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ABSTRACT

A model is presented for establishing or improving cooperative relationships between higher education and the employment community, as part of the American Council on Education's Higher Education/Comprehensive Employment and Training Act (CETA) Project, which was supported by the Fund for the Improvement of Postsecondary Education. Attention is directed to types of education-employer joint efforts, linkage components, cooperative planning in education-work linkages, and linkage barriers and problems. Joint efforts include cooperative education; work-study programs; apprenticeships; internships; clinical experience; required volunteer work; faculty consulting and part-time work with the private sector; teaching or lecturing at the college by business and industry specialists; student visits to work sites; student initiative projects and competitions; membership and participation in occupational and civic organizations; advisory committees; special events (e.g., career days); involvement of business/industry representatives in college support programs (e.g., career planning); and activities and materials funded by government agencies, foundations, and corporations. Advisory councils enable the business, labor, government, and professional sectors to help colleges and universities plan and implement better cooperative programs and to include those special groups. Commom areas where problems may arise in designing and implementing joint ventures include the following: budget and cost factors, corporate and institutional policies, legal restrictions, long-range planning considerations, and neglect of management or learning principles. The Industry-Labor Education Council in Utica, New York is briefly described, along with eight programs in which colleges contract with business and industry. (SW)

AMERICAN COUNCIL ON EDUCATION

A Monograph of the Higher Education/CETA Project

Joel D. Lapin, Director, Higher Education/CETA Project — July 1982

STRUCTURES AND STRATEGIES FOR LINKING THE HIGHER EDUCATION AND EMPLOYMENT COMMUNITIES

By Donald M. Clark and Richard L. Rinehart

INTRODUCTION

Recently, colleges, universities, and employers—public and private—have expressed the need for developing a cost effective structure and process for cooperative efforts. Institutions of higher education are confronted with a growing scarcity of funds, a need for program accountability, and increased demand to serve new and diverse groups that want a greater volume and mix of occupational training programs and services. Simultaneously, the employment community's need for a highly motivated, disciplined, and skilled work force, especially in high technology industries, suggests that conditions are ripe for greater interaction between these two different worlds.

In the current literature there is increasing commentary on the relationship of industry-education cooperation to human resource and economic development. The National Association for Industry-Education Cooperation, the American Vocational Association, and the National Center for Research in Vocational Education, for example, have presented policy statements and conducted research on this subject. Such discussion of education-work linkages within the framework of human resource development indicates that education is perceived as the primary delivery system to the work place. However, a structure is needed to connect both the educational sector and the employment sector for more productive work. Reindustrialization and the need for increased productivity and economic development stress the importance of industry-education cooperation.

Joint efforts between higher education and employers (businesses, labor organizations, government bodies, and the professions) are described by terminology such as industry-education cooperation, business-education collaboration, linkages, partnerships, alliances, brokering, and voluntarism. Whatever the concept, joint ventures often involve some of the following: cooperative activities that directly or indirectly involve students, such as career planning and work experience; cooperative efforts that do not involve students, such as cooperative curriculum development, in-service teacher education, or faculty internships in industry; membership of employer representatives on higher education boards of trustees, advisory groups, and task forces; and education-related programs and projects sponsored by employers with or without formal higher education input, such as in-plant training programs.

Attention to, and interest in, linkages between higher education and the employment community have increased, but joint efforts between these sectors are generally fragmented, duplicative, uncoordinated, and often undertaken on an ad hoc basis. Thus there is a need to unify the system to produce improved education-work linkages. To bring education and work into a better cooperative phase, it must be recognized that: ". . . there are no fixed parameters as to what constitutes school exit or work entry."[1]

Successful linkage requires an education-work complex in which colleges and universities examine their processes and exit requirements, and the work sector

examines its human resource requirements in light of what is being produced by the educational process. These two almost completely separate organizational systems need to integrate their resources—personnel, facilities, equipment, and materials—in an organized and systematic manner, with knowledgeable leadership, to produce the desired results.

This monograph presents a model for establishing or improving cooperative relationships between higher education and the employment community. The content is organized around four major topic areas:

1. Overview of current education-employer joint efforts;
2. Types of linkage components;
3. Cooperative planning in education-work linkages; and
4. Linkage barriers and problems.

Each topical area is described in sufficient detail to provide an understanding of the mechanism and procedures involved in higher education cooperative relationships with industry.

