

In Practice

Crunch Time at the Keyboard

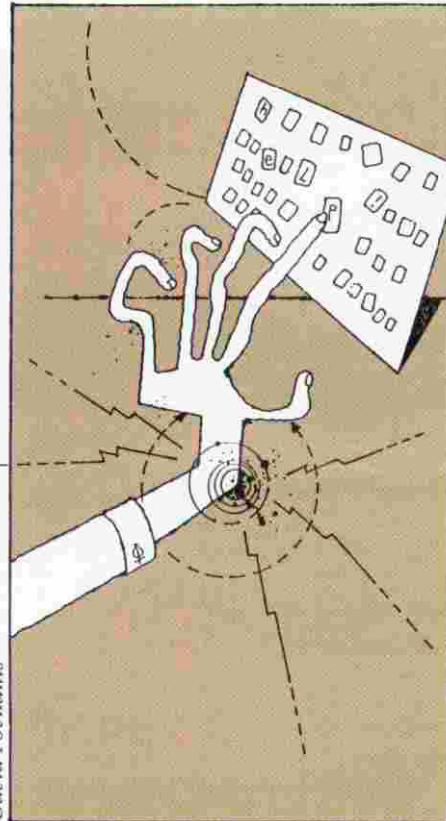
Back in the bad old days, when people earned a living with their backs instead of their brains, most worker's compensation claims arose from conflict between the human body's soft tissues and the material world's hard realities. When pliant muscles, tendons, and ligaments did battle with structural steel, reinforced concrete, or tempered glass, the body parts inevitably lost.

Sprains and strains led the hit parade of workplace injuries. Warehouse workers wrenched their knees, stevedores threw out their backs, and meatpackers pulled muscles. Unable to meet the physical demands of their jobs, they often found themselves unemployed.

The rise of postindustrial work was supposed to put an end to crippling occupational disabilities. How many people could get hurt sitting in front of computer screens all day?

As it turns out, plenty. The National Institute for Occupational Safety and Health estimates that in 1986 more than 5 million workers, fully four percent of the workforce, suffered from cumulative trauma disorder, a malady directly linked to the repetitive, small movements typically required of today's service workers. Most commonly felt in the arms and hands of people who enter data on computer keyboards, the syndrome—which affects the nervous system—causes a burning or tingling sensation that gradually gives way to loss of muscle strength and control, numbness, and finally, chronic pain.

Although clerical workers, data processors, and professional writers and editors suffer disproportionately, cumulative trauma disorder also afflicts workers as diverse as grocery-store cashiers, assembly-line operators, mail sorters, and concert violinists. The American Academy of Orthopedic Surgeons estimates that resulting lost wages and treatment



David Povillattis

expenses add up to more than \$27 billion annually.

Researchers at the Bureau of Labor Statistics have called cumulative trauma disorder the decade's fastest-growing work-related injury.

Experts blame the rise on technological and manufacturing process advances that enable workers to achieve great productivity by moving only a few muscles. In yesterday's offices, typists had to quit pounding the keys every few seconds to hit the carriage return, and stop typing altogether to roll in a new sheet of paper. The variety of movements required to execute those steps and the short breaks they provided helped prevent repetitive motion strain.

By contrast, today's secretaries rarely need to move their hands beyond the eight-by-18-inch surface of the standard computer keyboard, which features a much lighter touch than the old Underwoods. Thus, ac-

ording to *Business Week*, some clerical workers can now strike 10,000 keys an hour.

Such rapid, repetitive, and fine motions can cause swelling in the tendons of the wrist. The tendons pinch the median nerve running from forearm to fingers, resulting in tingling, shooting pain, and numbness. The condition, known as carpal tunnel syndrome, is one of the most common and serious cumulative trauma disorders. Left untreated, the pain can spread to the shoulders, neck, and back.

Training in proper keyboard procedures is an important part of the treatment.

For starters, office workers can prevent repetitive motion injuries by learning how to arrange their computer equipment. Some research suggests a lower incidence of cumulative trauma disorder among workers who can easily adjust the lighting in their work areas, as well as their desks, chairs, and display terminals.

According to University of Louisville professors Peter Mears and Jerald Smith, keyboards should be tilted upward to match the slope of typists' arms. Elbows should be bent at about a 90-degree angle. That helps relieve stress on wrist tendons. Hand position is also important: palms should be above the keyboard, not on it.

Workers also should regularly get up and walk away from the keyboard. Mears and Smith recommend stopping every two hours to rest and stretch the back, shoulders, neck, hands, and wrists. Other experts urge more frequent breaks.

It's How You Play the Game

Games can help American businesses solve one of their most pressing problems—how to get middle managers to act on the strategic plans developed by their bosses.

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That's according to Thomas F. Pray, an expert in computerized business simulations at Rochester Institute of Technology in New York.

