley, W. W. (1983): Improving the Performance of an Education System, *Education Researcher*, 12: 4-12.
- Cooper, G. H. (1986): The Impact of Technology on the Teaching of Surveying, *The Australian Surveyor*, 33(3), 260-265.
- Coops, N. and Hill, C. (1991): The Global Positioning System, Remote Sensing and Geographic Information Systems: A Merging of Technologies, Issues and Strategies, *33rd Australian Surveyors Congress*, Albury, Paper 28.
- Dahlberg, R. E. and Jensen, J. R. (1985): *Educational Implications of the Integration of Cartography and Remote Sensing into a New Concepts Model, Education and Training in Contemporary Cartography*, (Taylor, D. R. F.), John Wiley and Sons, UK, 169-185.
- Dahlgren, L. (1993): *Phenomenography*, Video Recorded Interview, School of Social, Business and Environmental Education, Queensland University of Technology.
- Davies, K. J. (1991): *The Future Scope of the Surveying and Mapping Industry in Queensland*, Queensland Surveying and Mapping Industry Advisory Council Consultant Report.
- Dawkins, J. S. (1988): *Higher Education: A Policy Statement*, Australian Government Publishing Services, Canberra.

- de Meyere, J. C. (1989): Training the GIS Professional, *ITC Journal*, 1, 12-14.
- Denning, P. (1992): Educating a New Engineer, *Communications of the ACM*, 35(12), 83-97.
- Department of Lands Queensland (1992): *Discussion Paper on Possible Surveys Legislation in Queensland*, Department of Lands, Queensland.
- Divett, N. and Mawn, M. (1992): Surveyors and the Future, *34th Australian Surveyors Congress: 18th National Surveying Conference*, Cairns, 435-443.
- Douglas, B. and Eccelston, D. (1992): Developing an SIS Strategy for RTA, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), AURISA, 81-85.
- Dowling, D. G. (1991): Surveying Education - Where is it Going? *12th Surveying Industry Seminar*, Toowoomba, Paper 7, 1-12.
- Dowling, D. G. and McDougall, K. (1995): Undergraduate Surveying and GIS Courses at the University of Southern Queensland, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 52-55.
- Dwyer, J. L. (1995): Surveying to Geomatics - A Personal Reflection, *21st Surveying Conference: Surveyors and Surveying - Today and Tomorrow*, Hobart, 89-99.
- Edwards, D. (1995): The National Training Reform agenda, *Institution of Engineering and Mining Surveyors 1995 Yearbook*, R. Calaby (ed.) Australia, 9-10.
- Edwards, D, Ellis, N. and Archdall, N. (1995): Seamless Study from Diploma to Doctorate, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 47-51.
- Ellis, N. and Edwards, N. (1993): Articulation: Pathways for the Future, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 317-324.
- Employment and Skills Formation Council (1992): *The Australian Vocational Certificate Training System, (the Carmichael Report)*, National Board of Employment, Education and Training, Canberra.
- Enemark, S. (1993): Project-Organised Education - How To Do It, *Proceeding of the FIG 2 Workshop - Facing the Educational Challenges of the Future*, Aalborg University, Denmark, 67-78.
- Enemark, S. (1994): Facing the Educational Challenges of the Future, *Proceedings of the XX FIG International Congress*, Melbourne, Section 202.1: 42-49.
- Eisner, E. W. (1979): *The Educational Imagination: On the Design and Evaluation of School Programs*, McMillan, New York.
- Epstein, E. F. (1992): Control and Dissemination of Public Information, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), 1-6.
- Fairbairn, D. and Openshaw, S. (1991): Cartographic and GIS Activity at the University of Newcastle upon Tyne 1987-91, *The Cartographic Journal*, 28, 79-82.
- Foster, B. C. and Williamson, I. P. (1985): Past and Future Trends of Surveying Education in Australia, *The Canadian Surveyor*, 39(4), 427-435.
