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ABSTRACT

This document reports the proceedings of a 50-person resource group meeting that included leaders from business and industry, government, unions, universities, the media, foundations, and schools. The group explored the implications of a Carnegie Foundation-sponsored study reported in "Corporate Classrooms: The Learning Business," prepared by Dr. Nell Eurich of the Academy for Educational Development. The report is organized in five parts. Part I summarizes the proceedings, while a summary of highlights and implications from the report and reactions to it are presented in Part II. Part III is a summary of the discussion of three groups that probed issues in the following areas: human capital development in the post-industrial era, linkages between corporations and universities, and new approaches to education in the workplace. Part IV is an interpretive summary of six key themes raised throughout the day: (1) the rapidly growing phenomenon of adult learning in the workplace; (2) the way in which this growth has been driven by change, a need for adaptability and flexibility, and a concern for human capital development; (3) the lead taken by corporations in innovative approaches to education; (4) the keen interest of corporations in the best way to facilitate adult learning; (5) a need for functional linkages between corporations and universities; and (6) policy issues regarding the rationalization of linkages, use of public funds, and a proposal for a Strategic Council. The final part of the document summarizes suggestions made during the conference of ways in which Teachers College could respond to some of the needs that were identified. (KC)

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Adult Learning in the Workplace

A Report of a Resource Group Meeting

Held at Teachers College, Columbia University
On 7 June 1985

Organized by:

Center for Adult Education, Teachers College

Co-sponsored by:

Office of Continuing Education, Teachers College
Center for Education and the American Economy,
Teachers College
Academy for Educational Development, New York

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ADULT LEARNING IN THE WORKPLACE

Part I: The Proceedings

In the summer of 1985, Professor Victoria J. Marsick, representing the Center for Adult Education, Teachers College, Columbia University, organized a Resource Group on Education in the Workplace. The Resource Group included opinion leaders from business and industry, government, unions, universities, the media, foundations, and schools. On June 7th she convened a meeting of approximately 50 members of the Resource Group at Teachers College to explore the implications of a Carnegie Foundation-sponsored study reported in Corporate Classrooms: The Learning Business, prepared by Dr. Nell Eurich of the Academy for Educational Development.

What follows is a report of the conference, which was organized by the Center for Adult Education, Teachers College, Columbia University. The Center for Education and the American Economy and the Office of Continuing Education --both at Teachers College -- and the Academy for Educational Development, New York, co-sponsored the activity. P. Michael Timpane, President of Teachers College, chaired the proceedings. An agenda and list of participants is attached.

Dr. Eurich opened the conference with a summary of highlights and implications from the report. A panel followed to provide reactions from an economic, policy, adult education and corporate perspective. Highlights from these presentations are included Part II. The morning concluded with discussion among presenters and participants of the issues raised.

Panelists representing these perspectives were economics -- Dr. Thomas Bailey, Associate Research Scholar, Conservation of Human Resources; policy -- Dr. Lewis Perelman, President, Strategic Performance

Services; adult education -- Dr. David Harman, Visiting Professor, Teachers College; and the corporate world -- Rex Adams, Vice President, Employee Relations, Mobil Oil Corporation.

During lunch, three groups probed issues in greater depth in the following areas: human capital development in the post-industrial era, linkages between corporations and universities, and new approaches to education in the workplace. Part III is a summary of the discussion of topics considered by each group.

Part IV is an interpretive summary of key themes raised throughout the day. It is not a verbatim account, but synthesizes emerging ideas under the following six major headings:

- the rapidly growing phenomenon of adult learning in the workplace,
- the way in which this growth has been driven by change, a need for adaptability and flexibility, and a concern for human capital development,
- the lead taken by corporations in innovative approaches to education,
- the keen interest of corporations in the best way to facilitate adult learning,
- a need for functional linkages between corporations and universities, and
- policy issues regarding the rationalization of linkages, use of public funds, and a proposal for a Strategic Council.

The day concluded with a panel in which chairpersons of luncheon groups presented highlights from their discussions. Resource group members shared reactions to these reports, and suggested ways in which Teachers College could respond to some of the needs identified. Part IV summarizes these suggestions.

Part II: Highlights of the Presentations

Welcome and overview

Dr. Marsick opened the conference on behalf of the Center for Adult Education, pointing out that since the phenomenon of education in the workplace was largely a matter of adult education, the Center saw in Corporate Classrooms an opportunity to explore trends and issues being highlighted in a number of other reports and publications.

Adult education was historically developed to assist "marginal" populations in joining the mainstream. Education in the workplace, while also providing remedial education to some employees, has been shifting the focus of much of adult education to mainstream American workers who are trying to keep up with the knowledge explosion and job obsolescence. Thus, this resource group meeting would explore priority areas for further research, dissemination, and action with the three groups involved in this phenomenon -- the corporate, university and public sectors.