Pray contends—and senior executives back his claim—that midlevel managers often don't understand the factors that shape a corporate strategic plan. And although most will concede the importance of strategic planning, many of the people halfway up the organization chart don't grasp the critical role they play in turning corporate vision into dollars-and-cents reality.

Business simulations can drive the point home, says Pray. "A bout with a business simulation helps managers buy into their company's strategic plan. Working with a business simulation gives middle managers a real understanding of the trade-offs and decision making that goes into a strategic plan."

Pray, an associate professor at RIT's College of Business, explains that top executives readily commit to the grand plan. After all, they've spent months or years scouting markets, figuring timetables, weighing options, and making tough choices. Managers, who tend to view the organization strictly in terms of how it relates to their work, can't see the big picture. The mismatch, Pray says, has senior execs "focusing on a limited number of quantifiable objectives" while managers "don't feel that they are part of the plan."

If business were a leisurely affair, top brass could afford to wait a year or so for middle management to come around. But faced with increasing competition and ever-fickle customers, few organizations can accommodate such a lag. More and more companies now sponsor crash courses that introduce managers to the strategic plan via computerized simulations. The games speed the process because they allow managers—in a span of two or three days—to wrestle with the same issues on which senior executives spent months.

"When key factors of a corporate strategy are integrated into a business simulation, it can effectively carry basic strategic principles down to lower levels of management," says Pray, who began developing computerized business games in the early 1970s and who now consults with such corporations as Eastman Kodak, Xerox, 3M, and General Motors.

"In a well-designed simulation, the winning team is almost always the team that uses a well-thought-out and well-implemented strategic plan," he observes. "That includes knowing what the competition is doing, looking at cost-efficiency factors, assessing resource strengths and weaknesses, looking for opportunities in the market, [and] understanding and interpreting appropriate economic information."

Business simulations provide a handy medium for gathering all the factors together in one place. Pray explains that during a typical simulation session managers are divided into competing teams responsible for running fictitious companies. Each team defines its organizational mission, sets objectives, implements strategies, and tries to turn a profit.

In one of Pray's simulations, for example, managers chart their course based on 15 variables including research and development, marketing, price, labor and production schedules, purchasing, preventive maintenance, dividend policy, capital investment, and issues concerning downtime and waste. The team's decisions are fed into the computer, which spits back updates on the company's profits and those of its competitors.

They also receive income statements, balance sheets, manufacturing reports, stock-market analyses, marketing reports, intelligence on competitors, and cash-flow charts.

Armed with those tools, Pray maintains, managers gain an understanding of the cost and revenue considerations that lie at the core of

corporate strategizing, as well as the long-term consequences of day-to-day business.

"Through the simulation, managers not only wrestle with corporate decision making, but they quickly learn how bad decisions and inadequate planning play out in subsequent quarters," says Pray. The result, he says, is a better perspective on how top executives make the necessary choices, and a new appreciation for strategic planning.

To get the most out of a business simulation, Pray advises bringing senior executives into the session once the game is over. When managers can compare their simulation experiences to their real company's situation, says Pray, "that's when it all comes together."

"When that division manager starts talking about the company's plan, faces brighten. You can tell by the questions managers ask that they're buying in." Managers who were skeptical or uncertain about corporate goals, Pray says, understand the trade-offs after they go through the simulation.

"Most important," he says, "they can see their role in implementing the corporate strategy."

Beyond Hit-and-Run Selling

A report from The Forum Corporation takes to task those who adhere to the old adage, "there is never anything new in selling." The report suggests that the art of selling has indeed changed, and sales and marketing trainers had best take note.

Selling in the 1990s: A Sales Productivity Report represents something of a state-of-the-industry manifesto. Based on Forum's research into the characteristics of exemplary business-to-business salespeople, the report concludes that selling now involves much more than taking an order and arranging a payment schedule.

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That approach, says the report, is outmoded but remains common. Forum asserts that salespeople who continue to rely on "hit-and-run" techniques ignore current thinking that sales productivity requires a partnership between buyer and seller.

Even more important, they ignore the fact that successful salespeople now play many different roles. As you evaluate your sales-training programs, check to see how well they prepare your trainees to act as:

■ **General managers.** Salespeople need to view themselves as integral to their employers' bottom-line success. Competitive companies now ask their representatives to be responsible not just for sales volume, but also for profitability. They must be able to sell internally, negotiate effectively, and implement marketing strategies.

■ **Partners.** Forum maintains that few organizations can afford buyer/seller relationships based on an adversarial model. Successful salespeople, the report says, "redefine the buyer/seller relationship creatively, establishing joint ventures and strategic alliances." They think in terms of helping clients succeed in their own organizations.