- Fraser, C. S. and Leahy, J. L. (1995): Geomatics at the University of Melbourne, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 3-5.

- Fryer, J. (1992): Cadastral Surveyors In New South Wales - How Many? The Australian Surveyor, 37(3), 176-180.
- Gagnon, P. and Coleman, D. J. (1990): Geomatics. An Integrated, Systematic Approach to Meet the Needs for Spatial Information, *CISM Journal ACSGC*, 44(4), 377-382.
- Gerber, R. (1990): Theoretical Studies in Cartography in Australia, *Cartography*, 19(2), 47-50.
- Gerber, R. (1992): Technology Education and Geography in Australian Higher Education, *Geography Monograph Series*, No. 1, Royal Geographical Society of Queensland Inc., Brisbane.
- Gerber, R. (1993): A Sense of Quality - Qualitative Research Approaches for Geographical Education: *Liber Amicorum Gunter Niemz, Internationale Beiträge zur geographischen Tachdidaktik und zur Regionalgeographie*, (Jäger, H.), Johann Wolfgang-University, Frankfurt am Main. 38-51.
- Gerber, R., Buzer, S., Worth, C. and Bruce, C. (1992): Is a GIS a GIS? or Coming to an Experimental understanding of GIS, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), AURISA, 18-25.
- Gonczi, A. (1993): Applying Competency Standards in the Professions, *CPE Conference*, University of New England Conference, Coffs Harbour, 1-20.
- Gough, E. (1980): Conference Dinner Address - New Horizons in Distance Education, *Evaluation in Distance Teaching: Workshop Proceedings*, (Armstrong, J. D and Store, R. E), James Cook University.
- Gracie, G. (1985): Striking the Right Balance Between Technology Studies and Liberal Education in Our University Programs, *The Canadian Surveyor*, 39(4), 371-376.
- Gracie, G. (1989): GIS in Surveying and Mapping Education in Canada, *CISM Journal ACSGC*, 43(3), 259-264.
- Granger, K. (1992): *Education and Training in Urban and Regional Information: The 1991-92 Australian Inventory*, Australian Urban and Regional Information Systems Association, Monograph No. 6.
- Granger, K. (1993): Dispensable Dinosaurs? *AURISA News*, 49, 18-20.
- Greenfeld, J. S. (1991): A Four Year Land Surveying Education: The New Jersey Experience, *Surveying and Land Information Systems*, 51(1), 33-44.
- Grenfell, R. I. and Finegan, A. F. (1991): GIS Technology Transfer - Interaction Between Academia and Industry, *AURISA 91: 19th Australian Conference on Urban and Regional Information Systems*, Wellington, 393-401.
- Griffin, C. (1983): *Curriculum Theory in Adult and Lifelong Education*, Croom Helm, UK.
- Groot, R. (1989): Meeting Educational Requirements in Geomatics, *ITC Journal*, 1, 1-4.
- Groot, R. (1991): Education and Training in Geomatics in Canada: A Discussion Paper, *CISM Journal ACSGC*, 45(3), 365-382.
- Hanna, J. (1995): The Changing Face of Surveying Education, *The 5th South East Asian and 36th Australian Surveyors Congress: Networking Into The 21st Century*, Singapore, 559-568.
- Hannigan, B. (1993a): Report from the Board on Matters Raised at Ballarat, *1992 Conference of Reciprocating Boards of Australia and New Zealand*, 1-7.

- Hannigan, B. (1993b): Development of a Board Policy on Education and Training, Queensland Surveyors Board Educational Committee Item 3.5, Personal Communication, 1-3.
- Hannigan, B. (1995): The Queensland Education Model, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 10-13.
- Hannigan, B. J. (1988): The Development and Implementation of a New Model for Surveying and Mapping Education and Training in Queensland, MSc Thesis, University of Queensland.
- Hannigan, B. J. (1990a): The Role of Surveying in Society - Has it Changed?, *The Australian Surveyor*, 35(3), 209-228.