P. Michael Timpane, President of Teachers College, officially welcomed Dr. Eurich, the panelists, and the participants. Various groups in Teachers College, including the Center for Education and the American Economy, have been examining the impact of change on education for several years. Among other things, these groups have looked at trends toward different delivery systems, exemplified strikingly in Corporate Classrooms. The issues are not clear if looked at solely from the perspective of any one group represented at this conference. The conference affords an opportunity to bring these perspectives together and look at the interface among sectors and implications for public policy.

Corporate Classrooms: The Learning Business

Dr. Eurich opened her summary of highlights and implications of the report with a few words on behalf of Dr. Ernest Boyer, President of The Carnegie Foundation for the Advancement of Teaching, who could not participate as planned due to illness. She then described six key themes: the importance of corporate education for productivity, the fact that corporate classrooms are a major part of adult education, the emergence of corporate colleges, implications of corporate classrooms for the educational establishment, implications of educational technology, and a proposal for a Strategic Council for Educational Development.

First, corporate education and training are essential to the nation's economic productivity and competitive position in the world. However, this report is limited by the fact that it focuses primarily on the largest and best companies. Smaller companies, which constitute a larger percentage of the market, often do not have the resources to develop extended in-house training programs, and are dependent on community colleges, vendors, and packaged training materials -- if they provide any training at all.

The rapidly changing nature of work today requires continual training and retraining to prevent displacement of workers, as well as to prepare employees for future roles. Education and training assist in adjusting to new directions and technology, enhancing productivity, preparing for increasingly complex tasks, and enriching both individual employees and the company.

Second, education for work is an important part of adult education. Corporate education is sometimes called a "shadow" or "second" system, but in quantity and quality, neither term is quite accurate. The major reason that people attend adult education classes outside of the corporation, whether

or not they are reimbursed by their company, is for their own professional and career advancement. In addition, business and industry is reported as the third largest provider of adult instruction, preceded only by four-year colleges and universities, and by community colleges and technical institutes.

Third, corporations and industry-wide associations are increasingly developing their own "colleges" and offering their own academic degrees, partially because they could not develop relationships with existing educational institutions that provided the kind of practical, results-oriented training they wanted. Another need that spurred this development was to set professional standards for new fields, such as with the Wang Institute's development of a program to meet the industry's need in software engineering.

Corporate colleges sometimes serve employees from one corporation only; others serve an industry-wide interest and concern; others have been developed by professional, research or consulting organizations. Many are independent, non-profit institutions.

Most corporate colleges now have open admissions, and do not serve exclusively the industry or organization originally sponsoring them. Technically and professionally oriented, they play a larger role in educating people for the work force than originally envisioned.

Fourth, the nature of education provided by the corporations is often vastly different than that provided by the educational establishment. It is, for the most part, goal-oriented, content intensive, practical, characterized by efficiency and evaluated by performance. Active learning methods are used, along with the latest technology, to involve workers in learning as a team and as a group of peers. It also demands

that coursework be transportable -- to offices located around the world.

Educational institutions, on the other hand, are characterized by different values and styles. Courses cannot be scheduled nor taught as flexibly. Rewards are provided for publishing and for theoretical contributions more than for teaching applications. The emphasis is on individual achievement, rather than team accomplishment.

The missions of both corporate and traditional educational systems are different, but blurring. Schools are broadening their curricula to include corporate concerns and to focus on career development and specific skills training. Each system can offer much to the other system, if effective linkages can be developed and collaboration enhanced along specific lines, such as that being now undertaken in some partnerships between business and universities or community colleges.

Fifth, the implications of corporate classrooms for educational technology are unlimited. New types of bridges are leading to experimental linkages and collaboration. Geography is no longer a barrier, due to new delivery systems such as NTV satellite courses or Control Data Corporation's Plato computer-based instruction. Entrepreneurs are providing computer software of all types.

Information is a resource and education a product by which it is delivered. A need emerges for monitoring the quality of these products and ensuring that the best educational methods are used in this courseware. A comprehensive analysis is needed of the contributions and programs of the various providers.

Finally, Dr. Eurich proposed the establishment of a Strategic Council for Educational Development to

provide continuing leadership and vision to guide national policy. Such a Council might be a small group with representatives from all three sectors that would consider national needs and propose alternatives to meeting them. Its purpose would be threefold. First, it would assess the nation's emerging needs for training and retraining. Second, it would identify and review educational resources with a view to how different sectors relate to one another, and how they fit with emerging technologies and delivery systems. Third, it would recommend policies and programs, not to establish a national manpower policy, but to match resources and suggest more efficient and effective ways of satisfying lifelong education needs of adults.

An Economic Perspective

Dr. Thomas Bailey supplemented the contribution made by Dr. Eurich in her description of specific corporate programs with some thoughts on definitions and a macro-perspective of education and training across different corporations and sectors. More complete and accurate information is needed on the size of this investment, and the way in which it is distributed.

