

CURRICULUM VITA: WELLESLEY ROBINSON (“ROB”) FOSHAY

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EDUCATION

Ph.D., Indiana University, Bloomington, Indiana, August, 1977.

Specialty: Instructional Development, with additional concentrations in Educational Psychology, Organizational Psychology and Computing.

Dissertation: *The Multivariate Prediction of Individual Differences in Academic Achievement. A Model-Governed Study*

Chairman: Dr. Thomas M. Schwen

School of Education Fellowship, 1974 - 75

Outstanding Alumnus, 1991

School of Education Alumni Association Board of Directors, 1997-2000

M.A., Columbia University Teachers College, New York, NY, May, 1971

Specialty: Social Studies Education, with certification for high school teaching.

B.A., Oberlin College, Oberlin, OH, May, 1970.

Liberal Arts program with major in Political Science

Dean's List, 1968 - 69 and 1969 - 70.

PROFESSIONAL EXPERIENCE

Director – Research, Texas Instruments Education Technology Group, July 2006 to Present

In the Product Strategy Group, designed and prototyped advanced product concepts. Projects supported formative assessment and collaborative learning.

Managed and communicated on a world-class educational research program on handheld educational technologies for math and science education, with global reach. Globally, the portfolio of projects with funding from internal and external sources reached \$4 million annually. Consulted with researchers on research grant development. For an overview, see education.ti.com/research.

Adjunct Faculty – Walden University, July 2009 to Present. Dissertation reviewer and doctoral studies advisor specializing in educational technology.

Principal Partner, The Foshay Group, June 2005 to Present

- Contributed to product development planning for a startup online university
- Wrote research analysis for a major eLearning publisher
- Contributed to research planning and policy guidelines for the Software and Information Industries Association
- Consulted on investment strategy and product strategy in the e-Learning industry

- Publications and presentations on educational technology, instructional design, and the learning sciences.

Vice President - Instructional Design and Research, PLATO Learning, Inc., June 1989 to May 2005.

Senior researcher, instructional design methodologist and Executive Team member for this \$140 million public company. Responsibility for product architecture strategy; development methodology; internal instructional design and quality training for designers and field consultants; research on effectiveness; communication of quality and research messages in marketing, sales, and policy contexts.

- Led the effort to create the design strategy, methodology and instructional architecture of the PLATO[®] product line, including over 4,000 hours of K-14 instruction, assessment, instructional management, professional services and technical training,
- Principal architect and author of an integrated performance support system for the development staff, including competency definitions, design/development job aids, training, QA system and performance evaluation/career planning system. Consulted with and trained product development groups in MN, CA, GA and UK.
- Managed a national independent program of research on effectiveness, including over 40 internally and federally funded studies. Interfaced with the federal What Works Clearinghouse.
- Published and spoke widely on strategic issues, research, and education reform.
- Supported company activities of strategic planning, partnering, acquisition, and business development.
- Managed R&D on advanced architectures, including a project on commercial application of intelligent tutoring partially funded by the Advanced Research Projects Agency (ARPA), and preliminary research on advanced instructional methodologies and authoring technologies.
- Consultant, writer and speaker for marketing and sales support and client service, including co-supervision and mentoring of client doctoral dissertations.
- Instrumental in the assessment of the PLATO system prior to its acquisition from Control Data Corporation in October, 1989.
- Promoted to Vice President, Quality Assurance, Standards & Training, 1991. Appointed to Executive Committee 1993 – 1996 and Executive Leadership Team 1996-2005. Job title changed in 1996 and 2001.
- CEO's Leadership Award, 1996.

Director - Quality Assurance, Standards and Training, Applied Learning, Inc., Naperville, Illinois, September 1983 to June 1989.

- Responsible for product testing, development methodology and architecture standards, quality assurance and designer training for internally developed interactive video, linear video, and computer-based product lines for the information systems industry. Managed a group of 6 internal quality assurance and design consultants.
- Subject of a doctoral dissertation by Rosalie Torres, on ASI's internal needs assessment practices.
- Also involved in marketing/sales support, research and development, and performance technology consulting.

