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Polishing the Crystal Ball

At regular intervals, the World Future Society weighs in with a sometimes ominous but always thought-provoking look at the shape of things to come. This year's findings, reported in the July/August issue of *The Futurist* under the headline "Into the 21st Century," detail the long-term trends likely to influence life in the United States at the start of the next millennium.

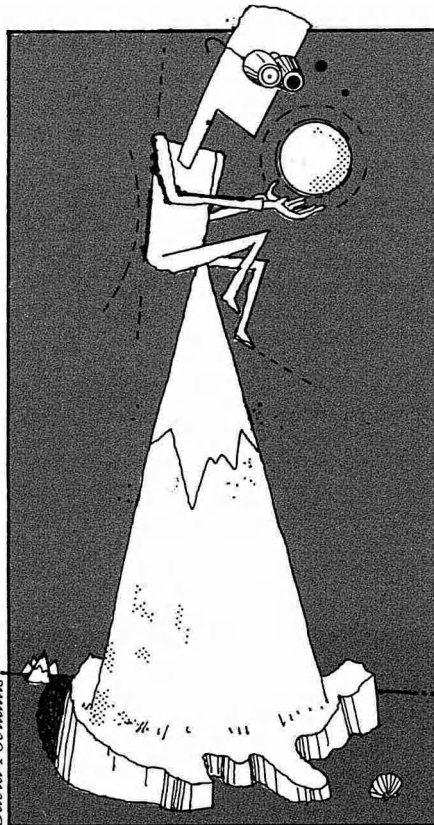
According to researchers Marvin Cetron, Rebecca Luckins, and Wanda Rocha, "The most important area affecting America's future is education." And, they say, the next 12 years will place novel demands on the training and development profession. (For more on what the future holds for education and the workplace, see *Workplace Basics: The Skills Employers Want* in this issue.) Consider the following:

■ Changing demographics and their effect on work.

U.S. birth rates declined from 24.1 per 1000 in the baby boom fifties to 15.7 per 1000 in 1985. This trend now manifests itself in reduced numbers of entry-level workers, and the shortage will worsen in the coming decade.

Businesses, competing with higher education and the military to attract young people, will have to offer top-notch training opportunities in order to fill jobs at the lower levels of the organization chart. Look for more efforts to recruit people with developmental disabilities and physical handicaps.

The aging of the baby boom generation and continued declines in the national birth rate also signal increasing workplace clout for older workers. The population of Americans aged 65 or older stood at close to 30 percent in 1985, and many companies have already begun to tap into this previously neglected pool of workers. As medical advances lengthen older Americans'



productive years, this trend likely will continue.

■ Increasing personal, occupational, and job mobility.

Between 1980 and 1985, 41.7 percent of the U.S. population moved, often changing jobs in the process. The well-documented population shift from northern industrial states to the Sun Belt is just one part of a broader trend toward increasing personal and work-related mobility.

Among the key factors contributing to increased migration is the growing tendency of corporations to relocate to favorable business climates. Workers willing to follow their employers to new sites and those who participate in job retraining programs will be able to adapt to this increasing mobilization.

The rise of the dual-career family will also affect how and where Americans live. As fast-track-minded professionals earn promotions contingent on relocation, HRD specialists will find themselves providing

job counseling to spouses with career development needs of their own. On the other hand, many couples will choose to work in different cities, commuting back and forth on weekends.

■ Continued growth of the service sector.

The Bureau of Labor Statistics predicts that 74.4 percent of the work force will toil in the service sector in 1995. While many of these jobs will pay well and provide stimulating work, a substantial number—including one million new jobs in the next decade—will be low-paid, low-skilled, part-time positions.

These jobs probably will not offset those lost with the decline in the manufacturing, transportation, and agricultural sectors. New service jobs will, on average, pay wages at half the level of manufacturing jobs.

■ The ascendance of knowledge as industry's most important commodity.

By the year 2000, half of all service workers will work primarily with facts and ideas rather than tangible goods. Instead of preparing or repairing products or delivering services directly to customers, they will collect, analyze, synthesize, structure, store, or retrieve information. Eighty percent of managers will be knowledge workers.