First, corporations must decide whether or not they should train workers or fill their needs through other alternatives. Should they decide to train, they must make decisions as to whether those needs be met in-house, through vendors, or through educational institutions in the public sector.

Second, there is some confusion as to why training takes place. It is true that corporations train for specific competencies and skills. But training also serves a vast array of different purposes, such as the provision of fringe benefits, as a supplement to wages, as a means of employee networking, or as a tool for building a corporate culture.

Third, there is an important distinction to be made between firm-specific training, useful solely to the present employer, and general training which will equip a person to move among corporations and sectors. Corporations generally do not like to invest in resources they will lose. This complicates the issue of who should provide what type of training.

Specific training is often provided in-house or through vendors. More general training might be met through corporations or educational institutions. The investment, however, is limited since training is completely unliquid. Workers cannot sell it back to the company when they leave. One solution to this might be to impose heavy costs on people for leaving the organization, or to utilize a strategy of developing lifelong careers for employees. An alternative is to not make the investment in training, but to buy new knowledge and skills through hiring new people.

Policy Perspective

Dr. Lewis Perelman pointed out that the real issue is not the need for more education or training, but for more learning which enables people to work more productively in a post-industrial economy. The major significance of Eurich's report is that it makes viable alternatives to traditional academic institutions visible. Perelman saw its major weakness in Ernest Boyer's introductory argument that the innovative developments in employer-based training and education are a "challenge to the nation's schools." Perelman sees the oversupply of traditional academic institutions and programs as a result of broad demographic, economic and technological trends. He strongly felt that policy should not assist the schools, but should focus on a comprehensive learning policy.

The essential problem is that we are in the midst of a post-industrial revolution that is radically restructuring the nature of our economy and creating a human capital crisis of four dimensions: functions, fitness, flexibility and frustration.

First, some 20 to 25 percent of American adults are functionally illiterate. Another 20 to 30 percent are only marginally literate. Second, increasing proportions have knowledge and skills that no longer fit the technological and other requirements of a rapidly changing economy. Third, we do not have a systematic process in our economy to make the workforce flexible so that people can adapt their skills to these changing requirements. Finally, workers are growing increasingly frustrated due to disappointments with displacement, occupational status, quality of work, advancement and mobility.

Defusing this human capital crisis requires more than simply tinkering with traditional training and education programs. What is needed, and what is happening, is nothing less than a basic paradigm shift of the role of learning in economic development. Learning must now be viewed as a strategically critical industry in an economy where information is the cardinal commodity and human capital is the most important factor of production.

The implications of this paradigm shift are that instead of being concerned with institutional providers, the focus must be on the needs of the learning consumer. This means that the real issue is how to provide better results, not a need to invest more resources. Second, instead of pumping out more education, the focus should be on greater productivity in the learning process. Traditional classroom methods will have about as much place in the 21st century's learning enterprise as the horse and buggy have in today's transportation system.

The great value of Corporate Classrooms is that it shows that there are places within the overall matrix of education and training where technological innovation and productivity are valued and growing. However, the term "corporate" is misleading, since a number of sectors providing large amounts of training are left out, such as the Department of Defense. The term "classrooms" is also misleading since education is often not classroom-based.

The challenge to the nation's schools is not as critical a policy issues as is that the learning enterprise meet the human capital needs of a changing economy. Dr. Perelman believes that traditional educational institutions cannot best meet these needs. A major effort is needed to grapple with these issues, to develop a comprehensive learning -- rather than education development -- policy. While national in scope, such an effort must be focused at the state level, where such policy must be developed.

Dr. Perelman concluded by expressing discomfort with the call for a strategic council, suggesting instead a working group of individual analysts and researchers. Finally, he agreed with the need for better information on the needs and demands for adult learning, the technologies available to meet those demands, and the markets for them.

An Adult Education Perspective

Dr. Harman pointed out that adult education as a field of practice and research has existed for a long time on the periphery of academia. Dr. Eurich's report draws attention to an emerging, large-scale system of adult education in which corporations have taken a leading

role. It is not a passing phenomenon, but is institutionalized in the form of faculty, curricula and facilities.

All corporations expect their employees to participate in education and training, which alters a fundamental concept i.e., that schools were considered preparation for careers. In part, this is an expression of dissatisfaction with the results of formal schooling. Beyond that, it is an expression of the continuing need for education to perform effectively in daily functions.

This raises the question of whether schools should appropriately achieve all that they have set out to. For example, is literacy best learned in schools, or in the context of the workplace where these skills will be used?

By definition, all students in corporations are adults and therefore adult learners. A wide body of theory is already available through the field of adult education which can be rediscovered and applied to corporate classrooms. Corporate education could provide a laboratory in which to explore further dimensions of the adult learner to enhance this knowledge and its translation into improved curricula and technology.

