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ABSTRACT

Functional illiteracy is an urgent problem for the U.S. business and industrial communities. Employers can uncover literacy problems among employees by conducting analyses of the literacy tasks needed on the job and assessing the basic skill levels of their work force. The design of a basic skills training program should be based on clearly defined company needs. Training may be provided in house, in partnership with community education programs, with help from government agencies, by community-based organizations, or in alliance with other small businesses. The corporate approach to workplace literacy is illustrated by programs at Polaroid, Motorola, Planters Lifesavers Company, and Nestle Stouffer Foods. Solutions used by smaller companies, such as Remmele Engineering, Cumberland Hardwoods, Peavey Electronics Corporation, and United Mailing, demonstrate the unique challenges facing small businesses. Examples of successful partnerships include the following: the Workplace Education Project in Tucson, Arizona; the Alliance for Literacy program in Hartford, Connecticut; and programs in Nebraska and Minnesota that specialize in teaching workers from Southeast Asia. Common features of well-run workplace literacy programs are as follows: well-defined goals and projected results; support from top management; personnel to plan and run the program; assessments and job task analyses that focus on job skills, not academic skills; materials, methods, and evaluations tied to learning goals; qualified instructors; class schedules and locations that accommodate workers' schedules; measurement methods to track progress; and flexibility to modify the program as company goals or technology changes. (Ten organizational resources are listed.) (CML)

JULY 21, 1992
Report No. 1764
SECTION III

SPECIAL REPORT

BACK TO BASICS: LITERACY AT WORK

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INTRODUCTION

Larry works in the warehouse as an inventory control clerk. He's married to a social worker, and his daughter recently graduated from a top college with honors. His youngest daughter, still in high school, excels in science and mathematics. But Larry keeps a secret from his friends, his employer, and even his family—he doesn't know how to read or write beyond a fifth-grade level. He never received his high school diploma; and now, after 20 years of hard work, Larry risks losing his job.

The warehouse is installing a computerized inventory system. Larry, like the other warehouse clerks, is expected to become "computer literate." But he can't understand the computer manual, which he must learn in order to pass a written exam qualifying him to make the switch to computers. He tries to wing it, using some of the cues he has developed over the years to cover up his problem. He fails and loses his opportunity to advance from a job he's held for 18 years.

Larry is a fictional character, but his story is real—it's the story of millions of people right here in the United States. Literacy, once relegated to the back burner as purely an educational issue, has now become an issue of economic survival. As the global marketplace becomes more service and information oriented, more and more jobs will require higher levels of math, reasoning, and communication skills. Yet the figures on workplace literacy reveal that millions of adults in the nation's work force lack these basic skills.

According to Business Council for Effective Literacy (BCEL), the national literacy information clearinghouse based in New York, approximately 27 million adult Americans can't read or write well enough to fill out a job application or to function at the basic literacy level for everyday living and working. The Council estimates that another 45 million adults are only marginally competent in their basic skills.

Study after study tells a similar story. The Center for Public Resources' *Survey of Basic Skills in the U.S. Work Force* reveals that more and more companies are experiencing problems with employees whose basic skills are deficient. Of the companies participating in the survey:

- Thirty percent reported employing secretaries who had difficulty reading at the level required by the job.

- Fifty percent stated that their managers and supervisors could not write a paragraph without making grammatical errors.

- Fifty percent reported that skilled and semiskilled employees could not use decimals and fractions in math problems.

Nationwide, estimates on basic-skills deficiencies vary from 13 percent to as high as 20 percent of the population. The widely quoted *Work Force 2000* study by the Hudson Institute (1988) estimates that of 25 million new workers entering the work force next decade, 41 percent will be from minority groups or immigrants, compared with the current figure of 17 percent. These groups of "nontraditional workers" typically have a higher functional illiteracy rate than whites.

As jobs become more complex, they will involve more brain power and less muscle. Only 27 percent of all jobs developed over the next 10 years will be considered low-skilled, versus 40 percent now. Fewer young, well-educated candidates will be available for complex jobs because of the decline in population growth.

Another study by the U.S. Department of Education estimates that 45 million current jobholders are functionally illiterate—a term defined as those people who read below a ninth-grade level and cannot write, compute, solve problems, or communicate well enough to fully participate in society.

While there are many arguments that center around the definition of literacy, there is no disagreement that unless America's work force is prepared to meet the demands of a changing marketplace, our country's ability to compete as an economic superpower in a global economy will greatly diminish.

The Business Community Must Act

The effects of adult illiteracy hit hard at the nation's pocketbook. Billions of dollars are lost each year through low productivity, absenteeism, and inferior product quality. While there are many causes of these ills, the symptoms can, in many cases, be linked to literacy deficiencies in reading, writing, math, and problem-solving skills.

The problem doesn't end there, however. The large number of unemployed who are considered to have seriously deficient basic skills puts a strain on the availability of qualified applicants for new jobs. Add this to the predicted increase of groups that traditionally have been undereducated and you come up with a nation whose ability to compete is seriously handicapped.

With the stakes this high, business must fight back. Workers with good basic skills are more easily trained and

retrained, and they give companies a larger pool from which to promote. Educated workers are also more satisfied, both personally and in their jobs. Thus, it's no surprise that workplace literacy programs are becoming more and more popular as a way of battling the problem.

In this Special Report, you will hear from some of the most respected leaders in the arena of adult literacy. You will learn through case studies of successful workplace literacy programs how some companies—large and small—have taken on the task of reeducating their work force. And you will learn the ins and outs of developing a basic-skills program in your own company, one that will help undereducated workers overcome the obstacles that hold them back.

The need for work force education has never been greater. Competition in the global marketplace is fierce. The trends predicted by the *Work Force 2000* report project that over the next 10 years, the United States will confront a widening gap between job skills requirements and the availability of qualified job candidates. Those companies that take steps now to educate and sharpen the skills of their employees won't find themselves left out of the game.

CHAPTER I:

A PROBLEM OF NEW URGENCY

It was not too long ago that America was the recognized leader of the industrial world. In the arena of global competition, we were the champion. But in recent years the nation has slowly been losing its competitive footing.

Why? "There are a number of reasons," says Kent H. Hughes, President of the Council on Competitiveness (Washington, DC), an organization founded in 1986 to explore ways to help make American industry and its workers internationally competitive. "One is that we were enormously successful with our old techniques, such as the mass-production assembly line developed and perfected by Henry Ford and others. That allowed tasks to be standardized, which was an enormous leap forward in terms of volume and quality of production."

Ford's techniques fit the nature of the work force. They enabled him to adapt sophisticated products to a process that could draw on immigrant labor. "Many of them, at least initially, could not speak English." says Hughes. "They may have been literate in their own languages, but they were not in English." The question of literacy, in functional terms, was not important. Ford's approach was successful well into the 1960s. But then the American economy began to face more and more competition from countries that were just beginning to reemerge following the devastation of World War II.

"We didn't have a war to eradicate our economic system," says literacy expert Jorie W. Philippi, executive director of Performance Plus Learning Consultants, Inc. (Springfield, VA). "Every country out there that is considered a prime competitor in the global market has had a war that wiped out its old system. Consequently, they had to build new systems. For the United States, it's more like trying to rewire the house while the lights are still on."

Rebuilding a nation's industry requires new thinking. America had been successful with its older manufacturing techniques. Training and skills upgrading was not a priority for most businesses. There was no stimulus for change.

Until now. And although the problem is not a new one for American businesses, it is a problem of new urgency. "It has hit fast and has become critically important because of very rapid changes in the makeup of work itself," says Gail Spangenberg, vice president and operating head of the Business Council for Effective Literacy. "Because of the changing nature of work and the rapid introduction of technology into the workplace, the skills levels and patterns of working behavior that were suitable a decade ago are no longer adequate or applicable."

There are other factors contributing to our waning competitiveness. "If you look at the demographic trends in this country, starting now, you can see that the pool of persons available for new hiring is largely made up of population groups who are heavily deficient in skills and vocational preparation," says Spangenberg.

Many critics point their fingers at the nation's education systems. But the task of educating the American work force cannot be done by our schools alone. Looking at the findings of the *Work Force 2000* study, "even if you look ahead to the year 2000," says Hughes, "85 percent of the workers who are going to be in the work force by that year are already in the work force today. So we can do everything right in the education system and still not reach that 85 percent."

A New Literacy

In 1990, the National Governors' Association, along with President Bush, adopted six National Education Goals. Goal number five states: "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." With 85 percent of the year 2000's workers already holding jobs, the ball then falls in the corporate court. Is business up to the challenge?

Ready or not, Spangenberg believes "the new economic reality requires the business community to make an investment in the work force beyond anything that they have historically been used to doing." American businesses have to play a game of catch-up, and they will need new ways of doing business.

Some companies have begun to move toward higher-performance work organizations. In this new method of organization, workers will increasingly be more responsible for the quality of output. It will require them to move beyond the traditional one-task, one-person assembly line mentality.

"We used to think of individual tasks being broken down into very fine discrete actions," says Hughes. "These actions were often repeated, and the level of literacy required was rather low. Now we are facing a need for front-line workers who can reprogram numerically controlled machine tools. This may require algebra, or the ability to perform statistical analyses to identify problems. Workers will need a higher level of academic and technical skills."

The skill and knowledge needed to perform in this new

organization goes way beyond the question of literacy and academic skills as they are traditionally defined. "For example," says Philippi, "we are shifting to horizontal work teams where there's the need for more communication skills. We are now asking workers to be able to summarize information during team meetings, which is a very high-level skill. We are asking workers to collect data, clarify information, and formulate questions. But most of the workers who are being asked to do these things have never done them before, and they need strategic training for these new applications of basic skills."

Front-line workers are not the only group in need of retraining. Higher level jobs are included as well. "I see a lot of managers being hit with Total Quality Management and upgrades in technology," Philippi continues. "Managers may have depended on secretaries or clerks to perform many office functions; then they are given a computer terminal to use. Those managers may not know how to type and may no longer have support staff to depend on. You see people you would consider advanced-level literates slip down a notch."

Whether entry level or managerial, clearly it is the jobs that are changing. With downsizing and people being asked to do more, the question of literacy becomes more universal. There is now an economic imperative for businesses to take a more active role in training employees in those basic-skills applications that support job performance requirements.

Approaching the Problem

When we define literacy or illiteracy, we often speak in terms of grade levels. For example, the definition of functional illiteracy given in the introduction was "those people who read below a ninth-grade level and cannot write, compute, solve problems, or communicate well enough to fully participate in society."