Computerization will enable this development. Computer competence will approach 100 percent in America's urban areas, and knowledge workers will use PCs for on-line access to the reference materials they need to do their jobs. These databases will include the contents of virtually all published books, magazines, journals, newsletters, and encyclopedias. A quarter of service employees may work at home, communicating with their coworkers via local area networks.

■ Advances in information technology.

Artificial intelligence and expert systems will permit computer users to automate complex problem-solv-

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ing processes, which in turn will speed product development, market research, and all types of business decisions. These information technologies are in their infancy now, but will flourish by 2001.

Expert systems, actually an offshoot of artificial intelligence, hold particular promise. Widely expected to revolutionize such diverse fields as manufacturing, energy prospecting, automotive diagnostics, medicine, and insurance underwriting, expert systems capture the experience and know-how of exemplary workers and translate them into computerized decision-support programs.

Trainers can expect to play important roles in expert-systems development; job and task analysis skills will be critical to this emerging technology.

■ The evolution of modern management.

Managerial work will change during the years to come. Companies will need fewer middle managers as workers gain autonomy by mastering information technology. Instead of reporting to a supervisor, workers will communicate directly with top-level decision makers.

Thus, organization charts will flatten, and managers will find few opportunities for advancement. Supervisory skill alone will not a career make; promotions will depend on expertise within a relatively narrow specialty. The best manufacturing process designers, for example, will become senior designers or internal design consultants rather than manufacturing managers.

This trend, however, won't diminish the need for well-qualified managers at the highest corporate levels. Management development practitioners may find themselves providing crash courses in business as professional specialists move into the executive suite.

■ Expanding training and education opportunities.

Training will become ever more important as technology turnover and an evolving global economy render old skills obsolete. Right now, for example, the half-life of an engineer's knowledge is only five years. As a result, training opportunities in general will expand.

Task-focused teams will provide the locus for training in tomorrow's corporations, with job incumbents instructing newcomers in work processes. This trend signals a growing need for programs that train technical experts how to train others. The job descriptions of line managers who survive supervisory cutbacks will emphasize training responsibilities.

To satisfy the need for rapid and realistic instruction, HRD professionals will often turn to computer-based training, interactive videodisc programs, and job simulations. These developments, in turn, will promote flexibility, and training will take place not in traditional classrooms, but at workers' actual job sites.

To receive copies of *The Futurist* or reprints of "Into the 21st Century," contact the World Future Society, 4916 Saint Elmo Avenue, Bethesda, MD 20814.

Getting Value from Video Vendors

Despite all the foregoing talk of sophisticated, computerized instruction, the plain old video will most likely remain a staple of your training repertoire.

Off-the-shelf videos proliferate and, depending on the topic, many make effective training aids. But sooner or later, you will run into situations that call for custom-produced videos. And since most trainers lack the luxury of an in-house production facility, you'll have to find a video vendor to handle the filming, editing, post-production, and duplication.

It can be a confusing process. To smooth the way, try asking these key questions, developed by Bette BonFleur and Marjorie Thomas, owners of Ivanhoe Communications, an Orlando-based video production company.

1. **May I see a list of recent clients?** Reputable firms will eagerly provide references. When you get the list, call a few clients. Ask them whether they would use the vendor's services again.

2. **Can I see a demo tape of a complete project?** Don't settle for a demo tape that features just "greatest-hits" clips or special effects. With a finished product you can look for continuity, professional production techniques, and pleasing esthetics. As you watch the tape, ask yourself: does this video do what it's supposed to?

3. **What type and brand of equipment do you use?** The quality of the finished product depends on the quality of the recording equipment.

4. **How long will it take you to get me a proposal and bid?** Time is usually critical when investing in a video production, and a vendor's ability to deliver on time a concise, understandable, businesslike proposal will give you a clear signal of what you can expect during the rest of the job. Give yourself enough lead time to get several bids, and weigh cost factors when you have them all in hand. But remember, an inexpensive production often looks cheap.

5. **What can I do to keep costs down while maintaining quality?** An experienced production company should be able to offer money-saving tips without sacrificing too much visual impact or harming instructional delivery.