A critical issue is evaluation. We do not know what it is that creates more productive, effective, efficient employees. Thus, we do not know what to evaluate when we look at the impact of corporate education. Evaluation is usually done at the end of specific courses, but it is much more difficult to evaluate performance on the job, or as a member of a team. How can training be isolated from other inputs and experiences and events that occur while on the job in determining its effectiveness? Corporations have not engaged in that kind of assessment. In a sense, they operate on a measure of faith that it is effective.

In summation, we should begin to treat corporate classrooms as a permanent fixture in the overall map of education. They have not developed because schools are not doing what they should. They have developed because schools are doing what they are doing, and perhaps cannot do any more.

Corporate Perspective

Rex Adams pointed out that corporations spend enormous sums of money on education. This is part of the problem of measuring the cost of corporate education, since people are paid to work, and are not working when they are being trained. He provided examples of why corporations do provide this large amount of training, and some criteria that drive corporate decisions about who to train for what and how.

First, corporations are interested in controlling and prescribing behavior in operations. They don't know what kind of education is being provided when they farm out a key group of people to external providers of education. They do know what happens when they control and prescribe the curriculum, and tell their trainers what they want their people to understand and how they want them to behave. Corporations need to set minimum safety standards, communicate how they want fellow employees and subordinates to be treated in the company, and prescribe and control behavior in operations.

One must understand the reality behind investment in human resources. People cannot be thrown away when they are not useful. Corporations consider human resources a competitive and strategic resource, to whom they have obligations. This human resource base must

be kept as utilizable and as flexible as possible. This means continual training and retraining to meet new changes and directions, to introduce new technologies, and to prepare the organization for changes.

There are several reasons why a corporation might want to run its own training program. First they might find that academia is too clumsy to deal with such needs as condensed time frames. Second, corporations can use training to reinforce common values and build a consensus on corporate strategic decisions in an environment of collegiality and debate.

In addition, a corporation like Mobil does respond to people's needs for continuing self-development. Mobil pays for courses they wish to take, provides self-study materials free of cost, and responds to and supports employees who want to improve themselves.

Corporations would welcome an opportunity to externalize some of the costs now absorbed internally. Some corporations with their own educational institutions find them operating near bankruptcy. There are economic limitations on the amount of resources that corporations can and should be devoting to education when there is so much underutilized capacity out there in traditional educational forms. There is an interest in finding a way to bridge the gap between educational providers, despite difficulties in relating to them, and corporations which spend money, time and management attention in trying to organize this education for themselves, all of which are in short supply.

Part IV: Summary of Luncheon Discussion Groups

Report of Group Discussing Human Capital Development

-- Prepared by James Glass and Amy Titus

The group, chaired by Steven Hofman of the House Wednesday Group, attempted to address the following set of issues:

- the need to invest in human capital,
- the changing nature of work,
- the changing competitive position of U.S. firms in the national and international economy,
- the impact of changing technology on skill requirements,
- re-education needs of the current work force, and
- financing options: the role of government (federal, state and local), business, labor, and the individual.

The discussion started with a focus on public policy. The issue of the need for re-training is not new, but in recent years, it has fallen between the cracks among policymakers. Now, however, given the issues raised above, this is slowly changing.

The Wednesday Group, which is a research organization of Republican members of Congress, is one of several who have made proposals for legislation to address issues of worker training. Their proposal would:

- provide a 25% tax credit to businesses for their training expenses over a five year average;
- allow IRA money to be used for re-training in case of unemployment, without penalty or taxation to the individual;
- make unemployment insurance available while a person is seeking re-training.

Currently, the tax code does not contain any incentives for corporations to invest in human capital development. Yet other capital investments, such as equipment and facilities, do receive favorable tax treatment.

Other policies have been proposed besides those of the Wednesday Group. For example, Gary Hart has proposed the establishment of what are called Individual Training Accounts. These would be financed by contributions by both employers and employees. The funds would be held as Federal trust funds.

Summarizing these proposals, Steve Hofman said that public policy at the federal level cannot end the chaos that characterizes the nation's many training practices, but instead should attempt to fashion policies that are flexible and make a virtue out of our chaotic environment. In this regard, he was critical of the Gary Hart proposal, which he argued would put aside billions of dollars for re-training workers, despite the fact that we do not know how much re-training will be required in our future economy.

The group agreed that as society is now moving through what one participant termed "the Post-Industrial Age," this raised more questions than proposals for solutions, including the following:

1. What are the real needs for training?
2. Should we be spending more money or re-allocating existing funds?
3. How does our culture work? Reference, for example, Studs Terkel's findings that many workers feel frustrated.
4. What are our economic and social priorities?
5. How do we address the mismatch between learning and actual work? For example, teachers working on teams are more productive, yet they are trained to work alone.

6. How do you increase productivity, particularly in education? Increase competition? Increase technology?

The group agreed that these issues need more public exposure. The media, for example, should become more involved in a dialogue on human capital.

