



## Present Position

## Key skills

# Curriculum vitae

## Nick Rushby

Director, Conation Technologies Limited

Nick Rushby has been working in the area of educational and training technology for over 39 years. Following a first degree in Electronic Engineering, he gained his postgraduate Diploma from Imperial College in Computer Science, specialising in artificial intelligence applications in computer assisted learning. During his career he has coordinated projects for the National Development Programme in Computer Assisted Learning, directed an international information centre for the use of computers in education and training, led multimedia training activities for PA Consulting Group, and headed the engineering team developing a novel multimedia advertising system for airports and subway environments. He has worked with a wide variety of clients in most business sectors and at all levels of their organisations including consulting at board level. Nick is particularly interested in the rail and motorsport industries. He co-founded Conation Technologies in September 2001.

- Strategic consultancy on training systems and programmes with particular emphasis on the rail industry
- Research into, and investigation of, education and training systems in national and international contexts.
- Managing organisational and human factor aspects of innovation in education and training.
- Management of large and complex training projects.
- Development of sets of occupational competences and their application in training systems
- Evaluation of training systems and projects against strategic business objectives.
- Application of appropriate technologies in education and training.
- Transferring skills to client staff through training and coaching.
- Development of safety cases, particularly for the rail industry.
- Development of innovative technology based training packages.
- Staff development in the areas of managing innovation, the development and deployment of technology based learning

## Previous Experience

October 1998 – September 2001, DHJ Media (UK) Limited. Nick joined DHJ having previously developed the functional specification for the Outdoor Evolution system - an innovative system to deliver multimedia messages within public areas. He was responsible for managing implementation projects, including a major installation across London Underground. This involved design, safety case work, liaison with partners developing innovative system components, sites surveys and supervising installation and commissioning work.

July 1987 – September 1998 PA Consulting Group, London. Joined PA to set up and run Sundridge Training Process Re-engineering which built on the total immersion learning approach and existing tutorial expertise at Sundridge Park Management Centre. The Unit developed appropriate resources to assist in the development of managers and their people using a range of technologies, including print, audio, video, computer based training and interactive video to produce effective and efficient flexible training materials. His work ranged widely across PA and included developing training for IT systems developed for PA clients, reviews of training materials and training strategies, and the use of mobile solutions for assessing competence in the workplace and for delivering performance support systems.

Sep 1984 - Jun 1987 Centre for Staff Development in Higher Education, London. As a senior consultant, he was involved in a broad range of staff development activities for higher education and the training community, both in the UK and overseas.

Jan 1978 - Aug 1984 CEDAR (Computers in Education As a Resource) Project and CITAR (Computers in Training As A Resource). Imperial College, London. Nick set up and directed these units whose aim was to encourage and facilitate the development and use of educational computing within and beyond Imperial College. The Unit operated the central UK information service on the use of computers in education and training. He undertook consultancy assignments in a number of countries in Europe (including Eastern Europe) and South East Asia. From October 1980 to July 1981 he was Educational Technology Research Fellow at Imperial College London

Jan 1975 - Dec 1977 National Development Programme in Computer Assisted Learning, London. Project co-ordinator and manager.

Jun 1972 - Dec 1974 Brighton Polytechnic Computer Centre. General academic use of computers, computer managed Fortran Teaching System.

Sep 1969 - May 1972 Marconi Company Limited.

Sep 1966 – Aug 1969 English Electric Scholar

His consultancy assignments include:

*Network Rail* (June 2009 – present) Working with Park Signalling to develop strategies for training on Automatic Train Protection systems.

*NovaRail* (2006-2009) Design and development of the NovaRail training management system, configured specifically for the GB rail industry. The system has been trialled successfully with two train operating companies.

*Department for Work and Pensions* (September-November 2008) Led a feasibility study on the provision of a web-based Single Point of Access for training and development across the Department.

*Rail Safety and Standards Board* (April 2008– March 2009) Research on how adult learning styles are taken into account in rail training and assessment. The research identified and quantified key learning parameters for a representative sample of rail staff, and reviewed sample materials in the light of what is known about their learning styles. The project culminated in a series of six workshops for rail trainers.

*British Educational Communications and Technology (Becta)* (March – December 2007) Understanding the past – illuminating a future. A project to identify key ICT research from the period 1980-1999 and make the findings more accessible to the current generation of researchers.

*Rail Safety and Standards Board* (February – April 2007) A review of simulation in the rail industry. This project updates earlier work to paint a comprehensive picture of the various ways in which simulation is being deployed for training and assessment across the UK rail industry and in other safety critical industries.