- Hannigan, B. J. (1990b): Re-uniting the Surveying and Mapping Industry by Coordinating its Educational Model. *The Australian Surveyor*. 35(3), 273-292.
- Hannigan, B. J. (1992a): The Cadastre: An Impediment to Rural reconstruction, Synopsis Booklet, *13th Annual Surveying Seminar: Development and Conservation - The Surveyors Role*, Paper 10, 1-21.
- Hannigan, B. J. (1992b): Strategies for the Management of the Education and Training Process, *34th Australian Surveyors Congress/ 18th National Surveying Conference*, Cairns, 423-429.
- Heywood, L., Gonczi, A. and Hager, P. (1993): *A Guide to Development of Competency Standards for Professions*, National Office of Overseas Skills Recognition, Research Paper No. 7, AGPS.
- Higgins, M. (1992): A Discussion Paper on Survey Integration , Department of Lands, Queensland.
- Higher Education Council (1990): *Higher Education: The Challenges Ahead*, National Board of Employment, Education and Training. AGPS.
- Higher Education Division (1992): Competency Standards, *Higher Education News*, Department of Employment, Education and Training, AGPS, September 1992, 22-23.
- Hirst, W. G. and Masters, E. (1992): Recording Graphical Data Accuracy, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), URISA , 436-443.
- Hocking, D. R. (1990): The Surveying and Mapping Connection into the 1990's, *32nd Australian Surveyors Congress*, Canberra, Paper 26, 1-11.
- Hocking, D. R. (1991): The Surveying and Mapping Connection into the 1990's, *The Australian Surveyor*. 36(1), 5-13.
- Holmberg, B. (1989): The Concept, Basic Character and Development Potentials Of Distance Education, *Distance Education*, 10(1), 127-134.
- Hoogsteden, C. C. and Williamson, I. P. (1991): No easy Road - Accountability in Modern Education for professional Surveyors, *The Australian Surveyor*, 36(4), 308-325.
- Hubert, G. (1989): Mixed Mode Study: Has it a Future, *Studies in Higher Education*, 14(2), 219-229.
- Hunter, G. J. and Beard. K. (1992): Understanding Error in Spatial Databases, *The Australian Surveyor*, 37(2), 108-119.
- IEMSA. (1992): *Proposed Bachelor Technology, Surveying - University Southern Queensland: IEMSA Submission to the USQ on the Proposed New Course*, Institute of Engineering and

- Mining Surveyors Australia Inc., Queensland.
- Institution of Engineers (1990): *The Institution Towards 2000: Professional Development Opportunities for Engineering Workforce*, The Institution of Engineers, (Australia), Canberra.
- Institution of Surveyors (1992): *Guidelines for Continuing Professional Development*, Institution of Surveyors, Queensland Division.
- ISA and CSQ. (1992): A Registration Model, *Queensland Surveyors Bulletin*, December, 50-54).
- Johansson, B., Marton, F. and Svensson, L. (1985): *An Approach to Describing Learning as Change Between Qualitatively Different Conceptions, Cognitive Structure and Conceptual Change*, Academic Press. 233-257.
- Johnson, P (1993): Competency Standards and the Professions, Presented at the Land Professionals Mini-Conference, Brisbane. Personal copy give out at the conference.
- Johnson, R. (1990): *Open Learning: Policy and Practice*, National Board of Employment, Education and Training, Commissioned Report 4, AGPS.
- Johnston, S. (1991): Future Directions for Land Information Systems, *12th Surveying Industry Seminar*, Toowoomba, Paper 2, 1-5.
- Jones, K and Ellis, G. (1994): The Challenge of Meeting the Professional Educational Demands of a Changing Society, *Proceedings of the XX FIG International Congress*, Melbourne, Section 202.2: 50-61.
- Jordan, L. E. and Star, J. (1992): A call to Action: Standards for the GIS Community, *Photogrammetric Engineering and Remote Sensing*, 58(6), 863-864.
- Keates, J. S. (1991): University of Glasgow, Department of Geography and Topographic Science, *The Cartographic Journal*, 23, 76-78.
