

Higher education institutions need to be prepared to respond to an economy that is increasingly dependent on workforce quality and preparation. Metropolitan universities are well suited to be responsive to the needs inherent in workforce preparation and maintenance. This article addresses the means by which universities can gather the necessary information to target their response. The methodology and results of a Northern Illinois University study are presented as an example of such an effort. Using these results, the article presents an analysis of the role of universities in workforce development and the nature of future challenges in such endeavors.

Targeting Educational Services for Economic Development: *What is the Role for Metropolitan Universities?*

Changes in the structure of the United States and world economies have fundamentally altered economic relationships. As capital availability becomes even more ubiquitous and technological diffusion increases, competitive advantage will accrue to those firms and nations who develop a skilled workforce that allows them to more fully exploit capital and technological advances. Higher education institutions need to be prepared to respond to an economy that is increasingly driven to competition in workforce quality and preparation. Metropolitan universities by their nature have the ability to do so. Institutions subscribing to the *Declaration of Metropolitan Universities* have explicitly indicated their commitment to such endeavors.

The first section of this paper presents an overview of the role of metropolitan universities in facilitating the economic development of their region through workforce preparation and enhancement.. The second section of the paper discusses the general means by which metropolitan universities might explore the best ways of targeting their educational services to the needs of their regions. The third section of the paper reports how this was recently done at Northern Illinois University (NIU). The final section of the paper discusses the implications and conclusions of the study, the changing role for universities in the United States, and the expected contribution of metropolitan universities

to the economic vitality of their regions and the United States by means of workforce education.

I. The Role of Metropolitan Universities in Economic Development

The potential impact of universities in enhancing the economic vitality of their constituent regions and of the nation has long been recognized. Consider, e.g., the Morrill Act of 1862 establishing the land-grant institutions. Attention to workforce preparation as an important component of higher education's role in economic development decreased in the post-World War II decades. But, beginning in the 1980s, government officials at all levels began to look to higher education institutions for leadership and active participation in the skill development of their constituent communities. While motivations are not well documented, I believe several key factors contributed to the look to higher education for leadership:

- the perception of higher education as a relatively recession proof industry suggested that this might be one place to look for resources during the relatively weak economic times the United States experienced for much of the period 1974-1990;
- economic success stories during this time were often tied to high technology industries requiring highly skilled labor and a large commitment to research and development, e.g., in Silicon Valley;
- university involvement in science and technology parks had a few visible and highly publicized successes (see Peddle [1993] for details);
- policy makers and others increasingly realized that economic development and the quality of the workforce are inextricably linked and that global competitiveness in the next century is going to be primarily related to workforce issues;
- the knowledge and skills necessary for a competitive workforce have increased to include areas of education/training where higher education has typically had primary responsibility; and
- the perceived neutrality of universities in an often politically fragmented local and regional environment gives additional credibility to their policy leadership.

Higher education institutions, or at least a core subset of universities, began to respond directly to this challenge around the mid-1980s. For example, the American Association of State Colleges and Universities undertook a series of pertinent case studies and published several monographs in the late 1980's and early 1990s. The marriage of economic development and workforce issues also provided impetus for public and private sector cooperation and partnership.

The distinguishing characteristics of metropolitan universities make these institutions prominent candidates for economic development leadership in their regions. Ernest A. Lynton summarized this theme in a recent *Metropolitan Universities* editor's column referring to a gathering of metropolitan universities:

. . . there was no question about the common focus of all the institutions. All were universities dedicated to improving the quality of life in their immediate region. All accept the obligation to respond to the instructional and other knowledge-based needs of their surrounding constituencies and communities. It is that direct bond, that commitment to neighborliness in the

most positive and constructive sense, which constitutes the fundamental characteristic uniting our metropolitan universities. All see themselves as *interactive* institutions linked to their regions; all want to become, as President Ramaley stated so well in her inaugural address at Portland State University in 1990, 'the university next door.' [*Metropolitan Universities*, Vol.3 No. 2, p. 2-3, 1992.)

Thus, one set of reasons why metropolitan universities have a special role in facilitating the economic development of their regions is simply that such universities explicitly recognize that they are stakeholders in their region, have an acknowledged and accepted public service role in their region, and represent a mix of resources that is crucial to future global competitiveness and knowledge acquisition/enhancement. In addition, over time the economic development literature has increasingly emphasized the importance of cooperation and partnership in the success of economic development projects and policy. Metropolitan universities have explicitly committed themselves to working with other institutions and actors in their region and have attempted to overcome the ivory tower parochialism that so often alienated higher education institutions of the past from their host community and region. Nevertheless, such a participatory, good neighbor approach to interacting with one's region creates some unique issues for the metropolitan university.

