



# Performance-Based Instruction: Linking Training to Business Results

by Dale M. Brethower and Karolyn A. Smalley  
reviewed by Peter-Cornelius Dams

Many organizations are beginning to realize that training is a substantial capital investment of human and financial resources. Naturally, they are demanding that instructional designers generate measurable returns on that investment. Therefore, human resources development (HRD) professionals are held accountable for their use of those resources and must demonstrate clearly how their work contributes to overall organizational performance. In *Performance-Based Instruction: Linking Training to Business Results*, Dale Brethower and Karolyn Smalley pool their extensive experience to present a training paradigm that can help HRD practitioners improve on-the-job performance (not only of clients but also their own) and add value to the bottom line.

## What Is Performance-Based Instruction?

Performance-based instruction (PBI) reduces the gap between novice (or typical) and competent (or excellent) performance by focusing on what employees actually do to get the job done. This concept is not a new one, but Brethower and Smalley provide a simple (but by no means simplistic) framework for achieving the training mission. They show how key questions guide the analysis, design, development, implementation, and evaluation of PBI and provide a framework for linking instructions and instructional material to the desired workplace performance.

At the heart of PBI lies the instructional performance system, a training model based on the total performance system (Brethower, 1972, 1995). This system provides seven key linkages that connect the training event to what happens on the job after training:

- Mission or Goal
- Instructional Content (Inputs)
- Instructional Processes
- Learner Products (Outputs)
- Feedback During Instruction
- Workplace Support
- Workplace Feedback

All seven elements are equally important and must be addressed from the beginning to facilitate adult learning and transfer of training. Thus, the systems approach provides important checkpoints for instructional design, implementation, transfer, and evaluation. This attention to built-in feedback is one of the strengths of PBI.

### How Is the Material Presented?

Brethower and Smalley present the material in a structured easy-to-read format with abundant headers to guide the reader. The language is informal yet concise; tables and lists are used when lengthy prose would not contribute to a better understanding of the subject matter. The authors provide many design and evaluation questions in a convenient checklist format as well. The chapter layout follows the principles of PBI and familiarizes the reader with the PBI format from the beginning.

Each chapter features a detailed real-life example from the authors' own experiences. These case studies are described and analyzed in the three-stage framework of guided observation, guided practice, and demonstration of mastery (see pg. 57). A question-and-answer section addresses a wide array of potential practitioner concerns, such as, "How can this procedure be used for really complicated jobs?" or "Can traditional instruction be converted to PBI in all settings?" The authors explain how each procedure actually works within each of the three stages. A Tips and Caveats section gives advice about the successes and challenges one can expect when designing and implementing performance-based instruction.

The chapters close with several exercises that also follow the three-stage format. Readers can modify many exercises to match their particular situation and experience, and some readers will be able to incorporate exercises immediately into their work.

### How to Develop PBI

When developing PBI, the designer works through five project phases. Figure 1 shows the five phases and their respective key questions that guide the development process. During project phases 1 and 2, the strategic business need and the performance required for meeting that business need are specified. These specifications also function as benchmarks against which the success of the implementation can be measured and thus closely integrate evaluation criteria into the design of PBI. Project design phase 1 determines the workplace processes needed for expert performance, and checklists based on these procedures will guide

### Project Phase

Specification of Business Need

Specification of Performance Requirements

Design Phase 1: Specification of Work Processes

Design Phase 2: Specification of Instructional Processes

Implementation and Evaluation

### Key Questions

Why train?  
What is the strategic or current business need for performance improvement?

What performance products are needed? What standards? What performance support?

How can people do it?  
What processes can people use to produce the products?  
How will we guide practice?

Does the overall design link learners and workplace?  
Does each unit?

Are analysis and design done properly?  
Do the design and implementation reflect principles of adult learning and performance?  
Do they actually work?

**Figure 1. Development Process for Performance-Based Instruction.**

learners' observation and practice. During project design phase 2, increasingly complex practice tasks for each procedure are developed until the final tasks simulate actual work conditions. During the last project phase, implementation and evaluation, learners actively engage in job-relevant practice. Evaluation of analysis and design against the specifications of business need and performance requirements provide critical feedback to the designer.

The key questions remain the same, regardless of the particular application of performance-based instruction. However, the particular answers to those questions constitute the relevant design guidelines for the analysis, design, development, implementation, and evaluation of specific PBI projects.

### How PBI Works

The critical linkages between instruction and workplace developed during design phases 1 and 2 are implemented through a three-stage framework: guided observation, guided practice, and demonstration of mastery. This framework allows learners to gradually master the skills needed for expert performance.

