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DETERMINING THE ROLE OF CONTINUING EDUCATION
IN THE INLAND EMPIRE'S BUSINESS AND INDUSTRY

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Interdisciplinary Studies

by
Donna Joy Boyd

June 1994

DETERMINING THE ROLE OF CONTINUING EDUCATION
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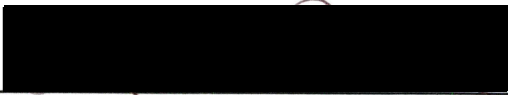
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June 1994

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ABSTRACT

Society is changing: technology is advancing rapidly; women and minorities are entering the work force in record numbers; the United States is becoming a service nation; workers are required to be information processors; it is becoming a global marketplace.

These changes are affecting the labor force, and businesses are looking for ways to adapt. Most businesses realize that training is the best way to solve the economic and technical changes that are affecting the workplace.

More than 47 million people received some kind of training in 1993, depending on their job classification, the size of the organization and the training needed. Some training is provided entirely by the employer, some is provided by an outside agency, and some is a mixture of the two.

To determine whether the Office of Extended Education should develop a job training center for the Inland Empire, a survey was administered to local businesses. The survey gathered such information as: critical training needs for the organization; job classifications needing training; desired format of training; and, sources of training.

Results of the survey determined that there is a need for a job training center for the Inland Empire and that Extended Education could fill this niche.

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INTRODUCTION

When I began my job with the Office of Extended Education over six years ago, one of the first things I was told I would be responsible for was converting our *Bulletin* from a publication that was composed by an outside vendor and then pasted up, to one that was created in-house with desktop publishing. I had seen desktop publishing demonstrated but I had never had the opportunity to use it myself. How was I going to learn, I wondered. There were several options: 1) I could read the software manual and learn by trial and error (ha!); 2) I could take a class by a training organization; 3) I could hire a consultant to come to the office and teach me on my computer; 4) I could buy a "how-to" book; or 5) I could see if a local college or university was offering a class.

After considering how fast I needed to learn it, how much money I wanted to spend, and what options were available from the list above, I decided to take a class by a training organization. Within three days and \$795, I was adept enough at *PageMaker* to begin converting our *Bulletin* to an in-house publication.

Obviously my supervisors realized how important desktop publishing was to the future of our organization and felt the

time and money involved were a small price to pay for the cost-effectiveness and the efficiency in the long run.

Do other organizations experience this same phenomenon? Of course they do. But do they feel as strongly about training? Do they see the benefits to the organization of keeping their staff trained on new technology? Do they know where to turn when they decide they need training? Do they know they can turn to the CSUSB Office of Extended Education?

To find the answers to some of these questions, and to determine whether the Office of Extended Education should develop a job training center for the Inland Empire, I did some research on training in the United States and I conducted a survey of area businesses. The research and the survey gathered such information as: critical training needs for an organization; job classifications needing training; desired format of training; and, sources of training. The results helped me determine whether Extended Education should undertake a job training center and some of the questions to be answered in making this determination.

CHAPTER ONE

I. WHAT IS TRAINING?

Webster's New World Dictionary, Third College Edition defines training as "instructing so as to make proficient or qualified" (1418).

Retraining refers to training a worker for a new and different job or career. This may include a transition into a different working environment as well as entirely new skills (Miller 5-6).

Training can take many shapes and forms. It can be provided by the employer or by an outside agency. The instruction itself can be given in a variety of ways, including formalized instruction in a classroom setting, lectures by in-house staff, videotapes, satellite conferences, computer-aided instruction, and more. If an outside agency is used, it can provide as little or as much of the training that the organization wants. For instance, the contractor can design, develop and deliver the training or just develop the training and have the organization's training department deliver it (Carnevale 23). On-the-job training is another important form of training. It can be structured, like an apprenticeship program, or unstructured, as in one employee showing a fellow employee how to perform a new task (Carnevale 23).

It is in the best interest of the organization to train and retrain their employees for a number of reasons. It will establish a loyal and dedicated employee, resulting in less turnover and less expense in hiring and training new employees. "When the company retrains its existing employees, training can build on the knowledge and experience that trainees have accumulated over their years with the company" (Miller 7).

II. BACKGROUND OF TRAINING

Education and training in the workplace is nothing new. Two out of three Americans say they learned how to do their job on the job, not through a formal training session or classroom setting (Carnevale 23). At the same time, formal training sessions are becoming more prevalent in the workplace.

Corporations have increased their training efforts dramatically in recent years to deal with the changes in the work force and society. Corporations are even joining forces with government agencies and labor unions to design and administer training programs. Likewise, educational institutions are joining in by assisting in the development and delivery of training programs. (Miller 34).

The growth of workplace training is evident in financial figures also. In 1986, Anthony Carnvale estimated that the corporate education industry was a \$30 billion enterprise; in 1990 he says it is a \$40 billion enterprise (Miller 34). Workplace training, in general, is a \$210 billion investment. (Carnevale 23).

Training is the best way to solve economic and technical changes that are affecting the workplace. If the United States does not embrace training and retraining for its em-

ployees, it will lose its ability to adapt and be competitive in the global marketplace. (Carnevale 28).

III. WHY IS TRAINING IMPORTANT?

A. CHANGES IN WORKFORCE: NATIONAL

According to Margaret Gayle (10-11), executive vice president of 21 Century Futures Corporation in Raleigh, North Carolina, "futurists and business forecasters predict dramatic changes in society in the next century:"

1. An emerging service economy will provide jobs for 88 percent of the work force by the year 2000.

2. A shrinking labor force will emerge as 16- to 24-year-olds will be only 16 percent of the labor force in 2000, compared to 30 percent in 1985. In the future, 30 percent of the growth in the work force will be among minorities.

3. Small businesses (less than 100 employees) will be the major contributor to the labor force by the year 2000. Many of these businesses will be small manufacturing firms.

4. The growth of information or knowledge industries has created a new category of *knowledge workers*. Seventy-three percent of the jobs today require information-processing skills.

5. The decline of major traditional industries will continue in agriculture and manufacturing, but by 2001, manufacturing productivity will have increased 500 percent in those industries that have become more automated, added robotics,

and remained flexible in their production.