First, metropolitan universities do not represent the universe of higher education institutions in most areas. For most non-rural areas, the notion of a higher education institution acting in an interactive fashion as a cooperative stakeholder in its region is one that represents a new concept, or at least one that has only been experienced on a limited basis. This can be threatening to the existing power structure and to other institutions of higher education within the region. Metropolitan universities are sometimes resented for introducing competition for customer-based service into the economic development/education and training arena.

Second, metropolitan universities face diverse and geographically separated constituencies which have differing needs and priorities, and there are not unlimited resources to fully serve the needs of all constituencies in all places. The market for education and training services is so broad and underserved that there is plenty of room in the market for all institutions who desire to be players. The metropolitan university must carefully assess its resources, assess and prioritize the needs of its region, assess its institutional capabilities and comparative advantage in meeting those needs, and target its institutional response to its region within the context of its assessment of the region's needs and the university's resources, capabilities, and mission.

II. Assessment and Targeting for Metropolitan Universities: A Methodology

When developing a methodology to conduct any type of investigation, one must carefully state the question(s) one wishes to have answered by any data that will be gathered. With respect to the policy issue at hand, the questions can be clearly stated with in a manner analogous to the familiar journalistic framework for a well-constructed newspaper article:

- **WHAT** education and training services should be delivered?
- **WHO** are the likely consumers of our education and training services?
- **WHERE** should those education and training services be delivered?
- **WHY?** What is the purpose to be served by delivering these education and training services? and

- **HOW** should these education and training services be delivered?

This question is not only a pedagogical one relating to the use of instructional technologies, but also a distribution and allocation question relating to who should be the *producer and/or distributor* of the menu of education and training services.

While these questions are relatively easy to ask in abstract terms, each asks a question with much broader implications than might at first be apparent.

The question of *what* services should be delivered subsumes issues including basic skills and adult education, technical skills training, school-to-work programs, traditional graduate and undergraduate degree programs, continuing education programs, retraining programs, and business environment/workplace issues seminars. As one can quickly ascertain, a comprehensive assessment requires inter-institutional and business/education cooperation.

Identification of *who* are the consumers of the education and training services requires ongoing monitoring of the demographics of one's region and of the economy of the region. Among the potential constituencies that need to be monitored and assessed are: local residents, employees of local firms, current college students, recent college graduates, area employers, and prospective residents, employers, and employees. Different regions will find that they have differing mixes of these constituencies and differing needs within these constituencies.

Answering the question of *where* education and training services should be delivered requires one to investigate issues including: the prevalence and characteristics of place-bound students, relative participation rates in on-site and off-site training programs, economies of scale and agglomeration from running programs at central sites in larger groups, the proprietary nature of training services that might be required, the issue of underserved territories, and the pedagogical support needs of the education or training service under consideration. The answer to the "where" question typically varies with the type of services one is talking about.

The *why* question, while somewhat nebulous, is in many ways the most critical question and requires a careful assessment of the local workforce and its prioritized needs. Fundamental differences in program design can arise depending upon whether one is trying to meet basic skills/literacy needs of line employees, the continuing education needs of a group of lawyers, or the needs of technicians learning how to use a new technique or new apparatus.

Answering the *how* question is best done in a cooperative environment. The means and modes of production and delivery of education and training services require a careful evaluation of comparative advantage of candidate producers/distributors of services, as well as an assessment of the costs and benefits of innovative instructional technologies.

Assessment of needs based on this set of questions is but the first step in the policy response. One can generally expect that the need and desire for education and training services in any region will outstrip the resources available for the production and delivery of those services. Thus, targeting of educational services must take place within education and training institutions and between providers in the market for education and training services. A useful look at this methodology in action can be gleaned from a look at a recent study conducted at NIU through a Higher Education Cooperation Act grant.