This monograph will enable educators and employers to facilitate joint efforts within this framework, and achieve the following positive outcomes:

1. **Benefits to industry.** These include a source of potential employees trained to its needs and a cost effective training program for present employees.
2. **Benefits to education.** These are enjoyed by both the institution and the students. Students receive up-to-date training, experiences relating theory and practice, and often, job opportunities. Educational institutions benefit by the improvement and updating of instructional programs. Instructors receive current state-of-the-art information, procedures, practices, and other resource support.[2]

LINKAGE COMPONENTS

Creating an effective local infrastructure for education-work linkages is a long term, incremental process. There are no identifiable realistic short term alternatives to building a base for a comprehensive higher education-industry alliance. Patience, thorough planning and evaluation, intensity of effort, and adequate resources are required on the part of both sectors in developing and implementing relevant work-education programs. If industry-education joint efforts are to be institutionalized by colleges and universities in their human resource development efforts, they will require a structure and process in which goals are clearly defined, beneficiaries accurately targeted, and the employment community actively involved—a challenge in an age of great expectations and instant solutions.

Rather than attempting a complete analysis of each linkage component, the process is briefly identified below with a few comments to relate it to the overall theme of the monograph. This listing may also be helpful as a reminder of the variety of processes that can build and maintain desired linkages.

Cooperative Education, Work-Study, and Apprenticeships

Within this general heading there are various options for scheduling the work and education cycles, and for assigning specific responsibilities for education and productive work, under the prevailing terms of co-op, work-study, and apprenticeship programs. The most common characteristics include: (1) A formal commitment by both the employer and the educational institution, (2) Specific work or positions to be filled by a continuing sequence of students, (3) The expectation of valid productivity on the job, and, (4) Assurance that the learner has the necessary basic competencies needed for the specific work. Other characteristics include compensation to the learner in the amount that is normal for the work; routine supervision; evaluations by the employer; the use of regular personnel policies and actions including hiring, counseling, and employee ratings; and a planned relationship between the experiential learning and the overall academic curriculum.

The term "co-op" usually implies that the work is closely related to the occupational curriculum, while the term "work-study" often means that the experiential learning process may be limited to attitudinal goals and an awareness of the world of work. "Apprenticeship" usually implies a highly structured work place and an extended agreement relating to skilled trades.

Cooperative education and work-study programs are not considered inexpensive strategies. It is essential that the institution provide sufficient staff and budget for job development, placement assistance, and continuing communications among work supervisors, learners, and appropriate faculty members. The effort must extend to the program planning and administration. For example, in the selection of term/semester alternating cycles, versus morning/afternoon or other patterns, consideration must be given to the employer concern that work positions are usually more efficient when continuously filled.

Another important consideration is the geographic extent of the job market needed to assure success. For example, the civil engineering technician co-op program at Rochester Institute of Technology, in Rochester, New York, has found it necessary and possible to set up some co-op stations in Houston, Texas. The larger size and scope of the program service area, together with the differing economic cycles of the Northeast and Southwest areas of the United States, lead to this logical arrangement. Simultaneously, at the same institution, a co-op program in computer science is concentrated in the Rochester area, and their retailing program co-ops are extensively located in New York City and Boca Raton, Florida.

Other Extended Student Experiences at Work

There are many other arrangements which involve extended periods of time, are formally planned, and have specific curricular relations, but do not involve employer-employee status. These are used when it is not possible or desirable to pay the learner as an employee. Correspondingly, these do not involve established employer supervision and evaluation systems that are related to job performance responsibilities. These include internships, clinical experience, required volunteer work, and simulations that include linkages with potential employers.

Internships usually offer an opportunity to practice the functions that will be expected after completing a program. They are carried out under close supervision and are best scheduled near the end of the program of study. In addition to allowing students to compare theory with practice, they have the merit of developing valid references for future employment.

Clinical experiences, most often occurring in the fields of allied health and social services, might be considered in other fields. Again, the student responsibility can be limited to the role of the learner. Adequate planning is required to avoid ambiguities regarding the student role and responsibility. Planning provides the administrative effort required to anticipate and resolve problems before they happen.

Required volunteer work also provides an opportunity for establishing linkages with selected employing agencies and organizations. Computer based simulations and other training methods can also provide linkages by using problems and data from business and industry to seek rational solutions.