6. **What equipment or services will cause extra charges?** Reputable companies will give you a cost estimate for services not included in the initial bid. If, during the editing process, you suddenly realize you need to use wipes or dissolves to make

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transitions between scenes, you should be able to consult a fee sheet to determine the cost.

7. Who will work on the shoot? Try to get information about production crew members' experience. Many companies include staff resumes in their proposals.

8. What kind of experience do your producers have? The producer's skill will affect the quality of your production. Ask to see samples of his or her work.

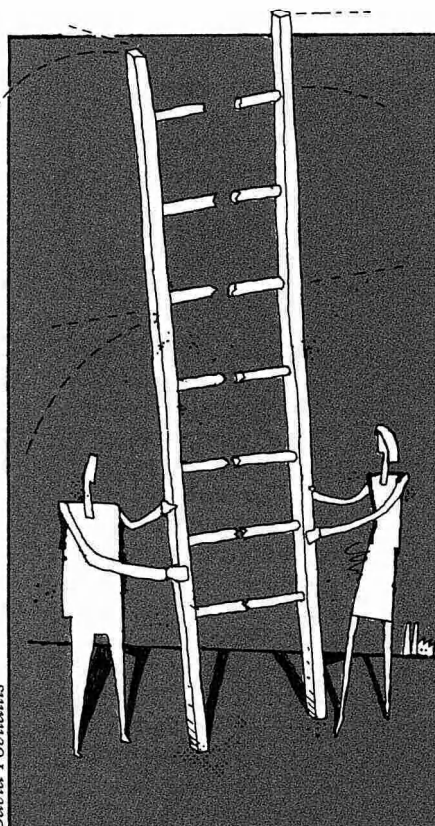
9. Are all the members of the camera crew full-time employees? Full-time employees tend to make better team players than a camera crew made up of freelancers. A well-organized shoot will save you time and money.

10. Do you prefer to shoot in a studio or on location? The answer could affect directly the esthetics and bottom-line costs of the video. Shooting in a studio is sometimes much less expensive than on-location filming. On the other hand, a video produced on-location has a more realistic and interesting feel to it.

11. Who owns the field tapes? The client, rather than the production company, usually retains rights to the field tapes—all footage shot, including that not used in the finished product. These out-takes can save you money if you decide to make another video later. Settle this question before you sign a contract.

12. What are my responsibilities as a client? Does the vendor's fee include scriptwriting? finding on-camera actors and actresses? scouting locations? All these essential tasks take time and cost money. You need to know who will perform them.

Armed with the answers to these questions, you'll be in good shape to screen vendors and ensure a fairly priced production that will earn two thumbs up from your toughest critics—your trainees.



David Povillatis

States Point the Way to Innovative Training

In the 1983 best-seller *Megatrends*, prognosticator and sociological content-analyst John Naisbitt wrote that states, counties, and cities would gradually supplant Uncle Sam as the innovator of progressive government programs. Where training and development is concerned, it appears the future is now.

While the federal government frets and fumes over such questions as the advisability of exempting from taxation the value of employer-paid educational benefits and the administrative problems that attend the Job Training Partnership Act, states have quietly and effectively begun to train and retrain their citizens.

Research by the American Society for Training and Development shows that at least 39 states have in

place formal programs designed to help local companies develop their workers' job skills.

These initiatives, often funded by novel means, fall into four broad categories. Here are some examples:

■ **Thirty-seven states provide training programs and incentives for new and expanding industries.**

In Iowa, for example, the Industrial New Jobs Training Center lowers the cost of expanding a workforce or starting up a new facility by providing on-the-job and other types of training. Tailored to the company's specific needs, the program focuses on training for newly created jobs.

Funding comes from the sale of tax-exempt certificates. By diverting property taxes accruing from the higher value of improved plant and equipment, participating companies pay off the certificates without increasing the corporate income tax they must pay.

■ **In 18 states, government agencies conduct or finance training or retraining programs designed to smooth the introduction of new technology.**

In Illinois, the Prairie State 2000 Authority helps companies upgrade employee skills when they institute new production techniques or productivity-improvement programs. With the goal of keeping the state's existing jobs, companies have free rein to choose training providers: funding pays for in-house HRD, vendor-supplied programs, or cooperatives with higher education institutions.