III. Methodological Implementation: A Case Study

The project undertaken by NIU, apart from the aforementioned general economic factors, represented a response to several developments in Illinois higher education. The Illinois Board of Higher Education (IBHE) commissioned a report studying underserved areas that was completed in November 1991. The report noted: "The challenge for higher education is to respond to the unique needs of different cities and regions with levels of instruction, academic disciplines, and program delivery modes that are tailored to different populations and regional economies." In addition, the IBHE, Illinois Community College Board, and the Illinois State Board of Education undertook efforts to formally develop policy directives for workforce preparation that were outlined in a March 1992 report. This report noted eight specific challenges to be addressed by Education in the area of workforce preparation: basic preparation for work, global competitiveness and technical expertise, retraining to improve competitiveness, opportunities in education and employment, educational transitions, linking education and work, interagency collaboration, and accountability.

NIU, as the only state university outside of Chicago in the populous and diverse northern Illinois region, had continued to respond aggressively to these challenges on its own. NIU had long been a leader among state institutions in attempting to serve the needs of its region through off campus delivery of programs and in its commitment to try to meet the needs of place-bound students. The fall of 1992 brought the opening of NIU's first official off-campus educational center, the Hoffman Estates Educational Center, to consolidate its existing course offerings in the northwest suburban area of Chicago and to better meet the education and training needs of this region. In addition, NIU's Center for Governmental Studies (CGS) continued in its nationally recognized policy and action research on workforce preparation and school to work transitions.

The close working relationship and the common understanding of and commitment to the notion of being a metropolitan university between the NIU President's Office and CGS fostered discussions that led to the formulation of a grant proposal by NIU and three area community colleges (Elgin Community College, Harper College, and McHenry County College) to the IBHE for a Higher Education Cooperation Act grant to assess and target educational services in the northwest suburban Chicago area. This grant was funded for the period September 1991 to September 1992.

Not only did the grant offer an opportunity to explore complementary and ancillary use of the new NIU center, but it also offered a public information opportunity to call attention to the impending opening of the center, the economic development contribution of the center and its activities, and the complementary relationship of the participating schools, local businesses, and local community.

While NIU's involvement in the project was central, the nature and intent of HECA grants is to foster cooperation between institutions. Thus, a very crucial aspect of the research design and of the project itself was the interaction between the schools to develop a workable and a useful project strategy. The first aspect of this interaction was to formulate a means of project management and oversight. The institution presidents had to be active supporters of the project and active participants in major decisions. Each school had to have ongoing and equal input into the project, as well as actively commit to the project and its execution. In addition, project implementation had to take advantage of the political capital each of the

participating institutions had acquired through their operations in the region and their curricular offerings.

Day to day project management and execution was carried out by a project staff of three persons: the author as project director and principal investigator, a graduate assistant, and a business liaison. The four institution presidents comprised the Council of Presidents that retained ultimate policy control and oversight of the project. Each president was asked to appoint a representative to serve on a coordinating council that would be responsible for ongoing advisory counsel to project staff and act as their institution's liaison with project staff. Ultimately, the coordinating council was comprised of two executive assistants to the president, a dean of external programs, and an acting vice president of instruction. The council of presidents met three times during the project and the coordinating council met approximately six times as a group. This project structure worked well and would be recommended to other institutions seeking to implement a similar project.

In order to answer the questions posed in section II, several data gathering techniques were utilized:

- face-to-face interviews with key employers in the region. Most of these interviews were conducted with manufacturing firms because of the great diversity of such firms in the area and the differing needs of manufacturers in different industries;
- three focus groups with groups of other key employers (finance, insurance, and real estate; health care and human services; and public sector employers including schools) in the region;
- a written survey of employees in the region;
- a mail survey of recent alumni from the participating community colleges; and
- a survey of students currently enrolled in off-campus courses offered by NIU.

One goal of the project was to identify directly the nature and pervasiveness of barriers to pursuit of further education and training on the part of the various constituencies. This was an especially important task as noted by the aforementioned IBHE report on underserved areas. Our experience with this study and our knowledge of the education and training market and its operation would indicate that this is a pervasive issue that *must* be aggressively investigated by all educational institutions as they attempt to service their constituencies, especially those institutions that desire to be proactive in the way that metropolitan universities desire and are committed to be.