*NetworkRail* (January 2007 – present) Working with Park Signalling to support the Radio Electronic Token Block (RETB) midlife upgrade. The work includes human factors studies, a full training strategy, and the design, development and delivery of training for signallers and maintainers,

*British Educational Communications and Technology Agency (Becta)* (November 2005 – February 2006) Study of commercial developers' business needs and Becta masterclasses. This project arose from the recommendations of the earlier study to explore the specific needs of small and micro developers and how they can be helped by the DTi network of small business advisors.

*British Educational Communications and Technology Agency (Becta)* (March – December 2005) Study of the needs of educational content developers to inform Becta's provision of information to this community.

*Rail Safety and Standards Board* (February 2005 – February 2006) A research study: Technology to support practical

decision-making and competence assessments. This project evaluated the potential contribution of existing, new and emerging technologies within the rail industry and other safety critical industries and explored ways in which they can be used to improve safety.

*Futuremedia plc* (October 2003 – December 2004) consultancy services on various aspects of e-learning including project management, virtual reality training simulations and provision of vocational training.

*British Learning Association* (July 2003 – January 2004) Led the response from the BLA to the UK DfES Unified e-Learning Strategy consultation. This work culminated in the formation of the Moore Group which brings together representatives of the professional bodies in the corporate e-learning sector to discuss issues of mutual interest – including government strategy. Nick convenes and chairs the Moore Group, and also represents the group on the DfES/eSkills Workbased e-learning stakeholders group.

*Network Rail* (July 2002- December 2003) The design and development of system training strategy and training materials for new signalling equipment to be installed on the UK railway network in 2003. Unusually, the training was developed in parallel with the design and development of the equipment itself and is influencing some aspects of the design and deployment.

*UK Rail industry* (December 2001-present) Development of a infrastructure to support rail industry training across the UK.

*Unilever Frozen Foods Division* (January – August 1999) Advised the Board on a European-wide strategy for the transition through the Millennium.

*Institute of Grocery Distribution* (January 1998 – August 1999). Nick project managed the design and development of a website to help members of the Institute address the Year 2000 problem. This included an assurance system to enable members determine the progress of their trading partners on the route to compliance. The website was complemented by a CD-ROM and print based material.

*A communications service provider* (September-November 1997) Nick oversaw and audited a competitive trial of three service providers comparing costs, reliability and transfer speed of a series of typical messages.

*Scottish Office:* (March-May 1997) Nick led a small team to develop training materials for users of the new General Practice Administration System for Scotland.

*Benefits Agency:* (March 1997) Led an organisational review of the training team within the Cross Benefits Unit.

*Benefits Agency:* (March 1997) He carried out a post implementation review of new training packages. This work led to a new methodology for such reviews in the Agency.

*A major multinational company:* (April-November 1996) Nick provided project management and specialist technical support for the development of a multimedia brand communication tool. Because this was a mission critical tool, quality was of the highest importance and Nick broke new ground in devising a methodology for assuring the quality of complex multimedia materials.

*Apple Computer:* Worked on a market study of mobile solutions in Germany.

*Aer Lingus:* (January-April 1996) Assessment of flight crew in simulators during recurrency checks. This built on the earlier work of workplace assessment using PDAs to investigate the potential for using similar techniques in flight crew training, with particular reference to cockpit resource management skills and human factors. This work is on-going and now involves Virgin Atlantic and Thomson Simulation and Training.

*Benefits Agency:* (August-November 1995) Development of the Education Strategy to support the introduction of the Common Accounting and Payments System.

*Sundridge Park Management Centre:* (September 1994-June 1995) Led the technological aspects of an internal project to change the mode of teaching/learning at PA's Management Centre at Sundridge Park. This involved the assessment of management competences, the provision of technology based training tools and computer mediated conferencing.

*National Health Service Training Division:* (March-December 1994) Led the development of a 'Health Check' to assess competence in respect of information management and technology for middle managers.

*Lloyds Bank Commercial Service:* (January-September 1994) Led and assignment to evaluate training material aimed at increasing managers' commercial awareness.

*UK Department of Employment:* (November 1993-April 1994) Co-director and author of a study of the current state and future prospects of learning technologies in education and training, with the aim of helping the Department to make informed policy in this area.