Employment of Faculty in the Private Sector

Given the great desirability of having faculty members maintain current knowledge of trends within their own specialization, a well planned, systematic structure can facilitate valuable work experiences. Planned industry-education systems can encourage and increase the extent of such work. In addition to vacation work, consulting experience and part-time or release-time work can be considered. Exchanges between faculty and specialists and temporary inter-sector loaning of personnel may also prove to be mutually beneficial strategies. Faculty members also can be in-service trainers, along with on-line employees and consultants. Cooperative arrangements will benefit the private sector also, through the interaction of personnel and presentation of new, innovative ideas in training and program implementation. Less value is secured when activities are considered to be planned and/or perceived primarily as a fringe benefit.

Teaching by Business and Industry Specialists

This arrangement includes opportunities for teaching courses as an adjunct faculty member, guest lecturing, and team or panel teaching. Considering the extent of such activities, it is relatively rare to find systems that insure the development of effective linkages through these practices. This strategy benefits both the individuals and the organization involved. It requires a well planned process of selecting, assigning, and orienting both the faculty member and the business participants. The benefit of easing overloaded class sections should not blind college administrators to other services and academic benefits that accrue.

Student Visits to Work Sites

A well known instructional strategy, student visits to work sites can include field trips, tours, and shadowing experiences. Faculty who use this strategy know that the benefit/cost ratio is directly related to the amount of prior planning. Inadequate planning usually results in an interesting but uninformative public relations tour. To assure that curricular goals are efficiently served, it is necessary to consider time arrangements, costs, liability, and corporate policies regarding visitors. Curricular goals are not likely to be efficiently served unless the students are previously prepared for the visit. A cooperative structure reduces the duplication of effort and encourages greater use of this strategy.

Student Initiative Projects and Competitions

This process includes major student projects such as those often required in technical programs, inter-college student competitions, applied student research, and instructional simulation games emphasizing student initiative. Projects and competitions have the particular value of facilitating a high degree of motivation for learning and integration of knowledge. These projects can and should involve linkages with the private sector.

Technical and Professional Associations

Membership and participation in occupational and civic organizations is another common linkage process. Participation and activity are encouraged because they lead to improved relationships between representatives of education and of business and industry. In addition to those societies where professionals from both sectors learn from each other, there are those that encourage student memberships. In addition, there are student clubs and chapters of vocational and occupational associations. Employer representatives can be involved in these student chapters as advisors, speakers, liaisons, and resource persons. In all association activities, the private sector representatives become more aware of the special challenges facing educators. The education staff profits with up-to-date information, a better understanding of current technical developments, and reliable, informative contacts. Students learn new technical applications and the importance of being active in appropriate organizations.

Committees and Boards

Advisory committees are another common linkage structure. Whether for an academic program or a larger educational unit, they can be very effective. Among

the factors needed for success are: sensitivity regarding the identification and contracting sequence of persons to be appointed, clarity of expectations regarding the services to be contributed and the term of the appointments, and an accepted concurrence on the real purpose of the committee. Assistance can be provided in the areas of external validation and support, or it may be limited to specific advice. These are not the same, and ambiguity of purpose will diminish advisory committee effectiveness.

Another significant linkage opportunity lies in private sector participation on college and university boards of trustees. College governing boards and coordinating boards are logical linkage mechanisms. Given the ideals for societal good that result from such participation, as well as educational, political, and economic realities, it is appropriate to encourage and assist business, industry, and labor representatives in becoming involved.

The participation of private sector representatives in coordinating industry-education councils is essential. They are a linkage in themselves; and they, in turn, facilitate other linkages.

Special Events

A wide variety of annual, ad hoc, and occasional activities, such as career days or nights and business-education days, allow workers in diverse occupations to talk with students of all ages. Open house events, workshops, seminars, and conferences are other means of arranging discussion of many diverse topics. Often there is a tendency to think only of education-sponsored events. However, the reverse is also desirable. Educators should be invited to participate in activities held by business and industry.

Staff Activity Involvement

Several college support programs, such as career planning, development, placement, and follow-up, are improved by involving business and industry representatives. Their participation strengthens other linkages. As an example, employer representatives may interview and recruit students, but a more valuable linkage results when the representative is encouraged to have lunch with faculty members, and when acceptable placement data relative to both the employer and the educational institution is shared.

