THE PROFESSIONAL PRACTICE SERIES

The Professional Practice Series is sponsored by the Society for Industrial and Organizational Psychology (SIOP). The series was launched in 1988 to provide industrial/organizational psychologists, organizational scientists and practitioners, human resource professionals, managers, executives, and those interested in organizational behavior and performance with volumes that are insightful, current, informative, and relevant to organizational practice. The volumes in the Professional Practice Series are guided by five tenets designed to enhance future organizational practice:

1. Focus on practice, but grounded in science
2. Translate organizational science into practice by generating guidelines, principles, and lessons learned that can shape and guide practice
3. Showcase the application of industrial/organizational psychology to solve problems
4. Document and demonstrate best industrial and organizational-based practices
5. Stimulate research needed to guide future organizational practice

The volumes seek to inform those interested in practice with guidance, insights, and advice on how to apply the concepts, findings, methods, and tools derived from industrial/organizational psychology to solve human-related organizational problems.
Previous Professional Practice Series volumes include:

**Published by Jossey-Bass**

*Resizing the Organization*
Kenneth P. De Meuse, Mitchell Lee Marks, Editors

*Implementing Organizational Interventions*
Jerry W. Hedge, Elaine D. Pulakos, Editors

*Organization Development*
Janine Waclawski, Allan H. Church, Editors

*Creating, Implementing, and Managing Effective Training and Development*
Kurt Kraiger, Editor

*The 21st Century Executive*
Rob Silzer, Editor

*Managing Selection in Changing Organizations*
Jerard F. Kehoe, Editor

*Evolving Practices in Human Resource Management*
Allen I. Kraut, Abraham K. Korman, Editors

*Individual Psychological Assessment*
Richard Jeanneret, Rob Silzer, Editors

*Performance Appraisal*
James W. Smither, Editor

*Organizational Surveys*
Allen I. Kraut, Editor

*Employees, Careers, and Job Creation*
Manuel London, Editor

**Published by Guilford Press**

*Diagnosis for Organizational Change*
Ann Howard and Associates

*Human Dilemmas in Work Organizations*
Abraham K. Korman and Associates

*Diversity in the Workplace*
Susan E. Jackson and Associates

*Working with Organizations and Their People*
Douglas W. Bray and Associates
The Professional Practice Series

SERIES EDITOR

Eduardo Salas
University of Central Florida

EDITORIAL BOARD

Timothy T. Baldwin
Indiana University, Bloomington

Wayne F. Cascio
University of Colorado

Kenneth P. De Meuse
University of Wisconsin, Eau Claire

Jerry W. Hedge
Personnel Decisions Research Institute, Inc.

A. Catherine Higgs
Allstate Insurance Company

Kenneth Pearlman
Lucent Technologies

James W. Smither
LaSalle University

Scott I. Tannenbaum
State University of New York, Albany
# Contents

Foreword xi  
Eduardo Salas  

Preface xiii  
J. Kevin Ford  

The Authors xv  

Part One: Transfer of Learning in Today’s Organizational Reality  

1 Making Transfer Happen: An Action Perspective on Learning Transfer Systems 3  
Elwood F. Holton III, Timothy T. Baldwin  

2 The Strategic Challenge for Transfer: Chief Learning Officers Speak Out 16  
Camden C. Danielson, William Wiggenhorn  

3 New Organizational Forces Affecting Learning Transfer: Designing for Impact 39  
Patricia McLagan  

Part Two: Transfer Diagnosis and Intervention  

4 What’s Really Wrong: Diagnosis for Learning Transfer System Change 59  
Elwood F. Holton III  

5 Managing Transfer Before Learning Begins: The Transfer-Ready Learner 80  
Sharon S. Naquin, Timothy T. Baldwin  

6 Managing the Organizational Learning Transfer System: A Model and Case Study 97  
Mary L. Broad
Part Three: From Knowledge to Performance Capability

