COMPUTER ASSISTED LEARNING Selected Proceedings from the CAL '87 Symposium

vii Preface

viii Organising Committee

Tony Adams	1	Computers in learning: a coat of many colours	
Geoffrey Hubbard	7	Recent history and imminent prospects for CAL in the U.K.	
David D. Thornburg	11	From metaphors to microworlds. The challenge of creating educational software	
Peter Williams	17	CAL production: strategies and tactics	
General Papers			
Nigel Gardner	23	Integrating computers into the university curriculum: the experience of the U.K. Computers in Teaching Initiative	
A. D. Boardman, G. S. Cooper, B. W. James, G. J. Keeler and J. Swage	29	Software development for undergraduates in physics	
Richard H. Trainor	37	Implementing computer-based teaching and research: the need for a collaborative approach	
C. E. Beevers, B. S. G. Cherry, D. E. R. Clark, M. G. Foster, G. R. McGuire and J. H. Renshaw	43	The CALM before the storm! CAL in university mathematics	
Noel Wilson	49	Project PROSE—development and use of an elementary <i>pro</i> gram <i>s</i> upport <i>e</i> nvironment for CAL production	
Peter Chandra, Joan Bliss and Margaret Cox	57	Introducing computers into a school—management issues	
Alan Chapman, Keith Young and John Steer	63	Raising the standard—system-independent programming for educational software	
David Squires and Richard Millwood	67	The influence of new software environments on CAL development	



Deryn M. Watson	73	A CAL development team in the process of change
Mike Aston	79	Professional development and teacher education—have we got it right?
Martine Chomienne	85	Educational computing implementation: the case of Quebec
Jean Underwood	91	An investigation of teacher intents and classroom outcomes in the use of information-handling packages
M. P. Doyle	101	Cumulative latency-of-response recording for evaluating CAL
John Layman and Wendy Hall	107	Logo: a cause for concern
Giorgio Olimpo	113	The Robot Brothers: an environment for learning parallel programming oriented to computer education
A. J. L. Harrison, J. K. Banwell, M. Frost and W. J. Plumbridge	119	An interactive teaching experiment in materials science
I. W. Burgess and R. J. Plank	125	Project-based teaching software for structural design
G. J. Makinson and H. L. Morarji	129	Do campus rings signal a turn around for CAL?
Mike Bennett and David Smith	133	Evaluating television-linked computer software
M. D. Leiblum	141	A model for describing CAL authoring systems applied to TAIGA
David Smith and Ros Keep	151	Eternal triangulation: case studies in the evaluation of educational software by classroom-based teacher groups
Riccardo Degl'Innocenti and Maria Ferraris	157	Database as a tool for promoting research activities in the classroom: an example in teaching humanities
Helen J. Schwartz	163	Computer software for critical thinking
Allan Martin	169	An adaptable microworld for the history classroom
Margaret Cox, Valerie Rhodes and Jennifer Hall	173	The use of computer assisted learning in primary schools: some factors affecting the uptake
Marlene M. Laubli and Terry Hinton	179	Implementation problems of computer based training within the U.K. Government's Youth Training Scheme

John L. Chatterton	185	Knowledge control: the effect of CAL in the classroom
Vittorio Midoro, Augusto Chioccariello, Donatella Persico, Luigi Sarti and Mauro Tavella	191	Ariadne's Thread: an introduction to logic programming
Eileen Scanlon and Randall B. Smith	199	A rational reconstruction of a bubble chamber simulation using the Alternate Reality Kit
David Benzie	209	The implications of window type environments for developers of educational software
Nick Hammond and Lesley Allinson	215	Development and evaluation of a CAL system for non-formal domains: the Hitch-Hiker's Guide to cognition
J. Terence Mayes, Michael R. Kibby and Hugh Watson	221	StrathTutor ©: the development and evaluation of a learning-by-browsing system on the Macintosh
Wilfred J. Hansen	231	The Andrew environment for development of educational computing
D. Cabrol, J. P. Rabine and T. P. Forrest	241	An educational problem solving partner in Prolog for learning infrared spectroscopic analysis
George R. S. Weir	247	Learning from a plan-based interface
Diana Burkhardt, Paule Chicken, Bob Hendley, Peter Jarratt, Nick Jurascheck, Mike Stoner, Gillian Weston and Jim Yandle	253	The exploration of fourth generation language program generation to assist in the production of multimedia computer aided learning
Sophie McCormick and Peter Bratt	257	Some issues related to the design and development of an interactive video disc