(Predecessor Companies: Deltak, Inc.; Advanced Systems, Inc.; Promoted to Director 1985.)

Senior Product Developer, Deltak, Inc., Naperville, Illinois, (Predecessor of Applied Learning) April, 1981 to September, 1983 (1981 - 82 Title: Product Developer).

- Designed and developed training products using text, video and micro-computer; edited and authored a 500-page "textbook" on instructional design standards and methods.
- Architect of Level III interactive laserdisc video/CBT/videotape 3-product development system.
- CEO's Achievement Award, 1983.

Adjunct Faculty, Governors State University, Program in Instruction and Training Technology, 1985 - 1989.

- Taught courses in the Instructional Design program

Assistant Professor of Medical Education, Office of Curriculum and Evaluation, University of Illinois School of Basic Medical Sciences at Urbana-Champaign. September, 1977 - April, 1981 (1977 - 79 Title: Staff Assistant).

- Responsible for development and evaluation of the clinical curriculum. Projects include: physical diagnosis and medical interviewing program; second-year problem-based integrated curriculum; application of multi-dimensional scaling to assessment of interpersonal skills; analysis of potential aptitude-treatment interactions in teaching medical interviewing.

Assistant Professor, Department of Educational Psychology, School of Education, University of Illinois, September, 1979 to April, 1981. Zero - time appointment.

- Taught "Instructional Planning" to all CAHPUC juniors, and taught a graduate seminar on task analysis.

Project Director, Division of Development and Special Projects, Audiovisual Center, Indiana University, Bloomington, Indiana. September, 1975 to August, 1977 (full time).

- Directed course development and evaluation of projects in a number of disciplines, including Religious Studies, Chemistry, Computer Science, Educational Psychology; conducted many faculty development activities.

Consultant for Project Development, School of Nursing, University of Manitoba, Winnipeg, Manitoba. October through December, 1976.

Graduate Assistant, Division of Development and Special Projects, Audiovisual Center, Indiana University, Bloomington, Indiana. January to September, 1974.

- Participated in program development and evaluation projects.

Audiovisual Coordinator, (system-wide), Irvington Public Schools, Irvington-on Hudson, New York. September, 1971 to June, 1973 (half time).

Teacher, High School Social Studies, Irvington High School, Irvington-on Hudson, New York. September, 1970 to June, 1973 (half time).

PROFESSIONAL ACTIVITIES

Consulting Editor for Refereed Journals

- *Educational Communications Research and Development Journal*
- *Computers and Human Behavior*
- *Technology, Instruction, Cognition and Learning*
- *IMPACT*

International Board of Standards for Training, Performance and Instruction, (IBSTPI) 1975 - 1987.

Member of the Board of Directors,

- Co-author, *Instructional Design Competencies: The Standards*, 1986, with Ken Silber and Odin Westgaard.

Contributing Editor, *Data Training*, 1985 - 1988.

- Author of Bimonthly "Principles" column.

Software Reviewer for CBT authoring systems, *Info World*, 1995-96.

External member of doctoral dissertation committees for Purdue University, 1993; Indiana University, 2003; Nova Southeastern University, 2005.

Association for Education Communications and Technology, Division of Instructional Development (DID).

- DID Professional Development Committee, 1978 - 1979
- Chairman, DID Pre-Convention Workshop Committee, 1979 - 1980
- Executive Coordinator, DID, 1980 - 1981
- Board of Directors, DID 1982 - 1984
- Editorial Board, *Journal of Instructional Development*, 1982 - 1988
- Editorial Board, *Educational Technology Research and Development*, 1989 to 1996 and 1997 to 2000 and 2003-2005. Consulting Editor, 1996 to 2003.
- Peter Dean Lecturer, 1996.

