Throughout the history of the American industrial economy, business integrated education into the workplace to facilitate management and worker development. What began as random experiments in the late 1800s became recognized as a business function in the early 1900s and an institutionalized practice in business organizations in the mid 1900s. Employer-provided educational programs served not only to provide employees with job skills and knowledge but also to create workers who fit the prevailing business image of an ideal employee. Corporate education became an important management strategy to maintain control over industrialized workplaces.

In the mid to late 1900s following the nation’s transition from an industrial to a post-industrial economy, employers and employees again faced dramatic changes. Businesses are having to re-evaluate existing management strategies and reposition their organizations to compete in a global, knowledge-based economy. Employee education has become even more important in the current economy where knowledge, not skill, is the critical factor.

As the American economy changed from an agricultural- to an industrial-based economy in the late 1800s, business organizations underwent fundamental changes. Business leaders experimented with management and educational strategies which they continued to use throughout the industrial period. These strategies proved successful to maintain control of industrial workplaces influenced by economic cycles, wars, labor demands and disruptions, government involvement, and adversarial public opinion. Management approaches included technology applications; hierarchical and bureaucratic organizational structures; and, ‘progressive’ personnel management tied to prevailing management philosophies.

Not unlike traditional apprenticeship, where master craftsmen possessed the ‘mystery’ of the trade and controlled entry into a trade, management and educational strategies gave employers the means to own the means and tools for production. By applying technology to manufacturing processes, management determined skill requirements for jobs and whom they would hire; by developing formally structured organizations with standardized rules and procedures, management dictated workers’ behavior.

Although business was periodically presented with challenges to its power – individual and collective labor resistance, increasing public awareness and concern, governmental
involvement – business leaders were, for the most part, unstoppable. The labels for decades following the Civil War – Age of the Robber Barons or The Gilded Age – describe how early industrial leaders came to be the most influential group in the American economy. The potential reward for the huge risk and difficulties they encountered was tremendous financial gain and, correlating with it, power and influence. During the period labeled the Progressive Era (1900 to 1914), the public protested business size and power and unsatisfactory working conditions. Business, however, as result of their status within the public at large, was able to influence government and the public to retain its one-sided control over workplaces.

During the Great Depression and the recovery period which followed, business, for the first time, lost considerable influence and control. But, they were able to position themselves to minimize their losses. While they could not stop New Deal legislation supporting the growing labor movement, they negated, at least to some extent, its impact upon them. With World War II and the following economic prosperity, they positioned themselves and recaptured, to a large degree, their former position.

Education was an important business strategy, not only to control the workplace, but also to positively impact public opinion. Businesses’ espoused reasons for providing workplace education. Their rationales ranged from concern over the welfare of their employees and fulfilling their social responsibility to frustration over employees’ skills and attitudes and negating the impact of the labor movement. The latter were probably closer to businesses’ actual, often hidden, agendas. The underlying rationale running throughout employer-sponsored education, as with other business strategies, was the continuing desire to unilaterally control their workplaces.

100 YEARS OF EDUCATION IN INDUSTRIALIZED WORKPLACES

In the decades following the Civil War, the educational movement in the workplace began in earnest. Industry experimented with providing workplace education which would, in the mid 1900s, became an integral part of business organizations. Business, just as in their management approaches, had great latitude in the education they offered – the kinds of programs they developed, their purpose, and the particular employees for whom they were intended.

External conditions – technological innovations, economic conditions, political influence, social factors, and belief systems – all contributed to the development and direction of employer-provided education. Business, who was able to shape and influence the impact of these conditions to their benefit, retained control over workplace education.
Basic Education -- Education with a Social Theme

Basic education provided employers the means to inculcate workers with the rudimentary skills to adapt and to perform effectively. Employers first turned to basic education when they faced employee behavior which distracted from productivity. Employers in the decades following the Civil War were faced with solving workplace problems created by their hiring large numbers of unskilled workers. These workers were frequently migrants from the farms or immigrants, or females, who not only did not possess the requisite skills but were also unfamiliar with workplaces and urban living. Employers offered basic education as a strategy to acclimatize workers and to manipulate their behavior to fit business leaders' expectations. Basic education also assuaged employers’ consciences, those with religious beliefs or paternalistic philosophies who believed that they were responsible for virtually all aspects of their employees’ lives. And, employers appeased the public who, in the early 1900s, had become increasingly aware of and concerned about working conditions and employees’ lives.