6. The high levels of unemployment will continue in some states with displaced workers experiencing longer times of unemployment.

7. The profile of the labor force is changing rapidly: 82 percent of the new entrants in the workforce by 2000 will be women and minorities.

8. The decline of unionization will continue, with a continued shift in jobs toward right-to-work or no-union states. (Union membership, as a percent of employed workers, will be less than ten percent by 2000, down from 28.9 percent in 1975 and 18 percent in 1985).

9. The increase in part-time workers and workers who moonlight will continue into the 21st century as two incomes are needed to maintain a decent quality of life.

10. A shortage of entry-level jobs, especially in the service sector, will create competition for the youth labor force among business, military, and institutions of higher learning.

11. Lifetime employment is a thing of the past. Workers will change jobs or careers five or more times, which will require lifelong training and learning.

12. The decline of the work ethic, quality, and productivity will continue as major management issues of the 1990s.

13. Day care will become the major fringe benefit issues of the 1990s. Other employee benefits will include flexible schedules and job sharing, maternity and paternity leave, and health care.

14. Six million jobs in the next decade will be available in the executive, professional, and technical ranks.

15. Computer competence will approach 100 percent in urban areas by 2000.

16. Work at home will increase as office automation becomes portable and powerful.

17. The mandatory retirement age will rise as life expectancy increases.

18. The impact of high technology industries on the workplace will continue to be underestimated.

19. Biotechnology will generate major growth in the 1990s as breakthroughs in cloning and gene splicing continue.

These changes will have a definite impact on employers and employees alike.

The Bureau of Labor Statistics projects that there will be a slow growth in the labor force through the year 2000,

particularly among younger workers, and that those entering the work force will not be sufficiently prepared (Riche). "Flexibility is the key to making the most of the opportunities that the changing work force brings. If the work force of tomorrow is going to be older, more female, more black, Hispanic, and Asian, then employers cannot rely on an annual crop of freshly educated young white men to fill jobs. Employee training and retraining will be the key to flexibility" (Riche).

Because of the emerging service economy and information age, it is estimated that 10 to 15 million manufacturing employees will be displaced in the next decade (Miller 10). On the other hand, 16 million new jobs will be created. The problem is that the skills required by the new jobs will not be the skills the displaced employees have; there will be a mismatch between the skills available in the work force and the skills required (Miller 2).

Management will not be untouched by these changes. In fact, they already have been: "Between 1981 and 1983 half of the Fortune 1300 companies eliminated an entire layer of management primarily because new, decentralized organizational structures have been made possible by electronic information

management systems" (Miller 2-3).

Because of the changing skill requirements, it will be imperative that employees have basic skills (reading, writing, math, reasoning) in order to be trained in new skills. Because it is unlikely that the emerging work force will be proficient in these skills, many organizations will have to concentrate on training programs in remedial skills before they can begin training on technological changes (Miller 30-31).

A report published by the Center of Public Resources in 1982, Basic Skills in the U.S. Work force, found that American businesses are already struggling with employees having basic skills deficiencies. These deficiencies prohibit job advancement for the employees and contribute to low productivity (Miller 31).

B. CHANGES IN WORK FORCE: CALIFORNIA

California will participate in these national workforce changes, and will lead the nation in terms of ethnic diversity in the workplace (Center for Continuing Study of the California Economy 1992).

The statistics in the following section are provided by

the Center for Continuing Study of the California Economy in its publication California Population Characteristics- 1992 Edition.

California had 15 million residents in the state's labor force in 1990 according to the 1990 Census. There were 8.4 million men- 56 percent of the workforce and 6.6 million women- 44 percent of the workforce. The labor force included 8 million White Non-Hispanic residents (59.8%), 3.5 million Hispanics (23.6%), 1.5 million Asians (10.1%) and 1 million Black Californians (6.4%).

Table 1.-- California Labor Force Characteristics 1990
(Thousands)

	Civilian Labor Force		Labor Force Participation Rate		
	Total	% Female	Male	Female	Total
Hispanic	3,543.8	39.4	80.8%	57.2%	69.5%
White	8,965.1	44.8	75.5%	57.3%	66.1%
Black	963.5	49.6	65.0%	59.0%	61.9%
Asian & Other	1,520.4	46.9	73.8%	59.3%	66.2%
Total	14,992.8	44.0%	75.9%	57.6%	66.6%

Source: 1990 Census, STF3

EDUCATIONAL ATTAINMENT

Concerning educational attainment of the California adult population:

1) it varies substantially by ethnic group in both the state and the nation.

2) California residents have a higher level of educational attainment, on average, than the total nation-- despite having a much larger Hispanic population.

Table 2.--California Educational Attainment
Persons 25 and Over
(Thousands)

	Hispanic	White Non-Hispanic	Asian Black	& Other	Total
Less than 9th Grade	1,287.6	458.8	91.7	247.8	2,085.9
H.S. - not Graduate	751.7	1,208.9	218.7	185.2	2,364.6
H.S. - Graduate	695.1	2,837.6	306.8	328.4	4,167.9
College - no degree	516.1	3,033.4	347.8	328.7	4,225.9
AA Degree	191.6	1,004.3	117.7	170.9	1,484.5
BA Degree	174.8	2,135.5	127.4	420.4	2,858.1
Graduate Degree	88.2	1,177.8	60.8	181.7	1,508.6
Total	3,705.1	11,856.3	1,271.0	1,863.1	18,695.5
Less than H.S. Grad.	55.0%	14.1%	24.4%	23.2%	23.9%
Forgotten Fifty	37.9%	58.0%	60.8%	44.4%	52.8%
College Graduate	7.1%	27.9%	14.8%	32.3%	23.4%

Source: 1990 Census, STF3

Roughly one in four California adults have not graduated from high school and one in four have a college degree. The other half of Californians are in the middle group which includes high school graduates and those with some college but not a four year degree. This middle group is becoming known as the "forgotten fifty" in terms of policy- the problems of high school dropouts are well known, the needs of college graduates are well known, while the problems of high school graduates trying to find a place in the workforce of the 21st century are "forgotten."

