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THE DEVELOPMENT OF TECHNICAL INSTITUTES IN OHIO

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

John J. Light, B.S., M.A.

* * * * * * * * * *

The Ohio State University
1973

Reading Committee:
Dr. Robert M. Reese
Dr. William Dowling
Dr. Aaron J. Miller
Dr. Norman Rask

Approved By

Dr. Robert M. Reese

Adviser
Department of Vocational-Technical Education
ACKNOWLEDGEMENTS

The men and women responsible for the development of the technical institutes in Ohio have been ambitious, resourceful, and dedicated individuals. This cooperative spirit in providing the author with information, letters, files, minutes, and valuable original documents has made this study possible.

The author owes a special thanks to the technical college presidents for providing materials, to Dr. Reese for his technical assistance, and to the committee, Dr. William Dowling and Dr. Aaron Miller. This dissertation is dedicated to Joy who carried on the work at home during the seemingly endless time it took to finish this task.
VITA

December 4, 1930 . . . Born - New Philadelphia, Ohio

1948-1950 . . . . . . . . . U.S. Navy

1950-1958 . . . . . . . . . Apprentice and Journeyman Machinist

1959-1965 . . . . . . . . . Vocational Education Instructor and Supervisor

1964 . . . . . . . . . . . B.S., Kent State University, Kent, Ohio

1965-1966 . . . . . . . Ohio Vocational Leadership Development Internship, Intern Director, Chandler Technical School, Willoughby, Ohio

1966 . . . . . . . . . . . M.A., Kent State University, Kent, Ohio

1966-1969 . . . . . . . Director, Tri-County Technical Institute, Nelsonville, Ohio

1969-1971 . . . . Vice President, Tri-County Technical Institute, Nelsonville, Ohio

1971 . . . . . . . . . . President, Hocking Technical College (formerly Tri-County Technical Institute), Nelsonville, Ohio

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CHAPTER I

TECHNICAL COLLEGES IN OHIO: INTRODUCTION
AND DEFINITIONS

The origin of technical education is tied very closely with the vocational education movement. Technical education is a part of, or a division of, vocational education. It is very difficult to determine where — or when — vocational education becomes technical. In many cases it is still a matter of semantics. Practical daily operations, funding, and administrative patterns force us to make a distinction between the two.

Vocational education received national attention through the Vocational Education Act of 1917 (Smith-Hughes Act). This act had provisions for adult education. These provisions, encouraging adults to attend career classes, were part of the evolutionary process through development, improvement, and upgrading of programs that led to technical education.

The National Defense Education Act was passed in 1958. This act allocated funds for post-secondary technical education. Legislators were aware of the changing employment needs due to the new technological age the country was in. With funds for technical education, a new concept in education began in Ohio. Education to meet the
needs of para-professionals for business and industry was different from the customary skilled level vocational education programs. Some educators claimed that this movement was the first really new idea in education since the Smith-Hughes Act in 1917.

The technical education movement rapidly developed from a few scattered evening programs using borrowed facilities to entire campuses chartered exclusively for the training of technicians. In the brief period of fourteen years, the evolution of technical education has taken it through several systems of administration, funding, and titles. The rapidity of change in size, increased programs, and administrative structures in technical institutes has resulted in an almost complete void in any attempt to preserve their pasts. Records, data, and other historical information are rapidly disappearing. There are several reasons for this loss of historical data relating to technical institutes: the developers in vocational and technical education have been looking forward to new horizons, rather than back into the past; and industrial, vocational and technical educators rarely have training or interests in the historical viewpoint. Consequently, very few of these developments are being collected, preserved, and recorded for analysis.

The Problem

There are currently seventeen technical colleges operating in Ohio. Six others have either closed or merged into community
Twelve of these technical colleges originally operated under a board of education prior to a structure change which requires operating under a board of trustees. From 1958 to 1963, the State Department of Education was the only state agency providing leadership and funds to technical institutes. From 1963 to 1971 both the Department of Education and the Ohio Board of Regents were involved directly. House Bill 351, passed by the 109th Ohio General Assembly, placed the responsibility of operating and funding technical education with the Ohio Board of Regents. With these confusing and changing patterns of operation, a recording of the development of these technical colleges is needed because:

1. Data are rapidly becoming obscured or lost.
2. Primary sources are still available.
3. Few persons have experience in technical education and historical research.
4. The rapid change and growth of technical colleges needs to be analyzed.

The problem simply stated is: there is a need to record the development of technical colleges for historical and analytic purposes.

The technical institutes in Ohio have operated under the Department of Education and the Ohio Board of Regents. The Regents are synonymous with (or are) higher education. An assumption is that there would be increased pressure for a technical institute to alter or change its philosophy, programs, contact hours, and laboratory
hours to fit the collegiate pattern. A further assumption is that the more pressure from the state, school counselors, and parents to include a collegiate transfer objective; the weaker the technical programs will become. A historical study of the curriculums of technical institutes can determine if these assumptions are true.

The philosophy and objectives of the technical institutes will be studied as they developed under the direction of the State Board of Education. These will be compared with the same institutions' philosophy and objectives as they came under the influence of the Ohio Board of Regents. Philosophies and objectives of the institutes will be compared for similarities and differences.

The curriculums of the technical institutes will be recorded, first as they occurred as the institutes applied for approval to the State Board of Education and again after the influence from the Ohio Board of Regents had been felt. Changes in curriculum content, total contact hours, and total laboratory hours will be documented and analyzed.

Patterns of staffing, qualifications of instructors, and importance of degrees for instructors will be documented in an attempt to discover trends in a potential drift toward a general academic staff rather than a technical or practical experienced staff.

Legislative acts dealing with technical education will be analyzed with summaries of their importance on the development of technical institutes. Effects on funding, growth, control, and building of physical facilities will be recorded.
The results of shared facilities in the development of technical institutes will be recorded. Negative and positive results of a technical institute sharing facilities and campuses with either a joint vocational school or a university branch will be noted. Other similarities and differences in programs, origins, successes, and problems of the seventeen technical institutes will be observed during the compilation of the data for this study.

A literature search of the topic of technical institute (and technical education) development in Ohio reveals an almost complete void in published material or formal writing. However, there is a wealth of primary source material available in technical educators (personal sources), catalogs, accreditation reports, board meeting records, and newspaper articles from all of the institutes. The writer visited the State Department of Education in Columbus, Ohio, and all the schools included in the study.

Methodology

The historical method of research is used in this study. The approach used follows the examples of Carter V. Good in Methods of Research.

Step One — Collection of Data. A partial list of sources includes:

Legislative Acts
Constitutions
Charters
Proceedings from administrative bodies

a. Board minutes
b. Reports and orders of administration
c. Committee reports

Reports of school surveys

Reports of advisory committees

Courses of study

Catalogs, brochures, advertisements

Newspaper articles

Personal material

a. Autobiographies
b. Scrapbooks
c. Letters
d. Notes

School facilities - present and past

School equipment - present and past

Policy books - student and staff

As the data were being collected, it was judged to be either primary or secondary source material. Primary sources are the original documents or remains, the first witness to the event or fact. Primary sources are the only solid bases on which to write a history or developmental study.

Data collected for the study were subjected to both external and internal criticism. External criticism questions the authorship of the data. External criticism attempts to justify the use of an
author and his qualifications as an expert, or one who really is reliable to give primary source material.

Internal criticism tries to determine the credibility of the data. A document could be the real thing and its authorship proved (external criticism), but the information itself could be wrong. Internal criticism of data involves such factors as bias, position, and good faith of the author. Internal criticism asks: Is this really the truth?

During and after the collection of data, the selection and organization of data was done. One of the greatest problems in historical writing is to be able to gather extensive data, then through organization and selection use the data needed for the final drafts. In this study the thematic organizational structure (as opposed to a chronological organization) was used. Thematic organization means that topics - or chapters - will be dealt with independently rather than in a strict chronological arrangement.

The historical method calls for the assembling and classifying of great masses of facts, analyzing the evidence using the inductive process, then recording the historical or developmental story.

Technical education, defined in this study as post high school para-professional career education, is offered in Ohio at technical colleges and institutes, community colleges, and university branches. This study is not meant as comparative research to judge quality or growth between these different types of institutions offering technical education. This study is limited to the history and development of the
seventeen chartered technical institutes operating under c 3357 of the Ohio, Revised Code.

As the history of the technical institutes in Ohio unfolds, the terms technician school, technical institute, and technical college may confuse the reader. These terms are later defined. Throughout the text, these terms will be used, as they would have been used, at the point in time being described. For example: describing the events at Hocking Technical College in 1969, the term "institute" would be used because in 1969 it was legally an "institute." Describing the events of the same school in 1972 it would be called a "college" because by 1972 the legal name had changed.

The author has been personally and extensively involved in the development of technical education in Ohio as an administrator of a technical institute and as president of the Ohio Organization of Technical Colleges. As president of a state institution, the author has been personally in attendance at many policy making meetings and active in discussions that have helped form the technical college system as it is in Ohio today (1973). The author has attempted to document all of these experiences and conclusions so that this history is one of documented data, not from personal memory and bias.

Definition of Terms

Vocational education. For this study vocational education is defined as it is in section 108 (1) of the Vocational Education Act of 1917.
The term "vocational education" means vocational or technical training or retraining which is given in schools or classes (including field or laboratory work and remedial or related academic and technical instruction incident thereto) under public supervision and control or under contract with a State board or local educational agency and is conducted as part of a program designed to prepare individuals for gainful employment as semiskilled or skilled workers or technicians or subprofessionals in recognized occupations and in new and emerging occupations or to prepare individuals for enrollment in advanced technical education programs, but excluding any program to prepare individuals for employment in occupations which the Commissioner determines, and specifies by regulation, to be generally considered professional or which requires a baccalaureate or higher degree.

Technical education. Technical education is a segment of vocational education with distinct features. For this study the term is defined in c 3357.01 D of the Ohio, Revised Code as:

post high school curricular program provided within a technical institute, planned and intended to qualify students, after satisfactory completion of such a program normally two years in duration, to pursue careers in which they provide immediate technical assistance to professional or managerial persons generally required to hold baccalaureate or higher academic degrees in technical or professional fields. The technical and professional fields referred to in this section include, but are not limited to, engineering and physical, medical, or other sciences.

"Adult-education technical program" means the dissemination of post high school technical education service and knowledge, for the occupational, or general educational benefit of adult persons.
Technical college. An institution supported by the State of Ohio defined for this study in c 3357.01 of the Ohio, Revised Code as:

"Technical college" means an institution of education beyond the high school, including an institution of higher education, organized for the principal purpose of providing for the residents of the technical college district, wherein such college is situated, any one or more of the instructional programs defined in this section as "technical college," or "adult-education technical programs," normally not exceeding two years duration and not leading to a baccalaureate degree.

The term technical college became effective February 16, 1972.

Technical institute. A technical institute is the same as a technical college. From 1966 to 1972, c 3357 of the Ohio, Revised Code, used the word "institute."

Technical school or technical center, is defined in this study as a post-secondary school, department, or center operating under a public school board of education and the Ohio State Department of Education without the approval or charter from the Ohio Board of Regents.

Full time equivalent. This term is used frequently in the text. Full time equivalent (FTE) is the number of students—or enrollment—used to calculate state subsidy. One FTE is equal to fifteen quarter hours of course work taken at a state institution. If a student enrolls for fifteen quarter hours of credit in one quarter he is counted as one FTE. Three students, each taking only five quarter hours of credit, together equal one FTE.

Headcount enrollment. Enrollment at state institutions is also listed in total headcount, or the number of persons taking credit work regardless of the number of hours they attend classes. In headcount
figures the part time student is counted as one, the same as a full
time student.
CHAPTER II

NATIONAL ORIGINS OF TECHNICAL EDUCATION

The principal philosophy and objective of technical colleges in Ohio is to successfully prepare citizens for employment in a technical career. Employment is also the objective of all types of vocational education. By the definition of technical and vocational education in the Vocational Education Act of 1963, technical education is a part of the total vocational education movement.\(^1\) The origins of technical colleges in Ohio then go back to the origins of the vocational education movement.

Informal vocational education is as old as history and begins with the father-son relationship. Crafts and apprenticeships throughout the ages were forms of vocational education.

The seeds of a formal type of vocational or career education were germinating in America during the closing years of the nineteenth century. Scholars were still, too often, declaring that the purpose of education was to prepare students for life by shaping their intellect. The National Education Association's Committee of Ten in 1894 still actively stated that the classical curriculum was still the

\(^1\) U.S. Congress, Vocational Education Act of 1963, Public Law 88-210, 88th Congress, Sec. 108 (1).
best preparation for life. However, this long time monopoly on the American public school curriculum was beginning to crumble. Criticism of the educational system that catered to the elite caused the Massachusetts Legislature in 1905 to appoint a commission to study the educational needs of the State.

This commission, appointed by Governor Douglas, with Carrol D. Wright as its chairman completed its study in 1906. The "Douglas" Commission made up of persons from industry, agriculture, labor, and education disagreed with the advocates of the classical curriculum.

The Douglas Commission reported that:

1. There was a widespread interest in special training for vocations by manufacturers, workmen, and educators.

2. There was a lack of skilled workmen in the industries, more especially workers with industrial intelligence.

3. The public schools were considered too exclusively literary and were not fully meeting the needs of modern industry and social conditions.

4. With minor exceptions, no remedial measures were suggested.

The commission recommended that the expense of industrial education become part of the public school system and its cost be

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borne wholly or in part by the State. The Douglas Commission further recommended that practical education commence in the elementary schools for both boys and girls and that instruction in mathematics, the sciences, and drawing should show the application of subjects to the industrial and business world. The commission continued its recommendations by suggesting that industrial courses be provided in high school for youths fourteen to eighteen years old, for adults in the evening, and part time classes for students who could work for one-half day. These recommendations parallel very closely the objectives and philosophy of modern technical and vocational education programs.

The Douglas Commission focused attention on industrial or practical education. This type of commission was formed in other states. The findings and recommendations were much the same. A need for career education was evident.

Commissions and committees discovered needs. If career education was to happen on a significant scale, national leadership and national funding would be needed. The first national organization formed to deal with this newly discovered need was the National Society for the Promotion of Industrial Education. This organization first met November 16, 1906. The meeting was attended by approximately 250 persons from twenty states. Henry Pritchett, the Society's first president, was able to acquire the approval of in-

\[\text{Ibid.}\]
dustrial education from such prominent men as President Theodore Roosevelt, Andrew Carnegie, and Commissioner of Education, Elmer Brown. The Society worked to establish federal funding for vocational education. The years of work done by this group proved successful with the passage of the Smith-Hughes Act Public Law No. 347 enacted by the Sixty-fourth Congress in 1917.

The Smith-Hughes Vocational Education Act of 1917 was the catalyst that allowed vocational, and subsequently, technical education to develop, grow, improve, and become an important force in American education. The seven million dollars appropriated in the Smith-Hughes Act was not a large sum. An important consideration was that this money created an educational partnership between the Federal government and the respective state and local governments. The Smith-Hughes Act provided funds for the preparation of vocational teachers. Matching funds were available to states for salaries of teachers, administrators and supervisors. The act specified that the funds from this source be used only for programs of less than college grade and under public supervision and control. The federal-state partnership was tied together not only by the matching fund concept, but through a Federal Board for Vocational Education and a


6U. S. Congress, Vocational Education Act of 1917 (Smith-Hughes Act), Public Law No. 347, Sixty-fourth Congress, Sec. 2.
State Board of Education for each state receiving federal funds. The State Boards were required to prepare a state plan for vocational education. These board and state plans were set up to ensure the proper use of funds and provided the states with a vehicle to follow its own plan with a minimum amount of federal regulations. The state plans were to guarantee that the federal program be under public supervision and control, that the primary purpose would be to create employability, and guided the state and local communities in providing equipment and a physical plant. Provisions for adult or evening instruction were included. These "over sixteen year old" and "evening industrial schools" inclusions led the way for many supplemental programs that would become "technical" in nature.

As vocational education increased in size through a series of federal acts, the term "technical" more and more implied a course or program requiring additional applied mathematics and science skills - as applied to the standards of the day. Melvin Barlow wrote, "Time seems to change the nature of the 'technical' so that continuously the older technical knowledge tends to become common or general. Technical, when applied to education, has a strong emphasis and implies a knowledge over and beyond manipulative skill.""
Vocational education grew with the passage of the George-Reed Act (1929), the George-Ellzey Act (1934), and the George-Dean Act (1937). These acts were mainly additions to the Smith-Hughes Act. Technical education had not as yet been conceived. However, the implications of a "technical" change were occurring. The American Vocational Association platform of 1937 stated that adult education should be providing for changing technical conditions.10

If changing technical conditions were a concern in 1937, this concern magnified itself greatly with the coming of World War II. Science and technology expanded immensely. New disciplines, careers, and specialties emerged. Then World War II caught the United States in great shortages of skilled and technical employees. The country rose to the occasion and produced the goods necessary for war, but the results of the lack of skilled manpower were remembered. The knowledge explosion continued at a rapid pace. To prevent a recurrence of a lack of scientists, engineers, craftsmen and technicians; Congress with its "memory" of past crisis passed the National Defense Education Act in 1958. Between the conclusion of World War II (1945) and the passage of the National Defense Education Act, one additional major vocational education act was passed. The George-Barden Act of 1946 did not specifically spell out technical education. However, the bill was significant in the development of tech-

technical education because the bill provided for much greater flexibility in the use of funds, and later became the National Defense Education Act—Title VIII.

The explosion of knowledge, increased demands from business and industry, a shortage of engineers and professionals, the war, emerging careers, and fear for national security were all forces that helped shape the emergence of a new type of education—technician training or technical education. These conditions aided in the passage of the National Defense Education Act and propelled technical education in much the same fashion that the Smith-Hughes Act did for vocational education in 1917.

Technical education did not just abruptly begin with the passage of the National Defense Education Act. Although, only unofficially called technical because of its emphasis on science and mathematics, programs were emerging soon after World War II. Technical education evolved from vocational education. The first apparent observation was work being done by the trade and industrial education division of vocational education. It was this group, the trade and industrial education leaders, that first suggested a national meeting to discuss the extent of interest in these emerging careers. This meeting was held December 5, 1956, during the American Vocational Association’s annual convention. The meeting

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called by James Pearson, Assistant Commissioner for Vocational Education, was chaired by John P. Walsh, National Director of the Trade and Industrial Education Branch of the U. S. Office of Education. The twenty-one members attending this meeting recognized a continuing and growing need in technical education and requested that the Office of Education assume the leadership in developing the possibilities of technician training.  

This central meeting on technical education confirmed the members' suspicion that the apparent need for technical education was nationwide. The group encountered difficulty in exactly defining technical education. It was decided that with the guidance from the U. S. Office of Education, a series of regional meetings should be held with smaller groups to confront the problems of identity, the role of the technician, means of implementing programs, and growth. These regional meetings were held in San Francisco, October 15-17; Milwaukee, October 28-30; Ogden, November 5-7; Asbury Park, November 12-14; and Memphis, November 5-7.

These regional conferences reaffirmed the need for technical education in the United States. The states through their vocational education departments were willing to assume the added responsibility of providing technical education with their other career objectives.

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13 Ibid.
14 Ibid. p. 162.
With the aid of these regional leaders, most of them from the trade and industrial education sections of vocational education, Lynn A. Emerson, a special consultant to the U. S. Office of Education, prepared a special publication that was to clarify the definition and understanding of technical occupations. This publication, defining technical education was titled: *Vocational-Technical Education for American Industry* and would be used as a guideline as programs were being developed in the various states.