Basic education, initially labeled welfare work, began as random, experimental programs following the Civil War. Although some historians attribute their development to the early 1900s, by the turn of the century (1900), they had in fact become fairly commonplace, especially in larger organizations. (See Appendix D.) Although more and more companies continued to adapt welfare programs to their particular workplaces, a lack of consistency occurred across businesses and industries. Companies used the same features with different rationales in the same period and in different time periods. To arrive at exact numbers is extremely because not all employees considered these activities welfare work and other employers offered only one or two features.

Although welfare programs declined after the 1920s, some evidence shows that they have remained, in some form, as an integral part of workplace education. Some features of welfare work, which began as innovative experiments and were originally considered extra or special, came to be standard for most workplaces. Working conditions became accepted as a condition of employment and were no longer considered extraneous or extra. Other activities remained voluntary and were provided by employers in return for, or to influence, positive employee behavior. These activities include recreational and social events; health, dental, and vision benefits, and other features contributing to employee welfare which had not yet been legislated. As the labor movement gained momentum in the 1930s and 1940s, welfare programs became part of the collective bargaining policies of organizations. Management, in many instances, would willingly providing certain benefits to workers in exchange for reduced pressure on the managerial function. Unions consequently became involved in both the content and presentation of these programs (Derber, 1970, pp. 469-470). During the New Deal era of 1930s, when the country was recovering from the Great Depression, certain other features -- working hours and
wages, pension benefits, and provisions for work injuries and unemployment -- became legislated.

Other basic education included educational efforts to provide for the health and safety of employees. Although, accident statistics did not necessarily demonstrate that education reduced accidents, educational efforts continued, both legislated and voluntarily. Other programs such as Americanization programs for the foreign-born took place within discrete time periods and only minimally contributed to the future development of practice.

**Education to Provide Requisite Job Skills and Knowledge**

Two of earliest training methods – on-the-job and apprenticeship – were the basis for the development of this type of training. On-the-job training, which had been a part of apprenticeship training, continued to be used in widely diverse fields. Following World War II, when supervisors were trained to be trainers for the first time, the steps and procedures for facilitating this training became more definitive. But, the nature of the training did not change; generally training was for less skilled employees who could easily be replaced. The training was usually brief, requiring only a few days or weeks for a worker to become proficient.

When workplaces became industrialized, traditional apprenticeship either became nonexistent or was modified. As corporations automated production processes, they needed workers to perform only a single process rather than all-round, highly skilled workers. Initially, business thought that external trades schools could provide this training, but when this method did not prove successful, they turned to their own programs. Employers, especially manufacturing and transportation, subsequently adapted apprenticeship to their needs.

Corporation schools sometimes called apprenticeship schools (a new development in the early 1870s) were exemplary of the effort to improve apprenticeship. They were developed by corporations, initially manufacturing and transportation companies, to ensure they had an adequate supply of appropriately trained employees. The movement, which did not gain impetus until after the turn of the century (1900), trained employees in a variety of skills: clerical workers, selling and advertising personnel, mechanics, and supervisors and managers.

This domain, probably more than others, encouraged alliances with external educational institutions, including continuation programs, public schools, and correspondence study. This area is one where government was involved and labor continued to have influence. Apprenticeship program standards and requirements were legislated at the federal level in the 1930s; and, a strong correlation between apprenticeship programs and labor involvement developed.
Limited General Education for Personal Development

Employer-sponsored education in this domain was minimal during the period from 1865 to 1970, especially from 1865 through the early 1900s when employers’ emphasis was primarily upon the mechanistic, not the humanistic side of the workplace. General education ran counter to employers’ emphasis upon receiving a direct return upon their educational investment. Calculating the return from other educational domains was difficult enough, much less attempting to determine a benefit related to the general enlightenment and cultural development of employees. Employers rarely discussed general education for employees without attempting to correlate it with increased productivity. If employee education did not result in increased productivity, it normally ran counter to business objectives.