- Kelly, G. D., Fitzpatrick, B. T., Phinn, S. R. and Hill, G. J. E. (1991): What Does the Processing of Satellite Imagery and Cartography Have in Common, *Cartography*, 20(1), 25-32.
- Kennedy, E. A and Woolnough, D. F. (1994): Canada Breaks New Ground in Geomatics Education and Training. *Proceedings of the XX FIG International Congress*, Melbourne, Section 205.2: 161-173.
- Kennie, T. (1994): Managing in a Changing World: Some Key Themes for Surveyors, *Proceedings of the XX FIG International Congress*, Melbourne, Section 202.4: 74-93.
- Kjersdam, F. (1993) : Experience from Problem-Based Project-Organised Engineering Education, *Proceeding of the FIG 2 Workshop - Facing the Educational Challenges of the Future*, Aalborg University, Denmark. 79-105.
- Kvale, S. (1983): The Qualitative Research Interview: A phenomenological and a Hermeneutical Mode of Understanding, *Journal of Phenomenological Psychology*, 14(2), 171-190.
- Kvale, S. (1989): *To Validate is to Question, Issues of Validity in Qualitative Research*, (Kvale, S.), Studentlitteratur. Sweden, 73-92.
- Lagerlow, T. W. (1988): Integration of Surveying and Mapping Education in a Unified Industry - the Old and the New, *7th Australian Cartographic Conference*, Sydney, 539-550.
- Langley, R. B. (1985): Colloquium on Surveying and Mapping Education (Introduction), *The*

- Canadian Surveyor*, 39(+), 292-293.
- Laurema, M. (1994): Computer Assisted Learning Environments for Cartography and GIS Education, *Proceedings of the XX FIG International Congress*, Melbourne, Section 207.1: 188-198.
- Laurillard, D. (1990): *Phenomenographic Research and the Design of Diagnostic Strategies for Adaptive Tutoring Systems*, NATO Advanced Study Institute on Instruction and Cognitive Science presentation, University of Calgary, Canada.
- Leahy, F. and Williamson, I. (1991): Educating Surveyors for the Next Century: Issues and Strategies, *33rd Australian Surveyors Congress*, Albury, Paper 8,1-11.
- Leis, B. (1992): If the Opportunity Fits - A Change for Australia, *34th Australian Surveyors Congress: 18th National Surveying Conference*, Cairns, 471-479.
- Little, J. (1993): *Providing New Value for Members: Towards an Australian Institute of Geomatics*, Institution of Surveyors, Australia.
- Lodwick, G. and Wright, G. (1993): Integrated Surveying Education Through the 1990s, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 292-302.
- Lodwick, G. (1995): Surveying and Mapping Education at Curtin University, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 24-31.
- Lundin, R. (1990): *Using Communication Technologies in the Queensland Open Learning Project*, Open Learning Centre Network, Brisbane.
- Lundin, R., Williams, H., Bartlett, L., Gerber, R. and Scriven, B. (1991): *Open Access For Teachers' Professional Development*, The Department of Employment, Education and Training, Queensland.
- Lyons, K. J. (1984): *An Evaluation of Surveying and Mapping Education and Training in Queensland*, The Commonwealth Tertiary Education Commission Evaluative Studies Programme, Brisbane.
- Marshall, C. and Rossman, G. B. (1989): *Designing Qualitative Research*, Sage Publications, USA.
- Marton, F. (1981): Phenomenography - Describing Conceptions of the World Around Us, *Instructional Science*, 10, 177-200.
- Marton, F. (1984a): *Towards the Psychology Beyond the Individual*, *Psychology in the 1990's*, (Lagerspetz, K. and Niemi, P.), Elsevier, Amsterdam, 45-72.
- Marton, F. (1984b): Phenomenography - A Research Approach to Investigating Different Understanding of Reality, *Journal of Thought*, 21(3), 28-49.