The gathering of similar types of data from a variety of stakeholders and constituencies was a key part of our methodology. Identifying and interpreting differences in perceptions of the supply, demand, needs, and barriers related to education and training services is an easily overlooked task. It should also be noted that one cannot expect unambiguous answers to the questions posed, but rather one must take an interactive and dynamic view of the data and recognize that within region differences in perceptions and needs are likely to exist, are important, and may require a variety of responses to address a diversity of needs. It is important politically and statistically to assure that all areas of the region are represented in the data set, even if this means over-representing some areas with lesser populations or levels of economic activity. Indeed, one often finds important relationships between low levels of economic activity and population and barriers to the use of education and training services.

While many of the results of our research were likely idiosyncratic, several of our findings should be of wider interest, as should some of the things we learned about the efficacy of our chosen methodology.

Face to Face Interviews

Representatives of twenty-one firms agreed to be interviewed as part of the project. Candidate firms were identified through consultation between the coordinating council and project staff. Generally, two person interview teams conducted each interview: the project staff's business liaison and a member of the appropriate community college's external affairs staff. It proved to be an excellent idea to have at least two ears in each interview and to have one person who sat in on nearly the entire universe of interviews. In addition, this structure helped in our effort to maximize the visibility of the participating institutions in the region and to inform the region of the wide variety of programs available through the participating institutions. Given the ongoing relationships with many of the firms, these interviews also served as an audit and accountability mechanism for the schools.

The major goal of this phase of the project, which represented the initial portion of the field work, was to gather baseline information, typically from human resource professionals, regarding the structure of the manufacturing labor force employed by the firms, the employment picture over the past year and ranging up to the next five or so years, the nature of anticipated future changes in the mix of workers needed by the firms, perception of technological and market changes that will affect the firms' businesses in the future, and, perhaps most importantly, an assessment of workforce preparation and the need for education and training programs. One of the unique and important aspects of the business interviews was the opportunity to gain feedback on the use and evaluation of the various types of training services providers. The major focus of the interviews was on non-credit rather than credit programs.

The interviews indicated that firms are at very different places in terms of their use of and commitment to education and training programs for their employees, and that the availability and use of education and training programs tend also to vary significantly with the person's job and status with the firm. Among our other findings of interest:

- the size of firm did not appear to be a major determinant of the firm's commitment to education and training;
- most firms do not have training budgets per se, but "spend what is necessary to get the job done" (for the firms we interviewed, this meant spending anywhere from nothing to \$1.2 million per annum);
- nearly all firms had some form of tuition reimbursement plan;
- the impact of changing economic conditions is felt very unevenly by firms;
- the firms we interviewed ranked community colleges as the type of external training provider best suited to meet their ongoing education and training needs, followed by commercial vendors and trade associations;
- the availability of "for credit" courses/seminars was important to about half the firms, while nearly three-fourths indicated that it was very important for education and training programs to be offered in house;
- firms were *universally* satisfied with the education and training providers they had used in the past, but most said that their education and training needs have not been fully met and that they needed assistance in meeting these needs in the future. These unsatisfied needs varied from firm to firm

- and were due generally to the lack of resources, including time, available to meet *all* training needs of all workers;
- most firms reported a need for outside help with basic skills training for their employees;
 - the need for technical skills training appears to be firm and industry driven with different skills needed for different jobs and job situations.

Focus Groups

Focus groups are an inexpensive way to gather large amounts of data in a short period of time utilizing an interactive format. Building upon the data gathered in the interviews, we intended to gather information from employers in other business sectors which were likely to be more homogeneous in their education and training needs than the manufacturers.

We had a firm or organization from our targeted population host each focus group, and hired an independent focus group facilitator to increase the objectivity of the process and allow staff to give their undivided attention to the group. We sought to have a geographic distribution in our focus group locations, while taking advantage of willing focus group hosts. The participating institutions and the focus group hosts helped prepare invitation lists and invitations were sent out by the focus group host and the invitee's community college. This personalized, grass roots approach seemed to significantly increase attendance and the degree to which participants felt that they were stakeholders in the process. Due to the nature of the sectors represented in the focus groups, much more time was spent in the focus groups talking about credit and degree programs than had been the case in the business interviews.