7 Transfer Is Just a Symptom: The Neglect of Front-End Analysis 119
Richard A. Swanson

8 Beyond the Classroom: Transfer from Work-Based Learning Initiatives 138
Lyle Yorks

9 Transfer in an E-Learning Context 161
Erik R. Eddy, Scott I. Tannenbaum

10 The Transfer of Team Training: Recommendations for Practice 195
Janis A. Cannon-Bowers, Eduardo Salas, Laura Martin Milham

Part Four: From Performance Capability to Sustained Performance

11 Transfer Is Personal: Equipping Trainees with Self-Management and Relapse Prevention Strategies 227
Robert D. Marx, Lisa A. Burke

12 Managers as Transfer Agents 243
Reid A. Bates

13 Creating a Climate for Learning Transfer 271
Jerry W. Gilley, Erik Hoekstra

Part Five: Conclusion

14 The Bottom Line: Talking Points for Transfer Improvement in Organizations 307
Timothy T. Baldwin, Elwood F. Holton III

Name Index 311
Subject Index 317
In an era of lifelong learning and of increasing competition for skilled employees, organizations cannot waste the limited resources they have to develop their workforce. Organizations should ensure that the newly acquired knowledge, skills, and attitudes of their workforce are applied and used to fulfill their goals and objectives. It is (or should be) a business imperative. Thus, organizations need to create, promote, and support a climate where employees can positively transfer the newly acquired skills to the job. Simple? Not so; this is easier said than done. There are many reasons for this. For example, organizations often have a poor understanding or a misconception of what and how training systems can help them. Another problem is that those who design, deliver, evaluate, or manage training have little guidance from the literature to help them create and foster such a transfer climate—at least until this book.

The now classic transfer-of-training piece published in 1988 by Tim Baldwin and Kevin Ford set the stage for this book. In that piece, they provide a framework outlining the key issues involved in the transfer of training. Since then we have seen a plethora of research in the topic, which has generated a body of knowledge that organizations can now use. This is what is compiled in this book. And it’s quite remarkable.

Ed Holton and Tim Baldwin have assembled a rich and innovative set of chapters on what should be done to facilitate the transfer of training to the job. They have brought together a number of authors who are well versed in applying learning systems to organizations. These authors in their chapters provide tips, guidelines, and practical recommendations on what to do to promote transfer of training and how to do it. This is, in my opinion, a true contribution not only to the field but more important to the organizations that use it. Holton and Baldwin (and the rest of the authors)
have done a great job in ensuring the chapters present practical information to them and also are concerned with the design, delivery, and management of training. Well done!

The Editorial Board of the Professional Practice Series continues to seek volumes that help practitioners manage their human resources. This book is another example of what we hope is useful guidance to them. On behalf of the Editorial Board, Ed and Tim, thank you and congratulations for a wonderful volume. Our thanks also go to all the authors who contributed to the volume. We will continue our relentless effort to translate our science to practice.

University of Central Florida               Eduardo Salas
May 2003                              Editor
Preface

Businesses, government agencies, and nonprofit organizations have devoted increased resources to the training and development of their own workforce in an effort to increase competitiveness and to improve service. While increased resources have been devoted to training and learning activities, concerns remain about the impact of the training and developmental activities on organizational effectiveness. Clearly, the main objective of training is to enhance employee performance in the transfer or work setting. Demonstrating transfer requires clear linkages between the expected changes during training and observable changes in behaviors in the work setting. Enhancing the likelihood of transfer requires active attention to transfer-enhancing strategies.

In 1988 Tim Baldwin and I published a review in Personnel Psychology that called for greater research attention to transfer-of-learning issues. Over the past fifteen years, industrial and organizational psychologists and human resource professionals have made great progress in several areas, especially the development of theoretical perspectives and models of what is meant by learning and transfer; the derivation of testable models and the conduct of empirical research on the factors that impact learning during training and the transfer of training to the job; the identification, design, delivery, evaluation, and improvement of training programs; and study of key issues beyond individual training to broader issues of team training and organizational change and development.