The prime mover of technical education prior to the passage of the *National Defense Education Act* was the vocational educators. They had evolved programs, recognized a different type or degree of training, recognized the need for increased emphasis in related math and science, and unified forces for national attention, and subsequently legislation.

The conditions that created a favorable atmosphere for passage of federal legislation supporting funding of technical education were not all created by the work of the vocational education people. Several other complex factors were at work in the United States.

The impact of Russia's successful attempt to place a satellite (Sputnik) around the earth, October 4, 1957, created a new awareness of all educational disciplines dealing with mathematics

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and science. All phases of math, science, and engineering were evaluated and expanded. The U. S. found itself in an unfamiliar role of second-best. The U. S. had lost scientific prestige with the orbiting of Sputnik I. The earlier emphasis on the scientific and mathematics portion of technical education made technical education a favorable segment of education to expand. The loss of confidence in the educational system raised doubts about the system and caused people to wonder if perhaps these weaknesses even made our national defenses vulnerable.

During the years 1954 and 1955 the American Society for Engineering Education strongly advocated, in a series of magazine articles, a change in engineering curriculum. These writings were collected and analyzed in a publication, *The Report on Evaluation of Engineering Education*. A summary of these articles suggested a change toward more general engineering education and theoretical concepts. Specialization should be geared toward graduate study and undergraduate education be more directed toward preparation for advanced education (Master's and Ph.D. programs). This guide to suggested change and summary of the Society's *Report on Evaluation of Engineering Education* became known as the Grintner Report.

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Technical education, especially that portion associated with engineering, received an indirect boost from the results of the Grintner Report. This study of the engineering curriculum was released in 1955. It stated that with the knowledge explosion and the increased theoretical data being discovered, some engineering colleges should alter their offerings to a highly theoretical approach and eliminate most or all of its practical preparations. This direction then became the common practice of engineering colleges leaving a further gap between the practical application and the theoretical experiences. This gap appeared at approximately the same point in time that new para-professional or mid-level careers were emerging. The pull toward the theoretical by the engineering colleges at a time of expanded need in the practical field caused a critical shortage of engineering technicians in American industries.

The suggestions and directions of engineering education suggested by Grintner were fortified in 1957 by the President's Science Advisory Committee. This group also suggested curriculum reform in engineering education. They emphasized broad theoretical concepts, increased study in social science and government at the undergraduate level and stressed research and specialization at the Master's and Ph.D. level. 18

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Engineering technical careers, an emphasis on science and mathematics, a national feeling of insecurity, and previous work and leadership by vocational educators all combined to bring about the passage of the National Defense Education Act. Title VIII of this act, later to become Title III of the George-Barden Act, identified technical education as a separate type of vocational education. This act (NDEA), primarily a higher education act, tied technical education to the higher education field, although philosophically and administratively it was vocational, creating a paradox still with us today.

The National Defense Education Act of 1958 was to improve and strengthen the national defenses through a wide variety of educational programs. Specifically the act reads as follows:

> to strengthen the national defense and to encourage and assist in the expansion and improvement of educational programs to meet critical national needs; and for other purposes. 19

The act is divided into many titles and sections. Some of the major provisions (other than technical education) include:

- Loans to students in higher education institutions
- Direct grants to strengthen instruction in science, mathematics, modern foreign languages, etc.
- Guidance, testing, and programs to encourage able students to pursue education goals
- Language development

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Research and experimentation in educational media

Provide science information services.

The National Defense Education Act of 1958, identifies funds for trained and technical manpower as it relates to higher education. The mention of technical skills and trained manpower is very apparent in the general provisions of the act. They read:

The Congress hereby finds and declares that the security of the Nation requires the fullest development of the mental resources and technical skills of its young men and women. The present emergency demands that additional and more adequate education opportunities be made available. The defense of this Nation depends upon the mastery of modern techniques developed from complex scientific principles. It depends as well upon the discovery and development of new principles, new techniques, and new knowledge.

We must increase our efforts to identify and educate more of the talent of our Nation. This requires programs that will give assurance that no study of ability will be denied an opportunity for higher education because of financial need; will correct as rapidly as possible the existing imbalances in our educational programs.

The Congress reaffirms the principle and declares that the States and local communities have and must retain control over and primary responsibility for public education. The national interest requires however, that the Federal Government give assistance to education for programs which are important to our defense.

To meet the present educational emergency requires additional effort at all levels of government. It is therefore the purpose of this Act to provide substantial assistance in various forms to individuals and to States and their subdivisions, in order to insure trained
manpower of sufficient quality and quantity to meet the national defense needs of the United States. 20

The educational delivery system at this time dealing with manpower and technical skill training was clearly the sole responsibility of vocational education, but the act is directed mainly to higher education as illustrated in Section 103 when it defines the type of institution able to participate in the act. They are:

an educational institution in any State which (1) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such certificate, (2) is legally authorized within such State to provide a program of education beyond secondary education, (3) provides an educational program for which it awards a bachelor's degree or provides not less than a two-year program which is acceptable for full credit toward such a degree, (4) is a public or other nonprofit institution, and (5) is accredited by a nationally recognized accrediting agency or association approved by the Commissioner for this purpose or, if not so accredited, (A) is an institution with respect to which the Commissioner has determined that there is satisfactory assurance, considering the resources available to the institution, the period of time, at any during which it has operated, the effort it is making to meet accreditation standards, and the purpose for which this determination is being made, that the institution will meet the accreditation standards of such an agency or association within a reasonable time, or (B) is an institution whose credits are accepted on transfer by not less than three institutions which are so accredited, for credit on the same basis as it transferred from an institution so accredited. For purposes of Title II such term includes any school of nursing as defined in subsection (1) of this section; any proprietary institution of higher education (as

20Ibid., Sec. 101.
defined in section 461 (b) of the Higher Education Act of 1965) which includes in its agreement under section 204 of such title such terms and conditions as the Commissioner determines to be necessary to insure that the availability of assistance to students at the school under such title has not, and will not, increase the tuition, fees, or other charges to such students; and any school which provides not less than a one-year program of training to prepare students for gainful employment in a recognized occupation and which meets the provisions of clauses (1), (2), (4), and (5). 21

Although the National Defense Education Act was meant to be a higher education bill, the Congress recognized that career education of less than baccalaureate degree was being done by the vocational education people. Furthermore, Congress considered the job being done by vocational educators of great quality and merit. The confidence by the Congress in the vocational education programs is emphasized in Barlow's History of Industrial Education in the United States as he quotes the findings and purposes of the act as follows:

The Congress hereby finds that the excellent programs of vocational education, which States have established and are carrying on with the assistance provided by the Federal Government under the Smith-Hughes Vocational Education Act and the Vocational Education Act of 1946 (the George-Barden Act), need expansion to provide vocational education to residents of areas inadequately served and also to meet national defense requirements for personnel equipped to render skilled assistance in fields particularly affected by scientific and technological developments. It is there-

21Ibid., Sec. 103.
fore the purpose of this title to provide assistance to the States so that they may improve their vocational education programs through area vocational education programs approved by State Boards for vocational education as providing vocational and related technical training and retraining for youths, adults, and older persons, including related instruction for apprentices, designed to fit them for useful employment as technicians or skilled workers in scientific or technical fields.\footnote{22}

During discussions on the bill in Congress, recommendations were made to limit the use of funds under this act, and specifically this title, to programs necessary to national defense. This limited somewhat the use of funds to the total broader spectrum of area vocational schools. This title did place the responsibility of, and the stewardship of federal technical education funds with the State Boards of Vocational Education and subsequently vocational educators. Furthermore, the original Title VIII of the National Defense Education Act would amend and become Title III of the Vocational Education Act of 1946 (George-Barden Act).

As the act finally emerged, technical education funds, would be administered by, and the programs operated by, vocational education. By definition technician programs would be post secondary and specifically would be of a different nature and scope than the manipulative skills associated with traditional vocational education programs. The philosophy and objectives were vocational.

\footnote{22}{Barlow, \textit{op. cit.}, p. 162.}
Technical education emerges from the National Defense Education Act as part of the vocational education movement.

Title III of the George-Barden Act or Title VIII of the National Defense Education Act is the gut section for technical educators. As programs drift toward the collegiate concept, the connection to the vocational education movement is still intact. This section (Title VIII) again keeps referring to technician and highly skilled scientific workers, but the connection to the State Board is very obvious as the funds became a part of the Vocational Education Act of 1946, the identity of technical education is assured in Section 303 which states:

that funds appropriated under section 301 of this title shall be used exclusively for the training of individuals designed to fit them for useful employment as highly skilled technicians in recognized occupations requiring scientific knowledge, as determined by the State board for such State, in fields necessary for the national defense.²³

Under the administration of the State Department of Vocational Education funds can be paid to the State for the following purposes:

(1) maintenance of adequate programs of administration, supervision, and teacher-training;

(2) salaries and necessary travel expenses of State or local school personnel, including teacher, coordinators, supervisors, vocational guidance counselors, teacher-trainers, directors, administrators, and

²³U.S. Congress, op. cit., Sec. 303 (a) (b).
others;

(3) travel expenses of members of advisory committees or State boards;

(4) purchase, rental, or other acquisition, and maintenance and repair of instructional equipment;

(5) purchase of instructional supplies and teaching aids;

(6) necessary costs of transportation of students;

(7) securing necessary educational information and data as a basis for the proper development of area vocational education programs and programs of vocational guidance;

(8) training and work experience training programs for out-of-school youths;

(9) related instruction for apprentices; and

(10) determining the need for, and planning and developing, area vocational education programs.24

Before the states could use funds for the above purposes they were required to amend or alter their State Plans for vocational education. This new or amended State Plan must have a part which:

(1) designates the State board as the sole agency for administration of such part of the plan (or for the supervision of the administration thereof by State or local educational agencies);

(2) provides minimum qualifications for teachers, teacher-trainers, supervisors, direc-

24Ibid., Sec. 304 (a).
tors, and others having responsibilities under the plan;

(3) shows the plans, policies, and methods to be followed in carrying out such part of the State plan;

(4) provides such accounting, budgeting, and other fiscal methods and procedures as are necessary for the proper and efficient administration of such part of the State plan.\(^\text{25}\)

With funds from the federal government, states were now able to expand their previous probes into technical education into full scale technician programs. The act while providing "seed" money did not answer many of the complex questions and confusion surrounding this new educational development. Confusion and unanswered questions were due to the wide range of technical job classifications and the numerous educational programs required to fill these classifications.\(^\text{26}\) This job classification of technicians was made more difficult because of the numerous methods - delivery systems able to provide technical education. Advancement from skilled jobs, company training, armed forces training, technical institution training and even highly sophisticated high school programs could conceivably produce technicians. The National Defense Education Act did not clarify this issue, but the training still progressed.

The most important work developed to find a common base

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\(^{25}\)Ibid., Sec. 305 (a).

\(^{26}\)Barlow, op. cit., p. 417.
for identifying and developing technical education was prepared by Maurice W. Roney in the early 1960's. This guide would enable states (including Ohio) to follow a somewhat common ground that still gives us a basis for evaluating the mission and objectives of technical education. Noteworthy portions of Roney's document included two basic assumptions.

1. The technical occupations, whether or not they are closely related to engineering functions, require broad technical competence based on a knowledge of engineering and scientific principles.

2. A significant part of this knowledge can best be provided by formal systematic training in organized programs of instruction. 27

For occupation identification, Roney suggested five points:

1. Facility with mathematics; ability to use algebra and trigonometry as tools in the development of ideas that make use of scientific and engineering principles; and understanding of, though not necessarily facility with, higher mathematics through analytical geometry, calculus, and differential equations, according to the requirements of the technology.

2. Proficiency in the application of physical science principles, including the basic concepts and laws of physics and chemistry that are pertinent to the individual's field of technology.

3. An understanding of the materials and processes commonly used in the technology.

4. An extensive knowledge of a field of specialization with an understanding of the engineering and scientific activities that distinguish the technology of the field. The degree of competency and the depth of understanding should be sufficient to enable the individual to do such work as detail design using established design procedures.

5. Communication skills that include the ability to interpret, analyze, and transmit facts and ideas graphically, orally, and in writing.28

Roney identified twelve technical criteria describing technician activities. These included:

1. Applied knowledge of science and mathematics extensively in rendering direct technical assistance to scientists or engineers engaged in scientific research and experimentation.

2. Designs, develops, or plans modifications of new products and processes under the supervision of engineering personnel in applied engineering research, design, and development.

3. Plans and inspects the installation of complex equipment and control systems.

4. Advises regarding the maintenance and repair of complex equipment with extensive control systems.

5. Plans production as a member of the management unit responsible for efficient use of manpower, materials and machines in mass production.

6. Advises, plans, and estimates costs as a field representative of a manufacturer or

28 Ibid.
distributor of technical equipment and/or products.

7. Is responsible for performance or environmental tests of mechanical, hydraulic, pneumatic, electrical or electronic components or systems and the preparation of appropriate technical reports covering the tests.

8. Prepares or interprets engineering drawings and sketches.

9. Selects, compiles, and uses technical information from references such as engineering standards, handbooks, and technical digests of research findings.

10. Analyzes and interprets information obtained from precision measuring and recording instruments and makes evaluations upon which technical decisions are based.

11. Analyzes and diagnoses technical problems that involve independent decisions.

12. Deals with a variety of technical problems involving many factors and variable which require an understanding of several technical fields.29

Many other factors affected the development of technical education prior to its introduction in Ohio in the early 1960's. The work of the various engineering groups such as the Society for the Promotion of Engineering Education and the Society of American Engineering Education identified and developed engineering technician curriculums. Industrial training programs were emphasizing technical aspects of their apprenticeship and supervisory training. Although aiding in the overall development of

29 Ibid., pp. 6-8.
technical education, these forces lacked the necessary combi-
nation to promote and develop programs to any significant de-
gree. It was not until the National Defense Education Act pro-
vided funds and the U. S. Office of Education provided the
leadership did technical education gain a foothold in Ohio.
CHAPTER III
TECHNICAL INSTITUTES: UNDER THE
STATE DEPARTMENT OF EDUCATION

The provisions of the National Defense Education Act as amended in the George-Barden Act required an amendment in the State Plans. States were required to identify the types of programs they were to offer and how they were to be administered. There were some variations open to the states due to wording in the act that included area vocational programs, technician training for apprentices, technical training for adults, etc. Because there was not distinct line separating manipulative skills and technical skills, the states could interpret this wording differently. Ohio, in its first State Plan including technical education, decided to define the technician in the more highly skilled specialized careers such as mechanical engineering technician rather than defined as an advanced craftsman or apprentice. This decision would provide the opportunity for new programs and new technical schools to open in Ohio.

Roney's criteria for technical education programs published in 1960 had originated through his experiences in the U. S. Office

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30 Personal interview with Byrl R. Shoemaker, State Director (Ohio) of Vocational Education, January 12, 1973.
and with the work of multi-state conferences held after the passage of the National Defense Education Act. Ohio had adopted criteria similar to Roney's as early as 1959 when Ohio's first State Plan guiding technical education was adopted. For new programs in Ohio, developed under the provisions of the National Defense Education Act, the following criteria were required: the program had to serve students from more than one school district to qualify as being an area school, an agency other than education was required to certify that the program was essential to national defense, there were employment opportunities, and an industrial advisory committee be named for each program. 31

To qualify as technical programs under the act, the program was to be considered technical if it answered in the affirmative to the following points:

a. Does the occupation lie between that of the skilled crafts and the professions?

b. Does the occupation require technical competency based upon specialized, intensive training in technical subjects involving the direct application of functional aspects of related science and mathematics?

c. Is the occupation one in which most of the persons' work is concerned with the application of technical knowledge and technical understanding in contrast with manipulative skills?

31 From T & I Form 1t and 5t adopted June 1, 1959, for school systems applying for approval of new technical programs.
d. Is the occupation one for which adequate technical training can usually be provided on the secondary level, extension programs for out of school youths and adults on a full time or part time basis, or terminal courses at the post high school level of not more than two years in length?  

The technical school applying for reimbursement was required to submit a curriculum that allowed for a minimum of 50% special laboratory and related technical subjects, 15% basic laboratory subjects (math and science), 20% communicative and leadership subjects, and 15% of the course work distributed among the needs of the particular program. Students were required to be full time with a minimum of fifteen in a class, and a two year program of 1,800 contact hours. To help insure that quality technical programs were offered and taught by proficient instructors the following standards were adopted by the Ohio Division of Vocational Education:

**Qualification of Instructors**

Faculty qualifications shall include:

A. Faculty members should be competent in the field in which they teach, normally holding the baccalaureate or higher degrees in fields of concentration appropriate to their teaching assignments and have at least one year employment experience in a technical field related to their area of instruction.

Technical competency in the field gained through five or more years of experience may be substituted for baccalaureate degree work.

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32 Ibid.
B. Department chairman or persons responsible for curriculum planning and supervision must hold the Master's degree or other advanced preparation and experience in an appropriate field of concentration.

C. A minimum of 60 percent of the curriculum should be taught by faculty members who devote their full time to teaching and/or administrative responsibilities at the institution in question.

D. A significant proportion of all faculty members should have had recent experience in industrial, business, distributive, or professional practice pertinent to the technologies which they teach, and such experience should be kept up-to-date through professional association, consultative practice, and individual reading and research.

E. Faculty members should be provided in numbers which will assure adequate attention to individual students.

F. All professional personnel must meet standards for certification of the State Department of Education. Special certification blanks are available for this purpose.

Time Schedule

Each technician training curriculum shall operate in conformance with the following general time distribution for both part-time and full-time students:

A. **Special laboratory and related technical subjects** - A minimum of 50 percent of the total instructional time for the program shall be devoted to specialized laboratory experiences and related technical subjects in such things as engineering layout, electronic theory, machine design, chemistry, physics, mathematics, metallurgy, business principles, management functions, business or secretarial procedures, production methods, and analysis of materials.
B. Basic laboratory experiences - A minimum of 15 percent of the total instructional time for the program shall be devoted to basic laboratory or manipulative experiences in the use of such things as equipment and instruments, hand and machine operations, blueprint reading, drawing, sketching, display, ad layout, etc.

C. Communicative and leadership subjects - A minimum of 20 percent of the total instructional time of the program shall be devoted to the development of skills in oral expression, written forms of communication, graphic forms of expression, human relations, supervisory techniques and other leadership development skills.

D. The remainder of time (15 percent) shall be distributed according to the need of the area of instruction.

Length of Course

Courses of instruction shall be two years in length when conducted on a full-time basis. Such programs may be operated for a longer period of time when on a part-time basis. A minimum of twenty-five class and/or laboratory hours per week for a period of thirty-six weeks shall be considered an academic year. With some types of technologies, it may be more desirable to develop a curriculum of 1,800 hours (or its equivalent in credit hours) for a two-year program. (For our purposes, three hours laboratory equals one credit hour and one class hour equals one credit hour with two hours outside work for a five-day week.)

With funds available, criterion, and standards set; the technical schools in Ohio began to emerge.

The first program to emerge in Ohio was initiated at Barberton, by the Barberton Department of Vocational Education under the Division of Vocational Education, Standards for Technical Education, a mimeographed paper dated June, 1959.
direction of Sebastion Furante and guided by the State Department of Education. The system began with only one program, Mechanical Technology. The students used the vocational day trade facilities at Barberton High School. By 1963 when W. E. Bauer was hired to direct the technical programs, a Chemical program had been added to the original Mechanical program.