International Society for Performance Improvement (ISPI; formerly National Society for Performance and Instruction, NSPI)

- Chair, CPT Governance Committee, 2001 – 2012
- Business/Government Outreach Project, 1985-89.
- Produced videotape on Performance Technology, 1988 (Sponsored by Applied Learning)
- DID/NSPI Joint Committee on Professional Certification, 1978 to 1985
- Contributing Editor, *Chicago P & I*, 1984 - 1988
- Long-Range Planning Task Force, 1985 - 86
- R & D Track Chair, 1988 - 1989
- Consulting Editor, *Performance & Instruction Quarterly*, 1988 to present
- Performance Technology System Award Chair, 1989
- Special Task Force on Research Policy, 1989
- Chair, Senior Advisor Panel, 1990 - 94
- Technology Advisory Panel, 1989 – 94
- Board of Directors, Chicago Chapter, 1991-1993
- Vice President - Communications, Chicago NSPI, 1993 - 1994
- NSPI Distinguished Service Award, 1995
- National Board of Directors, 1995-1997.
- Thomas F. Gilbert Award Chair, 2001, 2002.
- Member for Life, 2002
- Advisory Panel member for development of the Certified Human Performance Technologist professional certification.

- Certified Human Performance Technologist, 2002.
- Annual conference presentations and workshops, 1979 – present.

American Educational Research Association (AERA)

- Division C (Learning and instruction)
- Special Interest Groups: Technology, Instruction and Cognitive Learning;, Instructional Design and technology-related groups

Association of DP Services Organization (ADAPSO)

- Training and Support Services Committee, 1987 - 1988

Consulting Editor, *Educational Technology*, Research section, 1992 - 1996

American Society for Quality (ASQ) (formerly ASQC)

- ASQC/ANSI Working Group Z-1.11
- Accredited Standards Committee Z-1 on Quality Assurance, 1992 to 1999
- Co-authored ANSI/ASQ Z1.11 guidelines for education and training organizations under ISO-9000.

Consulting Editor, *Computers and Human Behavior*, 1999 to present.

Consulting Editor, *Technology, Instruction, and Cognitive Learning*, 2003 to present.

Expert Review Panel member, *Telelearning Network Centres of Excellence* application for continued funding, Vancouver, Canada, February, 2001.

Proposal review panel member, National Science Foundation, 2004 -2006.

Software and Information Industries Association (SIIA), Education Division.

- Co-Chair, Research Committee, 2003-2011

MAJOR PUBLICATIONS AND PRESENTATIONS

“A developmental model for adaptive and differentiated instruction using classroom networking technology” with Allan Bellman and Danny Gremillion. In *The Mathematics Teacher in the Digital Era.* (In press – 2013) Clark-Wilson, A, Robutti, O. (eds). London: Springer Verlag.

Handbook of Improving Performance in the Workplace, Vol. 1: Instructional Design and Training Delivery. San Francisco: Wiley Jossey-Bass, 2010. Co-edited, with Kenneth Silber.

“The Evolution of Distance Education: Implications for Instructional Design on the Potential of the Web” 3-part series in *TechTrends* (2009). With Jason Huett, Leslie Moller, and Craig Coleman.

“Evaluating the Effectiveness of Training Strategies: Performance Goals and Testing” *International Laboratory Animal Research Journal*, 48 (2), 2007 pp. 156-162. With Peggy T. Tinkey

“Research in Learning: What we know for sure” Chapter 9 in Beich, E. (ed.) *ASTD Handbook for Workplace Learning Professionals.* Alexandria, VA: American Society for Training and Development (ASTD), 2008

“Designing Instructional Strategies: A Cognitive Perspective” Article 3 in Gargiulo, T., Pangarkar, A.M., and Kirkwood, T. (eds.) *The Trainer’s Portable Mentor.* San Francisco: Pfeiffer (2008). Pp. 29-34.

“Can We Really Halve Development Time? – Reaction to Scandura’s Commentary” *Technology, Instruction, Cognition and Learning*, 2006 (3) .

“Building the Wrong Simulation: Matching Instructional Intent in Teaching Problem Solving to Simulation Architecture.” *Technology, Instruction, Cognition and Learning*. 2006 (3).

“Designing Instructional Strategies: A Cognitive Perspective” Chapter in Pershing (ed.), *Handbook of Human Performance Technology, 3d Edition*. San Francisco: Jossey Bass, 2006. With Kenneth Silber.