Another opportunity occurs in teaching job-seeking skills, resume preparation, interviewing techniques, work values, and work behavior. Career education calls for effective inter-relationships in these areas as well as infusion within the entire curriculum structure.

Creative Extensions

Creativity applied to normal operations leads to extended linkages. An illustration relates to the routine use of audiovisual software provided by industry. A linkage extension results when the faculty member corresponds with the supplying corporation regarding the selection and use of the material in order to secure the most up-to-date information about the material to be used.

Funded Training Projects

The many types of special courses and projects designed to meet specific business-industry training needs constitute a major linkage process, and should be included in this inventory. These projects include programs, activities, and materials funded by government agencies, foundations, and corporations. They involve upgrading and retraining, as well as the educational process of linking individuals with work opportunities.

All of these types of linkages, and assorted combinations of them, have been used, with various degrees of success, by educational institutions and the business community. While the degree of success depends in each case on a distinctly individual combination of factors, one factor stands out in all cases as paramount for success.

COOPERATIVE PLANNING IN EDUCATION-WORK LINKAGES

Planning is the most important function in the successful implementation of joint initiatives in education-work programs. Cooperative planning creates a supportive climate, identifies and analyzes institutional and employer needs, develops goals and objectives to meet those needs, identifies and obtains appropriate resources necessary for program implementation, and results in useful evaluation beneficial to both parties.

Administrative and faculty support, as well as support from representatives of the employment community, is essential in initiating education-work linkages. An advisory council is the appropriate structure for involving these groups. Such an advisory mechanism enables the business, labor, government, and professional sectors to help colleges and universities plan and implement better cooperative programs and to include those for special groups.

The Industry-Education Advisory Council (IEAC) model, developed in the 1960's, was a response to the need for a coordinated approach to education-work linkages. As a structure for linking institutions and non-education agencies and organizations, this type of advisory council:

> mobilizes key resources in a community; develops plans for their efficient allocation; and provides a greater opportunity to achieve program objectives.[3]

Industry-education councils are operational throughout the nation in New York, Ohio, Georgia, Wisconsin, Arizona, California, and other areas. They represent a realistic, cost-effective structure and process for linking the worlds of higher education and work.

An umbrella, community-based advisory council to a college or university can be utilized initially in the planning and design of cooperative education-work programs by assisting in conducting a needs assessment. The needs assessment process enables the employment community, represented in an advisory capacity, to work directly with educators. They jointly identify the need

for various types of administrative and support services which would contribute to the overall program effectiveness. These services might include assisting in: development of new curricula, career and personal guidance, and counseling; curriculum modification for handicapped or disadvantaged students; job search and occupational skills inventory; and job placement.

The advisory group, composed of decision makers from higher education and the sectors of business, labor, government, and the other professions, is then in a position to develop goals and objectives for program implementation and to identify the resources needed to accomplish the stated objectives. A council provides the appropriate organizational context in which the employment community and the educational institutions can reach a consensus on priorities for sharing resources and can coordinate evaluation of cooperative programs, including serving economically disadvantaged participants.

Evaluations of industry-education joint programs should be designed to provide information on which to base decisions concerning program operations and to demonstrate and improve upon the impact of the program. An advisory council can be particularly effective in planning the evaluation of joint efforts and reporting to the community on program progress.

An evaluation system for joint education-work arrangements will provide information answering such questions as: was the industry-education cooperative program worthwhile? How is the program progressing? Is everyone meeting the expectation of the program? Is the particular program really needed or would another do a better job? Did the program accomplish what the planner said it would accomplish?

It is appropriate to involve the employment community in the evaluation process whenever possible. Success requires commitment and commitment demands ownership. Prerequisites to ownership are thorough, first-hand involvement, as well as a self-perceived ability to make a significant contribution.

LINKAGE BARRIERS AND PROBLEMS

If everyone agrees that industry-education linkage inter-relationships are good for all, why don't they happen naturally? Why aren't there more of them? Why aren't they more successful? For many years (perhaps beginning with the discussions of Plato), leisure-work-education relationships have been analyzed. Since the 1950's, our own society has produced many well-stated positions advocating the establishment of linkage mechanisms.

Effective and efficient designs for action must take into account the complex and sometimes hidden phenomena that cause problems. This section reviews some of the barriers, and is included because of the tendencies either to overlook some of them or to assume that they are insurmountable. The listing is brief, since they refer to major fields of theory and extensive research.