OCCUPATIONAL STRUCTURE

California had 4 million managerial and professional workers in 1990, representing 28.6% of the state's workforce. Over three in ten workers were in sales, administrative support and technician occupations—roughly the same share in both the state and national workforces.

Table 3.-- **California Occupational Structure**
1990
(Thousands)

Occupational Category	1990 Number of Workers	% of Workers	% of U.S. Workers
Managerial & Professional	3,996.5	28.6%	26.4%
Sales, Admin., Tech Support	4,536.8	32.4%	31.7%
Service Workers	1,733.8	12.4%	13.2%
Farm Workers	382.4	2.7%	2.5%
Precision & Craft Workers	1,548.6	11.1%	11.3%
Operators & Laborers	1,798.2	12.8%	14.9%
Total Labor Force	13,996.3	100.0%	100.0%

Source: 1990 Census, STF3

PROJECTED CHANGE FOR THE NEXT DECADE

California will definitely experience the workforce changes that the rest of the nation is predicted to experience in the next century, most notably an increase of minorities and women in the workforce and a change in the profile of jobs.

The Center for Continuing Study of the California Economy predicts that half of California's workforce will come from minority groups in the next decade. Hispanics and Asians will account for most of this growth.

The decline of blue collar factory jobs is expected to continue. While technology related sectors will grow, the old line manufacturing sectors such as autos, steel, and metals will decline. Between 1979 and 1990, the U.S. lost 800,000 jobs in metal products; 500,000 in machinery; and 200,000 jobs in motor vehicles. At the same time, job gains were posted in computers, aircraft, printing and electronics.

As predicted, strong job gains were posted in most service industries. California saw an increase of 35.4 percent in retail trade, 70.4 percent in finance sectors, 82.7 percent in hotel businesses, 76.2 percent in business services and 48.8 percent in health services.

CHANGING OCCUPATIONAL AND EDUCATIONAL REQUIREMENTS

Recent long term forecasts prepared by the U.S. Department of Labor gave a detailed look at the nation's occupational trends between 1990 and 2005. We can expect these trends to hold in California, also. The key findings are:

1. Occupations requiring a college or graduate degree will experience above average growth.

2. Service occupations, which have relatively low educational requirements, also are forecasted to have above average growth.

3. Technician and marketing and sales job also are expected to show above average growth. In fact, technicians (such as radiology and medical records technicians) are the fastest growing occupational group. Most of these positions do not require a four year college degree.

4. Precision and craft jobs will grow, but relatively slowly.

5. Laborer jobs, which have the lowest skill level, will remain constant overall but will decline by nearly 1 million in manufacturing.

Table 4.-- United States
Occupations with Largest Growth
1990-2005
(Thousands)

Occupation	1990	2005	Growth
Retail Salesperson	3,619	4,506	887
Registered Nurse	1,727	2,494	767
Cashiers	2,633	3,318	685
Office Clerks	2,737	3,407	670
Truck Drivers	2,362	2,979	617
Managers	3,086	3,684	598
Janitors	3,007	3,562	555
Nursing Aides	1,274	1,826	552
Food Counter Workers	1,607	2,158	550
Waiters/Waitresses	1,747	2,196	449
Secondary School Teachers	1,280	1,717	437
Receptionists	900	1,322	422
Systems Analysts	463	829	366
Food Prep Workers	1,156	1,521	365
Child Care Workers	725	1,008	365

Source: "Projections of Occupational Employment," U.S. Dept. of Labor
Monthly Labor Review,
Nov. 1991.

IV. WHY IS TRAINING NECESSARY?

A new look at training and retraining within industry is necessary today for several reasons (Rosow and Zager 55):

- * the new "global economy" which requires a competitive edge by organizations
- * a demand for high quality products and services
- * constantly changing technology
- * the speed in which information/knowledge travels
- * the need for an adaptable workforce with interchangeable skills
- * the rate at which employees change occupations during their work life
- * more educated and capable workers, who want a vested interest in their jobs

Let's look at these factors.

GLOBAL ECONOMY

"...increased productivity is a must if the United States wants to halt its competitive slide in the global marketplace, according to the Commission on the Future of Worker-Management Relations" (Moskal). Increased productivity is not possible without the skills needed to keep up with constant changes in the workplace.

There has been a call by the Commission on the Skills of the American Workforce to upgrade the skills of the American worker in order to stop our economic decline and succeed in the global marketplace (Geber 28).

HIGH QUALITY PRODUCTS AND SERVICES

The United States is losing ground to Japan based on the lower quality of its products. Japan now owns entire product lines that the United States once dominated (Geber 28).

Employers are interested in providing training that is relevant to the organization in order to provide a competitive edge. They want training that is geared to the individual on the job and the organization's bottom line, resulting in higher employee productivity and better products (Carnevale 28-29).

The growth of the service industry also will require substantial training. Eli Ginzberg, an economist, said "The shift of the economy toward services is currently making it more difficult for the undereducated to find a niche. An increasingly white-collar economy has no place for functional illiterates" (Miller 13).

The service sector requirements will raise the level of education needed and change the nature of the skills required.

For instance, an employee in a service organization has more customer contact, thus they need technical skills to perform their job **and** interpersonal skills to interact with the customer (Miller 13-14).

CHANGING TECHNOLOGY AND SPEED OF INFORMATION TRAVEL

Technology changes very quickly; new innovations are made every day. To deal with these changes, workers will constantly need to acquire new skills. "In Future Shock, Alvin Toffler (1970) argues that the illiterate of the year 2000 will not be those who cannot read but those who cannot learn" (Miller 23).

Fortunately, those organizations that wish to remain competitive in the U.S. and abroad have made training for new technology a priority. Four reasons account for this (Rosow and Zager 1-2):

1. constant accretion of new technology-based products and processes is an essential weapon in the competitive struggle.
2. new technology cannot be successfully acquired and implemented without training.
3. the value added by proper training and the losses incurred by inadequate training are too high

to be ignored.

4. the net value of training for new technology increases with wider dissemination throughout an organization.