It became increasingly apparent that a new building to house technical programs would be needed if technical education at Barberton was to grow. The Board of Education and area industrial leaders were either not interested enough in the program, or the priority was low, because nothing materialized in the way of new facilities. With increased pressure for building needs, lack of funding, and the new technical programs offered at Akron University, the Barberton School of Technology, a first in Ohio, closed its doors in 1965.\[35\]

The second program to develop under the State Department of Education was the Lorain School of Technology starting in September of 1960.\[36\] The first catalog contained three programs: Mechanical, Electrical, and Chemical technologies. Eighty-eight students enrolled the first year taught by three faculty members directed by Dr. Max Lerner.\[37\]

By 1962 school year, thirty-eight students had enrolled at


\[36\] Personal correspondence with Dr. Max Lerner.

\[37\] Dr. Max Lerner is now Vice Chancellor of two year campuses, Ohio Board of Regents.
Lorain in four programs: Industrial Technology was added in 1962, Civil Technology in 1963. Ninety-two percent of the first graduating class at Lorain was employed within two weeks after graduation.\(^\text{38}\)

The original curriculum offered at Lorain School of Technology would not be considerably altered by technical colleges and institutes during thirteen years of development. The original Chemical curriculum appeared in the following way:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry</td>
<td>7</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Scientific Methods and Laboratory Use</td>
<td>2</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>7</td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>23</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>Physics</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Qualitative Chemistry</td>
<td>7</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>23</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Training</td>
<td>2</td>
</tr>
<tr>
<td>Industrial Economics</td>
<td>5</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>Quantitative Chemistry</td>
<td>6</td>
</tr>
</tbody>
</table>

\(^{38}\)"Fact Sheet," Lorain School of Technology, 1962.
The Lorain School of Technology has an important role in the development of technical education in Ohio as these are the oldest programs still operating in the State. In March, 1964, the Lorain School of Technology was incorporated into the Lorain County Community College.  

In 1960 three other technical schools were opened through the joint efforts of the State Department of Education and local school boards at Cleveland, Salem, and Ashtabula. In October, 1960, a Citizens School Advisory Committee with the help of the Trade and Industrial Services of the State Department of Education surveyed the Lake County area for technical education needs. From the survey came a recommendation that a technical school be sponsored by the Willoughby-Eastlake Board of Education. The new school at Willoughby, named

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Chandler Technical School began operations in 1962.\textsuperscript{41} When the school moved into the former Chandler Estate (donated to the school system) it became the first technical school in Ohio to have its own facility. In 1965 Industrial Technology was added to the original programs: Electrical, Data Processing, Mechanical, and Chemical. In its last year of operation, 1966-67, only 165 students attended the school and the final commencement program listed forty-seven graduates.\textsuperscript{42} Chandler Technical School's operation was taken over by the Lake County Community College in September, 1967.

By 1965 the State Department of Education was funding ten technical schools:

1. Hamilton Technical School
2. Springfield-Clark Technical Education Program
3. Columbus Area Technician School
4. Mansfield School of Technology
5. Penta Technical College
6. Cleveland Technician School
7. Chandler Technical School
8. Ashtabula Technical School
9. Canton Area Technical School
10. The Salem School of Technology.\textsuperscript{43}

By this time (1965) the influence of the Ohio Board of Regents was being felt in Ohio. Lorain Technical School had given way to a community college and new programs on college campuses had forced others to close at Barberton, Dayton, and Miami Valley. Section 3357


\textsuperscript{42} Chandler Technical School, Commencement Program, June 10, 1967.

\textsuperscript{43} Ohio Board of Regents, Master Plan for State Policy in Higher Education, June, 1966, p. 47.
FIGURE 1

AREA TECHNICAL SCHOOLS ESTABLISHED UNDER THE NATIONAL DEFENSE EDUCATION ACT 1965-66
AREA TECHNICAL SCHOOLS
1. Hamilton Technical School
2. Springfield & Clark Co. Technical Education Program
3. Columbus Area Technician School
4. Mansfield School of Technology
5. Penta Technical College
6. Cleveland Technician School
7. Chandler Technical School
8. Ashtabula Technical School
9. Canton Area Technical School
10. The Salem School of Technology
of the Ohio Revised Code rewritten in 1963 permitted technical schools under the boards of education to create technical institute districts chartered by the Ohio Board of Regents. Funding and administrative control loomed as problems for developing and existing technical programs. The State Department of Education and the Ohio Board of Regents reached an agreement on technical and vocational education released early in 1967.  

Under the agreement the State Department would still administer technical schools electing to remain with public school districts, and would guide, council, and fund (under National Defense Education Act) technical programs chartered by the Regents but still meeting the State Department of Education's technical education standards revised in 1966.  

For those technical programs operated under charter from the Regents a new reimbursement schedule was adopted: 

**Unit reimbursement rates will be as follows:** 

**Schools under Public Education will be $8,000.00 per unit if the entire curriculum is approved as technical subjects. If the (15%) electives (or any part thereof) are in areas of "non-technical" subjects, the reimbursement for the unit will be $7,000.00.**

Schools receiving assistance from the Board of Regents will receive 50% of the above rates.

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44 See appendix A for complete text of the agreement.


46 Ibid.
The State Department remained involved in the development of technical institutes. New programs were being considered in Nelsonville, Cincinnati, Zanesville, Portsmouth, and Northwest Ohio. Department of Education personnel conducted surveys, promoted new programs and schools, and helped upgrade faculties and equipment. The vocational teacher-education departments at Ohio State, Kent, Toledo, and the University of Cincinnati worked with the new technical staff members in certification and in-service training.

Program numbers operating under the State Department had stabilized by 1967 with the following schools and technologies eligible for technical education reimbursement:

<table>
<thead>
<tr>
<th>School</th>
<th>Technical Curricula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Technical Institute</td>
<td>Mechanical</td>
</tr>
<tr>
<td>(formerly Ashtabula Tech)</td>
<td>Electronic</td>
</tr>
<tr>
<td>Canton Area Technical School</td>
<td>Mechanical</td>
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<tr>
<td></td>
<td>Electrical</td>
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<tr>
<td></td>
<td>Industrial</td>
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<tr>
<td></td>
<td>Chemical</td>
</tr>
<tr>
<td>Courter Technical School</td>
<td>Graphics</td>
</tr>
<tr>
<td>(Cincinnati Cooperative School of Technology)</td>
<td>Sales</td>
</tr>
<tr>
<td></td>
<td>Computer</td>
</tr>
<tr>
<td></td>
<td>Mechanical Design</td>
</tr>
<tr>
<td>Cleveland Technician School</td>
<td>Mechanical</td>
</tr>
<tr>
<td></td>
<td>Electronic</td>
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<td></td>
<td>Industrial</td>
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<td></td>
<td>Chemical</td>
</tr>
<tr>
<td></td>
<td>Horticulture</td>
</tr>
<tr>
<td>Columbus Technical Institute</td>
<td>Architectural</td>
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<tr>
<td></td>
<td>Drafting</td>
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<td></td>
<td>Computer</td>
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<td>Chemical</td>
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<td>Food Processing</td>
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<tr>
<td></td>
<td>Electronic</td>
</tr>
<tr>
<td>Institution</td>
<td>Programs Offered</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Columbus Technical Institute</td>
<td>Mechanical, Metallurgical, Retail, Wholesale, Food Service, Aerospace, Ground</td>
</tr>
<tr>
<td>continued</td>
<td></td>
</tr>
<tr>
<td>Dayton Board of Education</td>
<td>Industrial, Retail</td>
</tr>
<tr>
<td>Technical Division</td>
<td></td>
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<tr>
<td>Miami Valley (Hamilton)</td>
<td>Mechanical, Electrical</td>
</tr>
<tr>
<td>Mansfield School of Technology</td>
<td>Mechanical, Electrical, Metallurgical, Retail, Industrial</td>
</tr>
<tr>
<td>Penta County Technical College</td>
<td>Chemical, Mechanical, Electrical, Computer, Food, Distribution, Retail-Wholesale, Civil, Tool, Manufacturing, Welding, Executive, Secretarial, Accounting</td>
</tr>
<tr>
<td>Springfield and Clark County</td>
<td>Agri-Business, Agri-Equipment, Computer, Electrical, Mechanical, Executive, Secretarial, Accounting</td>
</tr>
</tbody>
</table>

Sixteen approved programs were being offered at community colleges and five at university.
branches. 47

In 1968 the State Department of Education helped two new centers open, Tri-County Technical Center at Nelsonville, and the Four-County Technical Center at Archbold. Also in 1968 the State Department of Education, directed by R. D. Purkey, the State Technical Education supervisor, planned a Governor's Conference on technical education. The event, held April 22, 1968, at the Convention Center in Cincinnati, drew technical educators and technician employers from the entire state. The conference boosted the confidence and image of technical education to the extent that the conference was repeated the following year. 48

The 1969 Governor's Conference shifted its theme from technical education to vocational education and featured all phases of vocational education. The 1969 event entitled "A Governor's Symposium on Vocational Education" was held April 8 and 9, 1969, at the Neil House Motor Inn, Columbus, Ohio. The event was sponsored by the Ohio State University College of Education. The 1969 Governor's Conference was also a huge success, although some technical educators were disappointed that the theme covered the entire spectrum of vocational education and not just technical education as did the earlier confer-


48 From a mimeographed planning sheet distributed by R. D. Purkey.
ence. This perhaps was another sign of the division occurring between vocational and technical educators. In the same year, 1969, the Governor's Task Force on Vocational Education recommended that there be created forty-eight vocational education districts under the State Board of Education and five technical education-university regions be created under the Regents. 49 House Bill 531 enacted in 1969 eliminated the choice of technical institutes to be controlled by either the State Department of Education or the Ohio Board of Regents. By 1971 the bill mandated that all technical programs be administered by the Regents. 50

The State Department of Education, although not administering and approving programs, continued to be a factor in the operation of the technical institutes because National Defense Education Act funds were still channeled from Washington through the Department of Education. The Ohio Organization of Technical Institutes requested that the State Department remain actively involved in technical programs. 51 This request led to a workshop sponsored by the State Department of Education for all institutes still receiving technical education funds from the State Department. The workshop was held August 12 and 13, 1972, at the Ramada Inn, Columbus, Ohio. The major item of discussion

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50 Ohio, Revised Code, c 3333.14.

51 See Chapter V for the Ohio Organization of Technical College's role in technical education.
was the request (almost a demand) by some technical educators that the State Department of Education lower its standards and allow technical programs to drop as low as 1300 contact hours. Dr. Byrl Shoemaker, Director of vocational education in Ohio, refused to consider a drastic drop in hour requirements and asked the participating institutes, branches, and community colleges to respond to the workshop in writing and make recommendations on new standards. 52

Dr. Shoemaker and the vocational staff left the workshop feeling rejected and rebuffed by the technical educators. The arguments favoring the lowering of hour standards were coming mainly from the community colleges and university branches, who, due to low contact hours in their programs, were unable to receive State Department funds. Generally, the technical institute participants were in favor of high hour standards because their programs were approved. Lowering requirements, they felt, would not only weaken technical programs, but would split the financial pot to include community colleges and university branches. In a series of correspondences and meetings between Ohio Organization of Technical Institute members and Dr. Shoemaker, the organization attempted to retain the liaison between themselves and the State Department of Education. Concerning the apparent disagreements at the workshop, one technical educator wrote to Shoemaker stating:

52 From the agenda, minutes, and the author's personal notes taken at the workshop.
I talked with John Light today and understand that there has apparently been some failure in communication between the technical institutes and your department. In case John has not conveyed to you the essence of the meeting at which the question of State Department involvement was discussed, I would like to assure you of the following facts:

(1) There were strong disagreements but they were between the representatives of community colleges and the representatives of technical institutes.

(2) I do not know of any representative of any technical institute who criticized the State Department or its policies on any matter of importance.

(3) The only change that was suggested was that some consideration be given to lowering the contact hours required in some programs to as little as 1600 hours.

The representatives of the technical institutes evidenced a strong feeling that any reduction in hours should be in general education subjects—not technical education subjects.

Byrl, I do not think we should let anything as important as your involvement in technical education suffer because of a lack of understanding. I have said these things to you previously—and have also said them on numerous occasions when I knew they would not be favorably received. Your statement that, with the funds available, you are buying integrity in technical education is one with which I concur. We need your moral support and your financial assistance. The problems of curriculum development and reporting procedures are minor issues as compared to the basic integrity of technical education.

If after talking with John and reading this letter you have any doubt, I would strongly urge you to attend a meeting of the Ohio Organization of Technical Institutes personally. You
may find a few who do not agree with my position
and John's—but no more than a few....

The meeting requested in the letter was held in Dr. Shoemaker's
office in Columbus, December 10, 1971, with the following conclusions:

1. A total of 1,650 clock hours were acceptable on
the basis of eleven week quarters rather than
twelve week quarters.

2. The percentage of:

50% technical courses
15% basic courses
20% communication courses
15% general elective courses

would be held to strict accountability. All
technical, basic and communication courses are
to be held separately for each technology with
no mixing. The general elective courses will
be allowed to mix with other technologies.

3. Reimbursement will be on full time student en-
rollment and not any FTE mixture.

4. Reimbursement will be on a unit or homogenous
group basis with no mixing of technologies.

5. All teachers must be qualified and certificable.

53 Writer's name withheld.
6. If given a "vote of confidence," the State Department staff will then provide and aid in leadership, supervision and promotion.

The State Department continued to fund technical education programs in 1972 and 1973. The previous meetings resulted in new standards for technical education to be adopted by the State Department of Education June 12, 1972.

The new standards included enrollment requirements established by the Regents, a 1,650 hour minimum requirement, and a retention of the unit reimbursement. 54

With continued funding and new standards lowering minimum hours to only 1,650 in selected programs, the technical colleges were still able to "buy integrity in technical education" from the State Department of Education.

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54 Standards for Technical Education, State Department of Education, June 12, 1972, (See appendix B for complete text).
CHAPTER IV

TECHNICAL INSTITUTES: UNDER THE

OHIO BOARD OF REGENTS

When the Ohio Board of Regents chartered the Clark County Technical Institute in February, 1966, the Regents became an active agency in the development of technical institutes in Ohio. Two other technical institutes were chartered in 1966, Stark Tech and Jefferson Tech.

Although it did not issue its first charter to a technical institute until 1966, the Ohio Board of Regents had been in existence since 1963. The Ohio Board of Regents was established by the passage of House Bill 214 of the 105th General Assembly of Ohio and became effective September 20, 1963. House Bill 214 became Chapter 3333 of the Ohio, Revised Code. This law gave the Regents responsibilities in many areas. The Board of Regents was to make studies of state policy in higher education and formulate a master plan for higher education in Ohio.\(^55\) Other powers and duties included reporting to the governor and the general assembly, reviewing and recommending appropriate requests from institutes; make recommendations concerning capital improvements, recommend programs offered and added

\(^{55}\) Ohio, Revised Code, c 3333.04 (A).

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at state institutions, and approve or disapprove all new degrees.\textsuperscript{56} Concurrently with the development of this legislation, a technical institute bill was being rewritten. The Regents was to be the controlling agency of technical institutes. With the new technical institute legislation in mind, the Regents' duty outlined in House Bill 214 stated:

The Ohio board of regents shall:

Approve or disapprove the establishment of state technical institutes or any other state institute of higher education.\textsuperscript{57}

House Bill 214 granted the Ohio Board of Regents the responsibility of establishing, funding and controlling technical institute districts. This legislation did not forbid technical education centers and programs operated by the Ohio Department of Education from continuing to operate. However, programs being operated by boards of education could not receive benefits outlined in the new technical institute legislation passed as Senate Bill 326 and effective October 8, 1963. This new legislation entered into the Ohio, Revised Code as Chapter 3357. The new legislation immediately identified technical institutes as higher education. The first paragraph of the code states that "technical institute" means an institution of higher education beyond the high school.\textsuperscript{58} To be created, a

\textsuperscript{56}Ibid., c. 3333.

\textsuperscript{57}Ibid., c. 3333.04 (D).

\textsuperscript{58}Ibid., c. 3357.01.
technical institute district was required to get approval from the Ohio Board of Regents after submitting to them a proposal, a plan of operation (official plan), and individual technical program proposals. Of special interest to technical centers operating under the State Department of Education were two provisions exempt to them. Only under the Ohio Board of Regents could associate degree credit be granted. The code stated that "the board of trustees of a technical institute district with the approval of the Ohio board of regents: Grant appropriate associate degrees to students successfully completing the technical institute's programs...."  

Additional state financial support was the second feature available to technical institute districts. Again Regents' approval was necessary:

Financial aid to a technical institute from the state, to be used for the payment of operating costs of such institute, shall be paid to the board of trustees of the technical institute district in which such institute is situated, only upon certification by the Ohio board of regents that such institute is in condition to receive students and is operable and upon approval of its official plan and the issuance of a charter to such institute as provided in..... Financial aid for equipment may be paid to the board of trustees after approval of its official plan and issuance of a charter to such institute.

The first duty of the Ohio Board of Regents was to complete

59 Ibid., c. 3357.
60 Ibid., c. 3357.09 (G).
61 Ibid., c. 3357.15.
a master plan for higher education in Ohio. This plan was under study during 1964 and 1965. It was not until the work had been completed on its master plan that the Regents chartered its first technical institute.

This document titled Master Plan for State Policy in Higher Education contained objectives and goals concerning the Regents new charge - technical institutes. In the recommendation and conclusion of this plan, the Regents state that:

There is an apparent need for a larger number of two-year instructional programs in business technologies, health technologies, agricultural technologies, and engineering technologies to meet the employment demands of our increasingly technical economy.

Technical education programs to be of higher education quality should provide a curriculum in which approximately one-half of the course requirements consists of general education and basic courses and approximately one-half of the courses involve the appropriate technology.

Satisfactory completion of a two-year technical education curriculum should be recognized by award of the degree Associate in Applied Science or in Applied Business.62

Technical institutes should be established in appropriate areas to offer two-year programs in technical education of higher education quality, with particular attention to engineering technologies, business technologies, agricultural technologies, and health technologies.

Technical institutes will be considered for districts with a minimum population of 50,000 people, with an evident unfulfilled need for technical education, and where other facilities are available for general education. The minimum desirable enrollment in a technical institution should be 500 full-time equivalent students.  

The consultants, when arriving at these conclusions for the Regents, discovered an administrative problem involving technical education. As this consultant group attempted to define the standards they discovered that due to the federal governments National Defense Education Act of 1958 and the Vocational Education Act of 1963, the State Department of Education had encouraged the development of eleven technical schools in conjunction with existing vocational schools. Evidently the consultants feared that because of association with high schools, programs could be less than technical in nature. To guard against this the consultants simply stated that if these programs offered by the technical schools were to be considered a part of higher education, their programs would have to meet with standards established by the Ohio Board of Regents.  

This problem was somewhat alleviated when in 1965 the Ohio General Assembly enacted legislation authorizing the Ohio Board of Regents to approve the awarding of degrees in two year technical school programs or area vocational schools, subject to meeting the

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63 Ibid., p. 11.
64 Ibid., p. 70.
standards of the Ohio Board of Regents. This legislation opened the way for the Clark County Technical Institute charter.

The Master Plan (1966) contained the Regents' statement of objectives for technical education which included the following purposes:

1. To encourage the building of faculties which are fully competent to teach college level subject matter.

2. To encourage the development of curricula which are of sufficient substance as to stand unchallenged alongside other programs of higher education.

