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ABSTRACT

The relationship between business/industry and education in Florida is discussed in this paper with special emphasis on the role of community colleges in fostering and promoting economic development in the state. First, the paper highlights major factors arguing for strong links between education and industry, including the decline of labor-intensive manufacturing, the rise of high technology industries, the demographic shift to the Sunbelt, and the need for large-scale retraining programs. Next, in examining the role of community colleges in industrial development, the paper outlines the advantages that colleges can offer to industry and provides examples of programs developed in the Carolinas, California, and New Jersey that combine the resources of education and industry. Then, the relationship between education and industry in Florida is examined in terms of demographic and economic changes in the state and legislative and administrative efforts to bring educators in contact with business. After examining the attitudes of Florida colleges toward industry and outlining their efforts to attract new businesses to their service areas, the paper provides suggestions for linking the colleges more closely with future economic development. Recommendations regarding the role of higher education in economic development and an annotated bibliography are appended. (HB)

VOL. 1, NO. 3 FELLOWS PROGRAM FALL, 1982

LINKING COMMUNITY COLLEGES WITH ECONOMIC DEVELOPMENT IN FLORIDA

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AND

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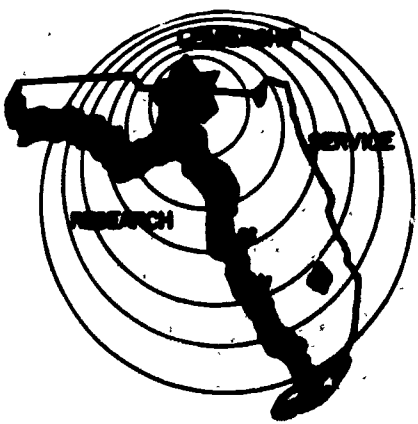

Department of Educational Leadership • College of Education
•• The Florida State University ••

INSTITUTE FOR STUDIES IN HIGHER EDUCATION

LINKING COMMUNITY COLLEGES WITH ECONOMIC DEVELOPMENT IN FLORIDA

Lawrence Worley Tyree

and

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CONTENTS

Foreword ii

Preface iv

Rationale for Linking Education with Industry..... 1

Community Colleges and Industrial Development..... 3

Education and Industry in Florida.....10

The Posture of Florida's Community Colleges.....15

Suggestions for Linking Florida's Community Colleges
More Closely With Future Economic Development.....19

APPENDIX A

ANNOTATED BIBLIOGRAPHY

FOREWORD

This is the third in a series of papers produced as a result of the Fellows Program which was initiated by the Institute in 1982. Dr. Larry W. Tyree, President of Gulf Coast Community College, was selected as an Institute Fellow in recognition of his accomplishment and leadership in higher education at the institutional, state, and national levels. His interest in the role of the community college fostering economic development is demonstrated by the work he has done at his own institution as well as the many committees he has served on at the local, state, and national levels which have worked to that end. It was natural, therefore, that he choose the topic of linking community colleges to economic development.

In recent years, nearly all of higher education has actively moved toward some form of interface with business and industry as well as governmental agencies in a growing involvement to attract expanded or new business and industry to local communities or even the state. Many colleges and universities have established liaison offices charged with making the private sector aware of what expertise and potential services reside at the campus while also soliciting the requirements and expectations of prospective employers for the kinds of services, training, education, or research required by the specific industry or business. Other institutions have established college-wide committees which seek ways to design curriculum, initiate research, or tailor services which will contribute to the economic development of the area. The mission and purposes of the community college make this indigenous institution a natural for participating in such enterprise. This paper provides insights and information valuable to any postsecondary institution interested in an interface with the economic elements of its area or state.

ABOUT THE INSTITUTE

The Institute was established by the higher education faculty to provide a focus for studies in educational policy. It extends the emphasis on the policy sciences at The Florida State University to the discipline of Education.

The Institute is dedicated to a mission of research and service at the state, national, and international levels. Four purposes have been identified, including: (1) To focus upon institutional, state, regional, and national issues of management, governance, finance, educational programs and educational services through descriptive and analytic studies or through synthesizing analytic or evaluative aspects of postsecondary educa-

tion; (2) To serve Florida State University as well as the State of Florida as a resource for policy analysis and research on issues of postsecondary education within the scope of the Institute's mission; (3) To complement the scholarly activities of the graduate program in higher education of the Department of Educational Leadership; and, (4) To serve as an initiator of activities and services intended to assist practitioners to deal better with problems and issues confronting immediate and future dimensions of institutional operation and vitality.

ABOUT THE FELLOWS PROGRAM

The Fellows Program is sponsored by the Institute for Studies In Higher Education as one of several initiatives intended to enhance the higher education master's and doctoral programs, contribute to scholary studies on higher education, and be of service to postsecondary education at the state, regional, and national levels. In addition to the Fellows Program, the Institute augments the instructional program in higher education, sponsors research and developmental projects of faculty within the Department of Educational Leadership and throughout the College of Education, and assists doctoral students of postsecondary education.

The Fellows Program was instituted in academic year 1981-82 with the objective of attracting successful practitioners with demonstrated scholarly interests and abilities who would enrich the graduate program by participation in selected seminars and other opportunities for interaction with faculty and graduate students while in residence. In addition, the Fellow is expected to produce a paper on an issue or problem which reflects his/her interest and experience.