Education for Career Advancement and Professional Development Expands

Although business possessed great power in the early period, professional management was only beginning to evolve. Professional education, that providing knowledge and expertise to enable workers to be promoted to advanced positions, received minimal attention prior to World War I. Early business leaders generally looked at formal education with contempt, frequently claiming that it distracted from management effectiveness. Limited internal education for aspiring foreman was usually an extension of apprentice programs, and practical experience was the preferable training for managers.

Both World War I and World War II gave impetus for the training and development of foremen and managers. The abnormal demand for production during World War I served to revolutionize foremanship methods. Business consequently expanded their programs, frequently through meetings and conferences. When the United States became involved in World War II, skilled management was a critical requirement to support the effort; and, both government and industry became involved in training and upgrading supervisors and managers. Increased emphasis upon human relations following the war frequently highlighted the need for educated, flexible managers more able to implement new strategies and philosophies.

CORPORATE EDUCATION -- AN ENDURING INSTITUTION

Following the Civil War, when the American economy changed from an agricultural base to an industrial base, tremendous changes occurred which greatly impacted workplaces. Business employed educational programs as a means to manage these changes. While various parties were interested in and involved to some extent in the movement – the public, state and federal governments, labor, and private institutions, business was the primary agent of influence in the development of workplace education. This educational institution provided American
business with an important management strategy, enabling them great latitude in organizing and managing their industrialized workplaces.

Throughout the history of corporate education, employers persisted in their preference to provide their own internal education programs in four domains. Basic education, although labels and programs changed, continued to be offered to create contented, productive workers. The bulk of employees continued to learn their jobs through informal, on-the-job training. Employers modified traditional apprenticeship removing much of labor’s control over this traditional educational institution; and, they also created their own educational institution, corporation schools, which they adapted to train production workers and managers. General education for personal development was separated from work-related development and most often considered a fringe benefit rather than a truly legitimate focus of training (Marsick, 1987, p. 1). And, education for professional development, of minimal importance in the first fifty years, gained importance as increasingly larger, complex workplaces created the need skill and education far beyond what could be learned through experience.

The programs began as random, experimental interventions for specific workplace problems and groups of employees – disruptive worker behavior, workers lacking fundamental skills, changing skill requirements, and supervisory-level employees not equipped to manage. This practice evolved into a fundamental, on-going management strategy, which was facilitated and delivered by a designated business area.

TRANSITIONING FROM INDUSTRIAL TO POST-INDUSTRIAL ECONOMY

During the late 1800s, when the economy was transformed from agriculture to an industrial base, employers faced unparalleled changes in the management of their business organizations. In the mid 1900s, as the economy transitioned from industrial to post-industrial, employers in the service and knowledge sectors faced dramatically changing businesses and workplaces. American managers not only faced a global economy, but the post-industrial economy is not clearly defined -- whether it is knowledge or service or manufacturing or a combination.

This transition is more difficult to manage because the boundary between manufacturing and service industries is becoming increasingly blurred. Manufacturing firms have almost always performed in-house functions – accounting, market research, engineering – which if performed externally would be counted as service. These service functions are contributing more and more to production costs as automation decreases the number of production workers. In addition, more industries are combining products – hardware, software, and service (Dertouzos, Lester, and Solow, 1989, p. 42).
When the Massachusetts Institute of Technology convened its commission (1986) on the first major issue since World War II, they addressed the decline in United States industrial performance. This commission concluded that their findings in manufacturing applied equally well to non-manufacturing industries. Their findings of recurring patterns of weaknesses in productivity included outdated management strategies (Dertouzoa, Lester, and Solow, 1989, p. 44). Management is faced with re-evaluating management strategies which have proven successful for over a century.

A world economy with growing international competition in both labor and product markets is also challenging American business leaders. Employers have to understand more cultures, to consider additional social responsibilities, to pay more attention to work relationships, and to rethink their business philosophies including their human resource offerings to employees (Kanter, 1991; Spivey and Thomas, 1990).

### Changing Work Conditions

Economic, political, technological events, together with increasing worker discontent and public involvement and a growing international perspective, brought an end to the 25-year period of prosperity following World War II. In the 1970s, not only was there double digit inflation but unemployment rates were the highest since the Great Depression. Thousands of workers lost jobs through plant closings, attributed to high labor costs or low productivity, and plant migrations, as corporations moved in search of cheaper labor, lower taxes, and fewer regulations (Green, 1980, pp. 211-212, 238).