It is possible to find some guidelines for solutions. Finding quick solutions, however, is hard work. Indeed, it is extremely important to stress that the process of establishing and maintaining industry-education interrelations requires *hard work*, careful attention to *details*, a sophisticated *understanding* of the two worlds—education and industry—and contagious *enthusiasm*. These are the fundamental elements needed to overcome barriers and reduce or eliminate problems.

Following are some of the common areas where problems may arise in designing and implementing joint ventures.

Budget and Cost Factors

The linkage projects and processes can flounder because of the lack of adequate funding. More often, the problems involve the needs for accurate estimates of direct costs, properly calculated indirect cost charges, and management accounting principles. Many linkage projects involve diverse sets of funding sources, and durations that do not match prescribed fiscal periods. Grantsmanship challenges include an accommodation to funding source schedules that do not match those of the operating budget, as well as the need to directly relate budget items to project goals. An often overlooked problem is the fact that many business-industry budget cycles are quarterly, and six months out of phase with conventional education budget cycles. A sophisticated planner, seeking business support for a project, must know which quarter is most propitious for financial collaboration.

Accounting and auditing rules are absolutely necessary in any organization. The problem and challenge is that of overcoming irrelevant rigidities which may cause problems for the financial affairs office, while insuring proper control and an audit path.

Corporate and Institutional Policies

It is equally necessary for any organization to establish policies and procedures regarding personnel, functions, and activities. Given the characteristics of human diversity and organization theory, the tendency for policies to become more detailed and rigid increases with the size and complexity of the organization. The entrenchment of such rigidities is likely to stifle creative ideas for linkages.

Some corporations require chain-of-command approvals for individual participation in formal external activities that may possibly involve corporate positions. There are educational institutions that require similar approvals for individual contacts with certain corporations in order to protect other fund raising relationships. More common problems arise from policies that relate to hiring and master contracts with unions, or site visits and proprietary technical development information. It is necessary and possible to show that certain policies can be waived on the basis of a greater mutual benefit that results from a linkage project.

Legal Restrictions

A common barrier to some linkage processes arises from legislative acts and judicial interpretations. Minimum wage and related laws, civil rights legislation, liability, and workman's compensation are examples. While the fundamental need for such legislation and insurance factors is generally recognized, a problem sometimes arises regarding perceived rigidity of interpretations. Timidity and incomplete knowledge sometimes permit persons to forget that one basis for our legal system is the recognition that laws, constitutional principles, and precedents may result in letter-of-law conflicts. It is necessary for a planner to understand clearly the legal intent of such legislation, the trend of interpretations, and the levels of higher law, in order to propose certain risks in creating linkages. At the same time, it is wasteful to spend time on a plan that has an inherent legal problem.

One potential barrier can result from fears regarding civil rights requirements. Individuals in either business or in education are sometimes hypersensitive about linkage projects that may embarrass either group. There may be fears about project participation by race, sex, age, or handicapping conditions. Even though both groups share the basic goals of eliminating prejudice and advancing equality of opportunity, there may be a perception that a project will focus attention on some incomplete attainment of such goals, or that the project design could perpetuate harmful stereotyping. Again, careful planning will advance the goal attainment. Linkage processes demonstrate that disabled persons perform functions thought to be impossible, that women are effective in non-traditional fields, that age diversity can increase productivity, and that the project is proof of affirmative action.

Semantic Barriers

It is well known that semantics can defer, side track, or kill a good linkage idea. Many terms—training, communications, accountability, responsibility, and coordination—have different meanings in the worlds of work and education. In addition, there are individuals in both areas whose personal use of certain terms creates confusion in interpretation. Emotional barriers, screens, and translational ambiguities can be identified and overcome by continuous dialogue. Improved linkage planning occurs when feedback and communications are implemented.

Interpersonal Factors

Personality conflicts, status questions, hidden agendas, and individual motivations often cause problems in linkage processes. These are distinctly different from problems and semantic interpretations that can be solved by communication cycles. They are more deeply rooted in psychological and sociological characteristics. Individuals' insecurities, temporary depressions, and phobias can side track ideal linkage efforts. A relatively weak understanding of group dynamics, small group theory, and leadership emergence, and an insensitivity to personal needs, can also hinder linkages. The planner does not have to be a therapist, but must be relatively aware of the potential for such barriers to prevent good linkages.