The 1981-82 Institute Fellows were identified through a nomination process whereby faculty and graduate students were invited to submit names for consideration. The higher education faculty then established criteria and priorities which resulted in the identification of those invited. We were most gratified by the enthusiastic response and the fact that all six nominees for 1981-82 accepted our invitation.

Louis W. Bender
Institute Director

PREFACE

I cannot consider this project complete until I offer a few words of sincere acknowledgment and credit to two individuals whose efforts were essential to its fulfillment.

Mrs. Nancy Casner McConnell, a doctoral student in the College of Education at The Florida State University, was assigned to assist me in the research which was of critical importance to the creation of a report such as this one. Her efforts were especially thorough and produced much helpful information. I am extremely grateful for Nancy's substantial assistance.

Mr. Ian Churchill Barker, professor of language arts at Gulf Coast Community College, lent his considerable expertise to the process of transforming the research notes into a cohesive finished product. Ian's sacrifices of time, energy, and talent are especially appreciated.

Lawrence W. Tyree

LINKING COMMUNITY COLLEGES WITH ECONOMIC DEVELOPMENT IN FLORIDA

Rationale for Linking Education with Industry

Dislocation of the American worker has become a chronic national problem. Taking as a benchmark the year 1940 when at the waning of the Great Depression unemployment rose to 14.6 percent, employment has tended to mirror fluctuations in the Gross National Product. Commissioner of Labor Statistics Janet L. Norwood was reported as having testified before an October 1982 meeting of the Congressional Joint Economic Committee that little reduction in the 10.1 percent unemployment rate could be expected until the Gross National Product had established and sustained growth. Analysts with the federal Bureau of Labor Statistics have also pointed out that recent unemployment figures include the entire spectrum of eligible workers, whereas joblessness during the 1930s affected male heads of households almost exclusively. In fact, statistics compiled during the third quarter of 1982 revealed that 59 percent of unemployed Americans were in households in which there was at least one other wage earner. These figures point to a truth which is of concern to increasing numbers of informed observers: The burden of unemployment is not distributed equally among all segments of the American population. Blue-collar unemployment has risen by 2.1 million to 15.6 percent; the jobless rate for adult males has risen from 8.9 percent since World War II to 9.6 percent today; black workers have an unemployment rate of 20.2 percent; Hispanics are unemployed at the rate of 14.6 percent; and full-time unemployment is up from 9.6 to 10.1 percent. On the other

hand, the unemployment rate for white workers is 9.0 percent and overall employment for white-collar workers has actually increased by almost one million jobs.

The anomaly which is at work in the American marketplace is that employment vacancies abound in the high technology environment of computers and electronics. The abandonment of farmlands half a century ago has been matched by the collapse of labor-intensive factories today. General Motors Chairman Roger B. Smith reportedly told a meeting of the Business Council in Hot Springs, Virginia, that while the three-year hiatus in the American auto industry was about to end, he did not expect to see massive auto worker recalls. "As a matter of fact," he said, "that would be counterproductive." The scenario forecast by some, notably Donald H. Strazheim, vice president of Wharton Econometrics, is that foreign producers may take advantage of the surplus labor force in the United States by opening plants in the climatically conducive Sunbelt states: "The people in Flint, Saginaw, and Akron will find that their industry has moved and that they will have to move as well."

Under these conditions, educational institutions in the state of Florida will find themselves strategically situated to respond aggressively and creatively to the traumas associated with such major dislocations in the work force. Teenage unemployment of approximately 24 percent today can be reduced only by preparing first-time job seekers for the vacancies that will continue to exist in the highly specialized areas. Beyond this, however, massive retraining programs

must be rapidly installed to cope with the retraining and relocation of the blue-collar worker from labor-intensive manufacturing industries. Experience has shown that initiatives in this direction are most successful when they involve the combining of the resources of education, industry, and government.

Community Colleges and Industrial Development

The first problem to be overcome in uniting educators with industrialists is traditionally and partially a perceptual one. In a 1980 report on the strengthening of relationships between employers and educators in Tucson, Arizona, two Pima Community College administrators begin as follows:

> Employers and educators are facing a socio-economic problem they cannot correct alone. Employers face people who are unemployable, cannot read, cannot communicate, "irresponsible," "shifters," "couldn't care less," "job jumpers." Educators face students without motivation or understanding of what it takes to function in the workaday world, students who see themselves en route to somewhere else, which will be exciting and school is just a place where you must wait until it is time to start living. (Lancaster and Shuford, p. 35)

The solution to this communications gap in Tucson was to form a Career Education Consortium in which school administrators, governmental agencies, and local businesspeople could exchange information on employment opportunities and training programs. Among the more successful projects stimulated by the "think tank" nature of this consortium are the sponsorship of retreats for businesspeople and educators and a conference call between "The Fonz" (actor Henry Winkler) and 1,000 adaptive education students. The latter was

apparently successful in its goal of "increasing students' communication skills, developing self-confidence, and fostering self-expression" (Lancaster and Shuford, p. 37).