Most funds come from state-financed grants or loans, but two innovative programs distinguish the Authority's efforts. A job-training voucher system worth up to \$1,000 per trainee supports skills updating for current workers, while unemployed people receive training with the aid of vouchers for up to \$2,000.

■ **Several states sponsor skill-building for unemployed or displaced workers.**

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Massachusetts's widely heralded Employment and Training program is but one such initiative.

Montana's Start-Up Training Program targets jobless or underemployed people and matches them with new or expanding businesses. Employers, after paying for on-the-job or classroom training, are reimbursed on a matching-fund basis. Montana officials credit the program for promoting local business and lowering demand for unemployment insurance benefits.

■ Eight states offer programs focusing on the training and development needs of small businesses.

Connecticut sponsors paid, full-time, on-the-job training for businesses employing machinist apprentices. The state Office of Job Training and Skill Development analyzes training needs, develops and implements an appropriate program, and coordinates services with other agencies.

Businesses can receive tax credits worth up to \$3,000 for each eligible machine-tool trades apprentice they employ and train. In general, tax credits work by giving companies an above-the-line exemption that lowers their adjusted income figures and lessens tax liability.

Thus tax credits, already widely used to encourage investments in research and development, may represent the most attractive incentive for companies to train and develop their workers.

A bill circulated through the California legislature this summer offers a prototype with national implications. Sponsored by Assembly Member Tom Hayden, the bill would provide "a 20% tax credit to employers for the cost of retraining employees who would otherwise be terminated due to increased specialization or skills necessary to remain competitive."

For several years ASTD has encouraged the U.S. Congress to pass a national training tax credit, but these efforts have yet to bear fruit.

Because California is so large—its

economy equals the world's sixth-largest gross national product—the state could act as an incubator for the trend toward training tax credits.

Feel Better About Yourself in Four Easy Steps

Next time you feel dissatisfied with your paycheck, try playing a zany new game known as Compute the Value of Your Career.

The *stat-meisters* at *Personnel Journal* have invented this revolutionary measure of job worth because "now more than ever an individual's career ranks as that person's number one investment." It's doubtful that this calculator workout will pay off in any way whatsoever, but here's how it works.

Personnel Journal says four factors go into figuring what your job is really worth: time on the job, on-the-job training, learning experiences within professional groups, and formal education.

To figure the value of time on the job, they say, multiply your median salary by the number of years you've worked. If, for example, you started work 12 years ago at \$20,000 and now make \$60,000 (you can tell *Personnel Journal* was thinking about trainers when they chose their figures), your median salary is \$40,000. Multiply by 12 to get a job experience worth \$480,000.

On-the-job training rates \$150 per hour, and the average executive gets around 40 hours of OJT annually, says the magazine, so tack on another \$6,000 per year worked. At 12 years, that makes your running total a whopping \$552,000.

Now gauge the value of learning experiences within professional groups. The *PJ* statisticians don't say why, but these learning encounters go for only \$100 an hour, compared to \$150 for on-the-job-training. There must be an overhead factor or something. Anyway, multiply

\$100 times 20 hours per month (!), times 12 months per year, times 12 years.

Subtotal: \$288,000. Running total: \$840,000.

Finally figure in how much your formal education is worth—that's tuition, room, board, activities fees, etc., for both undergraduate and any postgraduate degrees you may have accumulated. Don't worry about finding receipts. With logic that implies you may suddenly turn stupid, forget everything you ever learned, and find yourself rematriculating as a freshman, *PJ* advises using a replacement cost of \$18,000 per year to attend a grade-A private college. Assuming a four-year baccalaureate degree, your education is worth \$72,000.

All these numbers added together—experience, OJT, professional learning, and formal education—make your career worth \$912,000.

Personnel Journal cautions that "totals will vary widely according to individual variables."

So. There you have it. Next time your boss offers you a measly five-percent pay hike, stand up, lean over the scrooge's desk, and sneer, "Negotiations start at one million, buster. Here's my agent's phone number."

Then stomp back to your office and wait.

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