In this volume, Baldwin has joined with Ed Holton to compile a set of thought-provoking chapters that now translate these types of research findings into action-oriented steps professionals can take to enhance training transfer. The chapters provide a multidimensional view of transfer and the identification of conditions for successful transfer to job situations. The authors also anticipate the
variety of challenges training professionals typically face when designing training activities and promoting transfer. Throughout the chapters of this book, these challenges are examined in order to lead to a number of innovative strategies to improve the efficiency and effectiveness of training for transfer.

This book on improving learning transfer in organizations clearly fits the goals of the Society of Industrial and Organizational Psychology Professional Practice Series. The book provides industrial-organizational psychologists, human resource professionals, and all those interested in promoting learning in organizations with a number of clearly defined opportunities for effectively dealing with the threats to learning and development in the work environments of today. Now the cycle of training improvement can continue as ideas and strategies from this book are tested and further refined through new research and experience.

*Michigan State University*  
*J. Kevin Ford*  
*May 2003*
Elwood F. Holton III is Jones S. Davis Professor of Human Resource, Leadership, and Organization Development in the School of Human Resource Education at Louisiana State University, where he coordinates the B.S., M.S., and Ph.D. degree programs in HRD. He holds an M.B.A. and an Ed.D. in Human Resource Development from Virginia Tech. He is past president of the Academy of Human Resource Development and is the founding editor of Human Resource Development Review, a new quarterly refereed journal devoted to theory and theory building in human resource development. He has also served on the editorial boards of HRD Quarterly, Human Resource Development International, and Advances in Developing Human Resources. In 2002, he was honored with the Outstanding HRD Scholar Award, the highest award given by the Academy of Human Resource Development. His research focuses on analysis and evaluation of organizational learning and performance systems, improving learning transfer systems, new employee development and retention, adult learning, management and leadership development, and HRD policy and strategy. His research has won numerous awards, including the Richard A. Swanson Research Excellence Award from the Academy of Human Resource Development and six Citations of Excellence from ANBAR Management Intelligence. He is the author, coauthor, or editor of eighteen books, the most recent being Approaches to Training and Development (coauthor; forthcoming from Perseus) and Human Resource Development: Foundations of Theory and Practice (coauthor; Berrett-Koehler, 2001). He is the author of more than two hundred publications, including academic and professional articles in journals such as Advances in Developing Human Resources; Human Resource Development Quarterly; Human Resource Development International; Performance Improvement Quarterly; Human Resource Management Review;

Timothy T. Baldwin is professor of management and Subhedar Faculty Fellow at the Indiana University Kelley School of Business. Baldwin holds M.B.A. and Ph.D. degrees in human resource management from Michigan State University and has published his research work in leading academic and professional journals such as Academy of Management Journal, Personnel Psychology, Journal of Applied Psychology, Human Resource Management, and Academy of Management Executive. He has won several national awards for his work, including six from the Management Education and Development Division of the Academy of Management. He has also twice been the recipient of the Richard A. Swanson Excellence in Research Award presented by the American Society for Training & Development (ASTD). Baldwin is actively involved in executive education in the United States and abroad and has recently worked with firms including Eli Lilly & Co., FedEx, Cummins Engine, Whirlpool, EDS, Dow Chemical, and several others. His current research focuses on chief learning officers and their use of organizational systems to promote talent pool management and leadership development.

Reid A. Bates is an assistant professor in the Human Resource and Leadership Development Program in the School of Human Resource Education at Louisiana State University, where he teaches undergraduate and graduate courses in HRD. He received his Ph.D. from Louisiana State University. He is an active researcher
and author and has published in journals such as *Adult Education Quarterly*, *Human Resource Development Quarterly*, *Human Resource Development International*, *International Journal of Training and Development*, *Human Resource Management Review*, and *Performance Improvement Quarterly*. His research interests include employee development; learning transfer; the role of values, ethics, and culture in human resource development; and global and international human resource development. He has nearly twenty years of experience working with a variety of private- and public-sector organizations in the United States, Africa, and the Pacific region pursuing a range of goals and objectives related to HRD.