Long Range Planning Considerations

Timing and sequencing, and coordination with other functions and agencies, can pose other potential problems. Coordinated longer range planning is necessary to effect efficient staffing and budget commitments. Good plans for education and industry goal accomplishments should include accommodations for industry-education alliances. Forecasting is an art. Forecasting calls for extensive communications between business and education, and for sophistication in futurism. Both informal and structured systems are needed to accommodate such planning.

Hidden but Real Barriers

Separate and distinct from the predictable barriers listed, are individualistic conflicts. These include personal loyalty conflicts, perceived "turf" assumptions, and individual stereotyping. These rarely visible barriers result from personal experiences. Since they are not readily visible, they are more difficult to identify. They include differential constituency loyalties, wherein a cooperating link may owe loyalty to an unseen coalition; assumed prerogatives of style or substance; and inaccurate conclusions based upon prior experiences. These perceptions are easily transmitted to other groups without a corresponding explanation of the initiating concern.

The diagnosis and solution of problems resulting from prior antecedents is difficult but is possible through sensitive probing. More permanent and pervasive obstructions call for processes that bypass or remove the individual from the linkage process.

Neglecting Management or Learning Principles

In addition to the basic principles reviewed, good management and experiential learning principles are needed. Inadequate attention to the components of evaluation, communication of expectations, leadership, and the setting of goals and objectives can lead to barriers for linkage processes. Generalizations of experiential learning, opportunities to test hypotheses under controlled situations, and translation into useful principles are essential in any linkage effort. A linkage pla. that gives insufficient attention to management and experiential learning components creates problems and barriers.

GENERAL OBSERVATIONS

This listing of processes and problems may seem elementary to some, while to others the variations and problems may seem insurmountable. Both extremes can be avoided by consciously and continuously striving for the set goals and attending to the described details. It is necessary to provide an environment of positive confidence that results in basic industry-education cooperation.

Much inhouse employee training does not reach its full potential. Business and industry training by employers is a major expenditure and is even more significant in view of human resource development concepts. In the authors' view, the efficiency advantages of college contributions are often neglected because of perceptions of college rigidities. The fact or perception of faculty unwillingness to deal with corporate needs is a deterrent that can usually be overcome. While higher education should always be concerned with the individual and his or her future, these concerns can usually be accommodated in activities that also meet organizational goals for profits and productivity.

The specific terms identifying techniques and roles, mentioned in the paragraphs above, have specific meanings in this context. Complete operational definitions with allied procedural instructions are beyond the scope of this monograph. Sources of detailed information include publications on group behavior and dynamics, conference techniques, and organizational management. It is important to recognize that these terms relate to skills that should be mastered by those in linkage leadership positions. In-service training sessions should be available for those in either the public or private sector that have not learned these concepts.

Because linkages involve groups, effective leadership requires a usable knowledge of different intra-group roles. Task roles include: initiating, informing, clarifying, summarizing, and reality testing. Maintenance roles involve: harmonizing, gate keeping, consensus testing, encouraging, and compromising. These roles are needed to minimize the effect of blocking other personal aspects, such as: aggression, obstinance, domination, diversions, and special interest protection.

MODELS AND SUMMARY

Two particular sources are recommended for reference. These furnish descriptions of models, as well as information on problems and solutions.

Dr. K. Patricia Cross recently described a continuum with four models of cooperation with industry.[4] These range from the common market concept at John Wood Community College, through the state model in South Carolina, and traditional advisory committees, to the prevalent parallel mode, in which higher education and industry each do their job independently. This analysis helps to focus on the problems of control and real cooperation.

The National Alliance for Business (NAB) publishes a continuing series of case studies and examples of joint industry-education efforts.[5] These are available on request from NAB, and can be helpful as models because they provide some details about general problems and solution strategies. These case studies typically involved Comprehensive Employment and Training Act (CETA) funding and private sector initiative. Considering the diminution of CETA funds, and the desirability for increased leadership from higher education, it is important to recognize additional models developed in different urban and rural areas.

Described immediately below are examples of two of the cooperative models.

Examples of an Industry-Education Council

The Industry-Labor Education Council (ILEC) in Utica, New York, serves as a catalyst bringing together educators, decision makers from the business-labor-government-professional community, and others committed to the betterment of the Herkimer-Oneida-Madison Counties' educational opportunities and economic environment. This advisory group, established in 1978 as a nonprofit organization, is governed by a volunteer board of directors.