The machinists, who had been a thorn in the side of management since the days of Frederick Taylor's experiments, were at last affected by technological unemployment and shop migration. Their numbers dropped from 535,000 in 1950 to 390,000 in 1970. Machinists in auto and other industries faced the specter of computerized control which threatened to remove all mental work from the shop floor (Green, 1980, p. 221; Noble, 1984, pp. 57-76). Computerized technology enabled business to gain a new level of workplace control. The emerging feedback systems -- controls that were computer-linked, minicomputer controlled, or based on microprocessor technology -- further enabled management to follow production through its various stages, controlling the flow of work. When employees retaliated in the form of insubordination and sabotage, employers responded by introducing further automation to trouble spots on the assembly line, which in return increased the resistance of workers (Braverman, 1974, p. 197; Edwards, 1979, pp. 120-125).

Auto workers had been at war with the assembly line and the speedup since Ford built the first mass-production plants before World War I, but in the seventies the public began to discover the alienation. In Studs Terkel's 1972 book, *Working*, workers expressed their discontent and alienation. In 1973 a Special Task Force of the Department of Health, Education and Welfare published *Work in*
America concluded that “significant numbers of American workers were dissatisfied with their working lives” (Reported in Green, 1980, p. 221). Dissatisfaction was attributed to various causes, some having to do with the age of the workers and their higher levels of education, and others to the changing nature of work itself, that industry had pushed technology too far by removing the last remnants of skill from jobs (Braverman, 1974, p. 350).

**From Skill to Knowledge**

As the twentieth century comes to a close, the computer has become a defining force in business. There is not agreement when a ‘computer device’ was first constructed, the 1930s or 1940s, but by the 1950s and 1960s big institutions and businesses used computers to manage their processes and businesses. Then in 1971, the microprocessor, a computer on a chip, was invented which made possible the development of the personal computer. What had once filled a room had been shrunk to the size of a postage stamp. In the 1990s the next big step took place -- the move to computer communications where millions of computers and their users could be connected worldwide (Levy, Winter 1997-1998, pp. 28-30).

Businesses in the knowledge sector could no longer control employees through technology. Increased speed of change and greater differentiation in skills and abilities were needed for knowledge intensive job applications (Eurich, 1985, pp.134, 185). In modern technology, knowledge, not skill, has become the critical factor; and, employees with tools, training, and initiative, can possess this knowledge. Contemporary technical-oriented employees move from business to business, as journeymen did in the mid 1800s, both bringing new ideas and skills and learning more in the process. The concept of technological convergence has reappeared.

Throughout history, employees having leverage in the form of knowledge or tools have not been as susceptible to management control or manipulation. These instances occur when specific employees or groups of employees possess particular knowledge and experience which employers cannot obtain elsewhere and which are considered critical to the successful operation of their workplaces. The skilled machinists in the early Lowell mills were not subject to the same controls as the unskilled operatives.

“The future belongs to the knowledge workers. Technology has given them the tools to build a world in constant transformation” (How We Work, Winter, 1997-1998, p. 17).

**New Business Challenges**

The transition from the industrial to the post-industrial or knowledge economy is creating dramatic changes in workplaces and employees’ jobs. As in the decades following the Civil War, managers are challenged to find new management strategies and solutions. Employers are re-evaluating existing strategies – hierarchical bureaucracies; system-based management; traditional
personnel policies and procedures; and, an integral part of their strategies, corporate education. Business is re-examining their organizations, which are based on autocratic control of employees whose jobs have been reduced to repetitive tasks limiting their capabilities.

The traditional corporation is undergoing dramatic changes. The organizations designed in the late 1800s and early 1900s for industrialized processes are no longer effective. For some twenty years, since the 1970s, managers of large American corporations have been engaged in an effort to improve the performance of their businesses. Pressured externally by international competition and ever more demanding customers and internally by employees who possess the knowledge critical to them, companies have been forced to re-assess the strategies which they had developed to manage traditional business organizations (Hammer, 1996, p. 3).