NEED FOR ADAPTABLE WORKFORCE

Employees need to learn to act proactively to changes that affect their organization. Businesses are constantly reshaping their future through mergers, partnerships, buy-outs, etc (Rosow and Zager 26). When changes are made in an organization, they are not always communicated properly. The strategy may be clear to those who had a hand in the change, but to others it can be very unsettling. Corporate training that covers manager ideas and feedback can alleviate this communication barrier and help make the workforce more adaptable (Rosow and Zager 27).

OCCUPATIONAL CHANGES

As mentioned earlier, changes in the economy, the shift to a service nation, and the impact of technology have had an affect on organizations and the need for training. They have also contributed to occupation obsolescence and the creation of new occupations. The U.S. Department of Labor estimates that two of every five people will change occupations every five

years, even if they don't change employers (Rosow and Zager 27).

MORE EDUCATED AND CAPABLE WORKERS

A two-page survey was sent to approximately 2,100 California companies asking for their perception of California State University graduates. Nearly 500 responses were received from organizations ranging in size from one employee to 100,000 employees. When asked to select which skills they looked for in employees, approximately 85 percent gave these top five responses: communication skills (96 percent); analytic skills (95 percent); writing skills (93 percent); quantitative skills (87 percent); and computing skills (85 percent). Some companies are increasing their required entry-level skills. The president of a large bank recently justified these requirements by explaining "Everyone working within the banking industry at every level must be prepared to adapt to new methods, new products and new technologies quickly and constantly." The problem is, employees need basic skills before they can meet the new required skill level. In other words, the proficiency level in reading, writing, math, problem solving and communication skills will increase (Miller 23). This will result in training in remedial skills before training for

technical or vocational skills can take place.

Those workers that have the basic skills are concerned with professional development and self-growth. The more educated they are, the more they want to learn. The more they learn, the more they want to participate in job decisions--but they must have the training to do so (Rosow and Zager 27).

These changes would be much more manageable if they were occurring slowly, but they're not. With the speed of these changes, most workskills are only valid for ten years (Bentley 4). This means that training needs to be a continual event. "The business of training means much more than just improving the present ways of training, it means looking at how people are going to be able to grow and develop to keep pace with what is happening in the real world, and at ways of creating a learning organization (Bentley 4).

V. WHO GETS TRAINING?

More than 47 million people received some kind of formal training from their employers in 1993 (Froiland 53). Training opportunities are not available to everyone, though. The opportunities vary based on the size of the organization, the job classification, and the age of the employee. Those organizations with a large number of highly skilled employees provide the most training (Miller 35). Large organizations provide more training than small organizations; and those that receive the training are most likely 25-45 years old, white-collar managers, professionals, or salespersons (Miller 35).

Table 5.-- Who Gets The Training

Job Category	Organizations Providing Training (%) ¹	Average # of Individuals Trained ²	Projected # of Individuals Trained ³	Average # of Hours Delivered ⁴	Projected Total Hours of Training Delivered (in millions) ⁵
Professionals	70	73	8.8	36	317.0
First-Line Super.	66	37	4.2	36	150.1
Salespeople	41	53	3.8	33	125.4
Middle Managers	76	26	3.4	33	111.6
Senior Managers	64	14	1.5	33	49.9
Executives	74	8	1.0	32	31.4
Production Workers	37	185	11.9	32	378.2
Customer-Service People	52	84	7.6	29	220.6
Administrative Employees	76	39	5.1	20	100.2
TOTAL:			47.3		1,484.4

(Froiland, Paul. "Who's Getting Trained?" *Training*. October 1993: 54.)

¹ Percent of all U.S. organizations with 100 or more employees that provide formal training to people in these categories.

² Average number of individuals trained per organization, based only on those organizations that do provide some training.

³ Total number of people trained in all organizations (in millions).

⁴ Average hours of training per individual.

⁵ Total hours of training (in millions) delivered by all organizations to employees in these categories. (One person receiving training for one hour equals one "hour of training.")

The job categories in Table 5 are listed in descending order based on the average number of training hours delivered or training "intensity." Although you will note that only 37 percent of organizations with 100 employees or more provided training for production workers, the number of worker trained (185) is much higher than all other job categories. This is simply because there are more production workers in the workforce (Froiland 54).

Also, Table 5 indicates that more organizations deliver training to middle managers and administrative workers. "Training for middle managers has been the most uniformly applied training effort of American companies over the past decade" (Carnevale 52). Training for administrative workers, on the other hand, has risen since 1989. Approximately 60 percent of organizations provided training for their administrative workers in 1989, while more than three-quarters of organizations now train some people in this category (Froiland 56). "It's no longer enough that Nola can file or input data; now she has to use a desktop-publishing system and understand spreadsheets and be conversant with three new software programs a year" (Froiland 56).

VI. TYPES OF TRAINING

What type of training is most needed? Table 6 shows the top 15 general types of training provided by companies with more than 100 employees.

Table 6.-- General Types of Training

Types of Training	% Providing ¹	In-House Only (%) ²	Outside Only (%) ³	Both (%) ⁴
Mgmt. Skills/ Development	91	12	18	61
Computer Skills	90	21	14	55
Communication Skills	87	21	12	53
Supervisory Skills	86	18	12	56
Technical Skills/ Knowledge	82	22	6	54
New Methods/Procedures	80	38	5	37
Executive Development	77	8	26	44
Customer Relations	76	25	9	41
Personal Growth	73	14	15	45
Clerical/Secretarial	73	23	18	32
Employee/Labor Relations	67	23	12	31
Customer Education	65	28	5	31
Wellness	63	21	15	28
Sales Skills	56	15	11	30
Remedial/Basic Education	48	11	21	15

Source: Froiland, Paul. "Who's Getting Trained?" *Training*. October 1993: 54. Of all organizations with 100 or more employees...

1 Percent that provide each type of training.

2 Percent that say all training of this type is designed and delivered by in-house staff.

3 Percent that say all training of this type is designed and delivered by outside consultants or suppliers.

4 Percent that say training of this type is designed and delivered by a combination of in-house staff and outside suppliers.

VII. SOURCES OF TRAINING

Providing training for all the job classifications and categories listed above is no small feat. Employers frequently find they cannot handle it alone, so they buy part or all of a training program, as also shown in Table 6.