The focus groups provided a wealth of information and ideas. Among our many findings were:

- extensive use of in-house training programs and facilities, especially by the firms in finance, insurance, and real estate due to the proprietary nature of much of the required training and a desire to control consistency and employee down-time;
- an expressed need for educational institutions to spend more time on trying to instill corporate culture in their students;
- small firms are often at the mercy of high cost external training delivery systems;
- the expressed need for working relationships with several different educational institutions at the same time;
- a substantial need for "train the trainer" programs; (6) worker empowerment is a substantial issue in the workplace and thus in education and training;
- economic restructuring is turning traditional workplace relationships and operations upside down (e.g., everything is focusing on customer responsiveness and a breakdown of hierarchical workplaces);
- business curricula need more emphasis on interpersonal relations and teamwork;
- there is a need for more active and in depth partnerships between education and businesses;
- restructuring of the health care industry will substantially alter the workplace and increase the need for comprehensive education and training programs;
- the need for upskilling and refresher courses for R.N.'s was offered as an

- example of the need to be responsive to changes in workplace relationships and lifetime career commitments in order to allow movement in and out of the labor force as life circumstances change, as well as the increasing need for cross-training in today's workforce and workplace;
- a growing need to be able to move people from technician careers to technology professional careers without requiring them to start their education over;
 - educational requirements for many jobs, including continuing education requirements, have substantially increased and require active commitments on the part of both employees and employers;
 - increasingly, education and training is a function of legal requirements and collective bargaining agreements; + sensitivity to and response to cultural diversity are significant areas of present and future need;
 - firms and educators must work together to retool and retrain today's workforce as economic conditions change and education and training needs change;
 - growing resource constraints and the push to do more with less, make doing anything in the area of education and training difficult except in times of crisis.

Worker Survey

One crucial issue that needed to be addressed in the framework of the project was the degree to which employer/human resource management views of education and training programs and needs were confirmed by the employees using or eligible to make use of these programs. A survey instrument was designed to gather information from workers as to their education and training background and their education and training needs. For comparative purposes, we chose to administer the worker survey to employees from a subset of the firms involved in either of the first two stages (interviews, focus groups) of the project.

Support for this phase of the project never materialized at the levels expressed by employers during the interviews and focus groups. Several employers agreed to distribute the survey and never did so and others changed their minds after agreeing at an interview or focus group to distribute the surveys. We speculate that non-cooperation was indicative of several underlying opinions:

- employers may not be interested in employee opinions regarding education and training unless they are expressed in a controlled or a collective bargaining environment;
- employers believe that employees are not qualified to comment on employment and training issues;
- employers are interested in and require a better educated and better trained workforce, but feel that it is someone else's responsibility to provide skilled and trained workers to them; and
- especially for manufacturers, there was a perception that they could not afford the employee downtime required to gather the information.

Thus, at least a subgroup of the firms had not yet identified themselves as stakeholders and participants in the education and training process. In addition, they failed to see the long term payoff of knowing the perceived needs of their employees, although while they did not hesitate to identify *for* those employees the same needs when interviewed or participating in focus groups.

However, these problems should not take away from the extremely high

level of cooperation and assistance we received from a number of firms/organizations that allowed us to have our employee survey administered at their facility. These organizations included a municipality, school districts, finance and insurance firms, manufacturers, and social service agencies. A notable gap in the survey coverage was the lack of a hospital or health care facility. Due to the differing numbers of surveys returned by the various organizations, we created a stratified sample of about 500 responses in order to depict in a more representative manner the opinions expressed. While much information was gathered, a few general conclusions can be highlighted.

Employees expressed more satisfaction with their job skills than did their employers, especially in terms of basic skills like reading and writing. Second, there seemed to be broad interest on the part of employees in continuing their education/training in an effort to improve their job skills and their chances of job retention, job advancement, and long-term career goals. However, having education and/or training programs paid for by their employer and located close to their place of residence seemed to drive a substantial portion of the demand for such services. Third, there appear to be niches in the education/training market for many different kinds of providers including community colleges, universities, and private vendors. This is especially evident when one compares the wide variety of education and training needs expressed by employees and employers with the mainstream offerings of the providers.

Participating Community College Alumni Survey

A fourth phase of the project involved a mail survey of community college alumni to investigate their post-community college pursuit of education, future education and training needs, and evaluation of their transfer preparation and experience if they transferred or attempted to transfer course work to a four-year institution. The primary focus of this survey, unlike those previously discussed, was on the use and demand for *credit* educational programs as opposed to non-credit training programs. In the absence of a random survey of region residents, the alumni survey allowed us to ask about the nature and extent of educational barriers in the region.

The survey produced some interesting results that might have broader applicability. Community college preparation was cited most often as being of considerable help on the job in the areas of communication skills and maturity and self-confidence. Community college preparation, for reasons including student course work selection, was cited as least helpful in developing job search skills, managerial skills, technical job skills, and specific job knowledge.