■ **Resource managers.** Particularly in large selling organizations, salespeople can help create value for customers by pulling together far-flung resources. Coordinating manufacturing, shipping, and accounting activities in an effort to serve customers requires more than sales skills; it requires traditional management skills.

■ **Marketers.** As selling organizations seek to trim operating costs, they cut back on marketing support. Salespeople are becoming increasingly responsible for defining and developing territories, conducting product seminars, and coordinating direct-mail and advertising campaigns.

■ **Key-account managers.** In competitive times, the Forum report says, each salesperson must be able

to establish and sustain a few highly lucrative accounts. The most successful salespeople will know how to balance them against low-yield accounts.

■ **Strategists.** Salespeople must learn to "look at the customer from the point of view of the *customer's client*," the report says. That means buying into the customer's strategic plan and understanding what "benefits the customer politically."

■ **Pulses of the company.** Because salespeople spend so much time out in the field answering customers' objections, they are well-qualified to understand and communicate competitors' strengths and weaknesses. The market intelligence function will provide valuable insights for product developers and senior executives. According to Forum, salespeople who can contribute in that way increase their stature within the company.

■ **Telemarketers.** With the cost of face-to-face sales calls rising above \$400 each, effective telephone contacts will become critical. By using the phone, direct mail, and electronic mail, salespeople can increase contacts and reduce costs.

■ **Confidants.** Successful salespeople often have such a command of clients' problems, goals, and concerns that they are trusted to act on behalf of customers. An open sharing of information between buyer and seller creates a climate that fosters strategic thinking, long-term vision, and long-term profitability.

The new sales roles represent a significant departure from the ways of the past, but that doesn't mean that sales trainers are racing to abandon their old instructional methods. Judging by the data sales-training supplier Learning International uncovered in a 1987 survey, most selling organizations train their representatives fairly conventionally.

Asked to rate 59 sales-training topics on their overall desirability, sales organizations most often mentioned the following old favorites:

- effective listening (34 percent);
- closing and gaining commitment (32 percent);
- maintaining self-motivation (27 percent);
- managing time (25 percent);
- making cold calls (24 percent);
- dealing with clients who say "no" (23 percent);
- making presentations (23 percent);
- opening calls (22 percent);
- strategic questioning (22 percent);
- selling against price (21 percent);
- asking questions (21 percent);
- problem-solving selling (19 percent).

In contrast to the Forum report, Learning International survey participants rated the following topics as least desirable:

- following up with clients;
- providing service after the sale;
- differentiating products and services;
- developing workable territorial plans;
- setting priorities among accounts.

If the Learning International research is a valid indicator of the current state of the art, salespeople and sales trainers have a long way to go before they reach the standards in The Forum Corporation's report.

For a copy of *Selling in the 1990s: a Sales Productivity Report*, contact Jennifer Mason, The Forum Corporation, 1 Exchange Place, Boston, MA 02109; 617/523-7300.

Heavy-Metal Heads

And you thought the Cincinnati Bengals wore funny-looking hats. In its annual forecast of computer-based training's future, *The CBT Report* newsletter warns that trainees may soon strap on electronic headgear when they sit down to take their lessons.

Included in a list of "five major trends that will have a significant impact on computer-based training during the upcoming year(s)," the

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If gizmos like that can help the armed forces blow things away, just think what CBT helmets could do for supervisory training.

How to Spot Training Talent

By Karen E. Lawson, president of K.E. Lawson Associates in Fairport, New York.

It's a fact of life: most companies can't afford to maintain a full-time HRD staff equipped to meet all their training needs. Instead, budget-conscious organizations often rely on on-the-job training sessions conducted by experienced workers or managers.

Selecting the part-time trainers would seem to be a simple matter. Just choose the person who has been around the longest, does the job best, or has a little extra time. Problem solved, right?

Wrong. Trainer qualifications probably have more to do with the success or failure of an instructional program than any other factor. Although train-the-trainer sessions can help line workers or managers become polished instructors, the best part-time trainers display several important competencies in their everyday jobs.

When selecting potential trainers, look for the following qualifications:

■ **Job competence.** The most obvious qualification is the ability to do the job well. Look for people who have appropriate levels of technical knowledge and experience. But remember: technical proficiency alone does not a trainer make.

■ **Professionalism.** Trainers serve as role models, so they should be mature, confident, and enthusiastic about their topic—and about training. Identify employees who view training assignments as opportunities for professional development rather than as intrusions on their daily routines. Try to find instructors

who act the part, and who demonstrate a strong commitment to helping the organization attain its goals.

■ **Good communication skills.** An absolute must. A learning environment in which trainees feel comfortable taking risks without the fear of ridicule depends on the instructor's ability to create open lines of communication. Not only must temporary trainers be able to explain tasks and procedures clearly, but they must also know how to listen actively and be sensitive to the importance of body language and nonverbal communication.