This definition of literacy, as it pertains to adults, has recently come under fire, however, because it uses academic grade-level designations based on the standard norms of a school-based population. (See box on page 7.) But what a 9-year-old at a fourth-grade reading level knows and what an adult reading at the same level knows are two different bases of knowledge. Adults bring to any task prior knowledge and experience that no 9-year-old can match.

"Furthermore," says Spangenberg, "the focus of instruction in adult basic-skills programs is on enabling individuals to do what they need to do in life and at work. Different levels of proficiency are required to do or perform different tasks, which may or may not correspond to particular grade-level equivalencies."

The National Literacy Act of 1991 addresses this problem. The Act, signed into law in July 1991, is, according to the Committee Report, "a comprehensive approach for improving the literacy and basic skill levels of adults..." The Act defines literacy as "an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential."

Gail Spangenberg believes this definition is a major advance over prior legislative definitions because "it recognizes that specific functional contexts provide the basis for instruction. If widely adopted, the definition could be a major force in helping to shape effective literacy programs at the state and national levels."

Most experts in the field agree that because of its breadth, the National Literacy Act's denotation is an improvement over the academic-based grade-level definitions. It's also important to note that the Act's focus is to provide "an infrastructure for coordination, research, and planning; upgrading the literacy and basic skills training systems..."

This statement is noteworthy because it recognizes that literacy and basic-skills training go hand in hand. In the past, literacy training was mostly associated with one's ability to read at a certain level. Now it is recognized as going beyond that traditional definition of attributing a grade level to one's competence. It goes beyond the idea of traditional adult education courses, where the focus tends to be on the academic applications of skills. The skills learned in these classes do not necessarily transfer to the workplace.

"In the workplace, the skill applications you need are different," says Philippi. "Uniquely different sets of cognitive strategies are tapped when you need a brush-up or need to learn new skills you previously haven't had to use, versus learning how to read or do math calculations in school."

She says that any company needing to improve the skills of its employees is best served by programs that answer the question, "What skills do they need to perform their jobs competently?"

"Companies need to find out which skills are related to job performance and, if the company wants a long-term payback on its investment, which of those skills are what we call 'portable' skills that will transfer as jobs change."

She cites chart reading as an example of a portable skill. "If you learn how to read a chart, you know how to skim for headings, how to identify its organizational format, and how to pull out information. You can apply those skills to reading any chart once you know how to use them. This differs dramatically from teaching the context of one or two specific charts. It reclassifies chart reading as a 'portable' skill.

"What we are really talking about is change—whether it's shifting responsibilities or upgrading workers' skills," she continues. "Change is the issue. We should teach people these portable skills that will continue to be effective in the ever-changing workplace environment."

Functional Context

Workplace literacy instruction should be approached from a functional context. Basic-skills training for the job should be related to real job tasks. *The Bottom Line: Basic Skills in the Workplace*, a joint publication of the U.S. Department of Labor and U.S. Department of Education, says that "such programs...hold out the promise of helping employees develop their analytical reasoning abilities, enabling them to more readily transfer their experience in one job to another."

The report cites the Chicago Private Industry Council as a good example of uses of an effective functional context approach. The Council worked with local companies experiencing a shortage of word processor operators and a private consulting firm to develop a training program that would provide the much-needed pool of operators. A functional learning environment was established "which simulated that of a business, with the same kind of equipment that students would use on the job." The results were impressive. Within three months of completing the 20-week program, 70 percent of the trainees were employed.

This is an example of the kind of program companies should think about offering. "An effective workplace literacy program should have a core of instruction tied directly to performance improvement," says Philippi. As you will read in the chapters to follow, these programs are not confined to large corporations. Nor do they break the bank. Sometimes all they require is a commitment to closing the literacy gap.

LITERACY: WHAT DOES IT MEAN?

The following traditional academic definitions of literacy have come under fire recently. They are too general—so nonspecific that they no longer define the types of illiteracy many employers face.

- Raw illiteracy refers to those people who cannot read and write at all. Their skills are said to be below a fourth-grade level.
- Functional illiteracy, the most commonly used term, refers to those who can't write, compute, solve problems, or communicate well enough to fully participate in society. People who can read between the fourth- and eighth-grade levels fall into this category.
- Marginal literacy is used to describe people who have some skills, but read below a twelfth-grade level and may lack the skills needed to function in a highly technological environment.

As we learn more about literacy, however, the definitions and methods of assessing what constitutes knowledge are undergoing change. The U.S. Department of Education is currently in the midst of evaluating the results of the 1990 census. What it hopes to glean from this $6 million study, to be released by early 1993, are new, more specific definitions as to what constitutes literacy. In addition, The Department of Labor issued a report on Workplace Literacy in early 1992 that may also change the way we view literacy. It reports on literacy skills based on these more precise scales developed by the National Assessment of Educational Progress:

- Prose Literacy: the level of ability needed to read and interpret information typically found in newspapers, magazines and books
- Document Literacy: the level of skill necessary to identify and use information documents, such as entry forms, tables, charts, and indexes
- Quantitative Literacy: the ability to apply numerical operations to the information contained in printed material, such as a checkbook, loan advertisement, or order form

CHAPTER II:

UNCOVERING LITERACY PROBLEMS

Most employers assume their workers can read and write. The question is, how well? And if they can read and write, can they also perform simple arithmetic? Can they understand the elements necessary for statistical process control (SPC)? Companies too often find out after the fact that their workers' reading or math skills are too weak to keep up with the training demanded by new technologies. At a time when workers are expected to communicate effectively in teams, or grasp new ideas such as SPC, the mismatch can become costly—in terms of remaining competitive and surviving.

The disparity applies among various groups of employees—from entry-level to clerical to those in supervisory positions. For example, according to a 1990 report by the Conference Board (New York, NY), more than "70 percent of the firms surveyed do not formally test entry-level job candidates for reading and writing skills, except where such skills are essential for job purposes..." Instead, most firms make the assumption that an applicant is literate because he or she could successfully fill out an employment application, or because that person holds a high school diploma. As many companies have discovered, however, these assumptions can be costly.

The Conference Board reports that almost 14 percent of surveyed respondents could relate work problems to illiterate workers. Companies reported errors in billing, in measuring of raw materials, and the inability to read and comprehend maintenance manuals. *The Bottom Line* report by the Department of Labor and Department of Education cites similar findings. In one case, managers of a large urban bank "discovered that a major reason for low productivity among the secretarial and clerical staff was the fact that 70 percent of dictated correspondence had to be redone at least once because of spelling and grammatical errors." In another example, the report reveals that "in a major manufacturing company, one employee who didn't know how to read a ruler mismeasured yards of steel sheet, wasting almost $700 worth of material in one morning."

OSHA officials contend that on-the-job accidents and illiteracy are also related. Worker safety can be jeopardized by those who cannot read or fully comprehend safety instructions. As respondents in the Conference Board survey stated, in many cases, employees' literacy problems often are not discovered until well after the damage is done.

In the same report, human resource managers identified six areas of basic skills in need of improvement among new employees:

- Reading and interpretation
- Basic math
- Written communication
- Oral communication
- Computer capability
- Work readiness

All these areas are vital to the productivity of any company. Without training, new hires, as well as incumbent workers, are destined to flounder in the wave of change—whether it's an upgrade in technology or an organizational transition. Neither are employees at other job levels immune to literacy scrutiny. Workers' basic skills may be adequate to perform their jobs until a change takes place that uncovers hidden deficiencies.

In her recent work, *Acquiring and Using Literacy Skills in the Workplace*, Jorie Philippi points out that "the average worker is almost 40 years old. For years he has performed the same job tasks, but as his job responsibilities change...he finds himself no longer equipped with the skills he needs to tackle new job tasks. He is classified as an intermediate-level literate, no longer able to be competently functional in the workplace environment without additional literacy skills training."

The literacy gap can only be closed by uncovering the root of the problem. Companies are now addressing the question of literacy among their employees by performing literacy assessments: Does the company need a training program? Literacy task analyses are then performed to determine which skills are critical to the job. Based on the task analyses, programs are developed to upgrade those skills directly related to the critical tasks performed on the job.

Assessments: Look Before You Leap

Your next step is to assess the basic-skills level of your work force. "You have to assess your internal needs before you launch any training program," says BCEL's Gail Spangenberg. "You must first assess the literacy requirements of jobs, groups of jobs, or job tasks. Then you need to assess your workers' skills. It is the area of mismatch that will tell you if a general literacy program is appropriate or if you need a job-linked program."

There are a number of standard tests available to determine how much training your work force needs. These tests, such as the Adult Basic Learning Examination (ABLE) and the Test of Adult Basic Education (TABE), are not without their critics, however. They have been criticized for focusing on academic rather than work-related skills. An alternative might be tests that measure basic skills in the context of real-life experience. For example,

the REAL life-skills test measures how employees comprehend everyday information from a variety of materials—classified advertisements, magazine and newspaper articles, directories, timetables, etc. Whatever the method you choose to assess your employees' literacy needs, it should, at the very least, lead you to an informed decision about starting—or not starting—a training program.

Identifying Job Skills

Before you launch any kind of training program, it is necessary to determine what skills are necessary for employees to perform their jobs competently. The Department of Labor's *Dictionary of Occupational Titles* is a good place to begin. This publication lists descriptions of tasks associated with thousands of jobs, as well as the qualifications necessary for each occupation.

As you read, it may strike you that there are vast differences in the skills and knowledge required within the same industry and job level. And although there are job-specific skills and vocabularies that apply to certain occupations, it is also clear that everyone—from inventory clerks to department managers—must be able to read, write, and then comprehend vast amounts of information.

Literacy audits, or literacy task analyses, are designed to determine what basic skills are necessary for employees to perform their jobs effectively and, based on that determination, what training is necessary to bring employees up to an acceptable performance level.

Audits are usually performed by consultants or other trained professionals. This is a small but growing field, and you may have to make a few phone calls before you find a properly trained, qualified professional, but it's worth the effort.

Says Spangenberg, "We get calls at the Business Council for Effective Literacy all the time from companies that say they think they've got a literacy problem. We advise them to bring in people with professional training who can evaluate what needs to be done, who understand functional context principles of learning and program design, who know how to link instruction to the company's specific need and link it to the company or industry environment, and then evaluate outcomes in a way that means something to a business."