“Design Science Issues in Evaluation of Technology in Education and Training” in Spector, M. and Wiley, S. (eds.) *Innovations to Instructional Technology: Essays in Honor of M. David Merrill*. New York: Erlbaum, 2006. With William Quinn.

“Can Instructional Design Deliver on the Promise of the Web?” in Anglin, G. (ed.) *Issues in Instructional Technology*. Englewood, CO: Libraries Unlimited (2006). With Leslie Moller.

2006–1977

“Do We Need Authoring Systems? A Commercial Perspective.” *Technology, Instruction and Cognitive Learning*, 2006 (2) 249-260.

Writing Training Materials That Work: How to Train Anyone to Do Anything. San Francisco: Jossey-Bass Pfeiffer, 2003. With Kenneth Silber and Michael Stelnicki. [Winner, Award of Excellence, International Society for Performance Improvement, 2005].

“Leveraging Technology for High School Reform Initiatives.” PLATO White Paper #5. Bloomington, MN: PLATO Learning, Inc. 2005.

“A Guide to School-Based Action Research in PLATO.” Technical Paper #16. Bloomington, MN: PLATO Learning, Inc. 2005.

“Choosing the Right Formative Testing Option in PLATO” Technical Paper #13, ver. 2. Bloomington, MN: PLATO Learning, Inc., revised August, 2004.

“An Overview of the Research Base of PLATO” Technical Paper #12, ver. 2. Bloomington, MN: PLATO Learning, Inc. March, 2002. Revised August, 2004. ERIC IR021184.

Learning, Teaching and Designing Problem Solving: An Assessment. Available from www.foshay.org. 2003. With Andrew Gibbons.

“School Improvement and PLATO Learning, Inc.: A Guide to Incorporating PLATO Products and Professional Services into Your School Improvement Interventions.” Technical Paper #14. Bloomington, MN: PLATO Learning, Inc. June, 2003.

“Can Developmental Studies Learners Succeed in Distance Learning?” Presented to World Conference on Educational Media, Hypermedia, and Telecommunications, 2002. Proceedings Vol. 2002, Issue 1, pp. 519–520.

“Closing Performance Gaps in the Standards-Based Classroom: A New Role for Technology”
Bloomington, MN: PLATO Learning, Inc. January, 2002. With David Braswell.

“Best Practices for Instructional Computing in Schools and the Workplace.” Bloomington, MN:
PLATO Learning, Inc. February, 2002.

“Teaching Beginning Reading with PLATO: An Overview of the New PLATO Beginning
Reading Solution and How to Use It” PLATO Technical Paper #10. Bloomington, MN: PLATO
Learning, Inc. September 2001. With William Quinn and Carol Loomis. ERIC IR021185.

“Teaching Early Mathematics with PLATO Software: An Overview of the New PLATO
Elementary Mathematics Curricula and How to Use Them” Technical Paper #11. Bloomington,
MN: PLATO Learning, Inc. October, 2001. With William Quinn. ERIC IR021183

“Can Instructional Design Deliver on the Promise of the Web?” *Quarterly Review of Distance
Education* 2(1) 2001, pp. 19–34.

“Web-Based Education: A Reality Check.” in Rossett, A. (ed.) (2002) *The ASTD E-Learning
Handbook: best practices, strategies, and case studies for an emerging field*. New York: McGraw-
Hill. Originally in *Tech Trends*, 44, 5, September, 2000, pp. 16–18. With Corrie Bergeron.

“A Practical Process for Reviewing and Selecting Educational Software.” Technical Paper #8.
Bloomington, MN: PLATO Learning, Inc. September, 2000. With Muhammad I. Ahmed. ERIC
IR021191.

“Teaching Reading with PLATO: An Overview of the New PLATO Reading Solution and How to
Use It.” Technical Paper #7, with Ellen McEvoy, Mike Graves, and Rosemarie Park.
Bloomington, MN: PLATO Learning, Inc July, 2000 (revised). ERIC IR021190

“Instructional Models :Four Ways to Integrate PLATO Into the Curriculum” Technical Paper #6.
Bloomington, MN: PLATO Learning, Inc. January, 2000. ERIC IR021189.