3. To encourage the admission of students who are adequately prepared to benefit by this program of higher education.

4. To encourage the guarantee of minimum institutional resources in advance of the award of higher education degrees, such as will reassure prospective enrollees that a "going concern" will continue in the future to validate the educational program.

The Master Plan of 1966 stated specific points that demanded a strong institutional setting for technical institutes:

1. The technical institution should provide a program which is sufficiently broad as to offer a reasonable choice of curricula to prospective students, and should possess a student body sufficiently well developed as to demonstrate the institution's public acceptance as a permanent establish-

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65 Ohio, Revised Code, c. 3333.10.

66 Ohio Board of Regents, op. cit., p. 71.
ment. As a general rule, an institution should offer a minimum of four distinctive curricula, each enrolling 50 full-time students in order to demonstrate the institutional viability envisaged by the standard.

2. The technical institution should demonstrate a clear promise of attaining an enrollment of 500 full-time equivalent students within three years after becoming a degree granting institution.

3. The technical institution should possess physical facilities including classrooms, laboratories, offices, and equipment adequate to the teaching program which it conducts, and which lend themselves to the establishment of an institutional identity apart from secondary programs.

4. The technical institution should be able to demonstrate the adequacy of its resources for supporting present and future operating budgets.67

The Master Plan of 1966 was the Regents first attempt to put down in writing its ideas and objectives of technical education. These objectives were not far from objectives and standards set by the State Department of Education. With these standards it was possible for a newly emerging institute to satisfy the standards of both agencies.

The technical centers in Ohio, due to pressures to award an associate degree and increased financial support, began a movement toward being chartered by the Ohio Board of Regents. The technical schools at this time (1966) were under no obligation to apply to the

67 Ibid., p. 72.
Regents and meet their standards. In 1967 Columbus Technical Institute and Penta County Technical Institute followed Clark Tech, Canton (Stark), and Jefferson Tech in seeking a charter. Four County Tech applied to the Regents in 1968. Cincinnati Tech, Muskingum Tech, North Central Tech, Tri-County Tech, and Vanguard Tech submitted their programs in 1969. Scioto Tech followed in 1970. By 1969 (effective July 1, 1971) the choice of operating under either the State Department of Education or the Ohio Board of Regents was closed with the passage of House Bill 531.

Effective July 1, 1971, all public post high school technical education programs shall be operated by technical institutes, community colleges, university branches, state colleges, state-affiliated universities and state universities. Subject to rules and regulations adopted by the Ohio board of regents, the board of trustees or directors of one of the above such institutions shall adopt a plan of transition governing each public post high school technical education program not specifically identified or included in this section which is located in the geographic region of such institution as defined by the board of regents. The plan of transition shall provide the the dissolution of such technical education programs either by transfer of a program's lands, buildings, and equipment to one of the above such institutions or by complete termination of the technical education program.68

Not until after the release of the Master Plan of 1966 did the Regents actively become involved in the development of technical programs. In 1967 and 1968 the Regents approved associate degrees in

68Ohio, Revised Code, c. 3333.14.
115 technical programs to be offered at technical institutes and community colleges. The rapid development of programs caused the Regents to set a more detailed list of standards for the approval of technical degree programs. These standards, published in much the same format as the State Department of Education's standards, were adopted September 5, 1967.69

These standards stated that in approving new programs the Regents would consider two general factors: the quality of the teaching program and the viability of the institution in supporting the teaching program. To request program approval the institute would address themselves to five points: faculty, student services, curriculum, library, and institutional requirements. The faculty would have to be competent in their fields, normally holding baccalaureate degrees. A greater importance was placed on degrees in the Regents standards, but a degree for instructors was not made mandatory. The competence of the instructor in his field of concentration (experience) was considered first. Department chairmen or supervisors were required to have a minimum of a Master's degree.

Students accepted to programs were to be a high school graduate. Adequate testing programs were to be carried out to assist in the proper evaluation of students. Adequate guidance services and placement services were necessary.

69Ohio Board of Regents, Standards for Approval of Associate Degrees in Two-Year Technologies, September, 1967.
The curriculum was to be set up and expressed in units of credit (semester or quarter-hour system). The curriculum was to consist of approximately 25% basic science and mathematics, 25% of the curriculum was to be in oral and written communications and humanistic-social studies, and 50% of the curriculum was to be in technical courses. The curriculum length was to be two full academic years with a minimum of ninety quarter hours of credit. The Regents standards stressed ninety quarter hour credit for a complete program and the State Department of Education demanded a minimum of 1800 hours of contact or clock hours. With the Regents standard of three hours of work per week per credit it was conceivable that with little or no laboratory experience a student could receive an associate degree with as few as 1300 hours of instruction in the two years. The curriculum of the associate degree program for a technology was to have as its primary objective, an educational program for immediate employment. However, appropriate attention was given to the development of curricula to aid in transfer if a graduate so desired.

The institution was to be able to provide a program broad enough to offer a reasonable choice of curricula, a minimum of four, each enrolling fifty full time students. The institute was to have adequate facilities, a sound financial base, and a clear promise of attaining an enrollment of 500 full time equivalent students.70

70 Ibid.
As these standards were being worked out, and as more technical institutes applied for a charter from the Regents, it became apparent that the administrative confusion at the state level needed to be settled. The Regents offered charters, approved degree programs and provided state funds to technical institutes and the State Department of Education administered the National Defense Education Act funds. The two agencies, sometimes at odds, but usually just ignoring the operation of the other reached a memorandum of understanding on technical and vocational education in 1967. This agreement defined vocational education as the development of work skills for high school students and adults. The organization and operation of vocational programs were the responsibility of the secondary schools and the Ohio Department of Education. 71

Technical education was defined as a post-high school program for high school graduates entering into para-professional occupations. Technical education was to emphasize scientific and technical knowledge with work skills as a corollary. The organization and operation of technical education recognized by the associate degree was the responsibility of the Ohio Board of Regents, with cooperation and assistance from the Division of Vocational Education, State Department of Education. The legal and financial commitment to technical education by the State Department of Education (because of National

71 For full text of the Memorandum of Understanding on Technical and Vocational Education see appendix A.
Defense Education Act funds) was to apply only to technical education programs meeting the standards of the State Department of Education. This agreement was adopted officially by the State Board of Education March 13, 1967, and the Ohio Board of Regents October 5, 1967.

This agreement was of great importance to the technical institutes who had been meeting the requirements of both agencies. National Defense Education Act funds would continue to be dispursed through the State Department to the technical institutes.

Program development in technical institutes continued to accelerate. Forty new programs were approved by the Regents in September and October of 1969.72

Throughout the year 1970, technical institutes applied for and were granted permission to develop thirty-nine additional programs.73 New program approvals slowed down in 1971 with only twenty new technologies developed in the technical institutes.74 Program development accelerated again in 1972 when the Regents approved forty-four new technologies offered by the technical institutes.75

After the Memorandum of Agreement between the Ohio Board of

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72 Ohio Board of Regents, Minutes of Meetings, September 19 and October 17, 1969 (typewritten).
73 Ohio Board of Regents, Minutes of Meetings for the entire year 1970 (typewritten).
74 Ohio Board of Regents, Minutes of Meetings for the entire year 1971 (typewritten).
75 Ohio Board of Regents, Minutes of Meetings for the entire year 1972 (typewritten).
Regents and the State Department of Vocational Education the technical institutes settled into a period of relative calm. This was broken January 12, 1970, at a meeting for presidents and directors of community colleges and technical institutes called by Dr. John D. Millett, Chancellor of the Ohio Board of Regents. The Chancellor announced his new tentative plan for a system of two year colleges called University and Technical Colleges. This new structure would combine a university board of trustees with a technical board who would jointly operate the two year system on a regional basis. This plan would have taken away the technical institutes from their respective boards and to some degree the branches away from the universities. The system proposed by Millett would take the following form:

**Bowling Green State University Area**

1. University and Technical College,
   Bowling Green-Firelands

2. Penta-County University and Technical College
   (Penta-County Technical Institute and Fostoria Academic Center)

3. Vanguard University and Technical College
   (Vanguard Technical Institute and Fremont Academic Center)

4. Four-County University and Technical College
   (Four-County Technical Institute and Bryan Academic Center)
Kent State University

1. University and Technical College, Kent-Ashtabula

2. University and Technical College, Kent-Columbiana

3. University and Technical College, Kent Warren

4. University and Technical College, Kent-Tuscarawas

5. University and Technical College, Kent-Stark

Ohio University Area

1. University and Technical College Ohio-Belmont

2. University and Technical College, Ohio-Muskingum

3. University and Technical College, Ohio-Athens

4. University and Technical College, Ohio-Lawrence

5. University and Technical College, Ohio-Scioto

6. University and Technical College, Ohio-Chillicothe
7. University and Technical College,
   Ohio-Lancaster

**University of Cincinnati Area**

1. University and Technical College,
   Cincinnati-Walters
2. University and Technical College,
   Clermont-Highland

**Miami University Area**

1. University and Technical College,
   Miami-Middletown
2. University and Technical College,
   Miami-Hamilton

**Wright State University Area**

1. University and Technical College,
   Wright-Mercer
2. University and Technical College,
   Wright-Clark

**Ohio State University Area**

1. University and Technical College,
   Ohio State-Newark
2. University and Technical College,
   Ohio State-Lima
3. University and Technical College,
   Ohio State-Marion
The new university and technical colleges would operate under the following administrative structure:

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<table>
<thead>
<tr>
<th>University Technical College</th>
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<tbody>
<tr>
<td>Board of Trustees</td>
</tr>
<tr>
<td>nine members</td>
</tr>
<tr>
<td>President</td>
</tr>
<tr>
<td>Dean</td>
</tr>
<tr>
<td>Fiscal Officer</td>
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<tr>
<td>Technical Studies</td>
</tr>
</tbody>
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This was an attempt to combine the various types of two year campuses eliminating branches, technical institutes, and academic centers.

This plan was never put into practice because of the overwhelming unified opposition to it by all segments of higher education.

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76 List of Possible University and Technical Colleges, Released by John D. Millett, January 12, 1970 (mimeographed).

77 Mimeographed sheet distributed by John Millett, January 12, 1970.
opportunity, eliminate the autonomous technical institute. It was also significant because the effects on this announcement prompted the creation of the Ohio Organization Technical Colleges.

With this plan defeated, Dr. Millett quietly revised this structure, only to introduce it later in a modified version called a general and technical college.

Although the technical institute leaders were disturbed by the possibility of a new college structure, they witnessed an increased interest in technical education by the Ohio Board of Regents. Dr. Millett used the entire October, 1970, issue of the Ohio Board of Regents Newsletter, in writing about "A New Dimension in College Education" referring to technical education. Millett stated that a new idea in college education had been born in Ohio. This new idea was that a large number of rewarding occupations could be filled by persons completing well planned two-year programs designed to meet the needs of specific occupations. Millett pointed out that technical education was being provided in Ohio by four different kinds of higher education arrangements: universities, community colleges, technical institutes (twelve of them in 1970), and university branches. In this newsletter the old "problem" of dual sponsorship (Regents and State Department) was reviewed:

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79 Ibid., p. 3.
The whole subject of financing technical education is complicated by the provisions of federal law. Under the Vocational Education Act of 1963, as amended in 1968, each state government must prepare an official state plan for vocational and technical education and must administer this plan through a single state government agency. The federal law recognizes a difference between technical education as programs, but does not recognize an organizational difference in state government between the two programs. As a result, federal funds for technical education in Ohio are channeled through the State Board of Education and may be distributed by the State Board of Education to universities, community colleges, technical institutes, and university branches in support of technical education programs.

So long as the federal government law does not draw a distinction between vocational education and technical education in organization terms, it would seem desirable for the Ohio General Assembly to establish a Board of Vocational and Technical Education Finance as the administrative mechanism whereby the state plan could be prepared for submission to the Office of Education and as the channel for the distribution of federal funds within the state. I would recommend that this State Board of Vocational and Technical Education Finance be comprised of nine members, for serving ex officio by designation of the State Board of Education, four serving ex officio by designation of the Ohio Board of Regents and the Director of Finance as the ninth member. It would be desirable for this Board to have an executive secretary, probably from the Department of Finance. The executive secretary would necessarily draw upon staff of the State Department of Education and of the Board of Regents for detailed assistance. In turn, federal funds received by the State Board of Vocational and Technical Education Finance should be distributed to school districts and to higher education institutions
offering technical education in accordance with the state plan as approved by the Office of Education in Washington.80

A new suggestion was introduced; that a new board be formed joining the Regents and the State Department with the Department of Finance controlling a tie vote. The agency with the most influence with the Department of Finance would control the federal funds.

During the year 1970 the Ohio Board of Regents through the leadership of its staff began a comprehensive study of higher education in Ohio that was to become a master plan affecting higher education in the decade of the 1970's. To formulate the master plan the Regents staff organized committees representing all of the two and four year campuses to make studies and recommendations. Technical educators were deeply involved in the forming of the new master plan.

When the Ohio Master Plan for Public Policy in Higher Education 1971 was released in March, 1971, technical institutes emerged as an important part of the higher education plan. The Master Plan: 1971 made the following references to technical institutes. In the introduction of the plan it was observed that:

Great strides have been made in the past five years in Ohio in the expansion of opportunities for technical education and in the education of individuals qualified to serve as professional associates in the performance of essential professional services to the American people. The promise of increased productivity, economy, and availability in the performance of essential professional services for our society lies with technical education. An added promise of useful

80Ibid.
and needed activity for large numbers of individuals lies with technical education. The opportunities for technical education must be further expanded and the status of technical education as a worthwhile, integral part of higher education must be enhanced.\textsuperscript{81}

In its master plan the Regents recommended that enrollment limitations for state universities be established. These enrollment limitations would allow universities to be selective while an open admissions policy be made applicable to only the two year campuses. It was further recommended that all graduates of two year programs with an associate degree be admitted to appropriate baccalaureate programs.\textsuperscript{82} This recommendation would, in the event of full university enrollment, increase enrollment at the technical institutes and other two year campuses. The open admissions to baccalaureate programs puts a new emphasis on transfer credit. Several other recommendations would have far reaching implications for the future development of technical institutes. These were:

\textbf{It is recommended that the designation of technical institutes should be changed by law to that of technical colleges.} In addition to the technical institutes existing as of December, 1970, the Ohio Board of Regents should give consideration to the desirability of establishing new technical colleges in Belmont County, Washington County, and Miami-Shelby-Darke Counties. Technical colleges should offer a two-year program in technical education in accordance with the curriculum standards established by the Ohio Board of Regents.

\textsuperscript{81} The Ohio Board of Regents, \textit{Ohio Master Plan for Public Policy in Higher Education 1971}, p. 5.
Where a technical college and a university general college have been established in the same community, it is desirable in the interests of student satisfaction and of economical management to achieve maximum possible cooperation of these separate institutions. Such cooperation at a minimum should include joint use of a common campus with common support and service facilities such as library, student center, parking, and student activities. Such cooperation might also include the appointment of a common administrative officer, or a common business officer, or a common student services officer.

It is recommended that a new provision of law be enacted which would permit a technical college to change its status to that of a state general and technical college if the board of trustees should so request and the Board of Regents should so approve. It is also recommended that this new provision of law should permit a technical college and a university general college to be merged into a single state general and technical college upon the joint request of the boards of trustees of the two colleges, with the approval of the Board of Regents. In the event of the creation of a state general and technical college, the initial board of trustees of the new institution should be the board of trustees appointed by the Governor as may be needed to provide a board of nine members. All replacement appointment thereafter should be made by the Governor and confirmed by the Senate. It is desirable that boards of trustees of a state general and technical college should be comprised primarily of persons from the area served by the college. The state general and technical college would be a comprehensive two-year institution of higher education offering programs in general studies and in technical education under one common management. Financial support of a state general and technical college would be provided from
student fees, state subsidies, federal government loans and grants, and private gifts.\textsuperscript{83}

The recommendation that technical institutes be changed by law to that of technical colleges became a reality within a year of the Master Plan: 1971 release. The recommendation of cooperation between technical colleges and university branches is now in affect, and new legislation would soon be adopted permitting the forming of a State General and Technical College.

The master plan with the help of its committees and consultants projected the growth of technical institutes to 1980. The projections were:

<table>
<thead>
<tr>
<th>TECHNICAL COLLEGES</th>
<th>PROJECTED ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cincinnati Technical College</td>
<td>5,000</td>
</tr>
<tr>
<td>Clark County Technical College*</td>
<td>4,500</td>
</tr>
<tr>
<td>Columbus Technical College*</td>
<td>10,000</td>
</tr>
<tr>
<td>Hocking (Tri-County) Technical College</td>
<td>1,800</td>
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<tr>
<td>Jefferson County Technical College</td>
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<tr>
<td>Lima Technical College</td>
<td>1,000</td>
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<tr>
<td>Marion Technical College</td>
<td>800</td>
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<tr>
<td>Maumee (Penta) Technical College*</td>
<td>3,500</td>
</tr>
<tr>
<td>Miami-Shelby-Darke Technical College</td>
<td>1,600</td>
</tr>
<tr>
<td>Muskingum Technical College</td>
<td>1,200</td>
</tr>
<tr>
<td>Newark Technical College</td>
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<tr>
<td>North Central Technical College</td>
<td>1,200</td>
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<td>Northwest (Four-County) Technical College*</td>
<td>1,800</td>
</tr>
<tr>
<td>Scioto Technical College</td>
<td>1,000</td>
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<tr>
<td>Stark County Technical College</td>
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</tr>
<tr>
<td>Vanguard Technical College*</td>
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</tr>
<tr>
<td>Belmont Technical College</td>
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</tr>
<tr>
<td>Washington Technical College</td>
<td>500</td>
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</table>

41,000

\textsuperscript{83}Ibid. pp. 22-23.
These technical colleges might be established as State General and Technical Colleges.\textsuperscript{84}

Of the eighteen technical colleges listed on this forecast only the Miami–Shelby–Darke Technical College has not become a reality. Tri-County Technical Institute at Nelsonville did become Hocking Technical College,\textsuperscript{85} Penta became Owens Tech, instead of Maumee as suggested, Newark emerged as Central Ohio Tech, and Vanguard changed its name to Terra Tech.

The \textit{Master Plan: 1971} contained ten points on instructional programs in technical education:

1. Technical education should be understood as a post-high school program of instruction intended to educate individuals with technical and para-professional competencies to function in support of professional, administrative, and managerial personnel, or to perform services at the professional associate level of knowledge and skill.

2. Of some 195,000 students on a head-count basis and of some 146,000 full-time equivalent students expected to be enrolled in two-year programs as of 1980, it is to be hoped that half or more will be enrolled in technical education curricula. As many as 50,000 associate degrees in technical education should be the state objective for 1980, compared with 4,000 such degrees in 1969–70.

3. Technical education should offer two-year programs in business technologies, health technologies, engineering technologies, public service technologies, agri-business technologies, and home

\textsuperscript{84}Ibid. pp. 24–25.

\textsuperscript{85}The master plan was the first place the name Hocking Technical College appeared. The name was picked personally by Chancellor Millett.
economics technologies. All technical education program offerings should be closely correlated with community or area employment demand. The distribution of program enrollment by number of students should be determined by area labor market requirements. The offering of agri-business technologies should be limited.

4. In approving degree programs in technical education, the Ohio Board of Regents should continue to expect that approximately one-half of all course credits of course instruction should be devoted to technical courses clearly identified with the knowledge and technical skill required for competence in a particular technology. Technical education curricula afford a particularly useful opportunity for cooperative education alternating periods of instruction with periods of on-the-job experience.