What to Expect

The audit is usually quite detailed and can take days, weeks, or months to complete, depending on the number of employees and departments targeted for auditing. During an audit, you can expect the following to take place:

▲ **Observations of employees:** The auditor(s) observes employees performing all tasks that must be accomplished during a typical workday. If the job varies over a period of time, then observations continue until all actions are observed. These tasks are broken down by the number of times they are performed (for example, each time the observed worker reads, writes, or does a calculation). The setting in which the activities take place is noted, as are the materials used by the employee and whether the tasks are performed in groups or individually.

▲ **Collection of reading material:** Any material written or read on the job is collected to determine the level of proficiency employees must possess to do the job. This could include any interoffice communication, external correspondence, telephone messages, manuals, or any forms employees must fill out during the course of their jobs. These materials are then examined to determine reading levels, vocabulary, and writing competence. Content will also be analyzed to determine the material's function.

▲ **Discussions with employees and supervisors:** To determine the different perceptions of the skills needed to perform their jobs, competent employees and their supervisors are interviewed. They are asked which skills are used the most and how they use them. Of particular note are responses from top performers. Supervisors are asked to identify what they feel are the critical skills needed. Interviewing both employees and supervisors helps uncover discrepancies between their perceptions of necessary job-related skills.

▲ **Determination of basic skills:** Once the data gathered from the first three steps is complete, the auditor will write up a description of each of the audited jobs, detailing the reading, writing, and computation skills necessary for effective job performance. The auditor then returns to the work setting to observe how or whether the tasks requiring these basic skills are performed. If any problems are observed, the auditor should discuss these observations with the employees and supervisors. This will help bring any hidden weaknesses into focus.

▲ **Testing employees:** The auditor will design tests asking the employees job-specific questions. The test should use job-related language and focus on situations and formats in which the basic skills being tested will actually occur. Employees should also be asked to perform tasks simulating problems they encounter on the job.

Once the audit is complete and test results are compared with the established skills critical to a task, then it can be determined whether there is, in fact, a basic-skills problem, and if there is, what can be done to improve employees'

skills.

Literacy audits are not without their drawbacks, however. The U.S. Department of Education's 1991 study, *A Review of the National Workplace Literacy Program,* points out that "some workers fear that literacy analyses, and literacy programs in general, may be used as a screen to remove workers for whom retraining would not be cost-effective." In addition, conducting a literacy audit may be too rich for a small business's pocketbook.

If this is the case, the small business may opt for "an informal, less extensive analysis of job task skills." Smaller businesses can also take advantage of some of the recently developed literacy training products, which essentially train the trainer and help small firms write their own curriculum for improving employees' skills. (See the "Resource" listing at the end of this report.) The best of these products will focus on linking instruction to job tasks—the distinguishing feature of effective workplace literacy training.

CHAPTER III:

DESIGNING A BASIC-SKILLS TRAINING PROGRAM

The Starting Point

Once you understand the literacy requirements of your jobs or groups of jobs, your next step is to implement changes that will address the scope of your problem. For some companies, this might mean sending employees to training seminars or vocational courses to upgrade certain technical skills. For example, you may have a highly educated work force that needs only to learn how to use the latest computer software. Or you may have an employee population that needs to brush up on its math skills. Employees with jobs that require little reading, writing, or computation skills might best be served by generic basic skills courses. The results of the audit will be your starting point.

Solutions will not be quite so straightforward if the audit uncovers major literacy problems among your employees. Tasks may have to be redesigned and job-related materials might have to be rewritten to match the skills of employees. Training programs may have to be established for new hires or to bridge the gaps between your workers' abilities and the requirements of the job.

Before you launch a basic-skills training program, you need to clarify and define the needs of the company, and what specific needs will be addressed by improving your employees' basic skills. You will need to designate the employees who will benefit from this training and then define the results you expect from the training. The program should be consistent with your company's goals and your employees' needs.

For most companies, training is a bottom-line issue. You want either to remain competitive or to jump beyond the competition. These goals are clear-cut. Goals should also be established for the basic-skills training program. *The Bottom Line* (U.S. Department of Labor/U.S. Department of Education) basic-skills report suggests answering these six questions to help you set those goals:

➥ What company goals or performance standards are not currently being met?

➥ If there are projected changes in your business or business environment, how will the resulting new goals modify your current performance standards?

➥ What skills are needed to perform effectively in specific jobs or job families now and over the next five years?

➥ Do employees lack the minimal skills to perform effectively now and over the next five years?

➥ What results do you expect to achieve if a basic-skills training program is implemented?

➥ How will you determine whether these results have been achieved?

Philippi cautions against a "dipstick" mentality in setting up a basic-skills program. "You don't just test employees, dump in a reading course or two, and test them again," she cautions. If the program is going to have the desired effect, it's got to be well designed and meet the diverse needs of the company and its work force.

Training Resources: What Are the Options?

For all but the largest companies, most firms will be hard-pressed to come up with all the resources needed to conduct an effective training program. Training specialists, materials and equipment, classroom space, and funding are all needed to start up the program and then keep it on its feet. Where do you begin? There are a number of options to consider:

❑ **In-house programs**, where employees attend tutorial programs specifically designed to strengthen those skills necessary to improve job performance. However, the in-house resources and expertise necessary to run such a program are often not available to most firms.

❑ **Community education programs**, where a company enters into a partnership with local high schools or community colleges to develop programs for upgrading employees' skills. This is one of the most accessible options for many firms, because more and more local school districts have reacted to the demand for work-related basic-skills programs. Don't overlook colleges and universities in your state—many have continuing education divisions that can provide you with assistance in developing your own program.

❑ **Government agencies** are good sources for help with starting workplace literacy programs. Most state education departments have Adult Education divisions that are re-

SIGNING UP EMPLOYEES

Planning a literacy or basic-skills training program involves a cast of participants. Upper management, human resource personnel, and your education partners are all involved in implementing and administering your program. The biggest role, however, will be played by your employees. Because their understanding and cooperation are vital to the program's success, they should be involved in the process right from the start.

One midwestern electronics company sought its employees' feedback during the "what if" planning stage. "We carefully considered our employees' feelings," says one manager. "We were careful not to call it a 'literacy' program, because of the implications of that word. We didn't want our employees to feel that management thought they were uneducated or dumb."

Your project's *name* may have a bigger influence on employee participation than you might think. As stated in the *Review of the National Workplace Literacy Program* (U.S. Department of Education), "some programs have found that embarrassing potential participants can be minimized through carefully naming the literacy program." Some examples: ATLAS (Aim to Learn and Succeed, Bell Atlantic); R.O.A.D. to Success (a Pennsylvania truck drivers' program); LEAP (Labor Education Achievement Program, a Maryland program for union employees in Baltimore).

Employees may fear the testing process itself, wary that proposed testing could be used against them or could jeopardize wage increases or promotions. Others might be embarrassed to admit they have problems with reading or writing skills.

To overcome this problem, some companies develop anonymous questionnaires that ask employees to rate themselves in technical and basic-skills abilities. The electronics company mentioned earlier used this method to uncover areas where employees felt they were most deficient. Employees were also asked if they believed upgrading their skills would help them perform jobs in the future.

The questionnaire results identified math and communication skills as major areas in need of improvement. This data was presented to the work force. "They saw that there was a need for a basic-skills training program, and they understood that the company's future depended on their ability to keep up with technological changes." Employees also learned that the company was willing to invest in them. "That in itself says a lot," the manager notes.

Employee acceptance of the *idea* of basic-skills training is one problem; getting them to participate is another. It is hard for some people to admit they need help. You can recruit employees more easily if you are sensitive to their apprehensions. Start by assuring employee confidentiality. In many companies, test results and course grades are between employee and instructor only. This lessens any fears employees may feel about perceived threats, such as job loss or promotion denials. Offer incentives for their participation. Some companies outline possible job advancements for successful course completion. Others offer monetary incentives or allow employees to leave their jobs to attend class without losing pay.

sponsible for adult basic-skills training, administering General Equivalency Diploma (GED) programs, or English as a Second Language (ESL) classes.

❑ **Community-based organizations** and nonprofit literacy groups can also be helpful. Community organizations, such as a chamber of commerce, sometimes offer training courses for its members. Voluntary literacy tutoring organizations, such as Laubach Literacy Action and Literacy Volunteers of America, have affiliates in most states.

❑ **Small business alliances** are an option for small firms within the same industries. By banding together, they can pool their resources and work with an education provider to develop industry-specific job-related skills training.

Asking the Right Questions

When you explore the basic-skills training options that are available to you, be sure your chosen partner meets the needs of your employees' and your company's particular work environment. Not all providers have the workplace literacy experience necessary to conduct an effective program. So ask questions. *The Bottom Line* report recommends asking the following questions to serve as a guide to choosing the appropriate partner:

▼ Is the provider experienced in designing and administering job-related basic-skills programs?

▼ How was the success of its prior workplace literacy

programs measured? Is there any documentation of its success? If the provider has no experience in running job-related basic-skills programs, how successful were the agency's other basic-skills programs?

▼ Does the provider offer specialized programs for particular population groups? Employee groups with limited English-speaking skills, for example, will have different needs than the rest of your employee population.

▼ Does the provider understand your company's objectives? Providers must work with the company to develop synergy between program and objectives.

▼ How will the program be designed and implemented, and how much will it cost?

▼ How will the provider assess your employees' current skill levels and training needs?

▼ How will the effectiveness of the program be evaluated?

▼ How flexible is the provider? If the need arises, can additional hours or training courses be accommodated?

▼ What are the responsibilities of the provider? the company?

▼ What resources will be required from the company?

▼ How will instructors be selected and supervised?

▼ Is the training time frame realistic?

The keys to ensuring a successful program are cooperation and flexibility. The provider and the company must agree on certain basics. The objectives of the program must be understood from the company's standpoint. At the same time, you must understand and agree with the provider's methods and time frame for delivering the desired results. The relationship you develop with your provider must be based on mutual cooperation; anything less than a collaborative effort will likely sabotage the program's success. So be prepared to work together closely.

CONSULTANT IN A HANDBOOK: SIMON & SCHUSTER'S WORKPLACE RESOURCES

There are packaged basic-skills programs companies can purchase to establish, enhance, or expand workplace or other adult literacy training programs. One such offering is from Simon & Schuster's (New York, NY) Workplace Resources. The publisher has recently developed Adult Literacy and Workplace Basic Skills products that offer industry-specific, job-linked learning.