## Guided Observation

Guided observation orients learners toward what is expected from them through a guided tour of the workplace, preferably an actual tour, but possibly a simulated tour or representation of the workplace. The tour format allows them to ask why a task is worth performing, what it accomplishes, and how to accomplish it. By observing expert performers doing the actual tasks, learners find the answers to those questions and understand the criteria for mastery from both the performer's and the organization's perspective. An observation checklist (a product of design phase 1) guides the observation and sets the stage for guided practice.

## Guided Practice

After learners discover the why and what of their job, they learn through guided practice how to accomplish the task by rehearsing what they have observed. They now use the observation checklist to guide their practice, and much of the learning occurs by doing the actual tasks rather than using textbooks or other reference material. For example, trainees learn interaction with others, such as customers and subordinates, through performance-based role-play rather than by watching videos or reading manuals. Following each practice cycle, learners receive performance feedback on what was done well and how their performance could be improved. Repeated practice and feedback prepares them for excellent performance.

## Demonstration of Mastery

Learners demonstrate mastery before beginning or returning to their jobs. Therefore, each successful guided practice exercise culminates with a demonstration of mastery. After learners become proficient with less-difficult aspects of their job performance, they get exposure to more challenging exercises until the instructional situation matches the demands of the work environment.

## Applications of PBI

The book is divided into two parts. Part 1 is "A Practical Approach to Training Issues" and Part 2 is "A Paradigm for the 21st Century."

### Part 1: Performance-Based Instruction: A Practical Approach to Training Issues

Chapters 1–6 address specific performance-based applications that can readily be incorporated into existing training

programs or used to develop new training projects. These applications include conducting on-the-job training, improving teamwork skills, providing performance-based feedback, and designing job aids. Each application is outlined with respect to the five project phases and described within the three-stage framework of implementation.

One chapter that I enjoyed in particular was *Performance-Based Development* because it focused on aligning individual goals with the goals of the organization. This area promises great returns for career-minded employees and for companies that want to groom a reliable and motivated human resource pool. Brethower and Smalley show how guided observation, guided practice, and demonstration of mastery can work in designing personal development plans that meet current and future performance requirements.

### Part 2: PBI—A Paradigm for the 21st Century

Chapters 7–13 introduce the process of designing performance-based instruction. Chapter 7, "A Paradigm for 21st Century Human Resource Development," shows how the PBI model differs in key aspects from conventional educational and vocational paradigms. Although these paradigms have their usefulness in their particular areas of application (e.g., public education), they are not sufficient for developing valuable performance at the workplace. For example, PBI assesses mastery under actual or simulated work conditions, while traditional educational paradigms often assess skills that are different from those required at the workplace. The chapter's comparison-style worksheets can be used as a job aid for obtaining support from key decision-makers for implementing PBI. As it is not likely that many HRD directors will totally revamp all their current training projects to make room for PBI, Brethower and Smalley describe in Chapter 8 how to gradually convert existing training programs to PBI.

The remaining chapters feature a structured design approach for complex and large training projects, performance-based needs assessment, and evaluation of inhouse and outsourced training functions. The final chapter describes how PBI can teach people better ways of learning, based on the Learning-to-Learn® system developed by Heiman and Slomianko (1993).

### Advantages and Disadvantages of PBI

A major advantage of PBI is its effectiveness: Individuals can achieve high levels of performance quickly because PBI

focuses on what is necessary to perform the job well by utilizing real-life examples and immediate and frequent feedback. PBI dispenses with material that is not directly linked to the workplace, such as trivial games or contrived examples. Often these are not effective learning tools, and their artificiality distracts from learning what is really needed for achieving excellent workplace performance.

This narrow focus on performance, however, can also be a disadvantage because the attention to specifics does not allow learners to immediately acquire a scope of skills that might be needed to cover all possible and unexpected work situations. Instead, learners master those skills first that deal with the most frequent workplace demands. After they develop these basic skills, instruction focuses on the skills that support expert performance and prepare learners for changing workplace demands.

Traditional training often overloads learners with information and does not allow enough time for practice. PBI, on the other hand, provides only as much information as participants can practice and master during each lesson. In many cases, instruction and practice occur in short sessions over a period. Between sessions, learners apply, on the job, what they have learned in class. These on-the-job experiences are revisited during subsequent training sessions to evaluate and fine-tune performance and performance supports such as worksheets, job aids, and checklists.

Sometimes distributed practice is not possible, for example, when training has to be conducted quickly or when managers are not willing to send staff to more than one training session. In those cases, the principles of PBI can still be followed because the key questions of the five project phases apply to any instructional situation. Therefore, PBI is likely to be more effective than conventional training under less-than-perfect circumstances because it enables designers to link training to the workplace and provide some opportunities for guided practice, even if all the design information necessary cannot be gathered during the first two project-specification phases.