Finally, Rex Adams pointed out that four categories of worker needs must be considered simultaneously: those already working, who need to learn how to be more competitive in the market; those who don't work, who need re-training; those who have never worked; and those who are preparing for work. Human capital development must be concerned with all four categories in order to maximize national productivity.

Report of Group Discussing
New Approaches to Education in the Workplace
-- Prepared by Lynne Lummel Racz

Chairperson Jack Mezirow suggested the need to identify key issues pertaining to new developments affecting education in the workplace. He presented the following three concerns for discussion:

- Whether or not there is a need for assessing the quality of vendor products in order to assist consumers in making decisions about the quality of products they purchase;
- Steps that might be taken to facilitate communication between business and industry and higher education;
- Whether or not training in business and industry should be subject to public assessment and criticism.

There was considerable discussion regarding the need to develop symbiotic ties between business and industry and higher education for the purpose of continuing inquiry into how adults learn in the workplace. Questions arising from the discussion that could guide future research include the following:

- Is there a correlation between job satisfaction and learning?
- How is learning distinct from education in the workplace, and what are the problems being experienced with this learning?
- How can work be designed as an opportunity for learning?

- What typologies can be developed to differentiate kinds of learning in the workplace, e.g., formal education programs versus informal learning such as mentoring?
- Can education be carried out equally as well in-house or at an outside institution?
- What is the process of teaching and learning in the workplace?
- How does education affect job performance?
- What can higher education learn from business and industry regarding the efficacy of technology-based training programs? What methods are being used? What assumptions are being made?

Given the need to initiate a dialogue between business and industry and higher education, discussion focused on mechanisms to facilitate the process. David Harman suggested the need to create communication mechanisms at different levels of the corporation interested in education. For example, the Chief Executive Officer, Director of Training, and various instructors all have different perspectives on education and training.

Paul Delker recommended the need to develop research projects to design typologies of different kinds of learning in the workplace for which various principles of evaluation and learning theory could be applied. Ernst Rothkopf suggested that greater percentages of people with professional adult education backgrounds should be integrated into business and industry settings.

Finally, consideration was given to the need to identify mechanisms to serve dissemination or clearinghouse functions for exchanging information on teaching and learning between business and industry and higher education.

Report of Group Discussing
Linkages between Corporations and Universities

-- Prepared by Kathleen MacDonald

Attention was focused initially on five specific questions formulated by chairperson Ernest Lynton to delineate the major areas of collaboration and resistance between academic institutions and business. Summarized, they include the following:

- which components of employee education can best be provided by colleges and universities, or by community colleges;
- whether there are potentially important areas of employee education not currently well covered by any source in which academic institutions could play a role;
- whether there are areas and types of employee instruction in which academic institutions should not "imitate its rivals";
- what the principle deterrents and barriers are to increased cooperation with colleges and universities;
- what categories of cooperation exist now, and hold promise for more cooperation.

A key question discussed was "Can one identify, and if so how, some category of instruction in which it makes sense to have collaboration between corporations and higher education?" Some suggested categories included subject matter, instructional format, clientele, or type and size of company. The "Adopt a School" program

was discussed as one specific model in which mutually beneficial links have been forged between schools and corporations. They sometimes have access as well to training materials made available by larger companies, a form of sharing the group felt should be encouraged.

The group noted that the type and size of corporation determine the level of linkages with education. Small companies often rely on vendor packages or take part in community college programs.

Larger companies have a "MAKE OR BUY" choice in the area of training, a choice made with level of personnel as well as company objectives kept in mind. For example, major academic institutions might be drawn upon for top level personnel, whereas state schools, smaller colleges, or community colleges would be drawn upon for middle level or rank-and-file personnel. This parallels the prestige scale within the academic community.

It was noted that community colleges often serve local companies far better because of geographic proximity, and their ability to respond quickly to needs of local companies. Most of the major innovations in this kind of training and education have come from community colleges, e.g., contract training, continuing education, a focus on technology and learning mastery.

Companies play a brokering role in selecting academic institutions or training in-house in an attempt to insure uniform quality of the educational experience, the faculty, and the learning environment for their personnel within specific time limits.

"Turn around time" was agreed to be one of the largest obstacles to linkages between business and education, primarily because it is difficult for any one person within an academic institution to commit the institution to a course of action within a specific time frame, even if that person were the president.

Companies have thus been forced to provide for their own educational needs through in-house training, vendor programs, drawing on faculty as consultants, or contracting for campus-based education.

Another barrier to effective cooperation is the business community's perception of the academic world as removed from the reality of the day-to-day work world with its unique pressures and long hours. It was noted, however, that academics also "work from 7 to 7, but with us, looking out the window counts!"

The academic institutions, including secondary schools, have their own concerns about linkages with corporations. These include concern about compromising institutional standards, moving beyond institutional missions, and providing valid educational experiences for both faculty and adult learners.