Working with the American Bankers Association, Simon & Schuster developed "Strategic Skill Builders for Banking," designed to teach specialized reading, math, communication, and learning skills necessary for the banking industry. "The goal was to improve job performance and productivity," says Wendy K. Spiegel, director of sales and marketing for the Workplace Resources group. "It's a 12-module series based on the functional context approach to learning."

Working with literacy expert Jorie Philippi, the publisher developed *Literacy at Work: The Workbook for Program Developers.* The *Workbook* provides detailed information on how to develop and use the functional context approach to implement workplace literacy programs. "Essentially, it empowers trainers to employ these techniques without hiring a consultant," says Spiegel. "We call it our consultant in a handbook."

The company's latest product, *ETS Tests of Applied Literacy Skills*, is designed to assess adult literacy. Developed by the Educational Testing Service, these are the only standardized tests that use the same framework as the Young Adult Literacy Survey, which was part of the National Assessment of Educational Progress, done in 1986. "It is the only commercially available assessment tool that tests adult knowledge within the domains of document, prose, and quantitative literacy—the indicators for measuring literacy in the nation as chosen by the National Goals Panel," says Spiegel.

The Curriculum

The best workplace literacy programs are measured by this yardstick: The training is job-linked, with employees learning new skills that are transferable to the work setting. Research shows that the quickest gains are achieved in a work environment when the basic-skills program is specifically job-linked. The curriculum should be organized by job tasks and should include problems and examples that illustrate the same skills the employee will use on the job. Ideally, actual job materials should be used as instructional texts.

The actual subjects in a workplace literacy program differ from company to company. You will know from your assessment, job-task analyses, and your company's stated objectives which courses will best serve your desired results. The frequency and duration of classes will also vary. They will depend on how much training your employees need and the difficulty of the material, although many programs are designed to allow individuals to move along at their own learning pace.

The current focus on learning in a functional context does not mean there is no place for general literacy programs for your work force. These programs can work well for employees who want to earn their GEDs, for employees who have limited English-speaking abilities, or for employees who want to learn for the sake of learning. Studies indicate there are far-reaching benefits for companies that encourage the pursuit of education among their employees. Improved self-esteem and self-confidence, increased company loyalty, positive changes in work habits, and a more promotable work force are gains no firm would want to turn down.

Choosing a curriculum is not an "either-or" situation. Job-related skills training combined with general literacy programs can work well and can address the literacy needs employees may have not only on the job but also in their lives.

Evaluations: How Well Does the Program Work?

No basic-skills training program should begin until you have established a method for evaluating its effectiveness. Pretesting and posttesting will give you some idea of how well your course designs achieve the program's objectives. Evaluations are difficult, however, because no common criteria have yet to be developed for evaluating adult education programs. And to date, research has not revealed the relationship between basic-skills programs and job performance. Yet evaluation is important to the company and its employees. A good evaluation will help you pinpoint any shortcomings in the programs' methods or design.

There are several levels on which you can assess your program's effectiveness:

- **Employee reaction:** Design questions that provide feedback about the instructor, relevance of course content to the job, and the environment in which the course is taught.

- **Employee learning:** Pretesting and posttesting can paint a good "before and after" picture, and provide you with quantitative data. Results can be compared to measure how much an employee has learned in a particular course.

- **Employee performance:** A method for measuring the transfer of learning to the actual job is essential. Performance appraisals, observations and checklists, and task analyses are all good tools for evaluating performance.

- **Bottom-line impact:** You need to determine whether the program's positive results show up in some kind of benefit to the company. This will require a compilation of data involving profit and losses, accident and absenteeism rates, quality rates, and other indexes. Periodic interviews with employees and supervisors and class monitoring can also help document how well your program is working. While the data is subjective, the feedback is immediate.

CHAPTER IV:

CORPORATE PROGRAMS

POLAROID: PP 101
Preparing for Change

Training employees to handle the challenges of an ever-changing manufacturing environment is nothing new to Polaroid (Norwood, MA). It has one of the oldest employee training programs in the country. The photographic manufacturer recognizes that today's work climate is very different than it was 10 years ago. Polaroid is already moving toward workstations and total quality management, and it is making sure its employees are multiskilled and able to perform a broader range of tasks within a given job.

Polaroid first began its workplace education program over 30 years ago. "Our initiative in this arena came out of a policy that we know here as PP 101," says Acquanetta Farrell, director of Polaroid's Technology Readiness Workplace Education Program.

PP (Personnel Policy) 101 grew out of the philosophy of company founder Edwin Land. "He essentially said that the business of a corporation is not just the production of goods and services and capital for its stockholders," says Farrell. "It should also be about the business of developing its employees. Polaroid has always had a culture in which people are valued.

There was no formal training program in the beginning. "If someone wanted to take an ESL or math class, we offered it," she says. It was in the mid-seventies that the company started a fundamental skills program, combining some of the basic-skills classes the company offered under one umbrella, but it "was not a requisite program."

When the recession hit in the 1980s, Polaroid, along with many large corporations, went through a downsizing. "The company has a history of never laying off people if at all possible. We tried to find other jobs for them," says Farrell.

But the company faced the problem of moving workers whose skills did not match the requirements of available jobs. Then Charles LaPier, then manager of Corporate Training and Development, introduced a provocative idea: What if the company offered an in-house program that could retrain its work force, preparing them for existing jobs that needed to be filled?

Thus was born the Technology Readiness program. "The initial idea was to offer a 'tract' [Polaroid's term for a field of study] parallel to a high school education within the corporation," says Farrell. "So in the beginning we not only offered courses in the basics but we also developed courses in problem-solving and communicating within teams. We had a whole range of mathematics, from basic math to prephysics. Our program is geared toward the skills that are necessary in the workplace. People also have to know they employ, every day of their lives, the critical thinking and problem-solving skills that are as unique to them as fingerprints. They have to learn that those skills can be used to solve any kind of problem. So we concentrate on that, giving them information that is of immediate value to them."

General and Specific

The Technology Readiness Program blossomed, and by 1987 the company was offering 35 courses, from general math to calculus to technical writing. The computer segment of the program grew so rapidly that it eventually became independent from Tech Readiness.

The company currently offers two different tracts: The first is the brochure tract, offering courses that are generic to Polaroid as a whole corporation. Entry into these classes requires a placement assessment by employees who wish to participate in any of the courses. Employees can also attain mastery in any course just by passing the assessment. Those who take advantage of this option must score above a certain grade. If the assessment grade is too low, a recommendation is made to enroll in the class.

Although these classes are taught at a high school level, the actual instruction is structured very differently. "It's not good enough for us to stand up and lecture," says Farrell. Thus classes are geared toward discovering how individuals learn. "If you have people who are tactile learners or visual learners, you have to present information in a way that makes it accessible to how that person learns best. We use a multisensory approach to teaching and follow Adult Learning Theory guidelines."

The second tract is geared toward employees who need specific job skills or skill upgrades. "We call this a brokered intervention," says Farrell. "Essentially, our process is to go in and do a job task analysis." The analysis uncovers those skills that are necessary to perform certain tasks within a job. Assessments might be given in reading, writing, or math relative to the job. The results are tabulated and then used to direct employees toward the appropriate training.

Employees are involved with the job task analysis and assessment process right from the start. Workers, as well as supervisors and managers, are interviewed to determine the minimum level of skill needed to perform a given job. Observations of tasks are also made. "Our operating assumption is that we are working with adults who are

intelligent people and who need to be part of the process from the beginning," she says, "because if the corporation is really going to implement self-directed work teams and total quality management, people on the shifts have to take responsibility for what happens. Therefore, if they are informed and feel as though they have a voice from the start, they are less likely to believe that 'management' is doing something to them."

Training sites exist at all four of Polaroid's plants and at corporate headquarters. The norm is 5 to 10 employees per class, which would typically meet for three hours, twice a week for 12 weeks. An exit assessment is given by the instructor at the end of the term to evaluate progress and to make recommendations for what should be considered next. "No one fails," says Farrell. Employees fall into one of two categories: ongoing or incomplete. Information about attendance or participation is confidential, and records can only be accessed through a written request for release by the individual employee.

Employees who enter the Tech Readiness program do so on their own volition. There are, however, incentives. The company initiated a "Pay for Knowledge Plan" that structures salaries based on employees' knowledge and skill. "The incentive," says Farrell, "is the pocketbook. If you are going to treat people as adults, you don't mandate that they take classes. You help them see that doing so is in their best interest."

The Payoff

Technology Readiness is only one aspect of Polaroid's work force training agenda. It budgets approximately $850,000 annually for this program alone. Over 1,000 employees pass through the Tech Readiness program each year—approximately 20 percent of the company's hourly employee population.

The bottom line for the company is, says Farrell, "that it's just good business sense." Feedback from employees is, on the whole, positive. "People are amazed at what they do know," she says. "They have more confidence to make decisions and suggestions. They are more participative. And they are doing a better job."

MOTOROLA INC.: Investing in People

Motorola, the global electronics giant, is one company that has made a long-term commitment to employee training. In the early 1980s, it discovered some alarming trends:

- In one of its businesses, only 15 out of 180 workers tested were able to perform basic math problems involving percentages, decimals, and simple bar charts.
- In another business, *none* of 12 technicians passed when given a 5-question assessment of their ability to work with decimals.
- Half the 390 operators in a Motorola semiconductor plant scored below a seventh-grade level in reading and math assessments.
- Efforts to staff a portable radio factory were hindered because most of the applicants did not meet the minimal math and reading skill requirements.
- In a Motorola-sponsored factory automation class taught at a local junior college, half the participants dropped out because they lacked the prerequisite math skills. All participants had some prior technical training, and one had a two-year technical degree. All minorities in the class dropped out.

"We estimated that half our factory work force needed basic-skills education," says James D. Burge, corporate vice president, Motorola director of Government Affairs-Personnel. Work force readiness was the issue, and with the electronics company facing stiff foreign competition, a work force ill-equipped to cope with changes became "a potentially dangerous flaw in every one of our operations."

Faced with this grim reality, the company determined that a basic-skills training program was necessary in order to attain the minimum requirements of seventh-grade English and whole number mathematics, although "the long-range skill goal for those workers is much higher," says Burge. It rises as new technologies and empowerment of the work force demand more ability.