**Mary L. Broad**, with *Performance Excellence*, consults with public- and private-sector organizations to improve the payoff from investments in training and other performance improvement initiatives. She works with clients to enhance workforce learning and performance as well as organizational results, and to gain the support of key stakeholders throughout the complex systems that are increasingly common in the global marketplace. She has a master’s degree in adult education and a Doctorate of Education in human resource development, both from the George Washington University, where she has served as adjunct associate professor of HRD. Recent clients have included Pfizer Pharmaceuticals Group, the Georgia State Department of Human Resources, the Centers for Disease Control and Prevention in the National Institutes of Health, the Long Term Care Institute of Southwest Ontario, the U.S. Marshals Service, and H.G. Electronics (South Korea). Broad managed the training departments at several federal agencies (1976–1981), and headed the Human Resource Development Division at the Defense Information Systems Agency (1982–1993). She served on the ASTD Board of Directors from 1993 to 1995, and received ASTD’s Torch Award in 1998. She is coauthor of *Transfer of Training: Action-Packed Strategies to Ensure High Payoff from Training Investments* (1992, Addison-Wesley, now in its ninth printing) and edited *In Action: Transferring Learning to the Workplace* (1997, ASTD). She also has written chapters in six recently published books and journals on training and performance improvement (1998–2003). She has consulted and presented in Canada,
El Salvador, Indonesia, Ireland, Kuwait, Panama, Mexico, South Korea, Singapore, and throughout the United States, and is a regular presenter at international conferences of ASTD and the International Society for Performance Improvement (ISPI).

Lisa A. Burke is an associate professor of management at Louisiana State University in Shreveport. Her doctorate is in organizational behavior and human resources from Indiana University Kelley School of Business and she teaches organization theory, staffing, training, strategic human resources management, and general management to undergraduate and M.B.A. students. Burke’s research interests include management training, development, and education and she is on the editorial board for the Academy of Management Journal. Her book High-Impact Training Solutions (2001) addresses strategic training, needs assessment, training technologies, training transfer, performance consulting, and contemporary roles of corporate trainers. Burke is certified as a Senior Professional in Human Resources (SPHR) from the Society for Human Resource Management and has published her research work in leading academic and professional journals such as Academy of Management Learning and Education Journal, Journal of Applied Psychology, Human Resource Management Review, and Academy of Management Executive.

Janis A. Cannon-Bowers is a senior research psychologist in the Science and Technology Division of the Naval Air Warfare Center Training Systems Division. In 1988, she received her Ph.D. in industrial and organizational psychology from the University of South Florida. Her research interests include team training and performance, crew coordination training, training effectiveness, and tactical decision making.

Camden C. Danielson is executive director of Kelley Executive Partners, the executive education arm of the Kelley School of Business, Indiana University. Over the last seventeen years he has designed or conducted executive development programs for major corporations around the world. His research focuses on the formulation of corporate learning strategies and the role of chief learning officers and has appeared in the Academy of Management Executive,
Human Resource Development Quarterly, and Business Horizons. Previously Camden was a speech writer for the president of Indiana University and a member of the faculty at the U.S. Air Force Academy.

**Erik R. Eddy** is a member of the Group for Organizational Effectiveness. He has worked for the group since 1996, first as a consultant then as a project director, to support organizations in their organizational development, change management, management and employee development, and knowledge management efforts. A few of the recent projects he has worked on include facilitating strategic planning and conducting sessions to build managerial talent at Core Staffing Services, helping guide internal experts at Tiffany & Co. to develop a certification program for their sales and operations professionals, facilitating working sessions with U.S. Air Force fighter pilots to identify the “Mission Essential Competencies” required to be successful, and researching the requisite characteristics of successful mentoring programs and consulting with the U.S. Navy in developing a mentoring program. He has also worked with such firms as Whirlpool, BP Amoco, and The St. Paul Companies. He continues to be an active researcher and author. He has presented at national conferences and published in several journals and book chapters on such topics as job design, training, quality management, mentoring, and continuous learning. He holds a master’s degree in business administration and a master’s degree in organization development from Bowling Green State University, and a Ph.D. in organizational studies from State University of New York at Albany.