The make-or-buy decision is based on many factors. Anthony Carnevale (92-94) lists seven criteria cited most frequently by practitioners:

1. expertise-- depending on how specialized or unique the desired training is. Look in-house if the expertise exists. Otherwise, outside providers can train employees directly or train a trainer to train the employees. Also, outside providers can be used to provide materials only (workbooks, computer programs, etc.).

2. timeliness-- does the employer have time to develop and deliver the program within the time frame requested?

3. size of population to be trained-- the larger the population, the more likely employers are to rely on in-house resources. This is due mainly to economics; the larger the population, the more likely the program will need to be delivered more than once. It is hard to justify the time to design and deliver a program on a one-time basis for a small population.

4. sensitivity/proprietary nature of subject matter-- if the subject is sensitive, in-house training will most likely be done regardless of other factors. (Employers rarely issue security clearances to outside resources to provide training of this nature.)

5. cost considerations-- usually a secondary factor, considered in concert with other factors.

6. employer conditions-- the size of the organization or its training department affects the weight employers place on criteria in deciding to make or buy training. Note that a large organization does not always have a large training department. Small organizations and small training departments are less likely to have the expertise, resources or time to meet a specialized need.

7. other factors-- an employers may use an outside provider just to bring in new ideas or new blood. Outside providers can rejuvenate a dull or boring training program, which in turn motivates employees to attend and learn. On the other hand, some organizations may have a policy to never use outside providers.

Another factor considered when deciding how training will be offered is which job classification needs training. As Figure 1 shows, executive training has a tendency to rely on outside sources. Roughly half of all executive training is designed or delivered by universities, professional associations and/or consultants (Carnevale 48). Companies rely more on in-house sources for training beginning and middle-

SOURCES OF TRAINING

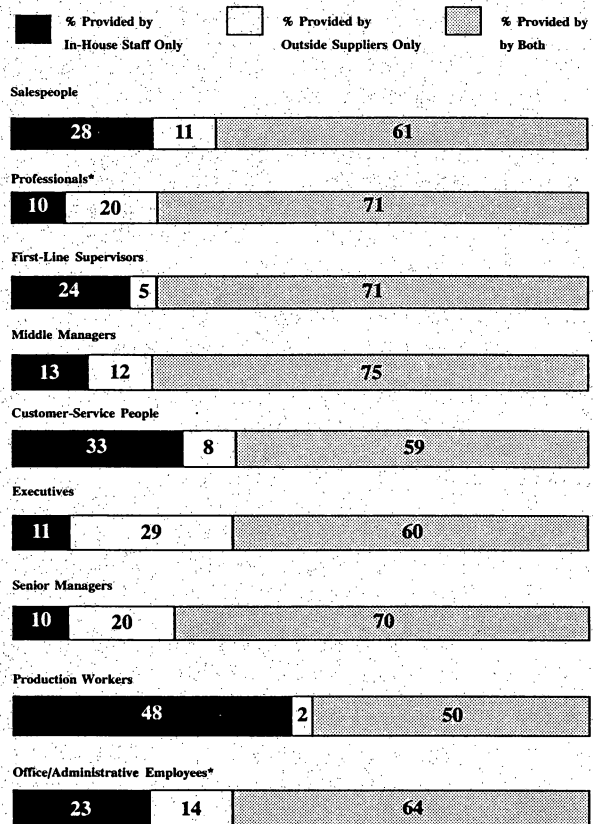


Figure 1
Sources of Training
Source: Froiland, Paul "Who's Getting Trained?"
Training, October 1993: 56.

managers (Carnevale 52). While many organizations turn to outside sources for training, many have been reluctant to collaborate with educational institutions or government agencies because they are afraid these organizations do not understand their business (Miller 147). In spite of this, partnerships are bound to become more popular as the need for training and retraining increases.

Critics of these partnerships argue that the arrangements are not practical because there is not a "shared language" between the two, plus they see a lack of coordination and focus in these partnerships (Miller 147). Proponents argue that these partnerships are optimal for retraining. "Although businesses are in the best position to identify their training needs, professional educators and trainers have the skills to design the curriculum and administer the instruction" (Miller 147).

Proponents must be speaking louder than critics; colleges and universities provide more qualifying and upgrading training for Americans than all other schools combined (Carnevale 7). They provided training for 16.1 million people and retraining for 5.5 million people in 1985 (Carnevale 7). Not only do colleges and universities provide training and retraining, they also provide valuable research and development for the nation, which in turn develops new innovations, new skills needs and more training and retraining (Carnevale 7). The schools aren't abandoning their mission of educating kids and providing vocational training, but more and more they're seeking to fill a critical void: "upgrading workers' skills so U.S. companies can stay globally competitive" (Therrien 76).

Table 7.-- **Formal Training by Source**

Provider	Share of Purchased Training (Percent)	Dollar Value (Millions)
All Schools	56.4	5,245.2
Elementary and secondary	1.5	139.5
Colleges and universities	31.2	2,901.6
Community colleges and technical institutes	15.5	1,441.5
Vocational schools	7.0	651.0
Other schools	1.2	111.6
Professional, trade, labor org.	14.2	1,320.0
Training industry	15.7	1,460.0
Community organizations	3.2	297.6
Tutors and private instructors	1.2	111.6
Government	5.6	520.0
Other	3.5	325.5

Source: U.S. Census Bureau, 1987.

Those organizations that have established partnerships with educational institutions are beginning to reap the benefits.

Educational institutions (Carnevale 105):

1) are relatively permanent and can offer continued service;

2) can offer academic credit or CEUs (no other provider can offer this benefit);

3) are numerous and extremely accessible.

VIII. TRAINING DECISIONS

At what point does an organization decide it needs training? Does it wait until after it has acquired a new software program or does it consider training before it decides which software program to buy? Before hardware or software is purchased, an organization must decide what kind is needed, what kinds are available and then which one should be selected. Before that decision, though, the organization must decide how to produce the new product/service for which the new technology will be used. Even before that, the organization must decide what new product/service to produce (Rosow and Zager 5). "Such decisions should not be made only on the basis of technology—but to make them with inadequate technological skills and knowledge is to court disaster" (Rosow and Zager 5).