The Council's mission is to "link learning with earning," by coordinating the employment needs of business and industry in the tri-county area with local educational institutions. In addition, ILEC makes employment forecast information available to educators, students, and other interested individuals; assists in the development of employee training programs to meet job requirements of local employers; and provides career information to school personnel and students.

Curriculum development projects are initiated by ILEC in cooperation with institutions of higher education such as Mohawk Valley Community College and Utica College. The Council also provides recruiting information to area industry personnel, conducts workshops to facilitate industry-university human resource and economic development cooperation in the area, and coordinates the engineering extension program through Utica College.

Other ILEC programs and services include Career Guidance Institutes, in-service career and economic education training programs for educators, a community resource talent bank, employment skills surveys, a career planning guide for students, and a vocational exploration program for low-income youth. The council is supported by membership dues and a variety of corporate and foundation funding sources.

Examples of Contracting With Business and Industry

An excellent example of multiple cooperation is demonstrated by Bay de Noc Community College in the upper peninsula of Michigan. The concept of contracting with business and industry was developed through the leadership of this college. The working arrangements, together with positive evaluations, have been reported in several publications[6] and could well serve as a national model. The program of contracting with business and industry permits students to receive supplementary training in a variety of fields, including banking, commercial sign painting, substance abuse counseling, printing, news writing, radio announcing, photography, key-punching, real estate title research and abstracting, interior decorating, and others. Other firms have now contacted the college offering additional training positions.

This related on-campus classroom instruction makes sense to students. They can see a close relationship between required study and their occupational goals. One result of this cooperative effort is a college degree program in wood harvesting that involves all of the stated principles of industry-education cooperation.

This college has extended liberal arts educational values through contacts between the college, community organizations, and local business and industry. One example provides insight into the cooperative education effort. College students and staff interviewed senior citizens who have first hand knowledge of the area's history and culture. Taped interviews included people of all nationalities and ethnic groups, and representatives from diverse occupational fields, including lumbermen, commercial fishermen, mail carriers, nurses, shoe salesmen, and others involved in law enforcement, aviation, medicine, and areas of general and specific interest. Each recording is transcribed with the assistance of work-study students, and college typing classes provide edited copy.

A similar concept, with different structure and funding, is the nonjoint apprenticeship program at the Community College of Allegheny County in Pittsburgh, Pennsylvania.[7] Working with the Bureau of Apprenticeship and Training, they developed a certificate and degree program involving significant employer responsibility in areas where union—joint apprentice—participation is not feasible.

The following case studies were selected to represent: (1) The varied nature of higher education's involvement with CETA and the private sector, (2) The range and types of institutional involvement, (3) The types of participants and private sector interests served, and (4) The geographic mix of colleges and universities.

Goldey Beacom College
Wilmington, Delaware 19808

Goldey Beacom College of Wilmington, Delaware, a two-year institution, offers CETA-funded co-op programs in stenography and business through its Cooperative Training Program. The programs offer students an excellent opportunity to combine academic course work on campus with practical on-the-job training through employment in business and industry.

Niagara University
Niagara, New York 14109

The Office of Special Programs at Niagara University, Niagara, New York, provided classroom instruction in a Restaurant and Tourism training program. The program, funded under Title VII, was initiated by the restaurant and hotel owners in Niagara Falls. It trained participants to become formal waiters and waitresses as well as knowledgeable tourist guides for the area.

Otero Junior College
LaJunta, Colorado 81050

Otero Junior College of LaJunta, Colorado, has joined with Colorado Balance of State Prime Sponsor and over a dozen businesses, trucking companies, and municipal agencies to provide a diesel truck driving project which trains individuals as commercial truck drivers for transport companies. The success of the program has been largely due to the efforts of private industry. The total contribution by private industry has exceeded $120,000 in equipment lending, resource personnel, and fuel.

Shaw College of Detroit
Detroit, Michigan 48202

Shaw College of Detroit, Michigan, a nonprofit, private four-year institution, provides classroom training with Title VII funds for disadvantaged Detroit residents in a Medical Assisting Program. One noteworthy feature of the program is a ten-week semester of on-the-job training in collaboration with local physicians' offices, hospitals, clinics, and other health facilities.