5. Programs in engineering technologies are being offered in such varied fields as aviation, construction, civil, electrical-electronics, ceramic, mechanical, engineering, drafting, chemical, water pollution, electro-mechanical, instrumentation, and surveying technologies. A high degree of specialization in programs and in courses in the engineering technologies should be avoided as a possible hindrance in job placement. The equipment needs of these programs are extensive and expensive. Increasing attention must be given to the differentiation between vocational education at the secondary school level, the engineering technologies, and engineering education at the university level.

6. Programs in business technologies are being offered in such varied fields as accounting, advertising, data processing, banking and finance, credit management, marketing and merchandising, office management, personnel management, procurement management, real estate, restaurant management, hotel-motel management, secretarial studies, transportation management, and wholesale trade.
Proliferation of individual job titles within business technology programs is not desirable, and some concentration of effort in certain well defined fields is desirable (clerical and related occupations), managerial occupations, sales occupations, accounting, data processing).

7. Programs in health technologies are being offered in such varied fields as dental hygiene, dental laboratory technology, environmental health, laboratory animal science, medical assistance, medical laboratory technology, medical secretary, medical records technology, nursing, and x-ray technology. These programs should expand as the needs of agencies and individuals providing health care may require. Shortages of such personnel are expected to continue throughout the decade of the 1970's.

8. Programs in public service technologies are being offered in such varied fields as law enforcement, fire science, education technology, library technology, recreation technology, social work and community service technology, and urban planning technology. The role of the para-professional personnel in most of these fields requires continuing evaluation, and programs should be expanded only in response to definite requirements developed by professional and managerial personnel of government agencies.

9. Programs in agricultural and natural resources technologies are being offered in such varied fields as agri-business management, animal care, agricultural equipment technology, horticulture, food processing, soil conservation, plant science and turf management, natural resources technologies, and forestry technology. Agri-business technologies tend to be expensive to offer and to entail only a limited demand for graduates. These programs are important to food production and horticultural needs of the consuming public. Programs in home economics technologies are being offered in child development, food service, nutrition, and family life.
There is an increasing demand for personnel educated in the home economics technologies as more and more family related services are being sought by individuals and families in Ohio.

10. In all the different kinds of technical education, there are many needs which must be met in the decade of the 1970's: improved public understanding of the importance of technical education, appropriate instructional staffing, improved instructional materials, necessary facilities and equipment, adequate student counseling and placement, and essential financial support. 86

Nowhere in these ten points were there suggestions that technical programs would be weakened under the Regents. Job placement was listed as item number one and the recommendation that 50% of the curriculum be technical was included. Many technical educators were concerned and apprehensive about the Master Plan: 1971 while it was being prepared. The final version of the plan was generally favorable to technical institutes in all of the parts that concerned them.

The unsuccessful attempt to initiate a university and technical college system and the introduction of a general and technical college in the Master Plan of 1971 were examples of the Regents concern over administrative and facility duplication where they financed university branch operations and technical colleges in the same community. With the lack of positive legislation settling the problem, the Regents drafted a Memorandum on University Branch-Technical Institute Cooperation and was adopted by resolution December 17, 1971. The technical

86 The Ohio Board of Regents, op. cit., pp. 30-32.
colleges involved in the memorandum were: Belmont, Allen, North Central, Marion, Central Ohio, Scioto, Stark, and Muskingum. These "guidelines" suggested a common campus, common planning for facilities, common library services, common student services, and common administrative services. The Board suggested that both branch and technical institute retain their separate identities. They could, by choice, unite as a general and technical college, if and when new legislation could be passed.

In 1971 the Regents introduced legislation (Senate Bill 396) that changed the name of technical institutes to technical colleges. This was passed by the Ohio General Assembly and signed by the Governor November 17, 1971, and became effective February 17, 1972.

A new era began for the technical colleges in 1972. Dr. Max Lerner, former President of Lorain County Community College and former Director of the old Lorain School of Technology was named to the new position of Vice Chancellor for two-year campuses.

In 1972 the State General and Technical College Bill, (Senate Bill 329) was enacted and became Section 3358 of the Ohio, Revised Code. This provides that "a college may be established by the Board of Regents at the request of the Board of Trustees of a technical college....." 88

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87 Ohio Board of Regents, Minutes of Meeting, December 17, 1971, R-1972-38.
88 Ohio, Revised Code, c. 3358.01.
In communities where both a university branch and a technical college exists, a state general and technical college can only be created with the approval of both boards of trustees. In this case, the initial board of trustees of the new college will be comprised of the members of the board of trustees of the technical institute district, to serve for the balance of their existing terms. The purpose of a general and technical college would be to offer associate degree programs in the arts and sciences, technical education, and adult continuing education.

The new vice chancellor, with considerable help from the technical college presidents developed a new taxonomy of technical education careers in Ohio. All new programs submitted to the Regents for approval would have to fit one of these careers. An inventory of two-year technical programs approved by the Regents showed 307 being offered in the seventeen technical colleges.

With a new taxonomy of technical careers, new standards, and new methods of program approval, it was apparent that as 1973 progressed, the technical colleges would be in closer relationship and under tighter control of the Ohio Board of Regents.

89 Ibid., c. 3358.03.
90 Ibid., c. 3358.01A.
91 See appendix C for complete taxonomy.
CHAPTER V

THE DEVELOPMENT OF THE TECHNICAL INSTITUTES IN OHIO

Technical institutes defined by chapter 3357 of the Ohio, Revised Code are post high school collegiate level training institutes chartered by the Ohio Board of Regents. In January of 1973 there were seventeen state chartered technical institutes. In the order of their charter these were:

Clark Technical College
Stark Technical College
Jefferson County Technical Institute
Columbus Technical Institute
Owens Technical College
Northwest Technical College
North Central Ohio Technical College
Hocking Technical College
Cincinnati Technical College
Muskingum Area Technical College
Terra Technical College
Scioto Technical College
Marion Technical College
Central Ohio Technical College
Belmont Technical College
Allen County Technical College
Washington Technical College

Although all seventeen have been chartered for the purpose of providing technical education programs, each one is an autonomous entity. Each school has been able to develop according to its own plan and the needs of its immediate geographic area. The institutes
created a wide and interesting variety of origins. A brief history of each of these officially chartered technical institutes is included in this chapter.

Clark Technical College

The development of Clark Technical College spans an era under the leadership and direction of the State Department of Education and an era under the Ohio Board of Regents. The State Department of Education provided the data necessary to begin a technician program when they completed a comprehensive study of occupational needs in Clark County.

This survey made at Springfield and Clark County was similar to many studies made by the State Department staff. The Springfield City School System and the Clark County School System were studied through occupational interest surveys given to students. More than seventy-five area businesses and industries were surveyed for possible job opportunities and future employment needs that required career training. The needs of industry and the interests of students in special job training matched. Furthermore, the study showed that occupational needs were not being met by the existing school system. 92

The survey resulted in a recommendation for both vocational education expansion and the initiation of technical education. The

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Springfield and Clark County Technical Education Program began in September, 1962. The Springfield City System sponsored the new program and classes were held in the vocational wing of Springfield North High School. Classes were held in the late afternoons and evening hours because the facilities were being shared with vocational high school students. Seventy-eight students enrolled the first year in three programs selected from survey information: Business Data Processing, Electrical Technology, and Mechanical Technology. The recommendations for need, program selection, operational funds, and equipment funds all originated from the State Department of Education and the entire program was conceived as an upward extension of the traditional twelve-year public school system.  

The Springfield and Clark County Technical Education Program continued to operate on an afternoon basis at North High School until the newly created Springfield-Clark Joint Vocational School opened in new physical facilities in 1966. The technical education programs transferred to the new school but continued to operate on an afternoon and evening basis, again taking over facilities used by vocational students during the day.

This shared facility aspect was due to terminate because earlier in 1965 a Clark County Technical Institute District, made up of the entire county including Springfield, was legally created

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93 Ibid.
according to provisions of 3357 of the Ohio, Revised Code and the Ohio Board of Regents' Master Plan.

The Master Plan for Higher Education caused a turn around in concepts for technical education in Clark County. Rather than a part or extension of the secondary system, the new district associated technical education programs with higher education.

Although the Technical Institute District was legally created in 1965, the programs continued to operate as the Springfield and Clark County Technical Education Program. The original three programs were expanded to include two business technologies and pilot programs in Agri-Business Technology (1963) and Agri-Equipment Technology (1964). All the early programs contained more than the 1800 hour requirements of the State Department of Education.

The Springfield and Clark County Technical Education Program officially became the Clark County Technical Institute February 18, 1966 when the district was issued its charter from the Ohio Board of Regents.\textsuperscript{94} February 18, 1966 became an historical date in Ohio for technical education. This was the first technical institute, under a program of public support, to be chartered by the State of Ohio.\textsuperscript{95}

A capital improvements appropriation of 2,000,000 dollars had been made for Phase I of the development of the institute. The programs, equipment, personnel, and functions of the former school would

\textsuperscript{94}Ohio Board of Regents, \textit{Charter of the Clark County Technical Institute}, 1966.

\textsuperscript{95}Clark County Technical Institute, \textit{op. cit.}, p. 1.
be assumed by the new district and placed into the new facility to be built from funds provided for by the State of Ohio through the Ohio Board of Regents. This pattern in which programs and equipment from the State Department of Education and capital funds from higher education would be repeated often in the development of technical institutes in Ohio.

Clark County Technical Institute's new buildings, completed in 1968, were built on a campus adjacent to the Springfield-Clark Joint Vocational School. The new site of forty-five acres was located at 570 East Leffers Lane and comprised of two buildings, Rhodes and Shull Hall. The new buildings provided eighteen classrooms, an auditorium, fifteen laboratories, an office, a library, and a greenhouse.

This facility was built for approximately 1,000 students, and by 1969 Clark County Technical Institute provided the following programs for its students:

- Accounting
- Agri-Business
- Agri-Equipment
- Business Data Processing
- Civil Engineering Technology
- Commercial Art
- Electronic Engineering Technology
- Engineering Graphics
- Executive Secretary
- Fire Protection and Safety
- Law Enforcement
- Mechanical Engineering Technology
- Medical Secretary Technology
The early programs consisted of a vigorous schedule for students usually with seventeen credit hours per quarter, as illustrated in the Mechanical Engineering Technology Program.

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Engineering Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
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<td>Physics</td>
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<td>Communications</td>
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<td>Mech. Engineering</td>
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<td>General Education</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Physics</td>
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<td>Communications</td>
<td>3</td>
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<tr>
<td>Mech. Engineering</td>
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<td>General Education</td>
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<td>Engineering Drawing</td>
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<td>Mathematics</td>
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<td>Physics</td>
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<td>Communications</td>
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<td>Mech. Engineering</td>
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<td>General Education</td>
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<th>Credit Hours</th>
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<tr>
<td>Elec. Engineering</td>
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<tr>
<td>Mech. Engineering</td>
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<tr>
<td>Mech. Engineering</td>
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<tr>
<td>Economics</td>
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<tr>
<td>General Education</td>
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96Clark County Technical Institute Catalog, 1969, p. 2.
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<td><strong>Fifth Quarter</strong></td>
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<tr>
<td>Mathematics</td>
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<td>Human Relations</td>
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<td>General Education</td>
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<tr>
<td><strong>Sixth Quarter</strong></td>
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<tr>
<td>Mathematics</td>
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<td>Human Relations</td>
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<td>General Education</td>
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</table>

The technical education programs were initiated under the State Department of Education concurrently with the development of the joint vocational school. With original boards being the same, an administrative pattern developed in which the Superintendent of the Springfield Clark Joint Vocational School was also responsible for technical education. When the boards split, under the Charter of the Technical Institute District, the Superintendent, Mr. R. O. Brinkman also assumed the role of President of the Technical Institute. The dual responsibility is retained to the time of this writing. R. O. Brinkman, Clark County Technical Institute's first and only President, has been one of Ohio's pioneers in developing technical education.

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97Ibid., p. 27.
The technical education programs developed at Clark were based on the following objectives stated by the institute:

1. Fulfilling the needs of a technical society
2. Preparation and training of technicians
3. Development of quality programs
4. Provide for possible transfer of academic work
5. Technical Education Programs.....is the primary function of the institute.
6. Continuing education

The student body of the institute grew from the original seventy-eight in 1962 to 500 in 1968, 650 in 1969, 725 in 1970, and 945 by 1972.

The statements of objectives at Clark County Technical Institute reflected an interest in transferability of programs. The curriculum began to show signs of a closer collegiate pattern by 1970. Comparing the Mechanical Engineering Technology of 1970 with 1969 we see a reduction in required hours and an increase in general electives.

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Drawing I</td>
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<tr>
<td>College Algebra</td>
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<tr>
<td>Fabrication Process</td>
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<tr>
<td>Applied Physics I</td>
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<td>Communications</td>
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Clark County Technical Institute, op. cit., pp. 6 - 7.
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<td>Trigonometry</td>
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<tr>
<td>Statics</td>
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<tr>
<td>Applied Physics II</td>
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<tr>
<td>Communications</td>
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<tbody>
<tr>
<td>Drawing III</td>
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<tr>
<td>Analytic Geometry</td>
<td>3</td>
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<tr>
<td>Metallurgy</td>
<td>3</td>
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<tr>
<td>Applied Physics III</td>
<td>3</td>
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<td>Communications</td>
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<td>Calculus I</td>
<td>3</td>
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<td>Computer Applications</td>
<td>3</td>
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<tr>
<td>Fluid Mechanics I</td>
<td>3</td>
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<tr>
<td>Strength of Materials</td>
<td>3</td>
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<td>Economics</td>
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<tbody>
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<td>Calculus II</td>
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<tr>
<td>Fluid Mechanics II</td>
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<tr>
<td>Thermodynamics</td>
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<tr>
<td>Dynamics</td>
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<td>Human Relations I</td>
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<tr>
<th>Sixth Quarter</th>
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<tbody>
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<td>Instrumentation</td>
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<tr>
<td>Tool Design</td>
<td>3</td>
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<tr>
<td>Machine Design</td>
<td>3</td>
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<tr>
<td>Research Project</td>
<td>3</td>
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<tr>
<td>Human Relations II</td>
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An additional 12 credit hours selected from General Education, the 39000 series, are required for graduation. Students entering this program must have completed a minimum of two units of high school college preparatory mathematics. Applicants who do
not meet this requirement must take a pre-technical mathematics course offered by the Technical Institute or make up their mathematics deficiency elsewhere. 99

The objectives of Clark County Technical Institute were notably changed as the trustees and administration considered a movement toward general education with the possibility of forming a State General and Technical College. 100

The supplement to the Clark County Technical Institute's Status Study written in 1971 stated that:

Although the philosophy and objectives of the Institute remain basically unchanged, the Master Plan for Higher Education in Ohio (adopted by the Board of Regents in February, 1971) could effect some changes. It authorized the Boards of Trustees of Technical Institutes to transform their respective institutions into a "state general and technical college," if they choose. The CCTI Board of Trustees has opted for this alternative. The Plan's emphasis upon a complete "open door" admissions policy may have some further effects upon the nature of the Institute and its goals. 101

Phase II of the building program began in March of 1971. A new library resource center was funded to contain 34,300 square feet of space and included an academic library, a faculty library, a modern media center, an instructional materials center, seminar rooms,

99 Clark County Technical Institute, Catalog 1970-71, p. 33.

100 The State General and Technical College structure is discussed in a later chapter.

and a television studio. The building was ready for students and staff in 1972.

By the 1972-73 school year program offerings included:

- Agri-Business
- Agri-Equipment
- Farm Operation
- Food Service Management
- Turf Nursery
- Accounting
- Business Administration
- Business Data Processing
- Commercial Art
- Court and Conference Reporting
- Executive Secretary
- Medical Secretary
- Pupil Personnel
- Retail Management
- Civil Engineering Technology
- Electrical Engineering Technology
- Engineering Graphics
- Environmental Engineering Technology
- Mechanical Engineering Technology
- Medical Laboratory
- Registered Nursing
- Respiratory Therapy
- Law Enforcement

Another change had occurred in 1972. The former Springfield and Clark County Technical Education Program had evolved into the Clark County Technical Institute; then because of Senate Bill 396 signed into law by the Governor in February, 1972, the institute became Clark Technical College. 103

In 1972 the educational program at Clark Technical College was expanded to include a department of continuing education to offer

102 Clark Technical College - Catalog 1972-73, p. 20.
103 Details of Senate Bill 396 described in a later chapter.
a variety of credit and noncredit courses in trade and technical occupations. Continuing education also includes seminars, short courses, or other services to local business, industry, government, and individuals. The department of continuing education advertised its willingness to provide educational services from one-meeting courses to long-range programs. 104

From 1962 to 1973 the name, length of programs, credit hours, and statement of objectives of Clark Technical College all drifted more toward a collegiate atmosphere. The career objective, placement of graduates, and quality of technical programs have remained consistently high through this period of growth and transition. 105

**Stark Technical College**

Stark Technical College began operations as the Canton Area Technician School, established by the Canton City Board of Education May 2, 1960. 106 Canton Area Tech was one of five technician schools organized in Ohio by 1960. It was also to become chartered by the Ohio Board of Regents in 1966, the first year this Board chartered technical institutes. Stark Tech was a pioneer in development, both with the State Department of Education and later with the Ohio Board of Regents.

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105 Personal interviews with students and administrators during a campus visit in September, 1972.

The original programs at the Canton Area Technician School were located on the fourth floor of the Timken Vocational School. The new technician programs had their own separate facilities at the Timken Vocational School, except for the shared use of the machine lab and welding lab. Students attended classes on an afternoon and evening basis because of the shared laboratories. The technician programs were sponsored by the Canton City Board of Education, administered by the Timken Vocational School officials, and funded by student fees and National Defense Education Act support through the State Department of Education. The first students reported to classes in September of 1960 and were able to enroll in one of two approved technologies—electrical or mechanical.

These two programs were extremely successful from the beginning, both in educational quality and placement of graduates. Enrollment was completely limited to the two programs because of the inability to increase the physical space required for growth. From 1960 to 1970, the electrical and mechanical programs were the only alternatives for full-time students attending Canton Area Technician School. In 1968, two new programs, metallurgical and industrial, were approved for evening instruction only and were not available on a full-load basis. Physical space was the reason given for allowing only evening attendance in the new course offerings.

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107 Personal interview with Mr. Fred Yenny, President of Stark Technical College, February 9, 1973.

Although small in size, Canton Area Technician School offered a strong technical curriculum. The original programs required students to be in class more than twenty-five hours per week and to acquire credits averaging nineteen quarter hours as illustrated in the Mechanical Technology curriculum:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics Review</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Com. Skills &amp; Humanities</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physics (Mechanics)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Machine Tools</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Technical Survey</td>
<td>0</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>College Algebra</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Com. Skills &amp; Humanities</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physics (Electricity)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>2</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>College Trigonometry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Com. Skills &amp; Humanities</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physics (Heat)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Engineering Drawing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Tool Design</td>
<td>2</td>
<td>19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytic Geometry</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Com. Skills &amp; Humanities</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physics (Light, Sound)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Production Methods</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Elementary Metallurgy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Electricity (Circuitry)</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Fifth Quarter</td>
<td>Credit Hours</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Com. Skills &amp; Humanities</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>General Chemistry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Machine Design</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Chemistry</td>
</tr>
<tr>
<td>Quality Control &amp; Time and Motional Study</td>
</tr>
<tr>
<td>Instruments and Controls</td>
</tr>
<tr>
<td>Industrial Hydraulics</td>
</tr>
<tr>
<td>Machine Design</td>
</tr>
<tr>
<td>Electrical Drafting</td>
</tr>
</tbody>
</table>

Two significant developments occurred in 1970 that would allow the Canton Area Technician School to emerge from the static enrollment and growth it had experienced for ten years. The operation of the school was transferred to the Stark Technical Institute District August 3, 1970. Although officially chartered in 1966 by the Regents, the actual change did not occur until 1970 because of the school's limited facilities. A building donated to the Canton City School System was leased to the technical institute district to use until the State of Ohio and the Ohio Board of Regents could complete plans for a permanent facility. The newly leased building, occupied in September, 1970, offered the institute its first opportunity to expand its technical programs.