The alumni also indicated that affordability of education remains a major barrier to further education for many students, as do family and personal responsibilities. Thus, it was not surprising that employer-paid tuition, availability of classes near their home, and opportunities for baccalaureate completion at an off-campus site were important considerations for students desiring to continue their education but who were not presently enrolled in college.

Survey of Students Enrolled in NIU Extension Courses

This final phase of the project's data-gathering activities involved a survey of students enrolled in off-campus courses offered by NIU. This survey was intended to gather information about service delivery issues from students already enrolled in extension programs; patterns and factors affecting enrollment in off-

campus courses; and unserved program needs.

Results from this survey were consistent with those from the community college alumni. Course offerings in the evening and near home were greatly valued by students, as was employer-paid tuition. One crucial point made by the extension students that is particularly relevant for other institutions was the necessity of offering full administrative services to extension students, especially in the area of schedule and program advising. For place-bound students, the availability of quality advising is magnified above the level that traditional students require. For NIU, the consolidation of programs at the Hoffman Estates educational center and the availability of on-site facilities including a computer lab and library reserve room facility, as well as an on-site administrative presence, have aided in better delivering services to students in the study region. The new educational center has been a rousing success.

IV. Implications, Conclusions, and Recommendations

The general results of our project have many implications for institutions desiring to respond to the continuing revolution in workforce preparation, the need to more actively service their region, and the need for education to play a leadership role in maintaining the economic vitality of its constituency through promotion of global competitiveness.

First, the study results verify the perception of the importance of education and training to maintained and improved productivity in the economy, as well as the perception of the challenge that existing and worsening skills deficiencies pose to economic growth. Education, as an industry, is viewed by external constituencies as a major player in preparation of the workforce, and workforce preparation is viewed as perhaps the most crucial tool of twenty-first century economic development policy. However, as pointed out in several contributions in *University Spin-off Companies* edited by Brett et al., internally the notion of universities taking an active role in workforce preparation and in economic development policy is often a difficult idea to sell to faculty.

Second, the magnitude and breadth of the effective demand for education and training services are enormous. As a result, no private sector firm nor any single educational institution is capable of cornering the education and training market in most regions. Thus, from an economic standpoint, cooperation among providers can be in the best interests of both providers and education and training clients. Firms have clearly expressed the desire to work with more than one educational institution in meeting their education and training needs. The missing link would appear to be clearinghouse services to facilitate such operations. Such services could be provided in many forms simultaneously, such as, e.g., a compiled catalog of services and providers, and through various delivery mechanisms as well as by various institutions. The crucial issue is the centralized and accurate dissemination of information about available education and training services that will allow potential clients to make informed decisions about matching their needs with a quality provider. This will also allow providers to broaden the information available in the market regarding their capabilities, specialties, and education and training methodology.

Multiple markets exist for education and training services such as customized training, non-credit programs, and credit programs. These markets will likely require different types of responses to target services of multiple providers to clients

in the most effective fashion. Indeed, the results from our surveys indicate that one more fundamental question is very important in targeting education and training services: *When* should training be offered, i.e., at whose convenience? Many firms told us that their training needs do not conform to a traditional academic calendar or to the normal academic day. Responding to these needs will require adaptation with which many higher education institutions are unfamiliar or inexperienced. Service delivery by educational institutions in such a market cannot be determined by mere geographic divisions, stratification of services by traditional educational level or mission, or through designating specific educational institutions for delivery of specific education and training content areas. Models with any such restrictions offer little incentive for quality control, customer service, or delivery and service innovation. Clearinghouse mechanisms remain an essential part of the targeted and efficient delivery of services in the market.

Also, with increased education and training availability and use in the region, especially in non-credit form, many employees/trainees may decide to purse or return to complete "for credit" programs as nontraditional students. This adds to the urgency of the already important need for higher education to address the admission and articulation of the increasing population of nontraditional students who have skills, experiences, knowledge, and understanding developed outside of traditional courses and school environments.

Finally, the diversity of education and training needs will likely require different levels of effective response. This response will require a commitment on the part of education institutions, businesses, and governments alike to partnerships designed to target appropriate resources to areas of greatest need and priority. Metropolitan universities can play a leadership role in bridging the gap between education and the private and public sector organizations that employ our graduates. The adaptive and interactive nature of metropolitan universities make them prime candidates for educating the stakeholders in the importance of flexibility and responsiveness in the face of the challenges of twenty-first century global competitiveness.