Don C. Garrison, president of the Tri-County Technical College in Pendleton, South Carolina, provides even more compelling statistics to substantiate his plea for increased cooperation between education and industry:

> There is a present and continuing need for educational programs to produce the skilled manpower needed by business and industry. The fact that private employers invest well over $2 billion on employee education annually, with a greater portion of these dollars going into internal company courses, should make it clear to community college educators the importance and necessity of education and training of the American worker as perceived by industry itself. The cited $2 billion figure would, of course, be substantially higher if the cost of wages and salaries paid to employees while learning were included. (p. 20)

Such is the present commitment of industry's resources to training that a draft report of the Public Hearings Related to the Development of a Master Plan for Florida's Community Colleges notes that 350 large corporations are already positioning themselves to set up their own in-house degree-granting structures (p. 35). To President Garrison and others who attended the Johnson Foundation's Wingspread Assembly on Industry-Education Cooperation in March of 1980, industry-sponsored degree programs would represent a costly and unnecessary duplication of the almost unlimited resources available to industry through this country's community college systems. Garrison suggests that community colleges offer business, industry, and labor six major advantages: (1) diversity; (2) structure and funding; (3) an eagerness to allocate

human, financial, and physical resources to industrial development; (4) the ability to identify community needs; (5) program flexibility and adaptability; and (6) low cost instruction (Garrison, pp. 21-22). In return, Garrison admonishes, community colleges must receive from business and industry the following: trust, the involvement of managers and workers on program advisory committees, training equipment, openings for cooperative internships, management information, constructive criticism, and staunch support presented to the public (pp. 23-24).

The catalyst for the creation of a symbiotic relationship between education and industry must be government. In those states where the combining of social resources is most advanced, notably the Carolinas, California, and New Jersey, positive and forceful support has come from government at the highest levels. "Governor James B. Hunt, Jr. has stated that he sees North Carolina's community colleges as 'the backbone of our economy . . . the most single important element in this program of economic development . . . and the presumptive deliverer of skilled training.'" (Campbell and Faircloth, p. 18) In response to the Governor's clarion call, the North Carolina General Assembly has issued a complementary mandate by inserting into law this wording:

> [The Department of Community Colleges] shall [emphasis added] assist with the pre-employment and in-service training of employees in industry, business, agriculture, health occupations, and governmental agencies. (Owen, 1981, p. 3)

Under this law, industry trainees may receive up to one quarter (440 clock hours) of training per calendar year.

Because North Carolina legislators opted for a proactive stance with regard to economic development planning, those specific categories of community college programming which were compatible with planning priorities could be identified and funded.

> Special appropriati .s have been approved by the General Assembly in the areas of (1) updating the technical training equipment inventory, (2) pre-funding state priority programs at hard-to-fill critical manpower shortage occupations, (3) establishment of Cooperative Skill Training Centers enabling colleges greater flexibility to contract with industry for in-plant training, (4) related and supplemental instruction of informal apprenticeship, (5) educational/ industrial leave with pay for up to 12 consecutive weeks, enabling technical faculty to return to industry for upgrade training. (Campbell and Faircloth, pp. 18-19)

In California, Governor Edmund Brown, Jr. recently proposed a $13 million increase in funding for vocational programs offered by that state's community colleges. Governor Brown's support of these programs was rooted in the successes of the 1979 California Worksite Education and Training Act. As in North Carolina, the California act addresses critical skill shortages, and community colleges are charged with the primary responsibility for meeting them. In the electronics field, for example, the American Electronics Association will be looking to community colleges to provide paraprofessionals to meet industry needs through 1985 (p. 19).

The Brookings Institution has come down firmly on the side of state funding for community college programs which dovetail with such industry needs as are awarded priority status under a comprehensive economic development plan. Owing to the objectivity with which the success of these plans is evaluated, the Brookings Institution has

concluded that "it will become increasingly important for colleges in their occupational-technical offerings to convey their successes to community and state funding sources in quantifiable measures of productivity and economic impact" (p. 18). Again in the lead, North Carolina has accomplished this by recording that between the 1960s, when over 60 percent of job vacancies were in the lower paying categories, and the early 1980s, economic development planning and community college training programs have upended the statistics to the point that 90 percent of vacancies are for jobs which pay above average "manufacturing wages" (p. 19). According to another informed observer of the North Carolina experience:

> During 1979-1980, 41 community and technical colleges in North Carolina provided specialized training for 95 new and expanding industries, training more than 7,000 employees with over $1.8 million worth of specially earmarked funds for this purpose. The cost per trainee was about $216. (Owen, 1981, p. 2)

Essential to any form of planning is, of course, needs assessment. An excellent illustration of this is the approach taken in Cleveland, Ohio, by Cuyahoga Community College and county government. Termed "work force planning," Cuyahoga's approach is to investigate governmental departments to determine where training needs lie. Programs are then developed accordingly. Director of Cuyahoga's College/County Manpower Project, George Eppley, is delighted with this "demand side" approach to programming which he considers to yield far more satisfactory results than the traditional "supply side" approach by which existing training programs are massaged to serve related but not necessarily compatible needs (Eppley, p. 8).