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109 Ibid., p. 25.

110 Stark Technical College - College Catalog, 1973-1974, p. 3.
The Ohio General Assembly, following a recommendation from the Ohio Board of Regents, appropriated 3,100,000 dollars for a new building for Stark Technical College. Construction began in July, 1971 at the campus of the Stark County Branch of Kent State University. The building was completed for fall classes in 1972.

The new building, located on Portage Road approximately seven miles north of Canton, contains 65,000 square feet of space including fifteen technical laboratories with dual lab-class use, six class-rooms, offices, and student lounge areas.

Throughout its thirteen years of development, the institute has remained true to its original intent to provide quality career education. An early statement of philosophy released by the Canton Area Technician School declared that:

The Canton Area Technical School is dedicated to the discovery and the development of human talents as they relate to employment in the expanding area of technology. The primary aim is the preparation of fully qualified engineering technicians who are ready for immediate employment upon graduation. In addition to enhancing the student's chances for a higher paying career, the school endeavors to provide the academic atmosphere, the human associations, and the discipline vital to his sound intellectual growth and character development. To this end the school's programs of study are devised not only to teach technical competence, but to stimulate the individual's curiosity, broaden his perspective, establish disciplined habits of thought, develop his enthusiasm for learning, and help him realize his potential as a responsible, informed, and useful member of society.\textsuperscript{111}

\textsuperscript{111}Canton Area Technical School, brochure material, (type-written about 1962).
As the institute evolved into a "technical college" according to legislation in 1972, its aims were restated, "The first objective is to provide students with a marketable level of skill and knowledge."\textsuperscript{112}

The technical college's curriculum for Mechanical Engineering Technology, when compared with an early curriculum, reinforces this continued technical objective. The 1973 curriculum follows:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative Skills I</td>
<td>3</td>
</tr>
<tr>
<td>Physics (Mechanics)</td>
<td>4</td>
</tr>
<tr>
<td>Technical Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Survey and Safety</td>
<td>1</td>
</tr>
<tr>
<td>Machine Tools I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative Skills II</td>
<td>3</td>
</tr>
<tr>
<td>Physics (Electricity)</td>
<td>4</td>
</tr>
<tr>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>Machine Tools II</td>
<td>4</td>
</tr>
<tr>
<td>Psychology I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative Skills III</td>
<td>2</td>
</tr>
<tr>
<td>Physics (Heat, Light, Sound)</td>
<td>4</td>
</tr>
<tr>
<td>Technical Mathematics III</td>
<td>3</td>
</tr>
<tr>
<td>Electrical and Electronic Fund.</td>
<td>3</td>
</tr>
<tr>
<td>Psychology II</td>
<td>2</td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

\textsuperscript{112}\textsuperscript{Stark, op. cit., p. 7.}
Fourth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicative Skills IV</td>
<td>4</td>
</tr>
<tr>
<td>Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>Technical Mathematics IV</td>
<td>3</td>
</tr>
<tr>
<td>Tool Design</td>
<td>4</td>
</tr>
<tr>
<td>Material Science</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Tech I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Mathematics V</td>
<td>3</td>
</tr>
<tr>
<td>Numerical Control Tech I</td>
<td>4</td>
</tr>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Mechanical Laboratory I</td>
<td>2</td>
</tr>
<tr>
<td>Electro-Mechanical Devices</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Tech II</td>
<td>3</td>
</tr>
<tr>
<td>Numerical Control Tech II</td>
<td>4</td>
</tr>
<tr>
<td>Mechanical Laboratory II</td>
<td>2</td>
</tr>
<tr>
<td>Digital Computers</td>
<td>3</td>
</tr>
<tr>
<td>Sociology II</td>
<td>2</td>
</tr>
<tr>
<td>Economics II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

Program offerings had increased to fifteen including:

Accounting
Business Management
Civil Construction
Computer Programming
Drafting-Design
Electrical
Electronics
Executive Secretary
Legal Secretary
Mechanical
Medical Laboratory
Medical Records
Medical Secretary
Retail Marketing

113 Ibid., p. 24.
Two problems emerge for the technical college in its thirteenth year of operation. It shares a campus with an almost overpowering university branch (Kent State University's largest). Enrollment has not reached significant proportions to the urban areas that the technical college serves. In 1972, the Stark Technical College received state support for only 243 full-time equivalent students. However, with a new building and an expanded program, Stark Technical College is in a favorable position for future growth.

**Jefferson County Technical Institute**

The origins of the Jefferson County Technical Institute differed in many ways from the other chartered technical institutes. Jeff Tech, as it is commonly referred to, was justified through a professional study done by the Battelle Memorial Institute, Columbus, Ohio. Jeff Tech is the only technical institute that submitted and passed a building and operating levy as permitted in c 3357 of the Ohio, Revised Code, and it was the only technical institute not initially supported by vocational education funds. A paradox seems to appear here because original programs did not follow the 1,800 hour requirements established by the State Department of Education; however, programs submitted in 1971 and 1972 did meet these requirements. At

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114 *Mimeographed release from the Ohio Board of Regents, 1972.*
Jeff Tech an increase in hours is noted, not a suspected decrease, as collegiate and transfer pressures increase.  

Technical institutes were already well developed in many parts of Ohio by 1965 when the Jefferson County Commissioners and the Steubenville Area Development Council engaged the Battelle Memorial Institute to research the area to determine the needs for a technical institute. The Steubenville Area Development Council's goal in hiring Battelle was to stimulate and maintain economic growth within the Steubenville area by showing that a career education facility was needed and would be a factor in area growth.

The Battelle survey was completed in October, 1965. Part I of the Battelle report was an inventory of needs for vocationally and technically trained workers. Data was collected from forty sources representing 16% of Jefferson County's total employment. This survey showed that 34% of Jefferson County's new employees needed or required vocational or technical training. By 1970, this percentage would increase to 48.

Part II of the study analyzed the data of Part I, analyzed population trends, studied student educational opportunities, identified occupational opportunities, studied student interests, and made

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115Personal interview with Dr. Fred Robie, President of Jefferson Technical College, December 6, 1972.


117Ibid., p. 6.
recommendations on education implementation. Occupations with the greatest possibilities were:

- Accountants and auditors
- Draftsmen
- Engineers
- Nurses
- Technicians - medical and dental
- Technicians - electronic and electrical
- Technicians - other engineering
- Buyers and store department heads
- Managers
- Bookkeepers
- Secretaries
- Stenographers
- Ticket and express agents
- Typists
- Insurance agents
- Real estate agents

The final report concluded that technical and vocational education were needed and that the most pressing need was for a post-high school technician training institute.

The positive results of the Battelle survey and analysis were received by the Steubenville Area Development Council with such enthusiasm that a technical institute was formed. The recommendation that a technical district be formed was passed from the Council to the Jefferson County Board of Education, which on November 17, 1965 adopted a resolution requesting the creation of a technical institute district for the entire county. The resolution was forwarded to the Ohio Board of Regents, approved, and the articles of incorporation filed with the Ohio Secretary of State January 18, 1966.  

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118 Ibid., pp. 7-8.
119 Ibid., p. 2.
Jefferson County Technical Institute was the first to exercise its option under Ohio law to present an operating and building levy to its voters. A one mill levy for ten years duration was approved November 8, 1966. Ground was broken for the new school in October of 1967, and the building was ready for students in September, 1968.

The Jefferson County Technical Institute was built on Route 22, two miles east of downtown Steubenville. Phase I building contained 93,310 square feet of space and included:

nineteen classrooms
seventeen laboratories
library
lecture hall
bookstore
offices

Three hundred twenty students were admitted to the first class in fifteen associate degree programs including:

Business Management
Retailing
Insurance
Banking and Finance
Real Estate
Industrial Engineering Technology
Metallurgical Engineering Technology
Mechanical Engineering Technology
Electrical-Electronics
Dental Assisting
Medical Assisting

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120 Ohio, Revised Code, c 3357.11.
Executive Secretary
Medical Secretary
Legal Secretary
Industrial Secretary

The original staff included Mr. George Yoder as director, two additional administrators, twelve instructors, and five support personnel.

The original programs at Jeff Tech appeared to be similar to those in other technical institutes. A weakness in curriculum development was apparent because the original advisory committees were in name only and contained few experienced technical people. This lack of community involvement and weak programs were connected with the appointment of a new president in 1970. The curriculums in 1968 were typical of this example:

ELECTRICAL—ELECTRONIC TECHNOLOGY

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>D. C. Theory</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

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123 *Self Study, op. cit.*, p. 15.
### Second Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English II</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>Technical Drafting IV</td>
<td>4</td>
</tr>
<tr>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Elements of Electronics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Third Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English III</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics III</td>
<td>3</td>
</tr>
<tr>
<td>Physics II</td>
<td>4</td>
</tr>
<tr>
<td>A. C. Theory</td>
<td>4</td>
</tr>
<tr>
<td>Electronics I</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Fourth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>English IV</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics IV</td>
<td>3</td>
</tr>
<tr>
<td>D. C. Machinery</td>
<td>4</td>
</tr>
<tr>
<td>Power Distribution</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology I</td>
<td>3</td>
</tr>
<tr>
<td>Political Science I</td>
<td>3</td>
</tr>
<tr>
<td>A. C. Machinery</td>
<td>4</td>
</tr>
<tr>
<td>Hydraulics I</td>
<td>3</td>
</tr>
<tr>
<td>Electrical Circuits</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

### Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Controls</td>
<td>4</td>
</tr>
<tr>
<td>Electronics II</td>
<td>4</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

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Enrollment at Jefferson Tech was 324 in 1968, 484 in 1969, 470 in 1970, and 628 in 1971. The decline in growth in 1970 was contributed to internal administrative problems. In 1970, Dr. Fred Robie was named president, and growth resumed.

A second building phase was completed in 1972 adding classrooms, offices, a medical laboratory, and a nursing laboratory, bringing the total square feet to 110,000.

By 1972, the program offerings had increased to nineteen; Accounting, Computer Science, Law Enforcement, Chemical, Civil, Drafting, Environmental, and Medical Laboratory Technologies were added. During the period 1968–1972, the Retail, Banking, and Medical Assisting Technologies had been deleted because of the lack of student and employer interest. Program deletion has historical significance because educators have been traditionally criticized for maintaining obsolete programs.

The objectives of Jeff Tech at its beginning stated that:

The Institute is geared to the needs of the community and serves the following basic purposes:

Provide educational opportunities for shifting occupation requirements and advancing technology.

Provide for training and retraining opportunities for the area's youth and adults in an attempt to develop occupational competency and stem the employment out-migration.

Provide educational facilities and resulting training programs to develop up-to-date concepts and practices for the citizens of the area.

Provide general education necessary for the understanding of the functions of a Democratic Society.

Serve as a public educational resource for business, industry and public service. ¹²⁶

The objectives in 1973 were stated very close to the original statement except objective number two in 1973 was to provide significant general education. The ranking of the general education objective from fourth to second may have no significance, but the important objectives on an institution are usually assumed to be listed first. However, the career objective is listed first in all of Jeff Tech's catalogs.

The curriculum in 1973 was strong in technical subjects. No "watering down" of programs is noted at Jeff Tech throughout the years. A gain in technical hours is noted when comparing the 1968 electrical curriculum with the following one offered in 1973:

<table>
<thead>
<tr>
<th>Technically Related Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses:</td>
<td></td>
</tr>
<tr>
<td>College Algebra I</td>
<td>4</td>
</tr>
<tr>
<td>College Algebra II</td>
<td>3</td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Basic Electricity</td>
<td>4</td>
</tr>
<tr>
<td>Technical Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry II</td>
<td>4</td>
</tr>
</tbody>
</table>

¹²⁶ Bulletin, op. cit., p. 11.
Electives:

Introduction to Differential Equations 3
Physics II 4
Business, Legal & Ethical Phases of Engineering 3
Statistics 3 0 Credit Hours

Technical Courses

Required Courses:

Occupational Seminar 1
Electrical Drafting 3
D. C. Circuits 4
A. C. Circuits 4
Electronics I 4
D. C. Machinery 4
A. C. Machinery 4
Electronics II 4
Power Distribution I 4
Instrumentation 4
Industrial Controls I 4
Industrial Controls II 4
Occupational Internship 4
Engineering Seminar 2 50 Credit Hours

Elective Courses:

Hydraulics 4
Industrial Safety 3
Statistical Quality Control 5
Basic Metallurgy 4
Welding 4
Engineering Programming 4
Power Distribution II 4 8 Credit Hours 127

The use of functioning technical advisory committees beginning in 1970 strengthened the technical programs and increased the placement potential of graduates.

The official plan of Jeff Tech included a statement of intent to conduct a large evening-adult education program. There is little evidence of a dynamic adult program in the 1968 to 1970 years. Only slight mention is given to adult education in the early bulletins and news releases. By 1972 the technical institute had an evening enrollment equal in number to the day enrollment. Adult-evening education included developmental courses, cultural courses, seminars, and short courses.

Due to another college in Steubenville, the Jefferson Technical Institute Board of Trustees applied for permission from the state to continue using the term "institute" in its name rather than the term "college" as required by legislation. In analyzing growth, program strength, use of advisory committees, development of adult and continuing education, and technical objectives from 1968 to 1973, we find evidence of progress and quality technical education at Jefferson County Technical Institute.

Columbus Technical Institute

Columbus Technical Institute, located at 550 East Spring Street, Columbus, Ohio, is the largest technical institute in Ohio. In 1973 it could point proudly to its accomplishments of over 2,000 students, twenty-seven technical programs, a professional staff of 151, a multi-million dollar campus, an impressive master plan, and full regional accreditation.

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128. Personal interview with Dr. Fred Robie, December 8, 1972.
Through this period of growth from 1963-1973, the objective of career education first has remained intact. The original objective, stated in 1963, was that the school's primary goal was to provide semi-professional technical education to students who wanted it and could profit from it. Although stated more elaborately in 1972, the principles of Columbus Tech remained the same, stating that: The primary objective of Columbus Technical Institute is the provision of less-than-baccalaureate education for individuals needing career preparation. In recognition of this objective, the Institute assumes its implied responsibilities for the student, the employer, and the community.

Consistent with this objective, Columbus Technical Institute defines three major goals: first, to provide students with an education which will enable them to function effectively in a wide range of positions upon graduation; second, to provide business and public agencies with productive employees; third, to provide the community with responsible citizens.

To attain these three goals, the Institute undertakes two major educational tasks:

1. To provide a wide variety of quality educational programs;

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2. To provide continuing and adult programs for persons desiring to further their education.\textsuperscript{130}

President Tatsch reaffirmed this position by stating, "We stress technical education.... After successfully completing your program at Columbus Tech, you will be prepared for a midmanagement position in one of four major areas - Business, Engineering, Health, or Public Service."\textsuperscript{131}

Clinton E. Tatsch, working with the Columbus Board of Education in 1962 and 1963, helped in the creation of the school he now speaks for; he was the school's first director, and under the Ohio Board of Regents, the school's first president.

Columbus Area Technician School was the original name of the Columbus Technical Institute. It was created in 1963 in response to the needs of local business and industry. The school was sponsored by the Columbus Board of Education and located in a wing of Central High School. Fifty-seven full-time and fifteen part-time students attended classes the first year. The programs were funded by student fees, vocational funds from the State Department of Education, and given additional support by the Columbus Board of Education. The technician school outgrew its location at Central High School within two years,


so the Columbus Board of Education purchased the Columbus Aquinas
Parochial High School at 557 Mt. Vernon Avenue for technical education
purposes. 132

The move to Aquinas was made by 557 students. When the move
was made in 1965, Columbus Area Technician School offered the following
technical programs:

- Architectural Drawing
- Data Processing
- Chemical
- Electronics
- Food Processing
- Food Service
- Mechanical
- Metallurgical
- Retail
- Wholesale 133

The curriculums for these programs were established under the
guidelines from the State Department of Education that required stu-
dents to attend classes on a demanding thirty hours per week schedule.

A typical technical education program offered at the Columbus Area
Technician School and approved by the State Department of Education is
illustrated by the Electrical Engineering Technology courses:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills I</td>
<td>5</td>
</tr>
<tr>
<td>Technical Mathematics I</td>
<td>5</td>
</tr>
<tr>
<td>Basic Electricity, D. C.</td>
<td>8</td>
</tr>
<tr>
<td>Physics (Mechanics)</td>
<td>5</td>
</tr>
<tr>
<td>Economics I</td>
<td>2</td>
</tr>
</tbody>
</table>

25

132Columbus Technical Institute, op. cit., p. 2.

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills II</td>
<td>5</td>
</tr>
<tr>
<td>Technical Mathematics II</td>
<td>5</td>
</tr>
<tr>
<td>Basic Electricity, A. C.</td>
<td>8</td>
</tr>
<tr>
<td>Electronic Drafting</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills III</td>
<td>5</td>
</tr>
<tr>
<td>Technical Mathematics III</td>
<td>5</td>
</tr>
<tr>
<td>Electronics I</td>
<td>8</td>
</tr>
<tr>
<td>Physics (Heat, Light, Sound)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Writing</td>
<td>2</td>
</tr>
<tr>
<td>Calculus for Electronics I</td>
<td>5</td>
</tr>
<tr>
<td>Electronics II</td>
<td>8</td>
</tr>
<tr>
<td>Transmitters and Receivers</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>23</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Speaking</td>
<td>2</td>
</tr>
<tr>
<td>Calculus for Electronics II</td>
<td>5</td>
</tr>
<tr>
<td>Electronics III</td>
<td>8</td>
</tr>
<tr>
<td>Advanced Electronic Circuits</td>
<td>8</td>
</tr>
<tr>
<td>Human Behavior</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sixth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus for Electronics III</td>
<td>5</td>
</tr>
<tr>
<td>Fundamentals of Digital Computers</td>
<td>7</td>
</tr>
<tr>
<td>Industrial and Microwave Circuits</td>
<td>8</td>
</tr>
<tr>
<td>Electronic Research Project</td>
<td>(\frac{3}{23}) 134</td>
</tr>
</tbody>
</table>

The newly acquired facility was forty-five years old, but in excellent shape. The building, remodeled for technical education,

\(^{134}\) Ibid., p. 29.
contained approximately 90,000 square feet of space of five floors. The administration immediately began plans to enlarge the campus to meet the anticipated growth of the Columbus Area Technician School.

A major milestone in the school's history occurred in 1966 when the Columbus Board of Education concluded that it would be in the school's best interest and the Columbus Board's best interest that the technician school affiliate with the Ohio Board of Regents. Specific reasons given for the transfer were that legislative and state trends were motivating toward the Regents, increased funds would be available, the associate degree could be granted, technician programs were costing the Columbus Board money for operation, and the Columbus City system could not keep up with the growth of the technical school.