To meet those demands, Motorola launched a skills assessment at all the company's domestic sites. Study teams determined the size and scope of the company's basic-skills needs across all entry-level populations. Those skills included problem-solving and critical thinking, computer literacy, SPC, team-building, and the process of continuous improvement.

Task analyses were designed to determine skill levels of factory workers, technicians, supervisors, and engineers—the company's key population groups. Curricula were then developed based on the analyses outcomes.

What emerged from these results was the Manufacturing Literacy Program. The company enlisted the support of junior colleges and local school systems at all major Motorola locations to design and deliver the classes for employees who needed help with English as a second language, math, and reading. Most of the classes were held on site, although at some locations, Motorola classes were taught on the participating college's campus. In addition, regular meetings took place between Motorola

managers and some of the "feeder" public school systems. "We have tried to clarify our needed skills, and we offer Motorola training programs to teachers. We actively look for ways to establish collaborative partnerships," says Burge.

This effort paid off. A number of local partnerships have been formed with junior colleges and school districts. "In Florida, for example, Motorola engineers have worked with junior-college instructors to develop a robotic curriculum that was used to prepare technicians for the Motorola Bravo Pager factory.

"We put 12,000 employees through this basic educational process," says Burge. The total bill for this program was projected at a cost of $30 million over five years. In addition, since 1990, employees participate in five days of training or education each year to upgrade their job skills. "This sound investment in our human resources amounts to more than $70 million per year spent on training," he adds.

The company recognized the need for more advanced job-related training. To that end, Motorola University was established in 1990. "We wanted to give our work force the skills they needed for future growth," he says. SPC and software engineering are just two of the training classes taught at Motorola U. It offers a full range of basic and advanced training. The course catalogue, notes Burge, is over an inch thick.

The Bottom Line

Motorola's efforts to improve the quality of its work force has yielded some impressive benefits. For example, in the company's cellular telephone factory:

▲ Productivity is 500 percent of original estimates, which included all gains expected from factory redesign and automation. Workers perform self-inspections, and defects are "almost nonexistent."

▲ Manufacturing cycle time has been reduced by a ratio of 30:1.

▲ There is a 4:1 reduction in defects per unit; a 2.5:1 reduction in inventory.

"And improvements keep coming," says Burge. "People are excited by their work. Breaking a record routinely brings a cheer from the factory floor."

Similar stories can be told about the company's semiconductor factory. While an 8 percent work force downsizing via attrition took place over a nine-month period, the organization achieved record quality improvements and scrap reduction.

"Combining basic reading, math, and English communication with job-specific skill training has resulted in significant measurable improvements at the Motorola Paging Factory," he says. For example, lot sizes were reduced from 50 to 6. Cycle time was reduced by 30 percent, and overall quality improved 34 percent.

The Human Factor

While Motorola has seen tangible benefits in the company's bottom line, it also recognizes the effect training has on its employees' lives, both at work and in society.

"These programs have a profound human impact," says Burge. "As our associates see the impact of these skills in their lives, their self-esteem grows, and so does their ability to contribute to the organization." He reports excellent feedback from some of the employees: One, who enrolled in a reading class, "is delighted that she can read a bedtime story to her two daughters and read the labels on her family's prescription medicine." An ESL employee has advanced to the point where she can contribute to her department's quality meetings. She was not confident enough of her English language skills to speak up prior to enrolling in the class.

"At Motorola, we have discovered that work force readiness is not just 'everyone else's problem,'" says Burge. The company has made a commitment to its work force, and its future, by investing in its people and by taking the stance that learning is a lifelong process.

PLANTERS LIFESAVERS COMPANY: Basic Skills Is a PET Project

In 1978, employees at the Planters LifeSavers peanut processing factory in Suffolk, Virginia, asked for an employee training program. The company, in conjunction with Local 26/65 United Auto Workers, the local school district, and the Virginia Department of Education, developed a program that would offer basic-skills classes and job-related instruction in new technology.

The basic education program, called Planters Employee Training (PET), was designed to teach basic skills to those employees who wished to improve their skills in reading, grammar, math, writing, and job-related tasks. The program was conceived, however, only after discussions with employees and research demonstrated a need for a basic-skills program.

PET Structure

Classes are conducted on company premises by one full-time and two part-time instructors, who are supervised by the Suffolk City school system. "Employee participation is voluntary," says Program Director and Instructor

Janet E. Brinkley, who has been involved with PET for over eight years. "But there is an incentive in that they are paid for part of the time they attend class. If they come for four hours, they are paid for two of those hours." Classes are scheduled so that students can attend before or after their shifts.

Interested students are tested to determine their performance levels. On the basis of test scores, they are assigned to instructors who work with each individual to design the appropriate coursework. "People come in at all different levels, and they come in for different reasons," says Brinkley. "Some may want to develop better math or reading skills."

She says the student population is almost exactly divided between men and women. The average age is 41, and there are very few entry-level employees in the basic-skills classes. "Certain skills and a high school diploma are now required for employment at the plant, but that wasn't the case 20 years ago. So those who attend are not necessarily entry-level people. They are people who, for whatever reason, feel the need to come back to school."

The basic-skills classes, such as reading, writing, and math, are taught on three different levels. Students can move up through the levels as they acquire mastery. They are awarded certificates after reaching an eighth-grade proficiency level, and then they begin studying for the GED, which is given periodically in the region. The program does not require students to reach the eighth-grade level, but they are encouraged to attend any given class a minimum of four hours each week. "And if they happen to have quit school in the eleventh grade, they can come into the GED classes and catch up on what they need to finish," says Brinkley.

As the plant turned to advanced technology over the years, the company began offering more job-linked courses that teach skills such as those necessary for SPC. "Whatever comes up on the job that they need, we teach it," she says. "And it doesn't have to be the entire hourly crew. It can be one person who might be interested in something as easy as vocabulary or as difficult as a new type of math needed for the job."

Success Measured by Performance

PET is now entering its fourteenth year. Over 292 employees have enrolled in the program since its inception. Fifty employees are currently participating—the maximum number that can be accommodated at one time. Brinkley says the program provides a valuable opportunity for employees, and she measures the program's success by the satisfaction of the students and their improved performance on the job. PET must be working. The program has been so successful that the company is considering expanding the PET program to other Planters LifeSavers manufacturing plants.

NESTLÉ STOUFFER FOODS: Learning a Valuable Lesson

"About nine years ago, we didn't have much formal training or development at all," says Human Resource Development Director Denny Bichsel. "It was on the job and only once in a while." At the time, the company had one manufacturing plant in Solon, Ohio. But when a new plant opened in Gaffney, SC, the company saw that the start-up training efforts in this one plant were worth it.

The company measured the training's effectiveness. The start-up curves for the Gaffney plant were compared with the Solon plant and the differences were dramatic. "We had less scrap and more packages out faster. Quality went up as well as quantity," says Bichsel. "We found out that the dollars we put into training were significantly offset by profitability. We are now committed to continuous training as a result." Such a dramatic payoff leaves little doubt about such training's worth.

The company performs needs assessments to determine what kind of training is necessary. Some programs are general, focusing on personal development skills; others are in-depth programs that concentrate on job-specific skills. And while the corporation does offer GED programs, Bichsel says the company has no need to offer basic literacy skills training, such as reading or writing. Math skills training is offered, however, since many plant employees must work with fractions and perform metric conversions.

"We feel very strongly that all individuals we hire come in with the requisite skills—good communication, good interpersonal skills," he says, although training, in itself, is a relatively new need for the company. "In the past, people, especially hourly employees, did very specific jobs. They did not have a broad range of responsibility. But as we get them to become involved in self-directed work teams, and to take more ownership of their jobs, we need to help out by offering some training."

Bichsel says the efforts have met with success. "Employees thirst for it. Most of them look forward to learning. And while we do not have a basic-skills program, we will implement any kind of training that is required in order for our employees to do the job."

CHAPTER V:

SMALL COMPANY SOLUTIONS

REMMELE ENGINEERING INC.: Training as a Way of Life

"We are a high-tech machining business," says Wendy Jo Barge, Remmele's production division Human Resources manager. "Part of our reputation is that we have some capabilities that no one else has." The St. Paul, Minnesota-based shop manufactures state-of-the-art parts for the computer, aerospace, automotive, and defense industries. "We need to keep abreast of manpower and technology changes," she says.

Remmele recognizes that staying competitive means keeping employees well trained. In 1988 the Production Division went through an oganizational change "to become what we call a focused-factory or a business-within-a-business environment," she says. The idea was to have self-managed teams, who would take full responsibility for operating "work cells." Because of the reorganization and the investment in high-tech machines, employees had to learn a broad range of skills, from technical, such as measuring and calculating, to interpersonal, such as interacting in teams, with customers, and with vendors.

The division hired a consulting firm to help with a needs assessment that would identify those skills necessary to shift the work force into a focused factory environment. "We focused on the basic skills needed for existing jobs," she says. "But we also focused on future skills demanded by the new technologies and changing marketplace. We didn't go in just to fix today's problems."

The division's 160 employees completed a skills questionnaire that asked them to rate their performance relating to technical and basic skills. The assessment uncovered several training needs. "We found out that there was a higher-than-average need for math skills because of the technology," says Barge. "Employees are responsible for their parts from beginning to end. They receive the raw materials, and machine and inspect those high-tolerance parts. This requires them to read gauges and measurement equipment. Also, many of our work cells chart their own progress on SPC charts. All this requires quite a bit of math knowledge."

The assessment also brought out a need for employees and managers to improve their learning skills. "This was an unusual development," says Barge. "Employees needed to learn how to be better participants in training—learning how to listen, how to take notes, and how to ask questions. Training is a shared responsibility. They needed to know that it wasn't okay simply to smile and nod if they didn't understand something."

The Training and Development Plan

Remmele has been a strong proponent of training even as far back as the 1950s. The company is active in local and state education issues, and it offers scholarships to students who want to further their education after high school. For its own training plan, the Division recruited instructors from the local area who were experienced in teaching adult education. Remmele's program is self-funded. Its budget is approximately 2 percent of the payroll.

A training and development program was initiated based on the assessment report. The program was designed around core courses that all Production Division employees are expected to complete. These courses included SPC, Metrics, and Basic Problem-Solving, to name a few. The core classes are mandatory, taught on site, and on company time.

Employees are pretested before taking core courses. "There are underlying skills needed for the courses," says Barge, who posts all courses and their requirements. "If someone gets into a course and cannot comprehend the material, we direct the person back to our Review/Orientation Courses." Courses such as Math Refresher, Basic Manufacturing, and Print Reading help employees develop the fundamental skills used in the core courses.