Another important question to ask: is the proper person making the decision on the new technology? Does the person have adequate technical skills and knowledge to make the decision? If the employer simply asks the employee to follow instructions and ask for help when needed, it ensure the employees have the minimum training necessary (Rosow and Zager 6).

If the employer asks the employee to be responsible for productivity and quality, though, it encourages the employee to learn as much as possible about the new technology, which, in turn, makes him/her and their supervisors more knowledgeable and efficient (Rosow and Zager 6). Although productivity and quality may be increased by increasing quality inspectors, the cost may be prohibitive. **A better answer is to "give workers the knowledge, skills, and opportunity to do it themselves"** (Rosow and Zager 6).

CHAPTER TWO

I. WHAT IS EXTENDED EDUCATION?

The Office of Extended Education is a self-support department of California State University, San Bernardino with the mission of extending the resources of the university to the area community. It offers credit and noncredit courses, conferences, seminars, and workshops in a variety of disciplines. It utilizes Cal State's faculty and facilities to offer courses in a convenient location at a convenient time.

Extended Education also specializes in designing and conducting training programs focusing on specific, timely topics within a number of broad content areas, including business administration, management, marketing, computer applications, communications, and foreign languages.

II. BACKGROUND OF PROJECT/SURVEY

A survey to determine the training needs of the Inland Empire was mailed to approximately 2000 businesses in San Bernardino and Riverside Counties in July 1993. The intention of the survey was to determine whether there was a need for a "job training center" that could be administered by the Office of Extended Education. The mailing lists consisted of San Bernardino Area Chamber of Commerce members, San Bernardino area companies, Colton businesses, Fontana businesses, and Riverside businesses. The lists were in-house lists that are used for promotion purposes for the Office of Extended Education.

Approximately 60 surveys were returned by the requested deadline. In order to increase this return, a second mailing was sent to a randomly selected group, chosen from those that had not yet returned the survey. (Every third address was selected from the remaining businesses.) The second mailing yielded another 20 surveys. Another 24 surveys were returned because of incorrect addresses or businesses that no longer existed. Of the 78 surveys that were responses, 68 were valid and 10 were invalid because of incompleteness.

Possible nonsampling errors would include 1.) sample selection errors and, 2.) nonresponse errors:

1. Were the mailing lists chosen the best source of contact for this survey? Most of the large companies in the area were on the mailing lists, but many small organizations which do not require training were also on the lists.

2. Yielding a 3.5 percent response rate, obviously a majority of the sample did not respond to the survey.

Because of the nonsampling errors listed above, there are limitations to the survey results. Although the results contain valuable information in deciding whether the Office of Extended Education should undertake a job training center and what steps are necessary to do so, the response rate was not high enough to make "statements of proof." In other words, generalities cannot be made from this analysis.

A copy of the survey is provided as Appendix A.

III. SURVEY RESULTS

The first section of the survey asked for background information about the company and the person responding to the survey. Non-profit service organizations, health care facilities, insurance companies, government agencies, manufacturing and retail sales organizations were represented in the survey. The number of employees varied from one to over 9000, with a majority of the businesses employing less than 100 people.

The second part of the survey attempted to discover how the organization feels about training by asking how much it supports training, either by providing it or paying for it. Eighty-eight percent of those surveyed provide in-house training programs, 46 percent provide tuition assistance for credit courses, only 26 percent provide tuition assistance for non-credit courses, and 78 percent provide paid time for its employees to attend training and workshops. Most respondents seemed to feel that training is important, evidenced by the majority that provide training and/or paid time for training.

The third part of the survey asked if the organization was currently providing any training programs, and if so, what they were. Seventy percent of the respondents currently

provide training programs. The top four programs are: technical job-related (20%), sales training (16%), computer training (13%), and management training (10%).

The fourth part of the survey asked the respondent to identify the most critical skill training needs of the organization for current employees, listing the most critical need first. The four most critically needed training needs are: technical job-related (16%), computer training (15%), management training (7%), and communication skills (6%). These same four programs also were listed as the second most critically needed training, as: communication skills (18%), computer training (16%), management training (13%) and technical job-related (7%). Combining first and second choices, the most needed program is computer training (31%), with communication skills (24%) and technical job-related (23%) virtually tied for second.

The fifth part of the survey asked the respondents to identify the most critical training or retraining needs of current employees from a provided list. They could circle as many as appropriate, thus the following statistics do not equal 100 percent. The list provided (in the order below) and

the responses were:

Management training including supervisory skills	62%
Computer skills	57%
Business writing and vocabulary skills/ oral presentation skills	35%
Technical job-related skills	41%
Sales training	43%
Academic degrees	10%
Licensing or certifications	22%
Retraining or CEUs	10%
English-as-a-Second-Language	13%
Health services administration	6%
Marketing and/or advertising skills	19%
Work habits/ethics	47%
Other	6%

The top two most identified training needs (management training and computer skills) match the answer to the fourth section, where the respondents were asked to list the most critical skill training needs for their company (without a list provided). The next two most identified were work habits/ethics and sales training, which were not identified in the top four in Part IV.

Part VI of the survey asked which employees required the training needs identified and to match the priority need and secondary need with the employee group. The following tables list the responses by employee group.