**J. Kevin Ford** is professor of psychology at Michigan State University. His major research interests include improving training effectiveness through efforts to advance understanding of training needs assessment, design, evaluation, and transfer. Ford also concentrates on building continuous learning and improvement orientations in organizations. He has published more than fifty articles, chapters, and technical reports and serves on the editorial board of Human Performance. He was the lead editor of the book Improving Training Effectiveness in Work Organizations and is coauthor with Irwin Goldstein of the fourth edition of Training in Organizations. He is an active consultant with private industry and the public sector on
training, leadership, and organization development issues. He is a fellow of the American Psychological Association and the Society of Industrial and Organizational Psychology. He received his B.S. from the University of Maryland and M.A. and Ph.D. in psychology from Ohio State University.

Jerry W. Gilley is a professor of organizational performance and change at Colorado State University and was previously a principal at William M. Mercer Inc., responsible for human resource and organizational development. He received his doctorate from Oklahoma State University in HRD. He has coauthored thirteen books and more than seventy-five articles, book chapters, and monographs. His books include *Organizational Learning, Performance, and Change: An Introduction to Strategic HRD* (Perseus), which was selected the HRD Book of the Year (2000) by the Academy of HRD, as well as *Principles of HRD*, 2nd ed., *Beyond the Learning Organization, The Performance Challenge, Strategically Integrated HRD* (Perseus), and *Stop Managing, Start Coaching* (McGraw-Hill).

Erik Hoekstra is vice president for people and organizational development at The Harbor Group, the parent company for a variety of firms in the construction, engineering, and factory automation industries. He holds an M.B.A. degree from the Rotterdam School of Management in the Netherlands and is a Ph.D. candidate in organizational learning and human resource development at Iowa State University. Prior to his current position, Erik led several companies in retail and wholesale distribution and was a member of the business faculty at Dordt College.

Robert D. Marx is an associate professor of management, Isenberg School of Management, University of Massachusetts, Amherst, and a visiting professor, with formal affiliation, at the Athens Laboratory for Business Administration (ALBA), in Athens, Greece. He received his doctorate from the University of Illinois, Champaign-Urbana. He is coauthor of *The Wisdom of Solomon at Work: Ancient Virtues for Living and Leading Today* and coauthor of *Management Live: The Video Book*. Marx’s research interests include relapse prevention in management training, the optimal use of video in management education, and spirituality in organizations. His research
efforts on the problem of skill retention following management development programs have resulted in numerous published articles on this topic in journals such as the Academy of Management Review, the Journal of Management Development, and the Training and Development Journal. He has presented his research at the Academy of Management, the Eastern Academy of Management, the Organizational Behavior Teaching Society, and other national, regional, and international meetings. He serves on the editorial board of the Journal of Management Education. He has taught internationally at the Management Training Center in St. Petersburg, Russia, and at the Graduate School of Business Leadership (UNISA), the University of South Africa in Pretoria, and as a faculty member at the Athens Laboratory for Business Administration in Athens, Greece. He has chaired the board of the Organizational Behavior Teaching Society. Marx consults on issues of leadership, teamwork, communication, improving skill retention in management training, and spirituality in organizations. His clients have included Danaher Tools, Lego Systems Inc., Glaxo SmithKline Pharmaceuticals Inc., Springfield Mo. Healthsystems, and—in Greece—Thenamaris Shipping Co., NetMed Cable Television, Macedonia Thrace Bank, and Adel Saatchi and Saatchi Advertising. He is a regular presenter at The Physician Executive Institute at Case Western Reserve University and has presented at the Cape Cod Institute in Wellfleet, Massachusetts.