Elective courses are also offered; however, completion of this group of courses is optional—it depends on each employee's need and goals. Currently, there are 17 elective courses, including CAD/CAM, Tool Making, Basic Algebra and Geometry, and Leadership Communication, which employees attend on site, on their own time.

"All this is job-linked learning," says Barge. "When we develop a curriculum, we include interviews with employees, managers, and engineers to find out what they need. Sometimes we take an existing curriculum and tailor it to our needs. Very rarely do we take anything off the shelf and plug it in. For example, in the Print Reading course, we use our actual blueprints. We use as many real-life job shop examples as we can so that employees can immediately implement what they've learned."

To make sure the coursework fits the division's needs, Remmele develops outlines and then works with instructors from a local technical school to determine the resource materials needed to support the courses. Developing a custom-tailored curriculum isn't always easy, however. For example, it took close to eight weeks to develop a CNC (computer numeric controllers) course. Says Barge, "It takes a while to incorporate all the ideas into a curriculum,

but it's worth the effort."

Courses are monitored by managers and by those employees attending the class. Employees are encouraged to address problems first with their instructors. Problems that cannot be resolved this way are brought to the attention of supervisors or to human resources personnel. In addition, employees complete an evaluation form at the end of each course. These methods allow the company to determine whether course goals are being met.

Employees First

Remmele's Products Division Training Plan, in its current form, was first rolled out in 1989. Employees were involved in the process from the beginning. "We took their feedback into consideration," says Barge. "We knew they had an investment in the company. We have a mission to be the best, and employees took ownership of that idea from the start."

With support from top management on down, the training program has been well received and well attended by plant employees. "We have a very supportive culture here," she says. "The employees know that, and they just thrive on the training. When I put up a posting for classes that are limited to 10 or 15 employees, half the time I end up with a long waiting list. They are very enthusiastic."

Training has now been woven into the fabric of Remmele's daily life. Is it working? Barge says the company now has a better skilled, more flexible work force, and it wants to keep it that way. "We want to stay competitive," she says. "We want to be in business for the long term."

CUMBERLAND HARDWOODS: Award-Winning Learning

When Cumberland Hardwoods wanted to improve productivity in its Sparta, Tennessee, factory, it brought in newer, faster equipment. But Company President John Keilsing quickly realized that the work force did not have the reading and math skills necessary to operate the machines.

To this end, Cumberland joined forces with the county school system and in September 1989 organized its first training program. A full-time project director was appointed, and instructors experienced in adult education were brought in to teach. The company relied on the State Department of Education, which came in to administer the Selectable screening test, a skills measurement test, to all employees. Class placement and plans for further testing were based on the results of the screening tests and on employees' goals. Depending on the Selectable scores, employees were asked to take one of the diagnostic Able tests—level one, two, or three—to determine areas in reading, math, or language that required further review and instruction.

"It was a full-scale screening," says lead instructor Mary Ruth Winford. "Our initial focus was on improving basic skills—reading, writing, math, and GED preparation. We focused on helping employees to improve their skills until they surpassed Able Level 1," a sixth-grade or higher reading level.

In the Beginning...

Classes for groups or individuals were held on site, in a classroom equipped with two computers. One of four instructors taught the various class levels. Participation was not, and still is not, man latory. During the first year, employees were encouraged to participate through financial incentives. The company quickly discovered, however, that the incentives were unnecessary because, for the most part, employees were self-motivated to attend classes. Classes met either before or after shifts, although employees attended some classes on company time.

In 1990 Cumberland applied for and won a National Workplace Literacy grant from the U.S. Department of Education. This allowed the company to expand its program to include job-related training.

"We realized that even though employees were getting their GEDs and improving their basic skills, this didn't really help them in the plant. So we tried to tie literacy with the workplace to make them better employees," says Winford.

Classes were offered in calibration and measurement—two skills essential for accuracy and reduced waste. The list of courses varies, depending on need. "If employees want to know more about lumber grading, dry kiln processing, or machine maintenance, a curriculum will be developed," she says.

The company also began an apprenticeship program with the U.S. Department of Labor (DOL). An area vocational-technical school provided the teaching staff and instructional materials for courses in basic electricity, hydraulics, and automated controls. A course in wood technology was also offered on site. These courses met the requirements of the Tennessee Department of Labor Apprenticeship Program for the Wood Processing Technician Certificate and the Industrial Maintenance Technician Certificate. To be eligible for participation, employees had to be high school or GED graduates.

The apprenticeship courses are demanding. Some require 600 hours of course work and four years of on-the-job training. "That's quite a commitment," says Winford. "But employees are learning job skills that will help them, and the company, now and in the future." Community col-

lege instructors also worked with Cumberland in developing coursework related to job skills that did not require an apprenticeship. For example, instructors teaching Basic Electricity would go on site and demonstrate lessons on the actual machines.

Learning to Be Better Employees

Cumberland employees are not only learning to do their jobs better, they are also learning to be better employees. The company developed a teamwork training program designed to improve speaking, listening, reasoning, and problem-solving skills. The custom-designed course, entitled "Confident Communications for Productive Collaboration," began as a pilot program in August 1990 with 14 employees from one department. "The goal was for them to learn how to interact as a group and make group decisions," she says. By March 1992 all seven teams had completed the course, and Winford says the teamwork approach is working well. Team coordinators meet with other team leaders to solve problems and set policies to improve productivity, safety, or attendance.

Coordinators are selected because of their interest, but they must also complete Able Level 3 (tenth-grade reading or higher). "But we realized they still had some areas of weakness and needed more training," she says. Coursework, based on self-assessments, is currently being designed to help them improve in a number of vital areas, such as SPC and computer skills.

The Rewards

Winford says that close to 85 percent of the company's 115 employees participate in the training programs, and that "it's worth the time and effort to invest in your employees. Productivity has improved, and there are fewer errors. At the same time, employees have improved their self-esteem, enjoy their jobs more, and are better employees overall. They are learning how to solve problems and stand up and present ideas." Cumberland effort's have been so successful, the company was recognized in October 1990 by the American Association for Adult and Continuing Education. The company received the AAACE's first Outstanding Literacy Program award, presented by First Lady Barbara Bush.

PEAVEY ELECTRONICS CORPORATION: A Small Company With Big Ideas

It all started with a question from the Governor. He asked Melia Peavey, president of Peavey Electronics (Meridian, MS), what he could do to keep this manufacturer of some of the best commercial sound equipment in the world in Mississippi. Peavey was running into the same problem as many companies driven by advanced technology—the lack of a work force that can grow and change with the times.

"Our products are digitally engineered," says Jere Hess, Peavey's director of Personnel and Public Relations. "We need people who can read assembly drawings. They have to know how to read and comprehend computer instruction, and to read measurements—what we call basic skills."

The company, which distributes its products worldwide, was also in the process of moving toward Total Quality Management. Not surprisingly, Peavey turned its sights toward developing a comprehensive training program. They had a little trouble getting started, however. "We had a strong tuition refund program for 20 years," says Hess. "In the early 1980s, in cooperation with Meridian Community College, we set out to design a total program—from remedial to college level. To do that, we needed someone to come in and assess our work force." The search almost ended in a stalemate. "We couldn't find anyone suitable to do it," says Hess.

At the direction of the Governor, the Mississippi State Office for Literacy offered a solution. The Department of Education was selecting sites to test the Army's computer training program for civilian business use. Peavey and Meridian Community College applied and were eventually chosen as one of the testing sites.

JSEP: Job Skills Education Program

The centerpiece of Peavey's training efforts is an experimental program called JSEP—Job Skills Education Program. The Army had a very high success rate with this program for quickly teaching a whole catalogue of transferable job skills to its personnel. This computer tutorial allows students to interact with the various lesson programs via keyboard commands, with the computer feeding back information as the students progress, allowing them to move through different levels of learning at an impressive pace.

With the help of a trained consultant working with the JSEP program through an NAB (National Alliance of Business) grant, a task analysis of various jobs and assessments of 500 of Peavey's 1,900 employees were performed. "You need about a fifth-grade reading level for this particular training," says Hess. "So we began the process and selected 64 employees to test the program. There would have been more, but time and the number of terminals limited us to 64." The results convinced the company that JSEP would work. "We determined with pretesting and posttesting that people who took JSEP go up an average of almost four grade levels in math in 54 hours."

The next step was to develop local support for the program. The consultant taught instructors at Meridian Community College to perform job analyses. Once the analysis for any given job was complete, appropriate prescriptions, or lessons, were selected from the computer's substantial course catalogue. The lessons are job-specific, but "it's not like doing the job," says Hess. "Rather, you learn all the skills involved with that particular job. For example, if adding and averaging numbers is part of your job, the prescriptions will teach you how to do that. The skill learned is specific and is transferable to the job." Employees in JSEP also learn lifelong learning skills, such as critical thinking and concentration.

Over 150 employees have taken JSEP since 1989—including Hess, who says he learned how to concentrate better through one of the program's prescriptions. "Our goal is to have as many employees as we can go through it," he says. "We don't force employees to take it, but the success of those who have taken the training speaks for itself. They are able to advance to better jobs, and that encourages interest in other employees."

While Peavey considers JSEP the centerpiece of its job-skills training efforts, the company still needed to develop appropriate training for those employees who pretested below a fifth-grade level—the minimum level of basic skills needed to go through JSEP. "We found out we had less than the national average of employees below that level," says Hess. "We had one in eight. The national average is one in seven."

Peavey was wary of branding employees as JSEP and non-JSEP. "We didn't want to make anyone feel bad," says Hess. Employees were not told they tested below a fifth-grade level. Those who needed to develop their math or reading skills were given computer training, but they did not learn via JSEP prescriptions. "We used basic learn-to-read programs," says Hess. "We move them through that first, and as far as they are concerned, they are taking computer training courses, just like JSEP." He says this tactic was successful. "Employees who had never been in a college setting before were learning through computers in a college setting. They took a lot of pride in it." Employees can move up to JSEP once they polish their basic skills. To date, 200 of the 500 employees targeted for training have been through JSEP.

Employee participation in the program is optional, and lessons are offered before or after shifts at the college. All of Peavey's training is done within the framework of local instruction. While the company spends approximately $50,000 a semester in tuition refund for general education, it has not paid cash to the college for JSEP instruction. Instead, Peavey donates computer equipment in exchange for instruction. For example, it recently donated a computer that allows the college to link up its CIM (computer integrated manufacturing) center with Peavey's mainframe. "They can teach our people how to do spreadsheets, documents, drafting, and electronic mail," he says.