In addition to forceful governmental leadership, funding, economic development planning, and needs assessment, there is considerable evidence to suggest that the exchange of information between governmental agencies, industry, and education is a necessary component in the interfacing of needs and human resources. North Carolina has created formal ties between the Department of Community Colleges and the Department of Commerce, presumably to ensure that education might have early warning of the requirements of industries which are either being recruited or expanded:

> Seven regional offices of the Department of Commerce house representatives of the community college system. Staffs work together with banks, utility companies, and other agencies in the community to recruit new industry and provide the necessary upgrade training services. Such close coordination assures that the services needed by industry can be properly planned and provided for, rather than put colleges in a position of reacting to promises made by a separate industrial commission or local chamber of commerce in which they might have had little or no input.
>
> The budget for industrial services in the community college system also is closely coordinated with the Industrial Development Division of Commerce before finalization. Such cooperation translates into support by the leadership and citizens for the vital role community colleges play in the state's economic development policy. (Campbell and Faircloth, p. 18)

The Raleigh (North Carolina) Chamber of Commerce has made itself an integral part of the interfacing process by serving as a formal go-between linking education with Northern Telecom, a company dealing with the highly sophisticated technology of micro-electronic devices. In 1980, the Raleigh Chamber's Business and Industrial Development Department formed the Manpower Resource Development Program which was given such responsibilities of surveying skilled job needs, evaluating vocational programs, providing work experiences for vocational

teachers, running an Equipment Coordination Project, publishing a training resources directory, conducting industry visitations, and promoting job opportunities (Patner, pp. 2-3).

To summarize, in those states where a positive attitude toward economic development and planning have been taken, creative solutions involving cooperation among education, industry, and government have been discovered. Among these we might cite North Carolina's appropriation of funds to local institutions willing to release professional personnel for up to 60 days a year for staff development (Owen, 1981, p. 3). In Michigan during 1980-1981, "2,500 employers paid for 30,000 employees to take courses [at a community college] for job improvement" (Packwood, p. 3). In addition, 12,000 apprentices attended community colleges under contractual arrangements with business and industry, and Michigan's 29 community colleges also entered into contracts to provide adult foste - day care, and professional upgrading (p. 3).

Each of these creative solutions is commendable and worthy of emulation. Garrison's recommendations for increased interaction between community colleges and business also warrant serious consideration: A joint study by the American Association of Community and Junior Colleges, the American Vocational Association, and the American Society for Training and Development should be undertaken to assess existing student competencies; a model vocational-technical curriculum based on competencies rather than time should be developed; a massive public information campaign related to industry and education should be mounted; businesses should adopt policies whereby employees

might be reimbursed for tuition costs; colleges should devise ways of granting credit for in-plant experiences; colleges should hire faculty to conduct classes in the workplace; top college administrators should become involved in and informed about industry conditions; the issue of quality should be addressed by all parties; and reliable and factual studies should be made of the effects of vocational-technical education on given communities (Garrison, p. 24).

Education and Industry in Florida

Florida planners are experiencing the same difficulties and frustrations reported by planners in other rapidly growing states. Since 1970, Florida's population has increased by 43 percent to 9.8 million, making it the seventh largest state in the nation. "During the next ten years, Florida is projected to continue to grow rapidly to 12 million people or more, making it the fourth largest state in the Union" (Postsecondary Education Needs of Florida, p. 3). Calculating the effects of in-migration is almost impossible to do with accuracy. The likelihood is that displacements and imbalances in the work force are going to result. This prediction is essentially borne out in the most recent study of postsecondary education needs as performed by the Postsecondary Education Planning Commission (PEPC). Among PEPC's more significant findings are the following:

> In 1976, one of every four new graduates was accepting employment in a job classified as clerical, blue-collar, service, or farm work. Between 1976 and 1985, the Bureau of Labor Statistics predicts that only one out of four college graduates will find a job in the traditional job market for college graduates. (pp. 148-149)

> [In 1979-1980] more than 320,000 persons were enrolled in credit and noncredit postsecondary vocational courses at Florida public community colleges and vocational-technical centers. (p. 47)
>
> Vocational students are likely to be female, members of minority groups, 25 years old or older, and enrolled on a part-time basis. (p. 57)

In addition, the Florida Department of Education projects an increase of 19.7 percent in vocational-technical students from 1980 to 1990 (p. 54).

Clearly the pressure is on community colleges and area vocational-technical centers to perform and here may be cause for concern:

> At the June 1981 PEPC meeting, testimony was given expressing some dissatisfaction with the responsiveness of the vocational education sector to the labor force needs of the local community. (Herrington, p.2)

At other regional hearings the members of PEPC heard testimony revealing further dissatisfaction with communication between employers and technical institutions, as well as concern that the vocational education sector was not able to "adapt quickly to fast-changing labor market demands" (p. 2).

Apparently there has been a lag between Florida's adoption of a statewide economic development and marketing plan and its adoption by all levels of government, business and industry, and education. Traditionally it has been education's role to support business and industry through training of the labor force, research, and public service (p. 1). Research and public service fall within the exclusive domain of the State University System and its Service Through the Application of Research (STAR) program. STAR involves the identifying by state and local governments of problem areas which then become the

subjects of university grant proposals. "Diversification and improvement of Florida's economic base" is an area of high priority (p. 7).