“A guide for implementing technology: or, now that we’ve got them, what do we do with them?”
Technical Paper #5. Bloomington, MN: PLATO Learning, Inc., January, 2000. ERIC IR021188

"Instructional Systems Design" with Robert Tennyson. in Tobias, S. and Fletcher,D. (eds.),
Training & Retraining: A Handbook for Business, Industry, Government and the Military. New
York: McGraw-Hill, 2000. A project of Division 15, The Division of Educational Psychology of
the American Psychological Association.

“Science and Research Applications in Operational Environments.” *Performance Improvement*,
38, 4, April 2000, pp. 44–47.

“A New Technology for Teaching Math Problem Solving.” Presented to International Conference
on Mathematics/Science Education and Technology, 1999. Proceedings Vol. 1999, Issue 1, pp.
424–424. With Bob Mulcahy and Ellen Cree.

“But Does It Work?” Six Ways to Evaluate Technology” Presented to World Conference on
Educational Multimedia, Hypermedia and Telecommunications, 1999. Proceedings Vol 1999,
Wellesley R. Foshay

Issue 1, pp. 822–827.

“Research in Human Performance Technology.” Chapter 42 in Stolovich, H. and Keeps. E. (eds.), *Handbook of Human Performance Technology*, 2nd Ed. San Francisco: Jossey-Bass, 1999, pp. 895–915. With Leslie Moller, Thomas M. Schwen, Howard Kalman, and Debra Haney.

“Commentary: Choosing a Strategy for Return-on-Investment Justification.” *Performance Improvement*, 37, 8, October, 1998, pp. 6–8.

“Introduction to the Special Issue on Training,” edited by W.R. Foshay. *Educational Technology Research and Development Journal*, 46,4, Winter, 1998.

“Principles for Teaching Problem Solving” Technical Paper #4. Edina, MN: TRO Learning, Inc. 1998. With Jaimie Kirkley. ERIC IR021187.

“What We Know (and What We Don’t Know) About Training for Problem Solving: An Update.” *Performance Improvement*, 36, 3, pp. 40–45.

“PLATO Instructional Philosophy and Strategic Direction” Technical Paper #3. Edina, MN: TRO Learning, Inc. 1997. ERIC IR021186.

"The Problem with ISD Models", presented to National Society for Performance & Instruction, March 29, 1995, Atlanta, GA.

"Effectiveness of Computer-Based Training: An Annotated Bibliography of Reviews, 1980–1993", TRO Technical Paper #1. Edina, MN: TRO Learning, Inc. January, 1994.

“Guidelines for Evaluating PLATO Programs,” TRO Technical Paper #2. Edina, MN: TRO Learning, Inc. October, 1992.

“Advancing the Field Through Research.” Chapter 42 in Stolovich, H. and Keeps. E. (eds.), *Handbook of Human Performance Technology*, San Francisco: Jossey-Bass, 1992, pp. 701–714. With Leslie Moller.

"Guidelines for Evaluating PLATO Programs", TRO Technical Paper #2, Edina, MN: TRO Learning, October, 1992.

"Sharpen Up Your Schemata", *Data Training*, 10, 6, May, 1991, pp. 18–25.

"Information Technology as a Performance Technology", *Performance and Instruction Quarterly*, 2, 3, 1989, pp. 115–125.

"I Don't Know Is on Third", *Performance and Instruction*, 27, 9, October, 1988, pp. 8–9.

"Educational Technology in Schools and in Business: A Personal Experience", *Educational Horizon*, 66 4, Summer, 1988.

"Intelligent Tutoring Systems: A Proposal For a Feasible Architecture" (with Jack Welsh),

presented to AERA, April, 1988.

"What We Know (And What We Don't Know) About Training of Cognitive Strategies For Technical Problem-Solving", presented to AERA, April, 1987 ERIC ED292 813; *Journal of Structural Learning*, 1988. Also in Anglin, ed., *Educational Technology, Past Present and Future*, 2nd ed. Englewood, CO., Libraries Unlimited, 1995.