It was suggested that a descriptive study be done of the range of transactions conducted between business and educational institutions. This might help academic institutions develop better linkages based on their unique strengths and help businesses determine which educational providers best answer its different needs. Corporations have learned to select "convenience foods" from vendors as necessary to fill specific, performance-oriented needs while seeking out a longer-term programmatic relationship equivalent to a five-course meal for other needs.

Part IV: Interpretive Summary of Themes

1. Adult learning in the workplace is a widespread, and rapidly growing, phenomenon.

As pointed out in Eurich's study, and reinforced by an analysis of the 1981 Survey of Participation in Adult Education by Carnevale and Goldstein (1983), the number of adults taking courses from outside adult education sources to further their professional knowledge and skills has grown rapidly. So too have the number of courses offered by corporations internally. Adult education thus increasingly serves educated workers, not solely "marginal" adults wishing to enter the mainstream.

Some of this learning takes place formally, through organized training and education both within and outside the corporation. An even more significant amount of learning takes place informally, through on-the-job training, through vast information and communications systems set up within and among industries, through team work on specific assignments, through coaching and informal consultations, and through self-directed learning that often includes the use of computer or video based technology.

Perelman called for a new paradigm for learning in his book, The Learning Enterprise: Adult Learning, Human Capital, and Economic Development (1984), recognizing that learning must be looked on as part of work.

Harris Lenke from Digital Corporation pointed out that the opposite is also true: work is learning. Corporations cannot continue to look primarily at skill

training without considering what he called a "developmental dynamic": the fact that since workers are going to be with an organization for a long time, their learning must be looked at in a long-term framework. And as John Berenyi pointed out, education in some industries -- such as financial institutions and hospitals -- is a matter of immediate survival, given changes in markets and technology. Moreover, it is intricately woven into a pattern of daily work, through research, reports, and supervision.

It is practically impossible to estimate the cost of this education, although the figure used in the report for corporate spending is upwards of \$40 billion. Panelist Thomas Bailey and various participants pointed out how difficult it is to report these costs accurately, since formal training figures are often spread over different operating divisions and seldom include costs of facilities, salaries and fees for both learners and trainers/consultants, vendor fees, transport and lodging, or time off the job. Moreover, corporations often consider learning part of everyday working, and thus inseparable from other costs.

While it may not even be necessary to calculate these costs accurately, as James Baughman pointed out, Eurich agreed with Bailey that it would be useful to know approximately what percentage of the pie this figure represents, and what kinds of learning it is focused on. ASTD is currently conducting a study directed at some of these outcomes.

2. The need for a new look at education in the workplace is spurred by rapid change, a need for flexibility and adaptability, and a concern for human capital development.

First, if anything is certain, it is the fact of change, experienced by many individuals and

organizations as reaching chaotic dimensions. Workers need to be prepared to flexibly meet new challenges: the rapid growth of technology, the changing nature of work, and the changing competitive position of U.S. firms in the national and international economy.

Moreover, corporations weigh seriously the trade-offs between simply hiring new workers and taking a more developmental look at workers in whom they have already invested resources to bring them into the corporate culture. Labor concerns for job security reinforce this viewpoint.

While individual corporations look at these issues internally through human resource development, there is a need for a macro-view of what Carnevale and Goldstein (1983) call "human capital development." Human capital development is concerned with education of the entire workforce, irrespective of movement of individuals within or among sectors and industries, in order to maximize national productivity.

Rex Adams pointed out that four categories of worker needs must be considered simultaneously: those already working, who need to learn how to be more competitive in the market; those who don't work, who need re-training; those who have never worked; and those who are preparing for work. Responses are different to each, yet no group can be excluded from policy planning or discussion.

Moreover, the issue of human capital development -- while focused primarily on the American workforce -- takes on international dimensions since many corporations have offices and staff in other countries, many of whom are not Americans. This calls for a wide range of different kinds of learning: for Americans working in other cultures, as well as for workers of other cultures. Learning is not always confined to direct employees, but may include the families of American and foreign workers.

3. As Eurich points out, corporations have often taken the lead in fostering innovative approaches to education.

Corporations are primarily interested in applications to performance. They have found universities largely unresponsive to their needs for different learning formats and technology: e.g., practical applications, an emphasis on team work instead of individual achievement, condensed time frames, minimal theory, active learning methods instead of lectures, results orientation, peer relationships among instructors and learners, and the use of high technology to deliver instruction to decentralized learning sites.

Corporations have set up large parallel systems of education to meet needs for new technology and for new content and methods that universities have not been able or willing to develop. They are experimenting with teleconferencing and other means to reach employees located all around the world.

To fill the demand for educational materials not being met through universities, a large service and vendor community has sprung up. Corporations pick from a wide range of packaged and customized courses offered by consulting groups, and by various organizations developing educational software that take advantage of a range of audio-visual aids, from the more conventional audio or vide tapes, films, and printed media to the "new kids on the block", i.e., interactive video and computer based technologies.