- Marton, F. (1988a): Describing and Improving Learning, *Learning Strategies and Learning Styles*, (Schmeck, R. R). Plenum, NY, 53-82.
- Marton, F. (1988b): *Phenomenography: Exploring Different Concepts of Reality*, *Qualitative Approaches to Evaluation in Education: The Silent Scientific Revolution*, (Fetterman, D. M), Praeger, NY, 176-205.
- Marton, F. (1989): Towards a Pedagogy of Content, *Educational Psychology*, 24(1), 1-23.
- Marton, F. (1992): *Qualitative Research and Phenomenography*, *Video Recorded Interview*,

- School of Social, Business and Environmental Education, Queensland University of Technology.
- Marton, F., Dall'Alba, G. and Beaty, E. (1993): Conceptions of Learning, *International Journal of Educational Research*, (Saljo, R.). 19(3), 277-299.
- Maseyk, J. (1995): Membership Committee to Consider a Commission Structure for the Institute, *Survey Quarterly*, 1.
- McDougall, K. and Dowling, D. (1996): Education, Communication and integration: A Look at the Future of Distance Education in Surveying, *37th Australian Surveyors Congress*, Perth, 435-443.
- McEwen, A. C. (1990): The Challenge of Professional Education in Canada, *International Federation of Surveyors Congress*, Finland, Paper 102.3, 67-75.
- McGhie, I. A. (1992): Graduate Diploma in Surveying Practice: 1991 Annual Report, Queensland University of Technology.
- McGrath, G. and Harding, A. G. (1985): A Case for Including Education in Management and Development Strategy Within Degree Programs in Surveying and Mapping, *The Canadian Surveyor*, 39(4), 401-415.
- McIlroy, J. (1989): Continuing Education: Do the Universities Mean Business, *Studies in Higher Education*. 14(3), 331-344.
- McKnoulty, J. and Dunlop, G. (1992): Opportunities for the Consulting Surveyor in Heritage and Environmental Conservation, Synopsis Booklet, *13th Annual Surveying Seminar: Development and Conservation - The Surveyors Role*, Paper 8, 1-24.
- McLaughlin, J. (1991): Towards a National Spatial Data Infrastructure, *GIS-91*, Canadian Institute of Surveying and Mapping, Ottawa, 1-25.
- McLaughlin, J. D. and Nichols, S. E. (1989): Resource Management: The Land administration and Cadastral Systems Component, *Surveying and Mapping*, 49(2), 77-85.
- McLaughlin, J., Kennedy, E., Woolnought, D., Isaacs, I., O'Connor, S., Zenco, J. and Batterham, R. (1991): *Geomatics Human Resources Planning Study - Final Report, Report of the Geomatics Industry Adjustment Committee*, Geomatics Industry Association of Canada.
- McLennan, B. (1992): Environmental Ethics, Synopsis Booklet, *13th Annual Surveying Seminar: Development and Conservation - The Surveyors Role*, Paper 7, 1-7.
- Meyer, J. H. F. and Muller, M. W. (1990): Evaluation of the Quality of Student Learning. I - an Unfolding Analysis of the Association Between Perceptions of Learning Context and Approaches to Studying on the Individual Level, *Studies in Higher Education*, 15(2), 151-152.
- Miller, W. R. (1992): Creating a New Geographer, *ARC News*, 14(1), 18.
- Mitchell, H. (1993): Combined Degrees in Surveying at Australian Universities, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 341-349.
- Mitchell, H. and Fryer, J. G. (1995): The Subject Structure of the Bachelor of Surveying Degree at the University of Newcastle, *June 1995 Educational Supplement: The Australian Surveyor*. Australia, 32-39.
- Moran, L., Hont, J., Calvert, J. and Bottomley, J. (1993): *Electronic Facilities Network to Enhance Tertiary Open Learning Services*, Deakin University, Australia.

- Morrison, J. L. (1985): U.S. Cartographic Education: Needs for the Remainder of the Century, *Education and Training in Contemporary Cartography*, (Taylor, D. R. F), John Wiley and Sons, UK, 85-109.