"Heuristic Approach to Instructional Design", presented to the National Society for Performance and Instruction, March, 1987.

"CBI: The More Things Change...", *Performance and Instruction*, June/July 1986, 25, 5, 29–30.

"Commentary: Choosing the Best Alternative Technique for Task Analysis." *An Introduction to Performance Technology*, Volume 1. Washington, DC: NSPI, 1986, pp. 95–105.

"The Corporate Training Departments as a Clinic for the Study of Instructional Design", *JID*, 9, 3, 1986, pp. 17–21.

"Problems in Developing a Technology of Instruction for Problem-Solving" presented to AECT, Anaheim, January, 1985.

"Planning and Evaluating Curricula for the Humane Practice of Medicine" *JID*, 8, 1, 1985, pp. 3–6.

"Quality Control for Training: QC Reviews and Pilot Tests" *Data Training*, December, 1984, p. 32ff.

"QA and QC: A Training Vendor's View of the Formative/Summative Evaluation Distinction", *Performance and Instruction*, 23, 10, December 1984, pp. 15–17.

"Training Development Skills: A Joint Task Force Report" *Data Training*, November 1984, p. 44ff.

"Implementation or Performance: Measuring Training Quality" *Data Training*, October 1984, p. 24ff.

"High, Middle, and Low Adopters. The PC and Organizational Change." *Data Training*, July 1984, p. 18ff.

"Measurement Issues in Professional Certification" with Sharon Schrock. *Performance and Instruction*, 23, 1, February 1984, pp. 23–26.

"Problems in Designing Instructional Strategies for High-Level Problem Solving", presented to AECT, January, 1984.

"Strengthening the Relationship of Training and Performance: The Role of Quality Assurance", presented to the Data Processing Management Association, January, 1984.

"Effects of Business on the Processes of Instructional Design and Production", Presented to AECT, 21 January, 1983.

"Alternative Methods of Task Analysis: Competitors or Replacements?" *Journal of Instructional Development*, 6, 4, 1984, pp. 2–8.

"Towards a Practical Model of Cognitive/Information Processing Task Analysis and Schema Acquisition for Complex Problem-Solving Situations" with Rolf Braune. *Instructional Science*, 12, 1983, pp. 121–145.

"The Relationship of Curriculum Development and Instructional Development" with A. W. Foshay, *Educational Leadership*, Summer, 1981.

"Toward the Multivariate Modeling of Individual Differences in Academic Achievement" with Earl R. Misanchuk. *Journal of Educational Research*, Spring, 1981.

Review of *Medical problem-Solving, An Analysis of Clinical Reasoning* by A.S. Elstein, L. S. Schulman, and S. A. Sprafka. *Educational Communications and Technology Journal*, 28, 1, 1980, pp. 73–74.

Instructional Development: The Social Implications of a Technical Intervention." with Thomas M. Schwen and others. In R. K. Bass (ed.) *Instructional Development: The State of the Art, II*. Earlier version in *Improving Human Performance Quarterly*, 8, 1, 1980, pp. 73–74.

"A Systematic Approach to Designing and ICM Course." Exhibit presented to 1978 Annual Meeting Association of American Medical Colleges (with Robert L. Pace and Marcia R. Smith).

"An Alternative for Task Analysis in an Affective Domain." *Journal of Instructional Development*, I, 2, Spring, 1978, pp. 22–24.

"A Multivariate Analysis of Academic Advising: Case Study of Research in an Instructional Development Setting." Presentation to the National Convention of the Association for Educational Communication and Technology, 1977 (with Thomas M. Schwen). Also available as ERIC document ED155 194.

"Some Comments on the Foshay Grid for a Humane Curriculum" (1974), available as ERIC document ED072–78.

"Task Analysis for Individualized Instruction with CAI: An Application." *Indiana University Computing Network Conference Proceedings*, 1977.

PERSONAL DATA

U.S. Citizen.

Hobbies: Amateur Radio Extra Class, baroque music

Married to Miriam C. Foshay, Ph.D. (Biochemistry)