In May, 1966, the Columbus Board of Education applied to the Ohio Board of Regents for the creation of the separate Columbus Technical Institute District. The Regents approved the Institute's proposal, articles of incorporation were filed with the Ohio Secretary of State, and on July 1, 1967, the Columbus Technical Institute was granted its official state charter. With the granting of a charter, Columbus Area Technician School became Columbus Technical Institute.

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135 *Columbus Technical Institute, op. cit.*, p. 1.

136 Personal interview with Columbus Technical Institute employee - name withheld, October 6, 1972.
At this time the Columbus City Board released its assets in technical education to the newly formed Board of Trustees.

To back up the growth of Columbus Tech, the Ohio Board of Regents approved 3,200,000 dollars for new construction. Between 1968 and 1970, three new buildings complemented the old Aquinas building. One new building was an administrative and student service facility containing 18,000 square feet of space. The next building, Rhodes Hall, housed eight aviation laboratories, classrooms, and offices. Rhodes Hall, with two floors, contained 18,200 square feet. The third new building of four stories and 30,300 square feet contains general classrooms, student lounge, laboratories, bookstore, and computer center. The total facility in 1970 would accommodate 2,000 students and 25 technical programs.\(^\text{137}\)

As building plans progressed, new technical programs and student enrollment increased. Accounting, Secretarial Science, and Sales Marketing were added in 1969.\(^\text{138}\) In 1970, Audio-Visual, Dental Lab, Fire Science, Laboratory Animal, Law Enforcement, Medical Laboratory, Science Education, and Surveying Technology programs were added.\(^\text{139}\) Growth continued with the initiation of Community Service, Traffic

\(^\text{137}\) Columbus Technical Institute, \emph{op. cit.}, p. 18.

\(^\text{138}\) Columbus Technical Institute, 1969, Bulletin.

\(^\text{139}\) Columbus Technical Institute, 1970, Bulletin.
Engineering, General Business, Graphic Communications, and Nursing in 1971. When the 1973 school year began, the three programs offered in 1963 expanded to include:

- Accounting Technology
- Adult Continuing Education
- Animal Health Technology
- Architecture Technology
- Aviation Administration Technology
- Aviation Maintenance Technology
- Business Data Processing Technology
- Chemical Engineering Technology
- Civil Engineering Technology
- Community Services Technology
- Consumer Finance Mid-Management Technology
- Dental Laboratory Technology
- Electronic Engineering Technology
- Fire Science Technology
- Food Service Mid-Management Technology
- General Business Management Technology
- Graphic Communications Technology
- Law Enforcement Technology
- Mechanical Engineering Technology
- Medical Laboratory Technology
- Mental Health and Retardation Technology
- Metallurgical Engineering Technology
- Nursing Technology
- Retail Mid-Management Technology
- Sales Marketing Technology
- Secretarial Science Technology
- Wholesale Mid-Management Technology

The early years of curriculum development saw a strong emphasis on the engineering technologies. By the 1970's, the enrollment in engineering technologies had stabilized and the growth was in public service, business, health, and continuing education programs.

The individual curriculums changed throughout the years with just a moderate drop in the total contact hours. The original programs

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140 *Columbus Technical Institute, 1973-74 Bulletin.*
often had an excess of the 1800 hour requirement, sometimes exceeding 1900 hours. Programs still qualify for the State Department of Education's standards, but now rarely exceed the 1800 hours.

When the Columbus Area Technician School shared a facility with Central High School, all of the technical programs were offered between 12:00 and 8:00 p.m. No special evening or continuing education program was established. Adult and continuing education became an important addition in 1968 when a department in continuing education was created. The original group totaled only thirty-six students in continuing education classes in 1968. This number swelled to 750 in the school year 1971-72.\textsuperscript{141} By 1972, students had taken enough courses that degree and diploma graduates were coming from the ranks of the continuing education division. New forms of education in this division include an Adult Food Service School organized by district nurses and attended by area hospital employees. Other successful continuing education programs are: a private police school for security officers, instrumentation classes for the Instrument Society of America, housekeeping courses for the National Housekeeper's Association, childbirth classes for the Columbus Association of Childbirth Education, bio-chemistry courses for the Dietitians Association, and many more.\textsuperscript{142}

\textsuperscript{141}Clinton E. Tatsch, Report of the President - Columbus Technical Institute, 1971-72, p. 20.

\textsuperscript{142}Ibid., p. 21.
The continuing education program was complimented by Dr. F. C. Croxton in his commencement address to the 1972 Columbus Technical Institute graduates. He carried the concept farther by stating:

"... I would like to commend to you a concept which I can characterize as "continuous education." You have heard a great deal about continuing education. We need more than that. We need to devote ourselves continuously to the educational process to make ourselves more useful as well as more capable of appreciating the world in which we live in."\(^{143}\)

With the beginning of its first building program, Columbus Tech began the development of its master plan that extends into the 1980's. The remodeling of the Aquinas school and the completion of the three buildings in 1969 represented the completion of Phase I of the master plan.\(^{144}\)

Phase II of the master plan is under way. An educational resources building, started in January, 1972, is nearly complete. Plans are progressing for a campus activity center. The remainder of Phase II identifies 25,000,000 dollars more for construction of seventeen additional buildings. The Institute will acquire the last of a thirty-five tract bounded by Spring Street, Cleveland Avenue, and the freeway. When the master plan has been carried to its conclusion, the Institute will provide space and programs for more than 8,000 full-time students.\(^{145}\)

\(^{143}\)Ibid.

\(^{144}\)Columbus Technical Institute, op. cit., p. 18.

\(^{145}\)Tatsch, op. cit., p. 9.
The growth of technical education at Columbus Tech has been from thirty-seven to 2,000 students in ten years, but only represents one-fourth of the expected growth according to the master plan. Another factor in possible acceleration of growth is the Institute's announcement that it intends to become a General and Technical College in the near future.

The addition of an associate of arts degree and a general college transfer division to the technical institute will alter its original objective. Only time will tell if technical education will gain or lose with such a change.

Michael J. Owens Technical College

Penta County Vocational School and Technical College, Penta County Technical Institute, Penta Technical College, and Michael J. Owens Technical College are all names of the same institute as it evolved in a short seven-year span from 1965 to 1972. This change is a characteristic of the development of technical colleges in Ohio.

The Penta County Vocational School and Technical College was a dominant factor in promoting the concept of area career schools in Ohio. A great deal of state attention was focused on Penta and many articles written on the early years of Penta's development. The national and state recognition and publicity created an image of a combined career center for vocational, technical, and adult education.

This combined image would give the Technical Institute identity problems. As Penta Tech developed, these identity problems appeared to be more prominent than at the other developing technical institutes. The question of the relative importance of technical education on the combined campus could be questioned by several developments: an exceptionally strong and dominant vocational system seemed to overshadow the technical programs, a controlling board of secondary education operated the Technical Institute, evening use of the facility by technical students after the vocational school students were finished, and the name. Early brochures often stated in bold letters "Penta County Vocational School," then in small letters added ".....and Technical College." These identity problems occurred to some degree at Tri-County, Muskingum, and other technical institutes where there was one board of education operating both a vocational and technical school. The data from Penta Tech documents these problems more often and more pronounced.

The State Department of Education, through the leadership of Byrl Shoemaker, was involved in the initial planning of the technical institute. Through Dr. Shoemaker's office a series of meetings with local school administrators was taking place. Surveys of industries and schools were being made and data collected. These surveys were all confirming the need for vocational and technical education and
confirming the fact that area students were interested in vocational and technical education.\footnote{147}{William L. Ramsey, "The Penta County Story," American Vocational Journal, XLI (May, 1966), p. 18.}

The real break in the development of this new complex for vocational, technical, and adult education occurred in March, 1964 when Bowling Green University and other interested groups gave up on the idea of the utilization of the huge U.S. owned former Rossford Army Depot property.\footnote{148}{Ibid.} With the sudden availability of property, the local educators pooled their ideas and data to form a school district that could use the valuable acreage and buildings. On May 11, 1964, the vocational school district was formed.

Seven months after the official forming of the Penta County Vocational School District, the State Department of Education again exercised its leadership by calling together Penta County Vocational officials, the Toledo Chamber of Commerce, and representatives from twenty major industries to discuss the possibilities of adding technical education to the district. At this meeting, December 17, 1964, a definite need for technicians was discovered and recommendations made to initiate at Penta programs in Chemical, Mechanical, Electrical, and Data Processing Technologies. A technical school was approved by the State Department of Education before the end of December so that
the four programs could be developed in time to begin operations along with vocational programs when Penta opened in the fall of 1965. 149

Two hundred seven students enrolled in the four technical programs the first (Fall) quarter, and the number increased to 245 for the Winter quarter. The technical students used the newly built vocational school facility on a late afternoon and evening basis. The technical students were joined in the evening hours by 527 other persons enrolled in Penta's third division, The Evening Adult School. 150

Guiding all three of Penta's divisions during the early years was its first superintendent, Dr. William L. Ramsey. Ramsey stated that the philosophy of Penta was to offer career programs to meet the needs of students, business, labor, and industry of the area. 151

When referring to the technical programs, the State Department of Education preferred to use the term "technical school" or "technical center." However, Dr. Ramsey was the first person in Ohio to use the words "technical college." Local documents, brochures, and other publications referred to the entire institution as the Penta County Vocational School and Technical College as early as 1966, although there was no legal basis to use the word "college."


150 From an untitled bulletin released by Penta County Vocational School, 1966.

151 William L. Ramsey, from a mimeographed release from the Superintendent's office.
During the first year of operation (1965-66), school officials began considering the advantages of associating their technical programs with the Ohio Board of Regents. January 13, 1966, the Ohio Board of Regents passed a resolution approving the creation of the Penta County Technical Institute District. It should be noted that the school was already being referred to as a college, but the official state designation on the charter was "institute." The college became an institute. The charter resolution was filed with the Office of the Secretary of State March 25, 1966, and the technical district received its state charter February 17, 1967.

A brief outline of the historical events at Penta Technical Institute is well summarized by Dr. Jacob See, the President who had replaced Dr. Ramsey. Dr. See again illustrated the Technical Institute's identity problem by writing:

THE PATH TOWARD A SEPARATE IDENTITY

When the College first opened in the fall of 1965, the two educational organizations, Penta County Vocational School and Penta Technical Institute, were practically one. The Penta County Vocational School was the dominant of the two educational institutions. Since then, the College has grown physically and has been recognized by other institutions of higher education. The two institutions have steadily grown apart, and the final separation will be complete in 1974.
The following is a partial list of events since July 1, 1968, which indicate progress toward a separate identity for the College:

1. On July 18, 1968, the Board of Trustees appointed Dr. Jacob See to the Presidency of the College. One of the reasons for his appointment was his plan to produce two separate, viable technical education institutions from the amalgamation.

2. The College President originally had an advisory committee consisting of the seventeen superintendents of the technical district. This group was disassociated from the College in 1968. A College President's Special Advisory Committee, consisting of area businessmen and industrialists, was formed. Also, at about the same time the College ceased requiring its instructors to hold teaching certification by the Ohio Department of Education.

3. Originally the eleven member Board of Education was the official legal entity which governed both educational institutions. On April 14, 1966, the nine-member Board of Trustees was elected; of these members, six served on both governing bodies. The boards met originally on the same night and their meetings followed one another. Separate meeting dates were instituted in 1969. Currently,
only three of the Board of Trustees are also mem-
bers of the High School's Board of Education.
There is reason to predict that by 1974, no mem-
ber of the Board of Trustees will serve on both
boards.

4. Originally, the two educational systems were inter-
meshed at all of the administrative positions and
faculty positions. Both shared substantially the
same staff at each of these levels. Presently, the
two staffs are totally distinct with one exception.

5. From the beginning, funds have been directly allo-
cated by state agencies directly to each institution;
hence, there was no need for separation of the funding
of the educational institutions.

6. On December 12, 1968, the Board of Trustees approved
a separate accounting system for the College. With
its implementation, the College's fiscal records have
been physically distinct.

7. In the fall of 1968, a formal inventory practice
was initiated to assure that the College equipment
was properly accounted for.

8. The College obtained a long-term lease on land in
1969 to construct permanent college facilities.

9. In the fall of 1969, the General Education Division
began requiring the faculty to hold no less than a
master's degree. It changed from a division which primarily employed part-time personnel to one primarily employing full-time personnel. The trend toward upgrading faculty later became evident in other departments and divisions.

10. The Board of Trustees, upon the recommendation of the President, officially recognized the Technical College Faculty Council in December, 1969.

11. Institutional membership in the Ohio College Association, American Association of Junior Colleges, and the Ohio Organization of Technical Institutes was recorded during the 1970-72 period.

12. A full-time administrative assistant to the President was named in September, 1971.

13. A rented building near the campus was furnished as a College Student Union in September, 1971.

14. In 1971, the President and the Board of Trustees purchased from available funds, twenty-two acres of land for further expansion, accepted a gift of two and one-half acres, and took an option on additional acreage.

15. On November 19, 1971, the Ohio Board of Regents passed a resolution which permitted Penta Technical College to change its name to The Michael J. Owens Technical College.
16. The new name was approved by the Ohio Board of Regents; it became official on February 17, 1972.

17. On March 27, 1972, Owens Technical College started its Spring Quarter in the new 4,122,000 dollar classroom and laboratory building. As a result of the move, the College is offering both day and evening classes.

18. By 1974, it should no longer be necessary for the President of Owens to serve as the administrative head of the Penta County Vocational Education Planning District, which is in general conterminous with the Owens Technical Education District....

19. Enrollment in the College is not restricted, however, to a geographic district. Actually, more than forty percent of the students attending the College live outside the area encompassed by the Technical Education District in which Owens Technical College is located.

20. In January, 1971, the President asked the permission of the Ohio Attorney General (his legal opinion) to contract with private organizations to furnish needed student dormitory-type housing on or near the campus.

21. In February, 1972, preliminary plans for a new five-story health-care technologies building were begun by the President and selected members of the faculty.
22. In March, 1972, the President began to study the feasibility of selling revenue bonds to build a new Student Union building. 152

The Technical Institute operated on an afternoon and evening basis from 1965 to 1972. The condition did not change until a new technical building was funded by the Ohio Board of Regents. The new building, named College Hall, is located on the same site as the Vocational School at 30335 Oregon Road, Perrysburg. College Hall has more than 90,000 square feet of space. It is a J-shaped building with four distinct parts. Part (1) contains engineering, fire, and police laboratories and a dining hall. Part (2) contains the library and student lounge and is considered the hub of college activities. Part (3), a two-floor structure, houses classrooms, business labs, health labs, and administrative offices. Part (4) is a lecture hall and lobby separated from the other parts of the building enabling this area to be used as a community center without interfering with the other functions of the Technical College. 153 With the new building in use, Owens Tech began evening programs and full-time day school - services not previously available.

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153 Description of facilities taken from building blueprints.
Enrollment at Penta Tech - or Owens as it now is named - has increased throughout its existence:

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965-66</td>
<td>207</td>
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<tr>
<td>1966-67</td>
<td>517</td>
</tr>
<tr>
<td>1967-68</td>
<td>575</td>
</tr>
<tr>
<td>1968-69</td>
<td>715</td>
</tr>
<tr>
<td>1969-70</td>
<td>886</td>
</tr>
<tr>
<td>1970-71</td>
<td>811</td>
</tr>
<tr>
<td>1971-72</td>
<td>907</td>
</tr>
</tbody>
</table>

From the original four programs, the offerings had expanded and in 1968 included:

- Mechanical Engineering Technology
- Electrical Engineering Technology
- Mechanical Design Technology
- Data Processing Technology
- Accounting Technology
- Retail Technology
- Police Science Technology
- Fire Science Technology
- Agri-Business
- Child Development
- Food Service
- Nursing

By 1972, new programs in Chemical Engineering Technology, Civil Engineering Technology, Hotel-Restaurant, Industrial, and Executive Secretary had been added.

The technical programs initiated at Penta Tech qualified for reimbursement from the State Department of Education. Throughout the years of program development, the high standards for technical

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education have been maintained at Owens Tech. A typical program would require a student to follow the following sequence of courses for the Electrical Engineering Technology Degree:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>1</td>
</tr>
<tr>
<td>Slide Rule and Calculators</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>Basic Physics</td>
<td>4</td>
</tr>
<tr>
<td>Circuit Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>Basic Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Circuit Analysis II</td>
<td>5</td>
</tr>
<tr>
<td>Technical Report Writing</td>
<td>2</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
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<table>
<thead>
<tr>
<th>Third Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics III</td>
<td>4</td>
</tr>
<tr>
<td>Basic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Circuit Analysis III</td>
<td>5</td>
</tr>
<tr>
<td>Mechanical Drafting</td>
<td>2</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>18</strong></td>
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<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Basic Programming</td>
<td>4</td>
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<tr>
<td>Circuit Drafting</td>
<td>2</td>
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<tr>
<td>Mechanics</td>
<td>5</td>
</tr>
<tr>
<td>Communications I</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
A major difference in curriculum development at Owens Tech is the higher number of technical courses in the first year and fewer general courses until the last quarter. This occurs mainly in the engineering curriculums. The large percent of industrial personnel working and attending classes is a reason given for this course structure. It is the belief at Owens Tech that these working people would rather get directly into their technical subjects because they can use them on the job.\textsuperscript{158} Higher funding for technical courses, compared to general courses, may have had some bearing on this structure of courses also.

The continuing education segment of Owens Technical College is not well defined. In the early stages of development when the Technical Institute was operated by the vocational district Board of

\textsuperscript{157}\textit{Ibid.}, pp. 66-69.

\textsuperscript{158}Personal interview with Dr. Jacob See, President of Owens Technical College, October 10, 1972.
education, a division of the Vocational School offered adult educa-
tion. The afternoon-evening schedule, necessary until 1972, restricted
adult programs sponsored by the technical division. However, seminars,
workshops, and special courses were offered at the department level
whenever needed or requested by area business.

An unusual development at Penta Tech was its part in estab-
lishing a technical institute in another district. There was a need
and a desire to establish technical education in Allen County at Lima,
thirty miles south of the Penta district.

Working with the consent of the Ohio Board of Regents and the
Ohio State University (Ohio State operated a branch at Lima), Penta
Tech planned, coordinated, and administered a new "branch" called the
Allen County Technical Institute. Mr. Daniel Brown, the administrative
head at Allen Tech, reported directly to Dr. See, Penta's president.

Allen County Tech began classes in Nursing in 1969. In 1970,
nine programs were offered with 360 enrolling in them. The first
graduating class of thirty-eight students were granted degrees from
the parent institution, Penta Technical Institute. On June 30, 1971,
Penta Tech turned the assets of Allen Tech over to its newly created
district. 159

The objectives of Penta Tech, according to its first adminis-
trative head, were to provide career education and career opportunities
to students, business, and industry. In 1969, the institution reported

that, "..... the purposes and objectives of the Penta Technical Institute center upon the requirements for technologists by area employers and the expressed needs of students seeking to become technologists."¹⁶⁰ Again in 1972, we see basically the same objectives stated in the following way: "The number one objective of the College is to provide individuals, businesses, and industries with relevant programs in given technologies and related areas."¹⁶¹

Like some of the other technical colleges in Ohio, Owens Technical College is considering reforming its Board of Trustees and making another change to a State General and Technical College.¹⁶² It is the belief at Owens Tech that regardless of administrative structure, name of the institution, or state developments, they at Owens will continue to offer quality technical programs meeting the objectives so many times stated.¹⁶³

Northwest Technical College

Northwest Technical College opened in 1969 as the Four-County Technical Institute. The development of the Four-County Technical

¹⁶⁰ Penta Technical Institute, op. cit., p. 3.
¹⁶² Statement made by President See at a meeting February 12, 1973.
¹⁶³ These statements derived from the personal letters and files of President See.
Institute is linked with the development of the Four-County Joint Vocational School.