Training of the labor force is a shared responsibility but, for two reasons, technical institutions have been unable to meet labor market demands: "(1) lack of industry involvement in designing curricula and (2) slow response to labor market changes" (p. 2). Community colleges, on the other hand, seem to be ideally structured and situated to respond to such needs with speed and flexibility. As reported by the Division of Community Colleges following two weeks of public hearings related to the development of a master plan for Florida's 28-member community college system:

> Regional planners, economic forecasters, and representatives from business and industry repeatedly attested to the responsiveness of community colleges to population growth and diversity which have been exponential . . . .
>
> In the past 2 1/2 years, new expanding industries have announced the creation of over 3,400 new jobs representing new annual payroll to the citizens of Ocala/Marion County in excess of $34,000,000 and a total capital commitment of over $74,825,000 for land, buildings, and equipment, which represents in excess of $2,800,000 of potential new taxes added annually to Marion County's tax base, and over $1,000,000 potential new taxes added annually to the City of Ocala's tax base . . . .
>
> Planning prediction for the 1980s: The community college student will be interested in taking courses to acquire skills useful in the labor market rather than necessarily to acquire a degree. (Master Plan for Florida's Community Colleges, p. 33)

The local economic impact data suggested earlier by Garrison as being important to the future success of vocational-technical training programs would appear to be available in Florida. Furthermore, needs

assessment and planning are matters of course for both many levels of government and the community college system. If there is yet a weak link, perhaps it lies in the realm of interagency articulation. The PEPC investigation revealed a need for the Departments of Labor and Commerce to provide more data to the educational community from which labor market needs might be more accurately anticipated. This concern has already been addressed, however, in the recent creation of the Bureau of Area Development within the Department of Commerce. The Bureau's function is to serve as the center for regional planning and hence to be the contact point for education and government (Herrington, pp. 2-3). The regional offices of the Bureau of Area Development assist existing industries with their expansion programs while the Tallahassee office, at the direction of the Department of Commerce, attempts to entice new target industries into the state. This two-tiered approach to industry recruitment and development has become a national prototype.

In 1978, the Florida Legislature established the Florida Research and Development Commission as yet one more way to bring educators in contact with business (through local chambers of commerce) and county government. Under this plan, county research and development authorities were to be established and these were to be empowered to set up "research parks similar to those in North Carolina, Palo Alto, and Boston . . . . Presently four parl [are] being developed in Tampa, Orlando, Gainesville, and Tallahassee" (pp. 2-3).

In place also, and actively seeking to promote communication among education, industry, and government in Florida, are a number of advisory councils and committees. Among them are the Florida State Advisory Council on Vocational and Technical Education which is mandated by the federal government as a prerequisite for vocational funding and which is advisory to the State Board of Education; occupation program area advisory councils which function at the state level and monitor specified program areas; numerous local-level advisory committees consisting of businesspeople and educators which supervise and direct vocational-technical education.

To date, the most effective coordinative agency among business and industry, education, and government has been the Industry Services Training (IST) Section of the Division of Vocational Education. Formed in 1967, the IST program works closely with the Department of Commerce. Once Commerce has made an initial contact with a target industry, the IST staff follows up by learning what manpower requirements exist. Through contacts with the Florida State Employment Service, potential employees are recruited and customized training programs are created, very often in collaboration with a community college and/or an area vocational-technical center. Funding for these training programs comes special legislative appropriations and federal vocational grants, and in no case is funding permitted to extend beyond one year.

> During the past 18 months [July 1980 - January 1982], approximately 3,500 employees have been trained through ISTP, accounting for an estimated $15 million in annual wages, according to Jesse Burt, the program's director. "Current annual budget for ISTP is $1.1 million," he said. ("Vocational Programs a Boost to Industry," p. 7)

ISTP has been credited in Florida's being ranked third in the nation and first in the Southeast with regard to vocational education as a percentage of population (p. 7). The major area which still needs attention, according to PEPC, is for "educational and business leaders to work closely together to develop a public policy that will promote close communication and cooperation" (Herrington, p. 1). Additional PEPC recommendations are contained in Appendix A.

The Posture of Florida's Community Colleges

Investigation into Florida's 28-member community college system reveals increasing awareness of the need to interact aggressively with business, industry, and government. Since 1957, when the system received its legislative mandate, career education has been a key ingredient of the community college mission. In 1968, when community colleges received autonomy from school board advisory committees and governance passed to lay district boards of trustees, 14 colleges took on the added responsibility of providing area vocational-technical education. Adult secondary education is incorporated into the mission statement of Daytona Beach Community College, Pensacola Junior College, Seminole Community College, and South Florida Junior College. Although there is great diversity within the system regarding program mix, all institutions appear to be deeply committed to the concept of local control and perceive a real need to serve their communities' job training requirements. Typically, career training programs are monitored by citizen advisory committees to ensure that training experiences are consistent with industry standards.

With the exception of a very small number, each college has given a high-ranking administrator the responsibility of assisting in the economic development and diversification of the service district. The dean for vocational education (or equivalent) is most often selected for this responsibility though it occasionally is lodged in the office of continuing education and/or community instructional services. In some instances the president or the president's senior assistant assumes this role and, in at leasc one institution, the chairman of the business and industrial education division serves in this capacity. There appears to be no correlation between the size of the institution or the relative industrialization of the service district and the assignment of this responsibility.