Long-Term Results

Hess says the bottom line for Peavey is straightforward—the company has better trained, more productive employees. "But we are not finished," he says. "We encourage our people to go from step A, the basics, to step B, to step C, and beyond. We're not looking for any short-term fixes. Training and educating your work force is an on-going process. Unfortunately, that's not usually an easy message for many businesses to accept."

UNITED MAILING INC.: A Matter of Survival

United Mailing, a subsidiary of the Instant Web Companies, is another company that has jumped headfirst into the battle for literacy. The Chanhassen, Minnesota, firm, along with Instant Web, Inc., and Victory Envelope, Inc., makes up one of the country's largest suppliers to the direct-mail marketing industry. After many years of double-digit growth, however, the recession and postal price increases had done their damage. Growth was only moderate. "We decided that rather than constrict, we would fight for market share," says Richard J. Warren, director of Human Resources.

In October 1990 the company made a decision: To stay competitive, it would move toward Total Quality Management. But to take part in the 60-hour training program required for TQM, employees would need more education. Says Warren, "Roughly 10 percent of our employee population has an education deficiency. We were told by educators that if we went through training [for TQM], 60 percent would not complete the courses because of their lack of basic skills."

TQM training takes place on site, in partnership with local community and technical colleges. It is part of a pilot program developed by the Department of Economic Development's Minnesota Job Skills Partnership program. By entering into this 30-month project, Minnesota hopes to put together a prototype skills program that can be offered to other industries in the state.

Total Quality Transformation

Citing partial data, Warren states, "we have, in fact, confirmed from assessment data that approximately 70 percent of employees are at or below the tenth-grade reading level. The Total Quality training material is written well above the tenth-grade level."

The initial assessment was developed by Directions, a state program funded through a U.S. Department of Education grant and administered by a local community college. The process of shifting to Total Quality Management, dubbed Total Quality Transformation, began in March 1991. Because of a variety of administrative problems, however, the assessment process was not complete until January 1992.

The testing assessed 900 of the company's 1,000 employees in reading, writing, and math—those skills necessary to complete the Total Quality training. "We were not particularly interested in their knowledge of Shakespeare because that's not relevant to quality training," Warren says.

Once the assessments were complete, employees were given a confidential interpretation of the results by personnel working with the state education project. The goal of the assessment was to identify individual employees' strengths and weaknesses. "Total Quality training is done in groups," says Warren. "Each group is assigned a project, and they must learn all the various principles of the Total Quality Management process, such as systematic problem analysis and resolution. Those with weaker skills—math, for example—would work with others on Total Quality training teams whose math skills were stronger."

TQM training runs in parallel with collateral training, offered to employees who have developmental needs beyond TQM. Those employees are referred to a "learning manager"—a certified educator who would help the employees identify educational resources available from one of Instant Webb's education partners.

"The collateral training is not the same as remedial training. The immediate interest is to identify development needs. It doesn't always directly affect TQM, but it will be a source of fulfillment to employees," says Warren, who points out that employees who participate in self-directed collateral training "tend to stick around. I don't know if it's the Hawthorne effect, but whatever the reason, it benefits the company.

"Our expectation is that a good share of this collateral training will be done using individually paced learning methods," he says. "This might be computer-aided training, individual tutors, or interactive videos."

The Results, So Far

The Instant Web Companies are still in the early stages of the shift to TQM. Approximately one third of the employee population have completed TQM training, "but we tried to start our first training groups with those individuals who do not have any significant collateral training needs, that is, employees who can read and comprehend the training material, written at or above a tenth-grade level. Only 30 percent are reading at that level."

While Instant Web plans to train most of the 900 employees within the pilot program's 30-month time frame, it doesn't plan to stop there. "We have ongoing training needs," he says. One plan is to train employees as trainers so that when the current pilot program ends, the company will have the capability to continue. It also plans to develop learning labs, providing the resources and facilities for employees to study or work on team projects, making learning an ongoing effort.

"We are applying a continual improvement process to training," says Warren. The company is taking a "fairly broad approach. If employees want to take courses in developmental math, we'll agree to it. If we can identify a company benefit, we'll do it."

Training for quality management is "a win-win situation," he continues. "The fundamental issue is that companies have to get sharper, more quality driven. We feel that if our quality is superior to our competitors', we'll have the edge. Our customers and employees both benefit. So everybody wins."

CHAPTER VI:

A PARTNERSHIP IN LEARNING

You've read how some companies, large and small, are tackling their work force literacy problems. Now let's take a look at how those who are delivering the services view their role.

WORKPLACE EDUCATION PROJECT: Providing Skills for Life

The Workplace Education Project (Tucson, AZ) got off the ground in 1988 after receiving a $72,000 grant from the National Workplace Literacy Program (NWLP). It was one of 37 projects in the country to receive funding from the newly developed program, which is administered by the U.S. Department of Education. The money has allowed this Arizona program to work with several partners to develop training programs for businesses around the Tucson area. The $72,000 is the initial round of funding, and since that time the Project has been funded twice by NWLP.

The Workplace Education Project, part of the Pima County Adult Education program, brings together business partners who need help training employees. The business partners, who pay matching funds, include the Arizona Consortium for Education and Training, a group of manufacturing companies, hospitals and educational institutions, the Southern Arizona Innkeepers Association, a consortium of hotels and resort corporations, and the Tucson Metropolitan Chamber of Commerce, the latest partner. "This partner is our vehicle into the small-business community, so we can meet their needs," says Project Coordinator Linda Hellman.

"We work with them to develop training programs. We perform task analyses and find out what their workers need in skills training," she says. All classes for WEP's various partners are held on site. In most cases, employees are given release time to attend the courses, which are scheduled to accommodate working hours. Subjects vary, depending on the individual company's needs, but Hellman says the goal is to link learning to the job. "We try to be job related as much as possible and to become part of the workplace setting."

While providing job-linked learning is the primary goal, "we also try to make classes relevant to employees' lives outside of work." She points to problem-solving skills or working with numbers as examples of skills that transfer from the classroom to employees' jobs and to their lives. "We like to do things in class that will help workers beyond the job—such as improving their writing skills or furthering their general education. If employees tell us their company might have layoffs, we'll go into résumé writing if that's what workers want. We are very responsive to their needs."

Some classes teach the basics to get employees up to a level where they can go on to learn the skills required for their jobs or for job advancement. "We are currently teaching a reading and writing course for one company that draws from different departments, but we apply the lessons to their job situations. We get them into the writing activities they need, such as writing incident reports, memos, claim and adjustment letters, or performance appraisals. We put them into a context that has immediate value."

Class structure is nontraditional. "It's a very flexible program," she says. "We can work with individuals at their own levels. But people also work in groups, depending on their rate of learning." Employees take part in what Hellman calls cooperative learning activities. "We have them work in groups to enhance their team-building skills, which companies really want these days."

Hellman works very closely with each company to establish goals, and then fine-tunes or makes changes as classes move along. "This is a participatory program. We try to have workers involved in all aspects of the program. Advisory committees help us achieve this goal. We get a lot of input from the workers initially, but we've found that our first interviews don't always reveal all their needs," says Hellman. "Sometimes we're five weeks into a class before employees reveal additional problems they may have been reluctant to tell us about at the start. For instance, after a few weeks in a class we were running for a college's custodial workers, one problem came up. They had trouble getting college students out of the rest rooms so that they could clean up. That's not something you would necessarily discover in a task analysis. So we built scenarios to teach them how to deal with this situation." Such a problem-specific approach is a big benefit to workers.

Hellman stresses that classes are not just for entry-level or hourly workers. "We have supervisors and managers attend some classes with their employees." She says this is a positive development, since companies that are shifting to Total Quality Management want all employees to upgrade their skills. "We don't advertise our classes as remedial or basic," she adds. "This is an opportunity for everyone."

ALLIANCE FOR LITERACY: Banding Together for a Common Cause

Training personnel representing different Hartford, Connecticut, companies got together about three years ago to discuss some common problems: Finding job applicants with the requisite skills was becoming increasingly difficult. They also needed to quickly help their current employees develop skills necessary for the implementation of Total Quality Management processes and the introduction of new technologies.

As they recognized this common need, they realized it would be cost-effective to pool resources and put together one training program that would be accessible to their employees. Funds were requested from the Department of Education's National Workplace Literacy Program for a grant partnership. The corporate partners tossed in some matching funds, and the State Departments of Education and Labor provided additional funding. By early 1990, the Greater Hartford Alliance for Literacy's Workplace Literacy Program was up and running.

The Greater Hartford Community College helped to develop and oversee the program for the eight participating companies. Its goal is twofold: to upgrade the skills of current employees, and to create a potential labor pool by training the area's unemployed.

Ruth Howell, the Greater Hartford Alliance for Literacy (GHAL) program director, says most of the business partners have used GHALs resources to focus on entry-level training. "With more and more technology being introduced, many old jobs would no longer exist, and the companies want to train employees so that they can move them into the newly configured jobs," she says.

Training classes take place either at the worksite or on campus, where the college runs a collective training center. On-site instruction is always job linked. The training that takes place on campus is "job linked as much as possible," she says, "but it is more generic in the sense that we are training for eight companies and multiple job descriptions." Reading, writing, or math skills development classes draw examples from a mix of entry-level job tasks. "We also incorporate critical thinking and group interaction," she says.

Classes are developed based on skills assessments. Literacy audits have been performed in some of the partner companies. "We did them formally in several companies," says Howell. "The companies selected a number of targeted jobs, and then we spent a few days following those employees, speaking with supervisors and employees, and shadowing employees to observe exactly how math is being used, how language is being applied, and what written materials are being used on the job. Then we developed curriculum around those skills." Informal audits are based on interviews with supervisors and written job skills assessments, and that information is used to customize curricula and simulate job situations in the classroom. "Our goal is to maximize the direct transference of learning," she says.

Training is done in 12-week cycles at the college and 8- to 14-week classes at the companies, depending on employee availability. Participation is not mandatory, and on-site programs are held either completely or partially during regular shift hours. Most of the 500-plus individuals who have gone through training are entry-level employees, although a "handful" of supervisors have attended classes. Over 300 unemployed Hartford men and women have been trained as potential entry-level employees for the partnership companies.