The old ‘command and control’ strategies are in need of revision. A shift is occurring from external control of employees and events to internal control, the empowerment of employees. Giving up control means replacing authoritarian, autocratic management approaches with more participatory approaches in which power is shared. The concept of working as an interdependent team has emerged as an effective way of operating (Pierce, 1987).

Contemporaries contend that the old ways of doing business -- companies built around the division of labor -- simply don’t work anymore. To succeed, or even to survive, in today’s global economy, companies must refocus and reorganize. One contemporary solution (1993) is to reorganizing around processes -- the end to end sequence of tasks that create customer value. This change marks the end of the Industrial Revolution and the organizations designed for it. It means the end of narrow jobs, rigid hierarchies, supervisory management, and feudal cultures. It ushers in a world of professionals and coaches, process owners and results-based pay, boundaryless organizations and an institutionalization of the capacity for change (Hammer, 1996, p. 3; Hammer and Champy, 1993).

CONTEMPORARY CORPORATE EDUCATION
HUMAN RESOURCE DEVELOPMENT

Contemporary industry continues to espouse education as an absolute necessity in the world of work (Eurich, 1985, p. 22). Business turns to education to maintain their unilateral control over virtually all aspects of their organizations. It is an on-going means to direct employees’ attitudes and behavior and to provide requisite skills and knowledge. It also continues to possess other important benefits -- improving public relations and discouraging unionization (Eurich, 1985, p. 13).

Although labels and programs have changed, employer-provided education continues to cover the four domains of corporate education examined during the industrial period. Contemporary employers continue to provide basic education to employees who do not have the
basics essential for acquiring more advanced technical skills. Many of these are disadvantaged employees who are outside the economic mainstream, not unlike the early farm migrants and recent immigrants whose deficiency inhibited their entry into productive, well-paying work. As in those decades following the Civil War, business is willing to provide education in this domain because the entry-level labor pool is relatively sparse. It is shrinking and will continue to do so through the year 2000. The demand for labor is creating opportunities for those who are less skilled (Carnevale, Gainer, and Meltzer, 1990). The increasingly rapid rate of knowledge expansion has caused both job obsolescence and job creation and resulted in new needs for employee training and retraining (Pazyt, 1990).

In addition to the kinds of education provided, there are other conditions and issues related to employer-provided education in the contemporary period, which are not unlike those in the late 1800s and early 1900s. Contemporary HRD departments continue to encounter the same problems that they have struggled with for years – justifying the value of the practice, corporate commitment to programs, and providing education which they believe should be delivered by the public schools.

Practitioners continue to have difficulty pointing to ‘hard measures’ of the effectiveness of employer-provided education. As in the early years, difficulties remain coming up with other than very rough estimates in terms of costs, programs, and numbers of employees who are students (Alden, p. vii, pp. 101-115; Cascio; Eurich, 1985, p. 5).

Attendees at the 1904 Welfare Conference sponsored by the National Civic Federation discussed that their educational programs, to be successful, had to have the support of the top management or the owner. Contemporaries also describe this condition contending that the most important factor determining the extent and success of a corporation's training program is the position of the person responsible for it and the commitment of the corporation's executives (Eurich, 1985, p. 51).

Businesses stated their preference in the early 1900s for doing their own training while criticizing the public schools for not providing employees with adequate skills. Employers contended in the early 1900s that it was not their job to complete employees’ basic education, and they continue to do so. Business still believes that they spend too much time teaching the three R's, reading, writing, and arithmetic (Eurich, 1985, p. 124). And, their discussions about the need for a more effective alliance between business and traditional education continue (Eurich, 1985, p. 3).

**CORPORATE EDUCATION FOR THE FUTURE**

The nature of the workplace and workforce is undergoing volatile change in the post-industrial era. Workers are requiring increasingly higher levels of both preparatory education and
retraining for new jobs or to keep up with the knowledge explosion. The learning involved in
this environment cannot be reduced to an individual acquiring another set of technical skills.
“Knowledge workers cannot entertain notions of education as periodic treatments. Instead,
learning is becoming an enterprise itself, the central unifying focus of life’s projects” (Marsick,
1987, pp. 4-5).