- Mueller, I. I. (1990): Surveying Education at a Crossroads, *Proceeding XIII North American Surveying and Mapping Teachers Conference*, Canada, Chapter 3, 9-19.
- Munsie, S. (1993): Continuing Professional Development: A Unified Approach, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 326-338.
- Murphy, T. (1992): Membership Profile Survey, *Cartography*, 21(2), 34-38.
- Muspratt, M. A. (1992): Engineering Education to the Year 2000, *Proceedings 4th Annual Convention and Conference*, Australasian Association for Engineering Education, Brisbane, 1-6.
- NBEET (1992): *Post Compulsory Education and Training: Fitting the Need*, AGPS.
- NTB (1991): *NTB Network*, 1, AGPS.
- NTB (1992): *Industry Competency Standards and Key Competencies*, The National Training Board Ltd., Australia, AGPS.
- Openshaw, S. (1992): Some aspects of Information Technology and the Future, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), AURISA, 104-113.
- Ormeling, F. (1988): Education Training in Cartography, *7th Australian Cartographic Conference*, Sydney, 527-538.
- Ormeling, F. (1992): Education and Training in Cartography 1987- 1992, *International Union of Surveying and Mapping Commission on Education Meeting*, Washington, USA.
AWAITING FULL DETAILS
- Ormeling, F. (1993): Teaching Core Concepts of Cartography to its Sister Sciences, *Proceeding of the FIG 2 Workshop - Facing the Educational Challenges of the Future*, Aalborg University, Denmark, 114-124.
- Ormeling, F. (1994): Joint Course Curricula in the Surveying and Mapping Field, *Proceedings of the XX FIG International Congress*, Melbourne, Section 201.1: 1-7.
- Persson, M. (1993): Role of CPE in The National Training Agenda (opening address), *CPE Conference, University of New England Conference*, Coffs Harbour, 1-9.
- Pollard, J. R. and Robinson, A. J. (1985): Practical Work: An Important Component of an Undergraduate Surveying Degree Course, *The Canadian Surveyor*, 39(4), 363-370.
- Preston, N. (1991): Applied Ethics: A challenge for Australian Universities, *Social Alternatives*, 10(3), 56-59.
- Prosser, A. P. (1989): Issues in Teaching Engineering and the Applied Sciences, *Research and Development in Higher Education*, 12. 276-278.
- Ramsden, P. (1992): *Learning to Teach in Higher Education*, Routledge, London.
- Ramsden, P., Marton, F., Laurillard, D. M., Martin, E., Masters, G. N., Stephanou, A. and Walsh, E. (1993): Phenomenographic Research and Measurement of Understanding,

- International Journal of Educational Research*, (Saljo, R.), 19(3), 301-316.
- Renstrom, L., Andersson, B. and Marton, F. (1990): Students Conceptions of Matter, *Journal of Educational Psychology*, 82(3), 555-569.
- Rhind, D., Joao, E. and Raper, J. (1991). *The Role of Birkbeck College in GIS Research and Teaching*, SERRL Working Report Number 33, 1-16.
- Roberts, D., Boyton, B., Buete, S. and Dawson, D. (1991): Applying Kembers' Linear-Process Model to Distance Education at Charles Sturt University - Riverina, *Distance Education*, 12(1), 54-83.
- Rouch, J and DeLoach, S. (1994): Technical Education of Surveyors in an Era of Push Button Technology, *Proceedings of the XX FIG International Congress*, Melbourne, Section 208.1: 238-244.
- Saljo, R. (1988): Learning in Educational Settings: Methods of Inquiry, *Improving Learning: New Perspectives*, (Ramsden, P.), Kagan Page, NY. 32-48.
- Sandberg, J. (1991): *Competence as Intentional Achievement: A Phenomenographic Study*, Occasional Paper 91.4, Educational Research and Development Unit, Royal Melbourne Institute of Technology.