Patricia McLagan consults, speaks, and writes on organization and people development. Her focus is on successfully guiding organizational changes that optimize the interests of all stakeholder groups: customers, employees, and shareholders. She is the author of two major studies of competencies required by people in the HRD field, and is the author or coauthor of many books and articles on management, change, learning, and communication, including Change Is Everybody’s Business, The Age of Participation: New Governance for the Workplace and the World, On the Level: Performance Communication That Works, and Helping Others Learn. She is the second woman and the fifteenth person inducted into the Human Resource Development Hall of Fame, and holds the American Society for Training and Development’s highest award, the Gordon Bliss Award. She is professor of HRM at Rand Afrikaans University,
Johannesburg, a member of many HRD-related editorial boards, and the former cohost of the Internet radio show *The Changing World of Work*. She lives in both the United States and South Africa and works and speaks around the world. See http://www.mclaganint.com.

**Laura Martin Milham** received her Ph.D. from the University of Central Florida. She has served as a research assistant at the Team Performance Laboratory of the Naval Air Warfare Center Training Systems Division, where she has worked on projects relating to team training and team performance measurement.

**Sharon S. Naquin** has her doctorate in HRD and undergraduate degrees in finance and human resource management. She is a faculty member in the School of Human Resource and Workforce Development at Louisiana State University and is also the executive director of the Public Management Program. She is also an active consultant specializing in public- and private-sector HRD-related issues. Her published works include journal articles and four books. She has also coedited three issues of *Advances in Human Resource Development*.

**Eduardo Salas** is professor of psychology at the University of Central Florida, where he is also project director of the Department of Human Systems Integration Research at the Institute of Simulation and Training. Previously, he was a senior research psychologist and head of the training technology development branch of the Naval Air Warfare Center Training Systems Division for fifteen years. During that time, he was principal investigator for numerous R&D programs on teamwork, team training, and performance assessment. He has coauthored more than 150 journal articles and book chapters, has coedited eight books, and is on the editorial review boards of several top-tier journals. A fellow of the American Psychological Association and the Human Factors and Ergonomics Society, and a recipient of the Meritorious Civil Service Award from the Department of the Navy, he received his Ph.D. in 1984 in industrial and organizational psychology from Old Dominion University.

**Richard A. Swanson** is professor of human resource development at the University of Minnesota. He is an internationally recognized authority on organizational change, performance improvement at
the organizational, work process, and individual and group levels, and the strategic roles of human resource development. Swanson has authored more than 250 publications on human resource development and performance improvement. He served as president of the Academy of Human Resource Development and was the founding editor of two scholarly journals, *Human Resource Development Quarterly* and *Advances in Developing Human Resources*. Swanson’s recent books include *Analysis for Improving Performance* (1996), *Results* (1999), *Foundations of Human Resource Development* (2001), and *Assessing the Financial Benefits of Human Resource Development* (2001). In 2000 he received the Outstanding HRD Scholar Award and was inducted into the International Adult and Continuing Education Hall of Fame, and in 2003 he received the Distinguished Alumni Award from the University of Illinois.

**Scott I. Tannenbaum** is a founder and president of the Group for Organizational Effectiveness. Throughout his career, he has served as a consultant and adviser to many Fortune 1000 organizations. The well-known organizations he has supported include Johnson & Johnson, Tiffany & Co., BP Amoco, Whirlpool, The St. Paul Companies, UBS Warburg, Bank One, USAA, PSEG, GE Capital, CNA, American Express, Binney & Smith, First USA, the U.S. Navy and Air Force, Citicorp, Progressive Insurance, and NASA. He is an active author and presenter on human resource, training, and technology issues. His research has received awards from the National Academy of Management and the American Society for Training and Development. He has also served as a business school professor, where he helped build the world’s first M.B.A. specialization in human resource information technology, and coauthored the first university-level text on the topic. He recently coauthored a book on the emerging topic of knowledge management. He holds a Ph.D. in industrial and organizational psychology from Old Dominion University.