*British Rail Infrastructure Services:* (December 1993-December 1995) A project, part funded by the UK Employment Department, to study the use of personal digital assistants (PDAs) as job aids for the assessment of competence, particularly in difficult and hostile environments. The pilot application was extended across the organisation and the concept was applied in several other industries.

*British Rail Infrastructure Support Group* (March 1992-December 1994) Nick led a three-year assignment to re-engineer the training and assessment system for signal and telecommunications staff to meet evolving customer needs for cost-effective, competence based training. The work

involved the development of a set of competences describing the work of signal and telecommunications staff, the development of a flexible training strategy and the project management for its implementation with about 2000 hours of training materials.

*Sun Alliance Life and Pensions:* (1990) Evaluation of the open learning programme to advise on value for money and on future strategy.

*National Audit Office:* (1990) Support for a value for money study on the use of simulation in military training.

*British Rail:* (1989) A study to establish the effectiveness of simulation for British Rail Driver Training, including the level of simulation and the areas of training where real benefits can be obtained, so as to enable the Board to make informed decisions about its deployment of simulators and its investment in this area.

*ANCIFAP:* (June 1990-April 1992) Consultant to the technology based training project for the Italian Mezzogiorno.

*CEC:* (September-November 1990) Member of the DELTA (Developing European Learning through Technological Advance) mid-term review team.

*Department of Employment - Learning Credit Card:* (January 1990-December 1992) Self-development and awareness Training. Co-director of a feasibility study of using technology to provide a continuous guidance and counselling service to individuals at the workplace, which will support them in meeting their personal development aims and objectives.

*Training and Development Lead Body:* (November 1989-May 1991) Member with particular responsibility for standards in technology based training.

*London Docklands Development Corporation:* (June-July 1989) Advising on the setting up of a post-16 college and negotiating curriculum with senior members of academic staff and local businesses.

*New Technologies in Training* (1984-1987): The design and delivery of courses for personnel and training managers responsible for deciding how best to meet the training needs of their organisation and what the new technologies can do to support the principles of adult learning.

*Interpersonal Skills Training - the Next Candidate* 1987-1989). The development and delivery of an multimedia interpersonal skills training course in interviewing skills (clients include PA Consulting Group and a major insurance company). A series of simulated interviews is used to confront learners with the consequences of their preparation for the interview and their behaviour as interviewers. This training package was published commercially in Europe and North America.

## Major publications

(a full list of publications is available at [www.conation-technologies.co.uk](http://www.conation-technologies.co.uk))

Nick Rushby is the author and editor of a number of books and papers on CBL and CBT. He currently edits the *British Journal of Education Technology*. His editorial experience includes:

Assistant editor *Programmed Learning and Educational Technology - PLET* (January 1979 - June 1983): Acting editor for 10 months of this time.

Editor *CALNews* (September 1984 - August 1989): a quarterly newsletter on the use of computers in education and training.

Series editor for the Ellis Horwood series *New Technologies in Training* (November 1985 - June 1986)

Editor *Interactive Learning International* and *ILI News* John Wiley (September 1988 - December 1992)

Guest editor *Educational and Training Technology International* **26** 2 Learning from failures (May 1989)

Editor *British Journal of Educational Technology* NCET and Blackwell Publishing (January 1993 to present). Deputy editor to December 1993)

Major publications include:

Rushby, N J, McMahon, H, Southwell, A, and Philpott, A (1976) Computer assisted management in learning: the CAMOL Project, in Clarke, J, and Leedham, J (Eds) *Aspects of Educational Technology X: Individualised Learning*. Kogan Page, London.

Rushby, N J, and McMahon, H (1977) The institutional transfer and adaptation of a content free computer managed learning system, in Hill, P, and Gilbert, J (Eds) *Aspects of Educational Technology XI: The Spread of Individualised Learning*. Kogan Page, London.

Rushby, N J, James, E B, and Anderson, J S A (1978) A three dimensional view of computer based learning in continental Europe. *Programmed Learning and Educational Technology* 15(2) pp 152-161.

Rushby, N J (1979) *An introduction to educational computing*. Croom Helm, London. (published in North America as *Computers in the Training Process*)

Rushby, N J (1980) Foci for computer based learning in the United Kingdom. In Howe, A (Ed) *International Yearbook of Educational and Instructional Technology 1980/81*. Kogan Page, London.

Rushby, N J, Anderson, J S A, Howe, A, Marrow, F, and

Warren Piper, D (1981) A recursive approach to teacher training in the use of CBL, in *Proceedings of IFIP Conference on Computers in Education*. Lausanne. North Holland, Elsevier.