- Schneider, J. R. (1994): The Advantages of a Multidisciplinary Surveying Education to Meet the Global Changes, *Proceedings of the XX FIG International Congress*, Melbourne, Section 205.1: 145-160.
- Scriven, B. (1991): Distance Education and Open Learning - Implications for Professional Development and Retraining, *Distance Education*, 12(2), 297-305.
- Shale, D. (1988): Towards a Reconceptualization of Distance Education, *The American Journal of Distance Education*, 2(3), 25-34.
- Skitch, R. F. (1991): The Role of Cartographers in Land Information. Australian Institute of Cartographers Submission to the Public Sector Management Commission, *Scribesheet*, 91(2), 6-8.
- Smith, K. (1991): Organisation of the Institute; National Report to ICA, 1991. Australia, *Cartography*, (Smith, K), Supplement, 6-12.
- Sprent, A. and Osborn, J. E. (1995): Geomatics Education at the University of Tasmania, *21st Surveying Conference: Surveyors and Surveying - Today and Tomorrow*, Hobart, 89-99.
- Survey Industry Review Commission (1991): *Surveying the Future*, Report by the Survey Industry review Commission, New Zealand Institute of Surveyors.
- Svensson, L. (1989): The Conceptualisation of Cases of Physical Motion, *European Journal of Psychology of Education*, IV(4), 529-545.
- Swiney, D. G. and Sneddon, J. (1991): The Undergraduate Education and Training of Army Survey Officers, Issues and Strategies, *33rd Australian Surveyors Congress*, Albury, Paper 9,1-11.
- TAFE.TEQ (1992): *Review of Alternative Delivery Strategies and Distance Education in TAFE.TEQ*, Queensland, TAFE.TEQ, Queensland.
- Task Force (1991): *Report on the Status of the Geomatics Industry in Canada 1991*, Geomatics Industry Association of Canada.
- Taylor, D. R. F. (1985): *The Educational Challenges of a New Cartography*, *Education and*

- Training in Contemporary Cartography*, (Taylor, D. R. F), John Wiley and Sons, UK, 3-26.
- Taylor, D. R. F. (1992): A Conceptual Basis for Cartography: New Directions for the Information Era, *Cartography*, 20(2), 44-48.
- Taylor, J. C. (1991): *Designing Instruction to Generate Expert Cognitive Skill Performance: Empirical Evidence, Teaching and Learning Cognitive Skills*, (Evans, G), Australian Council for Educational Research, Melbourne, 1-18.
- Thorne, B. (1995): Competency-based for Professional Surveyors, *Surveying Australia*, 17(1), 17-19.
- Tight, M. (1989): Part-Time Higher education as Open Learning, *Open Learning*, 4(2), 3-6.
- Toms, K. and Perel, B. (1990): Towards A Surveying, Mapping and Geographic Information Industry in Queensland, *11th Annual Surveying Seminar*, UCSQ, Toowoomba.
- Toms, K. N. (1991): The Winds of Change in Title Systems and Their Effect on the Cadastral Surveyor, *The Australian Surveyor*, 36(1), 14-21.
- Trinder, J. (1993): The Impact of Education Policies in Australia on Surveying Education and Research, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 282-291.
- Trinder, J. and Li, L. (1996): Career Prospects for Surveyors/Geomatics Engineers, *37th Australian Surveyors Congress*, Perth, 87-96
- Trinder, J. C. (1990): LIS/GIS - Is There a Future for Surveyors, *32nd Australian Surveyors Congress*, Paper 23, 1-8.
- Trinder, J. C. and Fraser, C. S. (1994): Geomatics. The Case for a Change of Name of the Discipline in the Academic Context, *The Australian Surveyor*, 39(2), 87-91
- Usher, W. D. (1985): Surveying and Mapping Education in Canada - Requirements from the Industry's Perspective, *The Canadian Surveyor*, 39(4), 297-303.