**William Wiggenhorn** is chief learning officer at CIGNA Corporation. He has also been CLO at Xerox and Motorola, and executive vice president of human resources at Providian Financial Services. His numerous awards include the McKinsey Award for best article in the *Harvard Business Review* (1990), the Rose-Huhlman Institute Award of Excellence in Corporate Education, the China Society/Xilin
Association Educator of the Year Award 2000, the University of Dayton Alumni Award for work in the field of education, and the State of Penang Malaysia’s Governor’s Award and honorary title of the monarchy for contribution to development of citizens of the state.

**Lyle Yorks** is an associate professor in the Department of Organization and Leadership at Teachers College, Columbia University, where he is also director of the AEGIS doctoral program. He regularly consults with companies worldwide on issues related to organizational change, executive development, and performance management. He is the author of several books and chapters and has authored and coauthored articles in the *Academy of Management Review, California Management Review, Human Resource Development Quarterly, Sloan Management Review*, and other scholarly and professional journals. His current research interests center around the use of action learning, collaborative inquiry, and related participative strategies for executive development and organizational change. He holds master’s degrees from Vanderbilt University and Columbia University and earned his doctorate at Columbia University.
PART ONE

Transfer of Learning in Today’s Organizational Reality
This chapter presents the fundamental premise that guides this book: Researchers studying the transfer of learning have not focused sufficiently on interventions to improve this transfer, so the time has come for more action-oriented strategies. Our core assumptions about transfer are explicated, especially the notion that transfer can be improved significantly, particularly if the focus is on the learning transfer system. We also introduce a transfer distance framework as an approach to understanding the gap between learning and application and to analyzing exactly which parts of the transfer gap are addressed by various interventions.

Most corporations die prematurely from learning disabilities. They are unable to adapt and evolve as the world around them changes.

—ARIÉ DE GEUS, ROYAL DUTCH SHELL

Recent years have seen an explosion of organizational interest in becoming “learning organizations,” creating “corporate universities,” and generally being more proactive in approaching education and learning. Many organizational leaders are increasingly
sensitive to the reality articulated by de Geus and recognize that their firms’ future success will depend on the speed with which people can learn and transfer new ideas and information.

There is no question that transfer of learning is a formidable challenge for organizations. The most commonly cited estimate is that only 10 percent of learning transfers into job performance (although there is little empirical basis for this claim) and reports from the field suggest that a substantial part of organizations’ investment in HRD is wasted due to poor learning transfer.

Of course, transfer of learning has long been an important HRD research issue. Since Baldwin and Ford’s (1988) review of the literature over a decade ago, considerable progress has been made in understanding factors affecting transfer. Much of the research has focused on training design factors that influence transfer (see Kraiger, Salas, & Cannon-Bowers, 1995; Paas, 1992; Warr & Bunce, 1995). Another stream of research has focused on factors in the organizational environment that influence individuals’ ability and opportunity to transfer (Rouillier & Goldstein, 1993; Tracey, Tannenbaum, & Kavanaugh, 1995). Other researchers have focused on individual differences that affect the nature and level of transfer (Gist, Bavetta, & Stevens, 1990; Gist, Stevens, & Bavetta, 1991). Finally, recent work has focused on developing instruments to measure transfer and its antecedent factors in the workplace (Holton, Bates, & Ruona, 2001; Holton, Bates, Seyler, & Carvalho, 1997).

Unfortunately, the existing research is, for the most part, not action-oriented. That is, most existing authors have stopped at the point of identifying, describing, or measuring factors that may influence transfer without investigating how those factors might be effectively changed or managed. For example, of the fifty-eight studies described in the two most comprehensive reviews of the transfer literature (Baldwin & Ford, 1988; Ford & Weissbein, 1997), only those concerning training design dealt much with change or intervention. One notable exception involves studies examining the effectiveness of two post-training interventions (goal setting and relapse prevention training), with all of them finding enhanced transfer (Burke & Baldwin, 1999; Gist, Bavetta, & Stevens, 1990; Gist, Stevens, & Bavetta, 1991; Tziner, Haccoun, & Kadish, 1997).