NIU's Hoffman Estates center has been a great success and was cited by the Council of Educational Facilities Planners International as a "Project of Distinction" award winner, with the jury noting not only the architectural merit of the project, but its use of public/private partnering for the delivery of educational services. Within the next year, NIU will open its second off-campus educational center in Rockford, Illinois. The NIU experience indicates a real possibility for success by metropolitan universities seeking to further assess their region's education and training needs, and then working in partnership with other education and training providers to target educational services to aid in the economic development of their region.

NOTE: The assistance of Corliss Lentz, Gene Hoffman, Pete Trott, Bob Sheets, John Lewis, and the presidents and various representatives of the participating institutions is gratefully acknowledged. The original research upon which this paper is based was primarily financed through a Higher Education Cooperation Act grant from the Illinois Board of Higher Education. The opinions expressed in the paper are those of the author and may not be shared by the participating institutions, funding authorities, or their constituent units. All errors and omissions remain the author's sole responsibility.

All of the interview and survey instruments used in the study discussed in Section III are available from the author. Complete copies of the project report are available for a nominal fee to cover reproduction and mailing costs.

Suggested Reading

American Society for Training and Development, *Workplace Basics: The Skills Employers Want*, Washington, U.S. Department of Labor (Employment and Training Administration), 1988.

Brett, Alistair and David V. Gibson and Raymond W. Smilor (eds.), *University Spin-Off Companies: Economic Development, Faculty Entrepreneurs, and Technology Transfer*, Savage (MD): Rowman & Littlefield, 1991.

Peddle, Michael T., "Targeting Educational Services for Economic Development: Preliminary Report/Results," Report to the Illinois Board of Higher Education, Northern Illinois University, November 1992.

Peddle, Michael T., "Planned Industrial and Commercial Developments in the United States: A Review of the History, Literature, and Empirical Evidence Regarding Industrial Parks and Research Parks," *Economic Development Quarterly*, 7 (1993), pp. 107-124.

State of Illinois, Governor's Task Force on Human Resource Development, "Competitive Challenges and Strategic Goals for Workforce Preparation in Illinois," September 1991.

State of Illinois, Illinois Board of Higher Education, *Policy Directions for Workforce Preparation*, March 1992.

State of Illinois, Illinois Board of Higher Education, *Report of the Committee to Study Underserved Areas: Enhancing Educational Opportunities*, November 1991.

Call for Articles

"University Community Partnerships"

The Spring 1996 Issue of Metropolitan Universities

Guest Editors

Ira Harkavy, University of Pennsylvania

Wim Wiewel, University of Illinois at Chicago

John Puckett, University of Pennsylvania

Metropolitan universities have been the leaders in making their teaching, research, and service relevant to their surrounding communities. As universities throughout the United States, and indeed worldwide, are rethinking their missions in an era of shrinking budgets, increasing income disparities and concentrations of poverty, and continuing criticism of higher education, the connection between universities and communities becomes ever more important. This focus issue will explore the theory and practice of the relationship between the university and its community.

Articles are sought addressing the following topics, or related ones:

- What should the relationship of a university be to its community?
- What are the primary obstacles to effective university-community collaboration, and how can they be overcome?
- What kinds of activity are most suitable for what kinds of institutions?
- How can communication be established so as to get an optimal match between capabilities and priorities?
- What are the most effective means of linking teaching, research, and service?
- How can reward systems be developed that support faculty in different kinds of institutions engaged in university-community partnerships?
- What are successful examples of effective university-community partnerships?

Article proposals (1-2 pages) should be submitted by April 30, 1995 to the co-editors. Complete drafts are due by June 30. Proposals or questions should be directed to: Ira Harkavy, Center for Community Partnerships, University of Pennsylvania, 133 S. 36th Street, Suite 519, Philadelphia, PA 19104-3246, Telephone (215) 898-5351, Fax (215) 573-2799, or to Wim Wiewel, Special Assistant to the Chancellor, University of Illinois at Chicago, 601 S. Morgan, m/c 102, Chicago, IL 60607. Telephone (312) 413-3375, Fax (312) 413-8562, E-mail U13732@UICVM.UIC.EDU.