Rushby, N J. (Ed) (1981) *Selected readings in computer based learning*. Kogan Page, London.

Meek, B L, Heath, P M, and Rushby, N J (Eds) (1983) *A guide to good programming practice*. (2nd Ed) Ellis Horwood, Chichester.

Rushby, N J (Ed) (1983) *State of the Art Report: computer based learning*. Pergamon Infotech, Maidenhead.

Contributor to *International Encyclopaedia of Education: Research and Studies*. Edited by Husen, T, and Postlethwaite, T N. Pergamon Press, Oxford. 1985.

Rushby, N J (1985) Computer based learning: the search for a surrogate teacher. In Bevan, N, and Murray, D (Eds) *State of the Art Report: Man/machine integration*. Pergamon Infotech. Maidenhead.

Rushby, N J, and Howe, A (Eds) (1986) *Aspects of Educational Technology XIX: information, education and training technologies - economics and other realities*. Kogan Page, London.

Rushby, N J (1986) A knowledge engineering approach to instructional design. *PLET* 23(3) and *The Computer Journal* 29(5).

Rushby, N J (1986) Courseware evaluation. *Interactive Learning International* 3(3). Wiley, Chichester.

Rushby, N J, Weil, S, Schofield, A, and Delf, G (1987) The ubiquitous trigger: a flexible resource. In Percival F (Ed) *Aspects of Educational Technology XX: Flexible Learning*. Kogan Page, London.

Rushby, N J (1987) From trigger video to videodisc: a case study in interpersonal skills. In Laurillard, D (Ed) *Perspectives in interactive video*. Ellis Horwood, Chichester.

Rushby, N J (1987) *Technology based learning: selected readings*. Kogan Page, London.

Mathias, H, Budgett, R, and Rushby, N J (Eds) (1988) *Aspects of Educational Technology XXI: designing for learning*. Kogan Page, London.

Rushby, N J and Schofield, A (1988) Conversations with a simulacrum. *Simulations, Games for Learning*.

Rushby, N J (1988) Design methodologies for technology



based training. *Interactive Learning International* 4(3/4). Wiley, Chichester.

Rushby N J, Twining J, Twining N and Devitt T (1990) Smart Cards in Education and Training *Interactive Learning International* 6(2)

Rushby N J, Twining J, Twining N and Devitt T (1990) The learning credit card *Interactive Learning International* 6(3) pp119-142

Rushby N J (1992) And see the place for the first time *Interactive Learning International* 8(4)

Rushby N J and Davies R (1994) The reality of workplace assessment *Training and Development* September.

Rushby N J (1994) PDAs: quantitative or qualitative change *Training Officer* **30** 10 314-315.

Rushby N J and Fairbrother R (1995) *Workplace assessment in a hostile environment* Report OL232 Department for Education and Employment

Rushby N J (1996) Assistants for assessment *Innovations in Education and Training International* **33** 3, 154-161

Rushby N J (1997) Quality criteria for multimedia *Association for Learning Technology Journal* **5** 2, 18-30

Johnston A N, Rushby N and MacLean I (2000) An assistant for crew performance assessment *International Journal of Aviation Psychology* **10** 1, 99-108

Rushby N J (2004) Peering over the horizon *e-Learning Age* July/August. 16-17

Rushby N J, Seabrook J and Fairbrother R (2004) Whatever happened to TD<sup>2</sup>? *IRSE News* Institution for Railway Signal Engineers, London. July/August pages 9-11.

Rushby N.J. (2008) A present from the past *Human Capital Management* Jan/Feb pp25-26.

Rushby, N.J. and Seabrook, J. (2008) Understanding the past: illuminating the future, *British Journal of Educational Technology* **39**, 2 pp 198-233 (part of a special issue of BJET on this topic)

Rushby N.J. (2009) Preserving the past – informing the future *Human Capital Management* Jan/Feb. pp6-7

Rushby N.J. (2009) Pooh-Bah with a keyboard *Editorial Office News*, ISMTE, June.

Chair of the Boyer International Award Committee 2001-2 and 2010

## Other appointments

**Education**

University College of North Wales  
Imperial College London  
London Institute of Education

**Qualifications**

BSc (Hons) Electronic Engineering  
Diploma of Imperial College (Computing Science)  
Diploma in Teaching and Course Management (University of London)

**Membership**

Fellow, Chartered Institute of Personnel and Development  
Fellow: British Institute of Learning and Development  
Associate, Institution of Railway Signal Engineers