At almost all colleges the president is a member of the local chamber of commerce and either the president or a high-ranking staff member also sits with the board of directors or with the committee of 100. Where chambers have industrial development or educational committees, these, too, involve college representation. Daytona Beach Community College is notable in that it houses the office of the committee of 100 on campus free of charge. In addition to its chamber membership, Broward Community College (BCC) maintains active relationships with the education committee of the South Florida Manufacturers Association, the Florida Industry Services Program, and the Board of Trade. These activities are undertaken in addition to the maintaining of close ties with the Florida Division of Vocational Education and local business and industry through program advisory committees.

BCC has prepared a two-color brochure entitled "BCC's Training Your Future Employees" which outlines the college's degree and certificate programs. Employers are directed to the Career Services/ Job Placement Office on one of the three campuses nearest them or to the chairman of the department in the specific field. The brochure also stresses BCC's willingness to "tailor-make" training programs to suit the specialized manpower needs of a business or industry. BCC cites as an example of the latter a program which has been created for an electronics equipment manufacturer.

Almost all colleges offer similar placement services and training programs to meet the needs of area industries. Such programs range from training prison guards to underwater welders. Most institutions pointed to the fact that training is conducted on site. Brevard Community College holds in-plant registration and offers a gamut of programs from assembly-line training to management seminars. Classes meet both during the day and at night. Whether courses are offered for credit or on a noncredit basis, they are supplemented by on-campus offerings and cooperative education internships. Small Business Development centers are located on a few campuses and, where military installations form a prominent part of the local economy, classes are often taught by the community colleges on base. Valencia Community College reports the purchase through its foundation of a downtown building which was renovated to be used for classrooms to serve Orlando's governmental and office workers. Gulf Coast Community College teamed up with Florida's Departments of Commerce and Education to develop a full-scale hospitality/courtesy training program for workers in the tourist industry statewide.

In addition to the colleges' willingness to work with existing industries and businesses, the institutions show considerable enthusiasm toward the recruitment of new industries into their areas. Both Daytona Beach Community College and Edison Community College point to their readiness to perform needs assessment studies, market analyses, wage and salary surveys and, in general, to act on an advisory or consultant basis with industry prospects. The colleges appear to work frequently with the Florida Industry Services Training Program in preparing presentations and seminars for targeted industries. Florida Junior College says that its representatives travel to meet with prospective industries, and several other colleges provide resource personnel and materials for "contact teams" of their chambers of commerce.

There is a pervasive awareness within Florida that a broadened and diversified economic base must be developed in the near future. Colleges provide cultural enrichment as well as nuts-and-bolts training which are sought after in equal measure by the sophisticated industries which comprise much of what the state has targeted for recruitment. Central Florida Community College (CFCC) this year created the full-time position of coordinator of business and industry with its sole responsibility being to act as the liaison between CFCC and governmental agencies and businesses and industries. This position and others like it are destined to have increasingly prominent roles in future curriculum planning at Florida's community colleges.

Suggestions for Linking Florida's Community Colleges More Closely With Future Economic Development

These suggestions emanate from the experiences of such states as North Carolina and California and take into consideration the unique history and contributions of Florida's community college system. In general it is felt that government at the highest levels should recognize community colleges as the logical providers of diverse, flexible, and low-cost training programs. Specialized training programs should be funded only when they are consistent with the state's overall economic development plan and not when they merely relieve a single industry of meeting its work force requirements. When state funds are allocated to worker training, the amount should be sufficient to provide for programs of the highest quality; furthermore, these funds should reward innovative and efficient cooperative ventures. Flexible application of funds is to be expected and allowed. Government agencies should be prepared to share economic data with business and industry, and vice versa, so that planning might be realistic and regularly updated. Educators should be more aggressive in involving business, industry, and government in program development and implementation and should remain alert to opportunities to join with business development interests at the local and state levels.

To accomplish these general objectives, the following strategies should be considered:

(1) Florida's economic development plan must be made known to, and fully embraced by, educators so that they might take an aggressive and proactive posture through the Department of Education with the Department of Commerce and related agencies regarding industrial/business expansion and recruitment.

(2) Community colleges should work for, and must have, support from the highest levels of government coupled with a clear legislative mandate and funding to be the primary deliverer of occupational education. To attain this status, community colleges must earn public support from business and industry who have become, through direct participation, convinced that community colleges can react quickly and competently to their training needs. The establishment of Cooperative Skill Training centers might prove most helpful in attaining this goal.

(3) Community colleges must provide community and state funding sources with quantifiable evidence of the effectiveness of their training programs. Possibly much of industry's training budget could be re-routed via college foundations or direct institutional grants to in-plant and other cooperative education ventures.

(4) Community colleges must be prepared to dovetail training programs exactly to industry needs rather than to insist on supplying stock responses to unique training questions. For this to evolve, faculty must work

regularly within industrial and business settings or at least participate frequently in industry seminars and join their professional associations.

(5) The Florida Chamber of Commerce as well as local chambers should be made fully aware of the community colleges' abilities to respond to economic development needs and their eagerness to help formulate state and local economic goals. Many colleges are able to assist chambers with needs assessment and other surveys vital to industrial growth and development.

(6) Career education consortia based on the Tucson model should be established throughout Florida at the local level to promote and ease the relocation of industry and business to the Sunbelt.