### Who Should Read This Book?

*Performance-Based Instruction: Linking Training to Business Results* was primarily written for current and future HRD professionals who want to improve the quality and efficiency of their training. Instructional designers who are looking for ways to increase the effectiveness of

mandated but not necessarily needed training programs, and performance improvement specialists who design systemic performance improvement solutions will find strategies and tactics to achieve their goals. Even experts—such as the authors themselves—refer to the text frequently. For example, Dale stated recently that he uses the checklists in *Performance-Based Instruction* to review his own instructional sessions and thereby sometimes discovers that he has overlooked one or more design questions.

A “User’s Manual” suggests that the book is suited for non-HRD audiences as well. In addition to addressing HRD managers and staff, the manual provides helpful hints for instructors and students in academic settings, and for “rugged individualists [who] can just dive in and use the book as seems best.” The manual features a number of examples for possible PBI projects, and I recommend reading it first.

The book is accompanied by a diskette that contains tables, checklists, and worksheets identified with a floppy disk symbol in the text. These files provide ready-to-use job aids—truly a thoughtful and value-added addition considering that the evaluation chapter alone contains checklists with more than 200 questions.

### Conclusion

The book’s title, *Performance-Based Instruction: Linking Training to Business Results*, is the authors’ promise to readers to provide an instructional design paradigm that improves performance where it really matters—at the workplace. And as the reader will discover, Brethower and Smalley keep their promise.

### References

- Brethower, D.M. (1972). *Behavior analysis in business and industry: A total performance system*. Kalamazoo, MI: Behaviordelia.
- . (1995). “Specifying a human performance technology knowledgebase.” *Performance Improvement Quarterly*, 8 (2): 17-39.
- Heiman, M., & Slomianko, J. (1993). *Success in college and beyond*. Cambridge, MA: Learning to-Learn.

## Publisher Information

Jossey-Bass/Pfeiffer

ISBN: 0-7879-1119-4

This book is available from the International Society for Performance Improvement for \$44.95 (list) and \$40.45 (ISPI members), plus \$4.00 shipping and handling. You may send your order to: 1300 L Street, NW, Suite 1250, Washington, DC 20005; fax (202) 408-7972; phone (202) 408-7969; Internet: [www.ispi.org](http://www.ispi.org).

## Reviewer Bio

Peter-Cornelius **Dams** is a Doctoral Associate in Industrial/Organizational Psychology at Western Michigan University. He holds a BS in Architecture (Oldenburg, Germany) and an MS in Behavior Analysis (University of North Texas). He was elected into the Who's Who Among Students in American Universities and Colleges and currently serves as Student Representative for the Association of Behavior Analysis International. Peter focuses on systems analysis and behavior analysis for improving performance systems. His career goal is to become an internal performance consultant. Peter may be reached at the Department of Psychology, Western Michigan University, Kalamazoo, MI 49008 or via email at [Peter.Dams@wmich.edu](mailto:Peter.Dams@wmich.edu).

## Author Bios

**Dale M. Brethower** is the President of the International Society for Performance Improvement and a Board Member of Triad Performance

Technologies, Inc. Consulting for 30 years, his client list includes more than 60 public and private sector organizations. Dale has served on advisory boards for the Institute for Rational Living and for Ronningen Research and Development. He is the recipient of the Lifetime Achievement award in organizational behavior management from the OBM Network. Dale is a Professor of Psychology at Western Michigan University with graduate degrees from Harvard and the University of Michigan. He teaches courses in training, performance improvement, and systems analysis.

**Karolyn A. Smalley**, a performance and instructional systems consultant, helps improve performance at the organizational, process, and job levels. She specializes in process-improvement projects, performance management systems, and instructional systems. Prior to working as a consultant, Karolyn managed the HRD department for an organization having more than \$7 billion in annual sales. She was able to convert a conventional training department into one that specialized in performance improvement consulting. She is a graduate of Michigan State University, the programmed learning workshop of the University of Michigan, and the MA program in industrial/organizational psychology at Western Michigan University.

**Erika Gilmore**, *PI* Book Review Editor, is the Continuous Improvement Administrator for Oxford Automotive in Greencastle, Indiana. Her areas of expertise include performance improvement, training, team building, group facilitation, and associated labor relations. Erika is in the doctoral program in Instructional Systems Technology at Indiana University. She can be contacted by: phone, 765-658-2431; email [egilmore@oxauto.com](mailto:egilmore@oxauto.com).