Table 8.— Unskilled Labor Training Needs (34%)

Training	First Priority n=23	Second Priority n=17
Work habits/ethics	44%	24%
Technical job-related	26%	18%
English-as-a-Second Language	22%	12%
Sales training	4%	12%
Licensing/certification	4%	12%
Retraining/CEUs	---	12%
Business writing	---	5%
Other: safety	---	5%
	100%	100%

Table 9.— Semi-Skilled Workers Training Needs (35%)

Training	First Priority n=24	Second Priority n=20
Technical job-related	42%	20%
Work habits/ethics	21%	20%
Sales training	13%	15%
Licensing/certification	8%	10%
English-as-a-Second Language	8%	10%
Computer skills	4%	10%
Business writing	4%	5%
Retraining/CEUs	---	5%
Other: safety	---	5%
	100%	100%

Table 10.- Service/Sales Employees Training Needs (46%)

Training	First Priority n=31	Second Priority n=26
Sales training	42%	23%
Technical job-related	16%	4%
Business writing	16%	27%
Computer Skills	7%	11%
Other: customer service, motivation	7%	4%
Licensing/certification	3%	4%
Retraining/CEUs	3%	4%
Marketing/advertising skills	3%	4%
Work habits/ethics	3%	4%
Management training	---	11%
English-as-a-Second Language	---	4%
	<u>100%</u>	<u>100%</u>

Table 11.- Clerical Support Staff Training Needs (60%)

Training	First Priority n=41	Second Priority n=35
Computer skills	56%	29%
Business writing	28%	37%
Technical job-related	5%	11%
Retraining/CEUs	5%	---
Management training	2%	3%
Academic degree	2%	---
Work habits/ethics	2%	11%
Sales training	---	6%
English-as-a-Second Language	---	3%
	<u>100%</u>	<u>100%</u>

Table 12.- Paraprofessionals Training Needs (25%)

Training	First Priority n=17	Second Priority n=15
Technical job-related	41%	---
Business writing	17%	33%
Management training	12%	13%
Academic degree	12%	---
Computer skills	6%	26%
Licensing/certifications	6%	7%
Retraining/CEUs	6%	7%
Health services administration	---	7%
Marketing/advertising skills	---	7%
	<u>100%</u>	<u>100%</u>

Table 13.- Skilled Technicians Training Needs (32%)

Training	First Priority n=22	Second Priority n=19
Technical job-related	41%	21%
Management training	14%	---
Licensing/certifications	14%	21%
Business writing	9%	11%
Retraining/CEUs	9%	5%
Academic degree	9%	5%
Computer skills	4%	21%
	<u>100%</u>	<u>100%</u>

Table 14.- Supervisors & Management Training Needs (63%)

Training	First Priority n=43	Second Priority n=37
Management training	74%	13%
Marketing/advertising skills	13%	11%
Academic degree	5%	---
Computer skills	2%	11%
Business writing	2%	24%
Sales training	2%	11%
Work habits/ethics	2%	11%
Technical job-related	---	11%
Health services administration	---	5%
Licensing/certification	---	3%
	<u>100%</u>	<u>100%</u>

Table 15.-Top Management Training Needs (38%)

Training	First Priority n=26	Second Priority n=22
Management training	69%	23%
Marketing/advertising skills	11%	23%
Sales training	8%	14%
Computer skills	4%	---
Business writing	4%	14%
Academic degree	4%	4%
Health services administration	---	4%
Technical job-related	---	4%
Work habits/ethics	---	14%
	<u>100%</u>	<u>100%</u>

Not surprisingly, the training programs marked as first priority most often were computer skills, management skills and technical job-related skills. Those listed most as second priority were business writing and work habits/ethics. This matches the answers to Part IV and V of the survey.

What we do learn from Part VI is that Supervisors and Managers were listed the most as needing training (63 percent of respondents identified this group as needing training.). The second most identified group was the clerical support staff, with 60 percent of the respondents listing them. These statistics coincide with Table 5 and the statements by Carnevale and Froiland that middle managers and administrative workers receive the most training.

When asked to identify the type of training format most desirable to them, 56 percent of the respondents answered seminar or workshop (1-3 days), 41 percent answered short course (20 hours instruction or less over 2-4 weeks), and 9 percent said a long course (20-40 hours instruction over 5-10 weeks) was the best. Some gave more than one answer, thus the percentages do not equal 100.

Part VIII of the survey asked respondents to identify when training is most convenient for their employees. Again, many

gave more than one answer so the percentages do not equal 100. The evenings (5-10 pm) was the most popular answer, with 49 percent selecting it. A close second was during the workday (9 am to 5 pm) with 47 percent selecting it. Twenty-four percent said early morning (7-9 am) was convenient and 16 percent selected weekends.

When asked in Part IX what was the preferred location of training, 50 percent said on-site and 50 percent said off-site. This answer was not split according to the size of the organization; a mixture of small and large organizations preferred on-site training.

The last question on the survey dealt with sources of training. When asked where they would most likely look for training assistance, 40 percent said an in-house source, 31 percent said a community college, 31 percent said a trade consultant, 19 percent said a university, 13 percent listed other sources and 9 percent said a vocational or technical school. Obviously the make- or -buy decision factors listed by Carnevale earlier would come into play here. Many respondents gave more than one answer.

CONCLUSION

Obviously the emerging changes in society, including technology, a global economy, and the "information age," will and have had an effect on the Inland Empire. Frequently listed as one of the "fastest growing areas in the nation," the Inland Empire is still struggling with unemployment and the need for retraining due to the decline in the defense industry. All of these factors contribute to the need for continuing education and training in the area's businesses.

Looking at the results of the survey administered to Inland Empire area businesses, and comparing it to the research on training conducted by others, there are a few considerations we can use to determine the direction the Office of Extended Education should take in designing a "job training center."

First, the research and survey results suggest that there is a need for a job training center in the Inland Empire and that Extended Education would be an appropriate organization to be the administrator.

In designing the center, these questions need to be addressed:

1. Which training programs are most needed-- and could be

best provided by an outside source?

2. Which category of employees is most likely to contract for training?

3. Who are the decision makers in the organization when it comes to training?

4. What is the best way to deliver the training?

5. Who is our competition?

In detail: 1. As identified in the survey, the training programs needed the most are technical job-related skills, computer training, management skills, and communication skills. These programs coincide with the types of training being provided by U.S. companies with more than 100 employees (see Table 6). Computer training, management skills and communication skills could easily be packaged for on-site delivery at Inland Empire businesses. Extended Education currently offers a *Certificate in Management Skills* and a *Certificate in MS DOS Computers for Business Professionals*, which could be customized to a specific business or industry. Depending on the organization and the available resources at California State University, San Bernardino, a technical job-related program could also be designed. A communication skills training program could easily be designed by Extended Education--

the university has access to faculty that could easily teach business writing, speech communication and other remedial skills.