This multicompany alliance is unusual; alliances between like industries are more common. Says Howell, "It's a challenge. But for smaller companies that may not have internal training staff, it's a much bigger challenge to plan and implement basic-skills training. Certainly the alliance collaborative model is one they can use. I think the collaborative model is extremely cost-effective and encourages the exchange of information and expertise among members."

Literacy Across Cultures: The Value of Diversity

The *Work Force 2000* study reports that by the year 2000, 22 percent of the work force will be made up of immigrant men and women. Many will be non-English-speaking. With companies facing a growing employment gap, the traditionally less skilled and underutilized immigrant population will be needed to fill jobs. Some areas of the country, however, especially the northern and Mexican border states, have already felt the impact. ESL and cultural training workshops are now a fixture in many companies' training programs.

Linda Hellman says that Pima County Adult Education has offered ESL "for years. The *Work Force 2000* statistics were no big surprise to us because of our proximity to Mexico. One third of Tucson is Spanish-speaking."

Land and Sky, a waterbed manufacturer in Lincoln, Nebraska, has a large Southeast Asian employee population. "We take great pride in our product," says Production Vice President James Wood. "We feel it's the best in the world. But the only way to get that quality is if your employees buy into this philosophy. Being able to communicate is vital."

Land and Sky began offering English as a Second Language (ESL) classes five years ago to ensure that its non-English-speaking employees got the message that quality is the top priority. "But we also wanted to give

LITERACY VOLUNTEERS: GOOD FOR BUSINESS?

Most literacy volunteer organizations provide basic reading and writing instruction or ESL. Tutoring is usually one-on-one, taught by volunteers who receive several weeks of training. Literacy volunteers typically respond to the needs of the surrounding community. Based on those needs, they may have developed programs or formed alliances with other education agencies to serve area businesses.

But even if they do not offer programs for job-related skills training, literacy volunteer agencies might be a good place to start your employees on the track to developing better basic skills. Do not, however, view this as a quick-fix solution. Once employees develop better basic reading and writing abilities, they should then move on to learn those job skills they may not have been able to tackle because of deficiencies in the basics.

them an opportunity to improve themselves as workers and as members of the community. There are across-the-board benefits." Land and Sky employees attend on-site classes developed by the local community college. They learn how to identify tools, how to translate safety rules, and other important information. As in most successful skills training programs, the emphasis is on learning job-linked English-speaking skills.

The Instant Web Companies also offers ESL classes for its large immigrant population. It recruited one of its bilingual Southeast Asian employees to act as an ombudsman for newly employed refugees. She has since been trained to teach job-related ESL to her non-English-speaking co-workers. Classes are mostly oral, with emphasis on teaching the employees to understand company rules and benefits.

Besides ESL, which is offered in most communities through adult education resources, many companies are now sending their supervisors and managers to cross-cultural training courses. Pima County offers a "Valuing Diversity" workshop for area businesses. Its goal is to identify cultural barriers and to explore methods for improving communication in a multicultural work environment.

Minnesota, another state whose Southeast Asian population has recently swelled, has developed a cultural workshop through the Minnesota Department of Education called "Managing a Culturally Diverse Work Force." One of the program's goals is to get supervisors and managers to appreciate differences in culture. It tries to illustrate how people of different cultures approach problem-solving and creative thinking in ways that are different from Americans.

The workshop tries to illustrate, though the use of tools or textiles, for example, how people from different cultures use different patterns of thinking to solve problems. It also tries to make participants more aware of cultural behavior norms. For example, Southeast Asians consider it rude or bold to look someone directly in the eye. They tend to be reserved and have difficulty answering questions about themselves, because talking about oneself is also considered rude.

Besides promoting understanding of the norms of Southeast Asian behavior, the workshop agenda strives to make participants aware that people from different cultures don't always know the rules, even if they have been in the United States for a while. Making sure these groups of employees are included in meetings and other activities is one way to help them learn American standards of behavior. Inclusion is an issue with any new employee, and managers can facilitate that process, especially when a person's English proficiency is limited, by assigning employee mentors to work with them.

Common Problems

The workshop also tries to make supervisors and managers aware of possible communication problems that may arise. Workshop facilitators point out that communication issues are very real and they may supersede language; cultural confusion could be language or ESL related. Communication problems can sometimes stem from cultural factors, such as a natural reluctance to speak up. Anyone supervising people from different cultures should strive to understand those employees' points of view. Southeast Asians, for example, are reluctant to ask questions because

they believe it shows disrespect. They expect it to be the employer's responsibility to explain rules, directions, or job procedures; to ask a question of a superior would imply that person did a poor job of explaining.

What's the best way of getting your point across to limited English-speaking employees? The Lutheran Social Service Employment Project, which works with the local community on immigrant/refugee issues, offers these pointers:

- ❒ Avoid slang.
- ❒ Use consistent terminology.
- ❒ Speak clearly.
- ❒ Use simple words, but don't speak in "broken English."
- ❒ Confirm the employee's understanding by asking him or her to repeat your directions.
- ❒ Avoid information overload.
- ❒ Watch the employee's nonverbal cues. Looking away, shifting uncomfortably, or glazed eyes may signal a lack of understanding.

Finally, avoid stereotyping. Keep in mind that there are cultural differences among people from the same foreign country—just as there are cultural differences among people from different regions of the United States. Be aware that even employees who do speak English may lack socialization skills. Much of what constitutes communication is culturally derived, and misunderstandings are bound to occur. But you can do a lot to head them off by getting rid of any preconceived notions there might be about how people from specific cultures should act.

Workshop participants spend a lot of time assessing the language they use every day on the job. Facilitators try to get them to think about language and how they can simplify it. Participating companies are urged to develop their own action plans to ensure a foreign-born employee's successful assimilation into the work environment. "We've found there is a real hesitancy on the part of many of the Southeast Asian refugees," says one facilitator. "The initiative should come from the company."

CHAPTER VII:

NOW AND FOR THE FUTURE

The companies that have implemented job skills training programs recognize that the problem of literacy needs to be addressed now. Changes in the way business is done demand it. "We need people who can draw on their strengths," says Polaroid's Acquanetta Farrell. "Contrary to popular beliefs, American workers strongly identify with their work. We all take pride in what we do. I look at this country as having some of the best untapped veins of intelligence and creativity anywhere. But I see it going to waste. We need to develop our employees to critically think and problem-solve," she says. "And we need those changes now."

Nestlé Stouffer's Denny Bichsel agrees with this assessment and feels that the problem of developing a more literate work force "will only be resolved once we admit we are part of the problem. Both business and the private sector have to work together to bring on those changes that will help America stay competitive."

Many companies are addressing this issue by working on different levels to effect change. And not all of them are limited to the workplace. Rockwell International, for example, has been actively involved in partnerships at all levels of the eduction system. These efforts range from adopt-a-school programs to advanced career training for high school students to teacher workshops and graduate fellowships for Ph.D. candidates. Motorola has education partnerships and works with its partners at the federal, state, and local levels to initiate change in America's system of education. Phillip Morris helps fund the Teach for America program, which recruits college graduates to teach at rural and inner-city schools.

The alliance between businesses and educational institutions to provide workers with job skills training is a fairly recent development. There are still some kinks to be worked out in the area of workplace literacy, but no one has yet to say workplace literacy programs don't work. If the examples in this report are any indication, basic-skills training, workplace literacy, job-related training programs—whatever you choose to call them—are well worth the effort. They will only meet with success, however, if they are implemented properly. Some of the common features of a well-run program are the following:

- Well-defined goals and projected results.
- Support from top management.
- Personnel to plan the program and steer it in the right direction.
- Assessments and job task analyses that focus on job skills, not academic skills.
- Materials, instructional methods, and evaluations that are tied to learning goals.
- Instructors who are qualified to teach the basic skills needed to perform job tasks.
- Class schedules and locations that accommodate workers' schedules.
- Measurement methods to track employee progress.
- Flexibility to modify the program as company goals or technology changes.

The success of any program also depends on the cooperation and participation of employees. Employees should be part of the process from the start, beginning with their feedback about what skills they feel are needed to improve job performance now and in the future. Participation in a program should be voluntary. None of the companies surveyed in this report enforce mandatory participation in literacy training. Rather, incentives such as bonuses, time off to attend classes, or promotions based on completion of courses work best to motivate employees.

American business is now faced with a situation that offers no alternatives. Says Kent Hughes from the Council on Competitiveness, "We have to learn a lesson from Europe and East Asia and make the most of our human resources. Literacy training lies at the very center of this country's long-term future." From this standpoint, training and upgrading the skills of our work force are not just questions of good business—they're questions of survival.

Where to Get Help: Resources

To find out more about literacy training programs, read these U.S. Government publications (also available at your area's Government Depository libraries):

- ★ U.S. Department of Labor Workplace Literacy Project.
  Mamoru Ishikawa, Project Officer
  U.S. Department of Labor, Room 5637
  200 Constitution Avenue
  Washington, DC 20210

★ A Review of the National Workplace Literacy Program (1991)
U.S. Department of Education
Mary Switzer Building, Room 4414
400 Maryland Avenue, SW
Washington, DC 20202

★ Work Force 2000: Work and Workers for the 21st Century
(Hudson Institute for U.S. Department of Labor, 1988)
Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402

★ The Bottom Line:
Basic Skills in the Workplace (1988)
Office of Public Information
Employment and Training Administration
U.S. Deparment of Labor
200 Constitution Avenue, NW
Washington, DC 20210

★ Enhancing Literacy for Jobs and Productivity
(Council of State Policy and Planning Agencies, 1989)
National Technical Information Service
U.S. Department of Commerce
Springfield, VA 22161

For workplace and adult literacy information, contact the following organizations:

★ U.S. Department of Education
Division of Adult Education and Literacy
400 Maryland Avenue, SW
Washington, DC 20202

★ National Job Training Partnership
Center for Remediation Design
1133 15th Street, NW
Washington, DC 20005

★ Business Council for Effective Literacy 35th Floor
1221 Avenue of the Americas
New York, NY 10020

★ Work in America Institute, Inc.
700 White Plains Road
Scarsdale, NY 10583

★ Simon & Schuster Workplace Resources
15 Columbus Circle
New York, NY 10023-7780

For information about the U.S. Government grants available under the Adult Education Act, contact this organization:

★ National Workplace Literacy Program
Office of Vocational and Adult Education
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202

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