- Viitanen, K. (1994): New Challenges to the Education of Surveyors in Finland, *Proceedings of the XX FIG International Congress*, Melbourne, Section 204.4: 133-144.
- Visvalingam, M. (1992): Cartography and Geographic Information Systems, *The Cartographic Journal*, 29(1), 51-54.
- Walker, J. (1993): The History and Philosophy of the Competency Movement in Australia, *CPE Conference*, University of New England Conference, Coffs Harbour, 15-23.
- Warner, S., Marling, G. and Hannigan, B. (1991): Continuing Professional Development. Panacea: Placebo or Poison for the Profession, *12th Surveying Industry Seminar*, Toowoomba, Paper 5, 1-31.
- Wells, W. (1991): Surveying Engineering at the University of New Brunswick: 1960-1990, *CISM Journal ACSGC*, 45(4), 579-539.
- Whitehead, E. J. (1992): The Development of National Competency Standards for the Engineering Profession, *Proceeding of the 4th Annual Convention and Conference*, Australian Association for Engineering Education, Brisbane, 7-12.
- Williams, B. J., (1988): Future Directions for Cartographic Education, *7th Australian Cartographic Conference*, Sydney, 551-554.

- Williams, B. J. (1992): Changing Roles of Cartographers, *1st Australian Conference on Mapping and Charting*, (Lock, B.), The Australian Institute of Cartographers, Adelaide, 236-242.
- Williams, R. J. (1996): Cartography: A New Era has Begun, *Cartography*, 25(1), 11-36.
- Williamson, I., Hunter, G. and Leahy, F. (1993): Education for Surveyors - A Vision for the 21st Century, *Proceedings 35th Australian Surveyors Conference (ISA) and 19th National Surveying Conference (IEMSA)*, Darwin, 303-315.
- Williamson, I. P. (1981): A Modernised Survey Profession - An Australian View, *The Canadian Surveyor*, 35(3), 292-302.
- Williamson, I. P. and Hunter, G. J. (1990): Education and Research Strategies in Land and Geographic Information Systems at the University of Melbourne, *18th AURISA Conference*, Canberra, 19-26.
- Williamson, I. P. and Morrison, T. (1978): *Questionnaire to Graduate of the School of Surveying*, University of New South Wales, Unisurv, New South Wales, G28, 94-121.
- Williamson, I. P. (Undated): Cadastral and Land Information Systems - Where are we Heading?, University of Melbourne.
- Willis, P. (1993): The LACEQCS Project: Reflective Group Support and Self Monitoring in Continuing Professional Development, *CPE Conference*, University of New England Conference, Coffs Harbour, 109-118.
- Wilson, B. G. (1992): A New Era for Land Information Management in Queensland, *Proceedings AURISA 92 - Power to the People: The Community, Information and Management*, (Gerber, R.), AURISA, 8-16.
- Wilson, B. H. (1994): The Western Australian TAFE Solution, *Surveying Australia*, 18(3), 50-54.
- Wood, C. H. and Forrest, D. (1985): *Cartography and Computers in University Education: The Memorial University of Newfoundland Example. Education and Training in Contemporary Cartography*, (Taylor, D. R. F), John Wiley and Sons, UK, 157-168.
- Worth, C. (1991): Cartographic Education in Australia, *Cartography Supplement: National Report to ICA*, 1991. Australia, 98-100.
- Worth, C. (1992a): The Present and Future States of Cartographic Education in Australia, *1st Australian Conference on Mapping and Charting*. (Lock, B.), The Australian Institute of Cartographers, Adelaide, 282-292.
- Worth, C. (1992b): Cartography and Geographical Information Systems: The 1992 National Education Report, *Cartography*, 21(1), 1-15.
- Young, F. R. (1994): Flexible Education For The Future Generic Surveyor/Cartographer, *Proceedings of the XX FIG International Congress*, Melbourne, Section 207.3: 211-223.
- Zubek, G (1981): Restructuring of the Association of Ontario Land Surveyors, *The Canadian Surveyor*, 35(3), 251-254.