A growing awareness and recognition exists in this country of the value of the whole human
being as an employee and the need to provide education and development for this whole human being
(Senge, 1990; Weisbord, 1989). Former workplace education, with its mechanistic perspective, needs
to be replaced with a humanistic orientation to support current workplaces such as that of Knowles’
andragogy -- adult learning advocating a self-directed, collaborative approach (Knowles, 1984).

New paradigms are emerging for learning in the workplaces in which employees do not learn
in an assembly-line manner, emphasizing compartmentalization of tasks, jobs, and relationships.
Rather, learning calls for continual reflection on one’s actions and at times for critical reflection.
Much of this learning takes place informally, through daily professional interactions and self-directing
learning (Mezirow, 1987).

ROLE AND INFLUENCE OF PRACTITIONERS

Practitioners have been in a difficult role throughout their history. Beginning in the late
1800s, when the new practitioners assumed hiring and training responsibilities, foremen viewed
them as interlopers and outsiders. Production staff resented the new practitioners. Only those
early welfare workers, who could positively influence foremen and supervisors as to the positive
objectives of welfare work, had an enduring role in an organization. The more outspoken
practitioners (Harvey, Bruere, Beeks) seldom lasted for more than a few years. At the same
time, whether or not practitioners were aware of the purpose of their new role, employees
frequently viewed them with suspicion.

Where the training function should be located in an organization remains inconclusive.
Unlike other business functions, which were established in corporations by 1914 (Drucker),
employee development practitioners been unable to establish a definitive position within business
organizations. The function, when it exists, not only fluctuates between line and staff operations
but can be a part of the personnel or human resource area or can stand alone. Programs’ lack of
definition in the past may have been conscious or unconscious on the part of management.
When the position and status of the function was ambiguous, management was relieved from
attributing a definitive purpose to the function (Milton, 1970).

Responsibilities within the function continue to be varied. Like the educational programs
which practitioners facilitate, their responsibilities have been extremely diverse, lacking definition
and standardization. Even contemporary practitioners, after one hundred years, cannot come to agreement upon what responsibilities are or should be.

Nadler labeled and defined the field in the early 1970s. Nadler (1980) placed Human Resource Development (HRD) within the Human Resource Management (HRM) function (p. 2). He defined HRD as training, which focuses on the employee’s current job; education, which prepares the employee to perform a specific job or group of jobs in the organization in the future; and, development, which concentrates on the organization. HRD is concerned with providing learning experiences to employees so that they may be ready to move in new organizational directions (Nadler, 1980, pp. 22-26). This definition is not unlike how practitioners and business leaders (NACS) defined the field in the early 1900s. The Committee on Special Training Schools reporting at the 1916 National Association of Corporation Schools Convention divided training activities into three distinct classes -- training employees for present, specific work; helping employees to fit themselves for advancement; and, teaching a business as a whole (NACS, 1916, pp. 81-84).

It is questionable whether business and practitioners are in agreement about practitioners’ roles. Practitioners enter the field, many times, with the conscious or unconscious desire of helping people or of providing training and education for employee development (Jacobson). Both early and contemporary practitioners have frequently had socially-oriented backgrounds, coming to the workplace to make a difference’ in peoples lives. Management’s objectives, whether spoken of hidden, may not be congruent with those of practitioners. Management generally supports employee development as a management strategy, which can contribute to organizational productivity.

Through their actions, practitioners reflect a lack of knowledge of the history of their profession. They suggest activities and labels as innovative when they have been present in some form for years. By examining their past and what contributed to their present condition, practitioners could gain a better understanding and hopefully work to built upon and improve their position and effectiveness.

FOR FURTHER RESEARCH

The history of business-sponsored education covers an exceptionally broad area – multiple disciplines, diverse participants, and continually changing workplace conditions. This synthesis brings together these segments, many for the first time. It explores areas and touches upon other topics which deserve further research. These include external educational institutions – public schools, continuation schools and evening schools, private correspondence and university extension study – and their relation with corporate educational programs. Another subject deserving exploration is the fascinating history of practitioners employed by business to deliver and administer
educational programs – practitioners’ backgrounds, personal agendas, professional development and influence. As time passes enabling a more accurate historical perspective, contemporary changes in corporate education brought about by the knowledge-based economy, can be more closely examined and analyzed in relation to the history of the field.