Snow College
Ephraim, Utah 86427

Snow College, a junior college in Ephraim, Utah, serves six counties in central Utah. It is working with the Manpower Agency of the Six County Commissioners' Organization to identify CETA students and match them with employers who are interested in working with the college in training youth. In recruitment, contacts were made with civic associations, the CETA prime sponsors, the manpower office, and the local job services offices. Several hundred job positions were identified, and 112 placements have been made. The evaluation studies will include documentation of the overall change in the communities through job development.

Utah Technical College at Salt Lake
Salt Lake City, Utah 84107

Utah Technical College, Salt Lake City, includes a skills center campus, which serves as the "manpower" arm of the college. It serves CETA, REHAB, and WIN participants with a variety of programs, including English as a Second Language, the Youth Community Conservation and Improvement Program, and skill programs, such as electronics assembly classes that train em-employees for local placement. The program is half-a-day, with open entry and open exit.

CONCLUSION

The linking of the worlds of education and work provides colleges and universities with opportunities to expand their program resources without a corresponding increase in expenditures. Institutional managers, corporate executives, union leaders, and public officials concerned with economic development at both the local and state level, and with the links between education and the productivity of the economy, share a common interest in improving cooperation between higher education and business and industry.

By allowing the employment community to participate in program planning, implementation, and evaluation, higher education can demonstrate its willingness to respond more effectively to private sector needs and to be

accountable for the results produced. An advisory group such as a local or area industry-education council provides the catalyst for effective education-work linkages. The business-labor-government-professional community's participation in program planning and evaluation produces better decisions, and better decisions are likely to result in better programs.

The employment community working with higher education can improve and help to meet the human resource requirements of the 1980's. As this monograph has detailed, the potential for effective long term linkages is there. Yet, the problem is that it has always been there.

Footnotes

[1] Richard I. Ferris and Solomon Arbeiter (eds.), *Bridging the Gap: A Study of Education-to-Work Linkages* (New York: College Entrance Examination Board, 1975), p. 98.

[2] Catherine P. Warmbrod, Jon J. Persavick, and David L'Angelle (eds.), *Sharing Resources: Postsecondary Education and Industry Cooperation* (Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1981), p. 1.

[3] National Association for Industry-Education Cooperation. *Industry-Education Councils: A Handbook* (Buffalo, N.Y., 1973), p. 3.

[4] K. Patricia Cross, "New Frontiers for Higher Education: Business and the Professions," in *Partnerships with Business and the Professions, Current Issues in Higher Education*, No. 3, 1981 (Washington: American Association for Higher Education).

[5] *Private Sector Initiative Program Clearinghouse Profiles* (Washington: National Alliance of Business).

[6] *National Information Exchange Newsletter*, No. 3, 1981 (Bayside: New York State Association of Two-Year Colleges).

[7] Larry L. Whitworth, "New Pathways to Apprenticeship," *Journal of the American Vocational Association*, Jan.-Feb. 1982, p. 38.

Dr. Richard L. Rinehart

Dr. Rinehart is the Director of the Center for Community/Junior College Relations at Rochester Institute of Technology, Rochester, New York. At RIT, he established, provided original direction for, and teaches in a graduate degree program in Career and Human Resources, as well as other activities that study linkages between business/industry and education. He was the founding president of Bay de Noc Community College in Michigan, and was on the faculties of Lansing Community College and Michigan State University. Earlier, he worked as a licensed civil engineer for three industrial corporations (including DuPont), for two private engineering consultant firms, and for two government agencies.

Dr. Donald M. Clark

Dr. Clark is the President of the National Association for Industry-Education Cooperation. His background includes: corporate management; public school, undergraduate, and graduate teaching and administration; radio and television news commentary. He has consulted to business, professional and government organizations and agencies such as the U.S. Office of Education, National Association of Manufacturers and the Education Commission of the States. He is the former Director of the Center for Economic Education at the State University College at Buffalo, New York, and organized the first Industry-Education Council in New York State in January 1971.

Dr. Clark has authored articles on industry-education cooperation, career education, and economic education. He has addressed groups throughout the nation on improving industry-education coordination in the education-to-work transition. The film, "Community Based Career Education Advisory Councils," sponsored by the U.S. Office of Education, was developed through his office.

A graduate of the U.S. Army War College, Dr. Clark holds the rank of Colonel in the U.S. Army Reserve and is assigned to the Directorate of Foreign Intelligence at the Pentagon.

The views expressed in this monograph are those of the authors, not necessarily those of the American Council on Education.