4. Corporations are keenly interested in the best way to facilitate learning.

Present models for analyzing adult learning in the workplace are inadequate to fully describe the range

and types of learning that take place. Learning must be distinguished from education, since the latter focuses more on the delivery system than on the process. While the number of adults pursuing learning in and for the workplace has increased, the degree to which corporations and universities have communicated about the best way to provide this learning has perhaps decreased.

A dialogue is needed to describe and analyze effective models of formal and informal learning, as well as ways in which the worksite environment can be better used as a resource in learning. For example, much of this learning occurs through informal interaction. Current training efforts are often dominated by a behaviorist, skills-oriented philosophy that is not relevant for all kinds of learning, as for example, the way in which managers creatively frame new problems and explore their solutions.

The wide range of vendor materials available have never been analyzed to determine their effectiveness. Consumers, in fact, would benefit from a clearinghouse that provided evaluative services to help corporations assess the quality of vendor products and their appropriateness for different settings.

Harman's presentation catalyzed a discussion of how difficult it is to evaluate the impact of training. Rex Adams pointed out that "We have many failings -- corporate executives as a type. But we have one enormous advantage. We are not social scientists!" He went on to point out that corporations do evaluate both training and results, but without getting caught up in lengthy discussions of methodology for evaluation. Instead of arguing the methodology of how to measure productivity, businesses put their efforts into action to improve productivity. They prefer doing something to "a task force that wastes a year in arguing about how you would know if you had actually done it."

Ernie Rothkopf of Teachers College, formerly of Bell Labs, pointed out that in addition to the technology of Silicon Valley, there is a "second technology," that of teaching and learning. Educational institutions might actually experience disincentives to more efficient, effective learning -- in that shortening the time to achieve the same results would require further investments to fill the remaining time with other courses. Whereas, he concluded, the corporation has built-in incentives to achieving results as quickly as possible.

Harman pointed out this reinforces the need for evaluation of the methodology being used in learning. Whether or not a course or vendor's package is worthwhile, the employee may learn the material because he or she is expected to apply it immediately to the job. Unlike the educational institution -- whose objective is to graduate people into other environments -- the corporation spends money and provides incentives to acculturate employees to its own environment. Without evaluation, it is difficult to know if other learning methods would be more effective and efficient in reaching this objective.

5. Eurich's report echoes a theme developed earlier by Ernest Lynton (1984): the need to develop functional linkages between corporations and universities to redirect underutilized resources in meeting a variety of yet-unmet demands.

Perelman questioned the need for the university to take a stronger role in education in the workplace as Ernest Boyer argued in the introduction to Eurich's report. Perelman stated that corporations need not defer to universities since Eurich's report demonstrates that corporations are more innovative. He

also pointed out that many demands are being met independently through technology based materials developed by vendors.

However, participants acknowledged that business often does look to universities to take the lead in matters related to the "second technology" of learning. As one working group reported, the Fortune 500 companies know how to play the higher education market beautifully -- when to seek the "convenience foods" of one-shot packaged responses to fill immediate skill needs, and when to cultivate longer-term "five course meals" through programmatic relationships with a hierarchy of educational institutions, from community colleges through the Ivy League. Likewise, a smaller number of perhaps Fortune 50 educational institutions know how to play the market.

However, a vast majority of "have-nots" -- both businesses and educational institutions -- are less willing or able to develop these linkages. Community colleges, with fewer such barriers, have been more innovative in developing "contract training" with business. However, they have done this by setting up separate management institutes that skirt rather than resolve these problems.

From the point of view of corporations, barriers include difficulty in obtaining an institutional commitment, an inability to respond quickly to needs, differences in faculty interests and reward systems, and the need for universities to develop a mission and strategy in seeking out partnerships.

From the point of view of academic institutions, barriers include a concern about compromising institutional standards, shifts in their mission, and differences in opinion about what constitutes a quality educational experience.

6. A variety of policy issues were raised, including the extent to which policy is needed to rationalize linkages and the use of public funds for purposes of human capital development, as well as whether or not a Strategic Council for Educational Development is needed, as called for in Eurich's report.

As Bailey summarized, the conference -- in focusing on education and training in the private sector -- raised many different policy agendas: e.g., potential waste of resources, use of public funds to subsidize corporate education, unemployment, school obsolescence, illiteracy of workers, and needs of small businesses. The question is: which policy objectives should be served?

Time was too limited to provide an answer to that question, nor even consensus that policy should be a major focus of concern. Many pros and cons were raised regarding the idea of a national strategic council, particularly the question of whether or not such a council could be effective in addressing practical concerns. In light of the above discussion on human capital development, however, it seemed important to address potentially overlapping and conflicting issues, and the degree to which federal laws and funds can affect them.