All of the programs, except perhaps technical job-related training, could be provided by an outside source of training (preferably Extended Education), without delving into privacy issues of the organization. Depending on the size of the organization and if it has a in-house training department, the training could be designed and delivered (on- or off-site) by an outside source.

Another important training need that was listed by many respondents, was work habits/ethics. A training program of this nature is well-suited to a university.

2. The survey also identified supervisors and managers as needing the most training, with clerical support staff ranked second. Once again, these figures coincide with national figures, as evidenced in Table 5. An advantage to supervisors and managers needing the most training, is that they are most likely to look for training from an outside source (see Figure 1). These numbers grow considerably if you include top management, executives and professionals in this group.

Clerical support staff don't look to an outside source

entirely, but will combine an outside source of training with an inside source.

3. Finding the appropriate decision maker when it comes to training can be very challenging. Not all organizations have a training department, and if they do are they being proactive in designing training programs? The Office of Extended Education will have to make contacts in the various businesses to determine what type of training is really needed compared to what they may be asking for. The importance of training current employees will have to be stressed with the advantages spelled out.

Because of the growth of the service industry, those organizations would be prime targets for initial contacts.

4. Training programs can be designed to be delivered in different formats. The most sought after format on the survey, was a short seminar or workshop (1-3 days), during the workday. The next selection would be evening courses, perhaps over 2-4 weeks. Actually, the answers to the survey indicated that the organizations were flexible and would be open to the format that was most conducive to the training program.

5. The competition for a skills training center administered by the Office of Extended Education would include in-

house training departments, trade consultants and other educational facilities such as a community college or vocational/technical college. The fact that the university has exceptional resources in faculty and research, and the ability to design and deliver appropriate curriculum, must be communicated to area businesses.


With the background information on training and the training needs of the Inland Empire presented in this paper, the next step for the Office of Extended Education would be to look at how a job training center would be designed. A marketing and business plan should be developed, closely looking at the five questions I have listed in this conclusion. This next step will be undertaken by Ms. Mendy Warman, director of conferences and contract training at the Office of Extended Education, in her final project for the M.A. in Interdisciplinary Studies.

One final note is that, according to Trevor Bentley in The Business of Training: Achieving Success in Changing World Markets, businesses will find training imperative:

"Training is perhaps the most effective way to get out of the downward spiral, for individuals,

organizations, and the economy. It will need an investment from everyone, but the investment will pay off handsomely. There is no doubt in my mind that there are going to be even more far-reaching changes as technology develops. Investing in training for success is not only good sense, it is absolutely vital."

APPENDIX A

	INLAND EMPIRE BUSINESS TRAINING NEEDS SURVEY
A confidential survey administered by the Office of Extended Education at California State University, San Bernardino	

- I. a. Company Name: _____
- b. Address: _____
- c. City, State, Zip: _____
- d. Telephone: _____
- e. Your name: _____
- f. Title: _____
- g. Type of Organization/Business: _____
- h. How many people does your firm employ? _____

II. Do you provide your employees:	Yes	No
a. In-house training programs?	()	()
b. Tuition assistance for credit courses?	()	()
c. Tuition assistance for non-credit courses?	()	()
d. Paid time to attend training and workshops?	()	()

- III. Are you currently providing any training programs? () ()
If so, what are they?
- 1. _____
- 2. _____
- 3. _____

- IV. Please identify your most critical skill training needs in your company for current employees.
1= top priority.
- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

- V. Please identify the most critical training or re-training needs of your employees from the list below. Select as many as are appropriate, by circling the letter.
- a. Management training including supervisory skills
- b. Computer skills
- c. Business writing and vocabulary skills/oral presentation skills
- d. Technical job-related skills
- e. Sales training
- f. Academic degrees
- g. Licensing or certifications
- h. Retraining or CEUs
- i. English-as-a-Second-Language
- j. Health services administration
- k. Marketing and/or advertising skills
- l. Work habits/ethics
- m. Other: Please identify _____

VI. We are also interested in knowing which of your employees most require the training needs you have just identified. Please match each of your training needs to one or more of the following employee groups. For example, if the priority training need for top management is business writing and vocabulary skills, place a "c" under #1, if the secondary training need for top management is management training, place an "a" under #2. (Choose from options listed below.)

Training Need			ie. (c)	(a)	Top Management
#1	#2				
<input type="checkbox"/>	<input type="checkbox"/>	Unskilled Labor			a. Management training including supervisory skills
<input type="checkbox"/>	<input type="checkbox"/>	Semi-skilled workers			b. Computer skills
<input type="checkbox"/>	<input type="checkbox"/>	Service/Sales employees			c. Business writing and vocabulary skills/ oral presentation skills
<input type="checkbox"/>	<input type="checkbox"/>	Clerical support staff			d. Technical job-related skills
<input type="checkbox"/>	<input type="checkbox"/>	Paraprofessionals			e. Sales training
<input type="checkbox"/>	<input type="checkbox"/>	Skilled technicians			f. Academic degrees
<input type="checkbox"/>	<input type="checkbox"/>	Supervisors and management			g. Licensing or certifications
<input type="checkbox"/>	<input type="checkbox"/>	Top management			h. Retraining or CEUs
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____			i. English-as-a-Second-Language
		_____			j. Health services administration
					k. Marketing and/or advertising skills
					l. Work habits/ethics
					m. Other: _____

VII. Circle the type of training format most desirable to your firm.

- a. Seminar or workshop (1-3 consecutive days)
- b. Short course (20 hours instruction or less over 2-4 weeks)
- c. Long course (20-40 hours instruction over 5-10 weeks)
- d. Other: _____

VIII. When is training most convenient for your employees?

- a. Early morning (7-9 a.m.)
- b. During the work day (9 a.m. to 5 p.m.)
- c. Evenings (5-10 p.m.)
- d. Weekends
- e. Other: _____

IX. What is your preferred location for training?

- a. On-site.
- b. Off-site.

X. Where are you most likely to look for training assistance?

- a. Community college
- b. University
- c. Vocational school/Technical school
- d. In-house resource
- e. Trade consultant
- f. Other: _____

Thank you for your time. Please return the survey in the enclosed postage-paid envelope by **August 2, 1993.**

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