(7) Greater use should be made of contractual agreements between community colleges and business/industry whereby facilities and equipment could be shared and training experiences could be better integrated to the benefit of both the student and the teacher.

ECONOMIC DEVELOPMENT AND POSTSECONDARY EDUCATION

IN FLORIDA (DRAFT)

12/16/81

Recommendations

To reach Florida's goals of increased economic development and stable economic growth, the postsecondary education sector must provide high quality educational programs and must foster the initiative and the flexibility to respond to special needs when they appear. Based on the above considerations, the Commission recommends the following:

Vocational Education

(1) There should be close interaction between industry and vocational educators in curriculum development and skills training throughout the vocational education system.

(2) The resources of the Departments of Commerce and Labor and the business and industrial communities should be brought to bear upon the problem of predicting manpower needs in Florida. The available data continues to be inadequate and new and more timely methods for predicting change needs to be developed.

(3) Vocational education should work with the local staff of the new Bureau of Area Development in the Department of Commerce to stay informed about changing vocational training needs on the local level.

(4) Local school boards and community college boards of trustees as well as vocational administrators should receive labor market projection information from the Division of Vocational Education.

(5) Appointment authority to vocational education advisory councils should be shared between business people and educators.

(6) Articulation between area vocational centers and community colleges should be facilitated and articulation between public vocational programs and proprietary programs should be explored.

Higher Education

(1) Florida must develop programs of national renown and excellence particularly in the fields of engineering and science and the state must fund these programs at a level commensurate with such goals.

(2) The skills and expertise of the teaching and research facilities at Florida's colleges and universities should be applied to aid the state's economic development aims through contracts, grants, consultation, and public service projects.

(3) Regional governmental agents who act to broker information and to serve as a point of access between business and postsecondary education communities should be appointed.

(4) Cooperative education ventures should be encouraged at all levels of postsecondary education.

(5) A special administrative unit should be set up which would be responsible for maintaining current data from all areas of postsecondary education for the use of economic development recruiters.

(6) More flexible contractual arrangements allowing for use of adjunct and clinical faculty should be developed to attract faculty members in areas of critical shortages such as engineering, science, and mathematics.

ANNOTATED BIBLIOGRAPHY

Burt, Jesse. Director of the Industry Services Training Program.

Interview.

Stated that he must verbally guarantee training to new industry looking to settle in Florida and then go and haggle with the various educational institutions to actually provide such training. Some institutions respond more readily than others. Recommendation: The Governor should call the presidents of community colleges and vocational schools together and charge them with providing such training when needed, thus making it a high priority for the respective institutions.

Campbell, Dale F. and D. M. Faircloth. "State Models for Economic Development." Community and Junior College Journal. April 1982, pp. 18-19.

Documents the success which North Carolina, Georgia, and California have had with economic development planning. Attributes this success to the clear delineation and funding of community colleges as the primary providers of occupational education.

Eppley, George. "Government: A Workforce: A Ready Market." Community and Junior College Journal. September 1980, pp. 6-11.

Cuyahoga Community College has developed a program to assist in training the local governmental workers. A detailed model is presented for developing and maintaining a body of manpower. This program benefits the college and the county.

Florida Economic Developments. February 1982.

Florida Rated Number 1:
In a nationwide survey, Florida was rated number one for overall business climate, based on 22 factors. Florida has steadily moved up from 12th in 1979 to 8th in 1980.

Diversification Efforts A Success:
The Department of Commerce, the Legislature, and Governor Bob Graham have listed four areas as those that will help diversify the state's economy. These are: 1) target industries, 2) movies and television, 3) foreign trade and finance, and 4) corporate headquarters. These efforts have been successful.

Vocational Programs a Boost to Economy:
Florida is ranked third in the country and first in the Southeast in vocational education enrollment as a percentage of population. The major factor given is the Industry Services Training Program.

Garrison, Don C. "Community Colleges and Industry: A Stronger Partnership for Human Resource Development." Employee Training for Productivity. March 12-14, 1980.

Community colleges are now more eager to change emphasis and priorities and intensify community response. The growth in enrollment at community colleges shows this response and points out that the community college is an important resource. Discusses the South Carolina TEC system in detail, as an example of what education has to offer industry. He concludes with recommendations for industry and the professional societies involved.

Herrington, Carolyn. Economic Development and Postsecondary Education in Florida. Draft, December 16, 1981.

Florida's push for economic diversity and development has presented a challenge to postsecondary education. Traditional approaches have been through training of labor, research, and public service. hrough regional conferences a need has developed to increase communications between industry and education. To help meet this need, the Bureau of Area Development of the Department of Commerce is suggested as a vehicle for improvement. Another source of assistance is the Florida Research and Development Commission, created by the Legislature in 1978. Gives specific recommendations to vocational education and higher education.

Lancaster, Stewart V. and David F. Shuford. "Employers and Educators Team Up in Tucson." Community and Junior College Journal. May 1980, pp. 35-37.

Cooperation between Pima Community College and the City of Tucson resulted in the formation of the Tucson Career Education Consortium. Many programs to help students enter industry and also to assist those already employed have been developed jointly by the community college and a variety of local industries.

Lund, Duane R. The Role of Vocational Education in the Economic Development of Rural Areas: Implications for Research and Development. Paper No. 62. National Center for Research in Vocational Education. August 1980.