Steven Hofman commented on the timeliness of this meeting, given that testimony was planned for the following week on possible legislation addressing some of these issues. His interest was in policies that would provide maximum flexibility to individuals and small businesses in responding to change in the economy. He made the distinction between needs and demands. Needs are perceived differently by different programs and may be more difficult to identify than demands. Demands are needs made visible, and thus provide a more reliable focus for policy.

Eurich responded that needs are continually being defined by providers, but that demands express wants of consumers. Larger corporations have been better

able to meet demands than smaller businesses and individuals, given the costs involved and limited access to quality learning materials and delivery systems.

Policy might not only provide tax incentives to stimulate increased training, but also to encourage smaller companies to initiate training. Policy might also encourage business to promote little-used tuition refunds by broadening the interpretation of what is useful to the corporation. It should not ignore the self-starters, those people already seeking courses even when they must shoulder the costs. And it could subsidize vendors in their production of quality materials to be used by other businesses. Many training packages developed by corporations could be shared by them without giving away trade secrets.

Part V: Suggestions for Teachers College

In summary, the group suggested a variety of ways in which Teachers College might respond to some of the needs identified.

1. Teachers College could assist in the development of a mechanism for dialogue between businesses and educational institutions to analyze the learning that goes on in the workplace, and suggest better means for carrying it out.
2. Research is needed on the nature of learning in corporate settings, as for example, development of a typology of learning and recommendations for best practice for these different types. The focus should not only be on the technology of learning, but on understanding the human endeavor. Perspectives of people in business differ from those in education as to what constitutes the best learning.
3. Given the fact that America has survived several major economic transitions that also seemed chaotic, the university could provide some perspective on the economic transition being lived through now and the resulting perceived "chaos". It could then explore the new learning paradigms to which the nation should be paying attention.
4. Research is also needed on a typology of relationships between corporations and different educational providers. A manual of best practice might be drawn up for discussion and dissemination in "electronic form" due to its continually changing character.

5. Community college models could be studied for innovative practices, although a number of these models avoid some of the problems in relationships with business while creating other problems. Another set of models that could be studied are "brokerage" agencies such as the New York City Partnership, in which corporations and educational institutions are brought together for networking, communication, and possible matching of needs with resources.

6. Clear institutional leadership is needed in the educational sector to determine a mission and strategy for linkages with corporations.

7. A university could provide a mechanism by which packages, courses, and best practice not specific to a particular industry could be shared. The university could serve a clearinghouse function, as a fair broker in which good materials that are not industry-specific are identified. The university could also broker an arrangement by which different industries would each develop and share their best courses. The key to success would be the degree to which the quality of such products could be trusted.

8. A consumer protection function might be developed to screen products developed by vendors for quality methods and effectiveness.

9. A university could bring people together from the business and public sector side, including policy specialists who need information on key issues, to share information and consider alternatives. The university can play a key role in breaking down general issues into specifics so that time is not wasted. It can thus provide a neutral forum in which issues can be probed that are central to corporate education, such as the reform of business school curricula, experiential learning, the use of technology, and continuing education of employees.

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APPENDIX A

RESOURCE GROUP ON EDUCATION IN THE WORKPLACE

Teachers College, Columbia University
7 June 1985, 9:30 a.m. - 3:00 p.m.

9:00 a.m.	Coffee, tea and danish	
9:30 a.m.	Introduction and overview	Victoria J. Marsick Assistant Professor, Adult Education and Conference Co-ordinator
9:40 a.m.	Welcome	P. Michael Timpane, President, Teachers College and Conference Chairperson
9:50 a.m.	Introduction to report	Ernest L. Boyer, President, The Carnegie Foundation for the Advancement of Teaching
10:00 a.m.	<u>Corporate Classrooms: The Learning Business</u> -- highlights and implications	Nell Eurich, Academy for Educational Development
10:20 a.m.	Reactor panel:	Victoria J. Marsick, Chairperson
	Economic perspective	Thomas Bailey, Conservation of Human Resources, Columbia University
	Policy perspective	Lewis Perelman, Strategic Performance Services
	Adult education perspective	David Harman, Teachers College
	Corporate perspective	Rex Adams, Mobil Oil Co.
10:45 a.m.	Buzz groups: reactions	
11:15 a.m.	General discussion	
Noon	Lunch discussion groups	

1:45 p.m.

Panel and closing

P. Michael Timpane,
Chairperson

Human capital development

Steven Hofman, House
Wednesday Group

New approaches to education
in the workplace

Jack Mezirow, Center for
Adult Education

Linkages between corporations
and universities/community
colleges

Ernest Lynton, The John
W. McCormack Institute,
Univ. of Massachusetts

Nature of preparation schools
should provide

Carol Gibson, National
Urban League

3:00 p.m.

Closing

Organized by: Center for Adult Education, Teachers College
Co-sponsored by: Center for Education and the American Economy,
Teachers College,
Office of Continuing Education, Teachers College, and
The Academy for Educational Development, New York

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