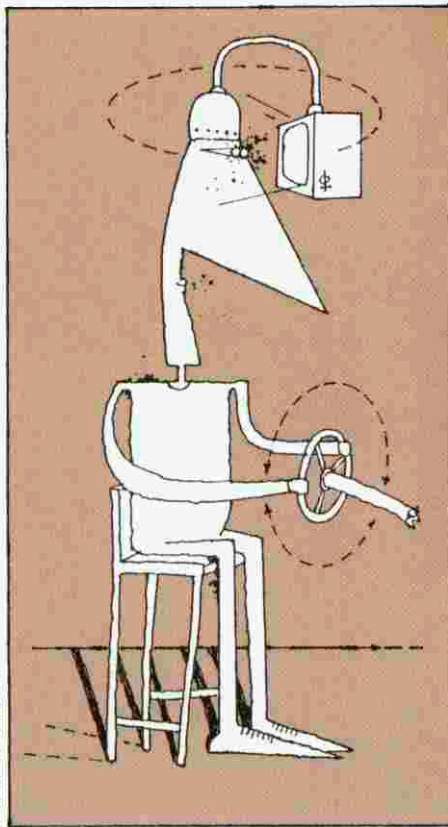
■ **Rapport.** In choosing part-time trainers, look for people who demonstrate good interpersonal skills when they interact with customers and co-workers. Friendly and congenial, qualified candidates for training positions also exhibit the ability to handle conflict without losing their cool.

■ **Good organizational skills.** The ability to balance various responsibilities and manage time are critical to training success. If your instructors will have to develop and implement their own training plans, it is important to find people who know how to organize work and work flow.

If you can fill your roster of part-time trainers with people who display all those characteristics, chances are good that your organization's employees will receive top-notch instruction. To make doubly sure, beware of some pitfalls.

First, be certain that managers recognize and support the training program. Ensure that new trainers have enough time to learn the job and enough time to actually fulfill their new responsibilities. Otherwise, the message comes across that training isn't really all that important.

Second, make sure trainers know what you expect of them and why they were chosen for the job. Laying out your expectations in advance helps prevent new trainers



CBT helmet will, according to the newsletter, contain a video-display screen plus sensors that precisely measure the wearer's head movements. Wired to an Apple or PC, the get-up will place the learner "inside the computer," observes *The CBT Report*. "Thus, what appears on the screen will depend quite realistically on where you are looking."

It isn't as farfetched as it sounds. The requisite technology already exists: display terminals now can be shrunk to visor size and the motion-sensing equipment has been around for a while.

The U.S. Army years ago developed an electronic targeting system for Cobra gunship helicopters that employs lasers built into the weapons specialist's flight helmet. The gunner simply looks at the object he wants to blast and an onboard computer figures out the coordinates. The computer instantly aims the cannons.

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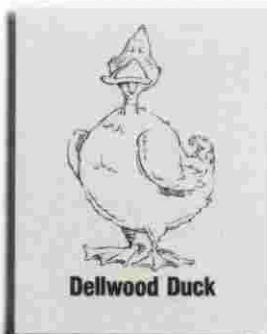
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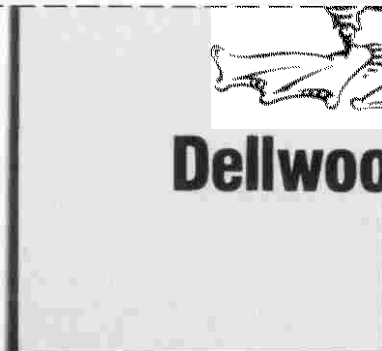
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from feeling overwhelmed and dumped on.

Finally, give part-time trainers all the logistical and instructional support you can. Without an organized plan complete with objectives, outlines, timelines, and procedures, new trainers will struggle and the training program will suffer.

By carefully selecting well-qualified trainers and giving them the tools they need to be effective, you can help your organization meet its objectives even if it lacks a large training budget.

Random Stats

■ Don't worry

If you've been tossing and turning at night wondering who you'll train once robots take over the manufacturing workplace, rest easy. Your job is safe for at least eight years.

According to the World Future Society, mechanical devices will replace very few of the 131 million people projected to make up the labor force of 1997. In fact, the group reports, there will be 400 human employees for every industrial robot.

■ Transferable skills

The ability to train subordinates is one of six skills most employers look for when interviewing candidates for management positions, says the human-resource consulting firm of Goodrich & Sherwood. In addition to developing competent employees, managers who know how to train also help ensure a well-qualified stream of possible successors.

Other key abilities include speaking in public, managing finances and people, conducting hiring interviews, and writing clearly.

"In Practice" is edited and written by John Wilcox. Send items of interest to *In Practice*, Training & Development Journal, 1630 Duke Street, Box 1443, Alexandria, VA 22313.