Profiles the movement of people back to rural areas and the expansion of industry into the rural community. Connects the role of vocational education as seen by state economic development agencies to the attraction of business and industry to an area. States four implications for research that lead to the recommendation that vocational education can lead the way. Gives an example.

Owen, James H. Citizens Applaud North Carolina's Community Colleges. Fall 1980 (unpublished).

Reports on sections of the North Carolina Tomorrow Survey. This survey listed community colleges as the number one state service by the citizens of North Carolina. Based on this survey, the Governor has recognized the community colleges' particular mission concerning employment and economic development. There is a direct link between the community colleges and the state's ability to attract new industry. Contains quotes from satisfied customers. Budget increases were made on both a state and local level.

Owen, James H. Community Colleges in North Carolina: Catalyst for Economic Development. October 1981.

Discusses the Community College Congress held in the state in 1981, involving business, industry, institutional trustees, and presidents. Explains the community colleges' participation in a program to promote balanced economic growth. Provided specialized training for 95 new industries in 1979-1980. North Carolina law has established the community colleges as the delivery system for in-plant training. The key is flexibility.

Owen, James H. Linking for Lifelong Learning: Some Approaches in North Carolina Community and Technical Colleges. Fall 1981.

The Department of Community Colleges' New and Expanding Industry Program assists industry in training new production employees for specific job skills. Close association has been fostered between the local and state industrial developers' associations along with the Department of Commerce. Since 1980 a Department of Community Colleges' industries services staff person was housed in the seven regional field offices of the Department of Commerce across the state. North Carolina law charges the community and technical colleges to provide training assistance. Two such programs are "in-plant skill training" and "educational/industrial leave with pay." There is also cooperation with the community school system.

Packwood, Gene. The Impact of Community Colleges on Michigan and Its Economy. October 1981.

Answers the following six questions:

1. Who attends Michigan community colleges and why?
2. What are the students enrolled in at the community colleges?
3. How have attendance patterns changed during the past decade?
4. What are the community colleges doing to help business and industry?
5. How have the community colleges met regional needs?
6. What role can community colleges have in diversifying the economy of the state?

In 1980-1981 business and industry contracted for training for over 19,000 of their employees. 2,500 employers paid for 30,000 employees to take courses for job improvement.

Patner, James R. Linking for Lifelong Learning in North Carolina: Community Colleges and Northern Telecom. October 1981.

Discusses the linking of Northern Telecom with the North Carolina community colleges. Gives the history of the program in Raleigh and a brief overview of each step. Makes statements supporting the need for more joint programs.

Phelon, Phillip S. President, Cumberland County College, Vineland, New Jersey. Interview.

In the state of New Jersey, the community colleges are mandated by law to be the overseer of all funding for customized training whether they provide classrooms, instructors, or nothing to the actual operation of customized training. Funds come from the State Department of Labor.

Postsecondary Education Needs of Florida: Demographic, Enrollment, and Economic Patterns. Postsecondary Education Planning Commission, September 14, 1981 (draft).

Section V. Economic Profiles and Projections by Industry for the Five Areas
Divides the state into five areas: Panhandle, Crown, East Central, West Central, and South. Each area is profiled by a variety of statistics, labor force, employment by industry, industrial development, quality of life, and future projections.

Section IV. Supply and Demand Comparisons
Discusses the supply of college graduates and the occupational demand within Florida. Comparisons are done for over 14 occupations. A closer look at vocational supply and demand is presented.

Postsecondary Education Planning Commission: Some Preliminary Considerations of Florida's Structure for Postsecondary Education. December 23, 1981 (unpublished).

Examines the need for postsecondary education in Florida to be restructured in light of changing student and societal needs. Makes recommendations.

A Report of the Public Hearings Related to the Development of a Master Plan for Florida's Community Colleges, 11/18/81-12/1/81, with Selected Emerging Issues. January 1982 (draft).

Lists the five broad major concerns that emerged during the discussions. These concerns are presented further with a list of issues that now must be addressed. Many of the concerns and emerging issues are directly related to funding and increased support for local economic growth. There is a specific section on contributions to economic growth. Discussion of national and state trends on education, employment, and the economy are also included.

Schmid, Gregory and Lawrence Russell. "Plenty of Clues to Future Trends." Community and Junior College Journal. May 1980, pp. 28-31.

Presents statistics on the demographic changes that are occurring within the United States. Places special emphasis on the change of population by region and age distribution. This is then tied to changes in the labor force and economic growth of the United States. The conclusion drawn is that the community college is the vehicle to respond to the changing educational needs of students and industry.

Wagner, Kenneth C. Economic Development Manual. 1978.

This book is a "how to" lesson on setting up an economic development program. Gives practical ideas and pays close attention to those items that can prevent success. Provides useful tools to local developers, local officials, area developers, and state development officials. Covers all pitfalls from idea to completion.

Warmbrod, Catharine, Jon J. Persavich, and David L'Angelle. Sharing Resources: Postsecondary Education and Industry Cooperation. Series No. 203, National Center for Research in Vocational Education, 1981.

Benefits are gained by both business and institutions when resources for training are shared. This project identified programs involving sharing between postsecondary occupational educational and industry. This book contains a listing of programs from around the country and details the more exemplary programs.

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