The origins of technical education in the northwest section of Ohio including Defiance, Fulton, Henry, and Williams counties began with a meeting of area public school superintendents called to discuss the possibilities of forming a joint vocational school district. The first meeting, held March 31, 1965, generated enough interest in vocational education that subsequent meetings resulted in a request to the State Department of Education for the creation of a joint vocational school district. The joint vocational school district with a technical institute was formed May 31, 1966.164

The decision to include a technical school with the vocational school was the result of a survey conducted by the State Department of Education in January of 1966. The State Department then recommended that a technical school offering eleven programs be formed.165 A follow-up survey, also conducted by the State Department of Education, indicated that a sufficient number of students would be interested in technical education to support a technical institute.166 The student

164Four-County Technical Institute, Official Plan of Operation, June, 1968, appendix A.

165Ibid., p. 2.

166State Department of Education survey results, October, 1966, (typewritten).
interest survey of 1966 did not accurately project interest in technical education. By 1973, only 268 student FTE were reported to the Ohio Board of Regents.

The new vocational-technical school district succeeded in getting its voters to approve a bond issue in November, 1966 for the construction of a vocational-technical training center.

The technical facility, occupied in September of 1969, was a separate wing of the vocational school located on a sixty-one acre campus at the intersection of State Routes 66 and 34, five miles south of Archbold, Ohio. The technical wing of the building contained 32,000 square feet of space including fifteen laboratories, six classrooms, and offices.\footnote{167 Information on the building secured during a personal tour March, 1971.} The Technical Institute was located in this wing until 1972, when a new facility, built by the state, was ready for occupancy.

The Four-County Technical Institute was chartered by the Ohio Board of Regents and given approval to offer twelve technologies in June, 1968. The administration was unable to get the facility ready and students recruited in time for the 1968 school year. In 1969, when plans were complete, 141 technical students (FTE) were enrolled.

The five objectives of Four-County Tech were career oriented and were stated to be:

1. Meet the manpower needs of the area.

2. Provide students with a level of marketable skills and knowledge.
3. Prepare students for citizenship.

4. Develop social competencies.

5. Provide appropriately equipped laboratories and competent instruction.168

These objectives were written by the Institute's first superintendent (later called president) Robert J. Durbin.

In 1972, the Technical Institute received a new president, a new name, and a new facility. Max F. Covert replaced Mr. Durbin as President. On February 17, 1972, Northwest Technical College became the official name of the school. A new 2.5 million dollar technical college building was operational on Route 34, east of the vocational site. The new building contains seventeen laboratories, ten classrooms, a commons, library, bookstore, and offices. The technical wing in the Vocational School was taken over by the expanding Vocational School still under the superintendency of Mr. Durbin.

An example of the programs being offered at Northwest Tech is illustrated with the following Accounting Technology curriculum:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Office Machines for Accountants</td>
<td>3</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>Communications II</td>
<td>3</td>
</tr>
<tr>
<td>Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Bus. Adm.</td>
<td>3</td>
</tr>
<tr>
<td>Psych. of Human Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adm. Communications</td>
<td>3</td>
</tr>
<tr>
<td>Accounting III</td>
<td>3</td>
</tr>
<tr>
<td>Credits &amp; Collections</td>
<td>3</td>
</tr>
<tr>
<td>Prin. of Management</td>
<td>3</td>
</tr>
<tr>
<td>Prin. of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Political Science</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interm. Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Tax Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Cost Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Gov. &amp; Business</td>
<td>3</td>
</tr>
<tr>
<td>Data Processing I</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interm. Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Cost Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Office Management</td>
<td>3</td>
</tr>
<tr>
<td>Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>Data Processing II</td>
<td>3</td>
</tr>
<tr>
<td>Comparative Governments</td>
<td>3</td>
</tr>
</tbody>
</table>
The greatest problem for Northwest Tech has been its low enrollment. With only 268 FTE in 1972, the College has been additionally supported with special funds from the Ohio Board of Regents. In an effort to strengthen its financial situation, Northwest Tech proposed to establish a State General and Technical College. An official proposal was submitted to the Ohio Board of Regents for the new structure. At its March, 1973 meeting the Regents tabled (did not approve) the request.  

With low enrollment, a total split from the Vocational School, and the inability to form a General and Technical College to strengthen its financial plight, the future at Northwest Technical College is not optimistic.

North Central Technical College

The development of the North Central Technical College is divided into two distinct eras: first, its existence as the Mansfield...
School of Technology 1961-68; and second, as the North Central Technical College from 1968 to the present.

Leadership for the early development of technical education in the Mansfield area came from the State Department of Education and local school administrators from the Mansfield City School system. Surveys, industrial meetings, and newspaper promotion in the early part of 1961 began the process of a new program of education that was supported elsewhere in the nation by funds from the National Defense Education Act. The area response to a tentative technician program was encouraging enough that Mr. Harry Davis the Vocational Diversified Cooperative Training Coordinator at Mansfield Senior High School was named part time technical director on April 4, 1961. Mr. Davis was given the responsibility of working with local industry and the State Department of Education in setting up technical education programs. In the Fall of 1961 plans had been completed for two programs. Forty-two students enrolled in the Electrical Engineering Technology and Mechanical Engineering Technology offered in the evening hours at Mansfield Senior High School. Sixteen of these students would graduate during the first commencement exercise June 8, 1963.

In establishing a technical school the Mansfield Board of Education stated that its objective was to provide post-high school education that would prepare its graduates with career oriented

This career objective was the only one mentioned by the sponsoring Board. Promotion and publication about the new school was done during these first years through a series of mimeographed bulletins describing programs and opportunities. Another media often used were articles and announcements in the local newspapers. In 1962 the Mansfield School of Technology added a Metallurgical Technology, had five full and two part time instructors, sixty students, and a new full time director, Mr. George Yoder. The Mansfield School of Technology was now located in a converted elementary school, a ten room sandstone building, located at 218 Marion Avenue. There was a library, four classrooms, and five laboratories in the building.

Through the years 1962-1966 no new programs had been added. This lack of development was due to limited parking and limited building facilities at the Marion Avenue location. A typical curriculum during this period, developed along the patterns set up by the State Department of Education, contained over 1800 hours of instruction. A typical program developed at Mansfield was the following Mechanical Technology curriculum:

---


<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics I</td>
<td>5</td>
</tr>
<tr>
<td>Physics I</td>
<td>5</td>
</tr>
<tr>
<td>Technical Drafting</td>
<td>3</td>
</tr>
<tr>
<td>Machine Tools</td>
<td>4</td>
</tr>
<tr>
<td>Technical English I</td>
<td>3</td>
</tr>
<tr>
<td>Problem Solution</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics II</td>
<td>5</td>
</tr>
<tr>
<td>Physics II</td>
<td>5</td>
</tr>
<tr>
<td>Technical Drafting II</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Processes</td>
<td>4</td>
</tr>
<tr>
<td>Technical English II</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics III</td>
<td>5</td>
</tr>
<tr>
<td>Metal Selection &amp; Processing</td>
<td>4</td>
</tr>
<tr>
<td>Heating &amp; Ventilating</td>
<td>3</td>
</tr>
<tr>
<td>Ferrous Metallurgy</td>
<td>4</td>
</tr>
<tr>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>Technical English III</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics IV</td>
<td>5</td>
</tr>
<tr>
<td>Technical English IV</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Electricity</td>
<td>4</td>
</tr>
<tr>
<td>Machine Design I</td>
<td>4</td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>Safety Engineering</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Organization &amp; Supervision</td>
<td>3</td>
</tr>
<tr>
<td>Statistical Quality Control</td>
<td>4</td>
</tr>
<tr>
<td>Tool Design I</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Machine Design II</td>
<td>4</td>
</tr>
<tr>
<td>Experimental Analysis</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
</tr>
</tbody>
</table>
Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool Design II</td>
<td>4</td>
</tr>
<tr>
<td>Production Scheduling, Planning</td>
<td></td>
</tr>
<tr>
<td>and Control</td>
<td></td>
</tr>
<tr>
<td>Motion &amp; Time Study</td>
<td>4</td>
</tr>
<tr>
<td>Industrial Economics</td>
<td>4</td>
</tr>
<tr>
<td>Mechanical Problems</td>
<td>3</td>
</tr>
<tr>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

The courses were mostly technical, as the curriculum contained very few general or leadership courses. All of the courses were taught by "technical" instructors.

Development and expansion again occurred in 1966 as two new programs, Industrial Engineering Technology and Retail Management, were added to the technical offerings. Growth continued slowly at Mansfield Tech. The new director, Mr. Henry Fallerius, told the students in 1967 that they were 105 strong. 176

The new administration, realizing that the Institute's location was severely retarding growth, made vain attempts to secure funds to expand from the Mansfield Board of Education. The Technical School administration and its advisory committees convinced the Mansfield City Board of Education that it was in the best interest of technical education that a technical institute district be formed. 177 An application to form a district was submitted to the Ohio Board of Regents. The new

176 Letter from Director Henry Fallerius, to students of Mansfield Technical School, November, 1967.
district was approved and the Trustees named by the Governor, December 22, 1968. The official plan and charter of the new district, expanded to include Richland, Crawford, and Ashland counties, were approved by the Ohio Board of Regents in May, 1969.  

With the State Charter, the Mansfield School of Technology became the North Central Ohio Technical Institute. The new district, with a new name and a new controlling board, still needed a new building. The search for a building solution placed North Central Tech into an unusual cooperative role. To get capital funds from the state of Ohio, a cooperative venture was initiated among the Ohio Board of Regents, the Ohio State University, and the North Central Ohio Technical Institute. The plan was to place the technical facility on the same campus as the developing Ohio State University Branch at Mansfield. According to the Technical Institute administration:

The reasons (for moving to the branch campus) were logical, particularly through an economical approach - to realize greater utilization of physical plants and services. In addition to "economics," the Technical Institute students would share with the University students a contemporary academic environment and greater cultural awareness and availability through extra curricular activities. The cost sharing arrangements between North Central Ohio Technical Institute and Ohio State University provides the Technical Institute students the additional use of library, classrooms, and cafeteria, which are operated by the Ohio State University.  

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178 Ohio Board of Regents, Minutes of Meeting, May, 1969.
179 North Central Ohio Technical Institute, op. cit., p. 2.
Another good reason for the cooperative arrangement was that without the agreement, the Regents would not have released building funds for technical education. North Central Tech President Fallerius when announcing the new plan to the press said, "This (move to the Ohio State campus) couldn't please me more."  

Under this new cooperative building and operational plan, the program requirements for the new one million dollar technical building would be done by the Technical Institute staff. The building was to be owned and maintained by the Ohio State University. All moveable equipment within the technical building would be owned and maintained by the Technical Institute. From its operating budget, the Technical Institute would pay Ohio State to operate and maintain the building and grounds. The architect began drawing for the technical building March 1, 1969, and by student registration day September 25, 1970, the building had been completed.  

The new facility, on the Ohio State Branch campus, is located at 2441 Kenwood Circle. The campus is on Route 39 northwest of Mansfield. The new building has two drafting, electronic, machine tool, testing, fluid power, industrial, secretarial, and computer laboratories. The building has 32,983 square feet of space. In addition to this space, the Institute shares with Ohio State classrooms, a library, and cafeteria.

With a new facility, the Technical Institute was now in a position to grow. In 1972, the program offerings had expanded including:

- Electrical Engineering Technology
- Electronic Engineering Technology
- Environmental Protection
- Law Enforcement
- Mechanical Engineering Technology
- Industrial Engineering Technology
- Nursing
- Radiological Technology
- Accounting
- Computer Programming
- Industrial Sales and Marketing
- Retail Management
- Secretarial Science

Student enrollment matched the increase in programs. Six hundred twenty-four FTE were reported in 1972 with an additional 150 enrolled in developmental and other adult programs.

Through the years of development the objectives at North Central Tech have remained the same. In 1971 the Institute informed the North Central Association of Colleges and Secondary Schools that the Technical Institute's "major purpose is to provide practical educational experiences aimed at meeting specific needs of our technological society."\(^{182}\)

The 1972-73 catalog shows another variation in name at North Central. With the passage of legislation, the Institute formally became the North Central Technical College.


\(^{182}\)North Central Ohio Technical Institute, op. cit., p. 4.
Curriculum patterns have changed slightly throughout the development of the Institute. A study of the 1966 and the 1972 mechanical programs show an increasing number of communications and general courses, but the program remains predominately technical as illustrated:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>Technical Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Basic Communications</td>
<td>3</td>
</tr>
<tr>
<td>Technical Drafting I</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Process I</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>Technical Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Technical Communications</td>
<td>3</td>
</tr>
<tr>
<td>Technical Drafting II</td>
<td>3</td>
</tr>
<tr>
<td>Statistical Quality Control</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Mathematics III</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Hydraulics</td>
<td>4</td>
</tr>
<tr>
<td>Technical Research</td>
<td>3</td>
</tr>
<tr>
<td>Technical Physics III</td>
<td>4</td>
</tr>
<tr>
<td>Statics</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Mathematics IV</td>
<td>3</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3</td>
</tr>
<tr>
<td>Industrial Organization</td>
<td>4</td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Materials</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
### Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Machine Design</td>
<td>4</td>
</tr>
<tr>
<td>Scientific Programming</td>
<td>4</td>
</tr>
<tr>
<td>Tool Design</td>
<td>4</td>
</tr>
<tr>
<td>Applied Psychology</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

### Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Electricity</td>
<td>4</td>
</tr>
<tr>
<td>Supervision</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Economics</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Processes II</td>
<td>4</td>
</tr>
<tr>
<td>Heating and Ventilation</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

When asked to look back over the years of development at North Central, President Fallerius made the following observations. The State Department of Education helped us define technical education and supported us financially in the early years. As we developed, they (State Department) could not fund us to the necessary levels for growth. Our greatest problem, Fallerius said, has been money – not enough. The sharing of facilities with Ohio State has been annoying at times, but workable and certainly not a major problem at Mansfield. The Technical College's greatest asset, according to Fallerius, has been the attitudes of team work and cooperation of the staff.  

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184. Personal interview with Henry Fallerius, the President of North Central Technical College, March 6, 1973.
In operation only since September 1968, Hocking Technical College has experienced growth and change that has propelled it to be the third largest of the seventeen technical colleges. Growth, curriculum innovations, and change have been characteristics of this Institute located in a sparsely populated portion of the state at Nelsonville, Ohio.

The College has grown from a modest beginning of 270 students to 1,288 in 1973 (948 FTE). The name of the institution has changed often and has at one time legally responded to Tri-County Vocational School and Technical Center, Tri-County Technical Institute, Tri-County Technical College, and Hocking Technical College.

The school has developed the only Ceramic Engineering Technology and combined Outdoor Recreation and Wildlife programs in the United States, the only Forestry Technology in Ohio, and the first Environmental Health, Corrections, and Broadcast technologies in Ohio.

It was the first technical school built in Appalachia; and in cooperation with the Tri-County Vocational School, built the first motel training complex on a school campus.

The Technical College owes its birth to the Tri-County Vocational School and the State Department of Education. From 1965, when a post-secondary school was conceived to operate with the Vocational School, until July 1, 1969, the Vocational School District planned and operated the technical school.
Career education of a high caliber for area youth had long been a dream of educators in southeast Ohio. The small and poor school district in the area could not afford expensive shops and equipment needed for modern career training. The dream began to materialize in 1963 as funds for area schools became available for construction through the **Vocational Education Act of 1963**. The State Department of Education, under the leadership of Dr. Byrl Shoemaker, made a student interest survey in Athens County in 1963. This survey indicated that there was a high interest among students for vocational training. An industrial survey was also conducted. The industrial survey completed in January, 1964, likewise indicated a high interest in vocational education and a high interest among civic and business leaders in the community to work for the establishment of a joint vocational school.  

In January of 1965 when local superintendents submitted an application to the State Department of Education to form a joint vocational school district, the possibility of a technical center was nowhere in the application.

The idea of a post-secondary technical center to augment the vocational offerings was suggested by Dr. Shoemaker. Shoemaker

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185 From the administrative files of the Tri-County Joint Vocational School.

promised the district additional building funds from the Appalachia Regional Commission for technical education if the local bond issue and levy for the Vocational School were passed.

A preliminary plan from the newly formed vocational school district was submitted to the Appalachia Regional Commission October, 1965, requesting 898,979 dollars to build and equip a technical center of 43,500 square feet for 600 students. The technical center would be located on the Vocational School site so that buildings and equipment could be shared with the Vocational School. The development of a technical school at Nelsonville was contingent on the ability of the vocational district to pass its vocational school levy and bond issue.

The first levy for the Vocational School failed in November, 1965. In a second attempt May, 1966, the levy and bond issues passed by only seventy-one votes. On August 1, 1966, Mr. T. C. Porter was hired as superintendent of the new Tri-County Joint Vocational School District. Porter would guide both the Vocational School and Technical Institute as their chief administrative officer until 1971.

The proposal submitted to the Appalachia Regional Commission was approved, and they granted the Vocational School district 1.9 million dollars to complete the Vocational School and build a technical school facility. Construction was started May, 1967, and completed for the Fall Quarter classes in 1968.

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187 Ibid., pp. 2-4.

188 From the personal papers of Mr. T. C. Porter.
On August 15, 1967, by Board of Education resolution, the combined name Tri-County Joint Vocational School and Technical Center was separated and the "Tech Center" became the Tri-County Technical Institute. The 270 students reporting to classes for the first time in September, 1968 attended a technical institute with its own name and operating in its own separate facility. Tri-County Tech was the first technical school in Ohio operating in a vocational school jointure that moved initially into its own facility. The new technical building with 30,000 square feet of space contained seven laboratories, two classrooms converted into laboratories, two classrooms, and offices. The building was too small on opening day with the unexpected size of its first class. The overflow of students attended classes in the adjoining Vocational School. Cafeteria and shop facilities were also shared with the Vocational School.

The overflow of students the first year created a problem for the administration. New buildings were needed. Another proposal was submitted to the Appalachia Regional Commission and before the new school was two months in operation, plans were underway for its first expansion.

Phase II of building at Tri-County Tech was funded by 160,000 dollars from Appalachia, 54,000 dollars of borrowed money, and 75,000 dollars from Van Buren and Firestone, Architects.
dollars from the state of Ohio. The new wing with five laboratories and three classrooms was completed for the class of 1969.

Program offerings the first year of operation in 1968 were:

- Ceramic Engineering Technology
- Mechanical Engineering Technology
- Electronic Engineering Technology
- Industrial Engineering Technology
- Food Service Technology
- Forestry Technology
- Recreation and Wildlife Technology
- Retail Technology
- Computer Programming Technology
- Executive Secretary Technology
- Accounting Technology

The eleven programs were all developed with industrial advisory committees and submitted to the State Department of Education. These original programs were developed with the possibility in mind of receiving Board of Regents approval at a later date. During the 1968 school year, the Technical School operated exclusively under the Vocational School Board locally and the State Department of Education. The original curriculums averaged nearly 1,900 hours of instruction for the two years. An example of the original programs is illustrated by the following Forestry curriculum developed by a State Forestry Advisory Committee:

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191 State Department of Education, list of approved technical education programs, 1968, (mimeographed).
<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Forestry</td>
<td>3</td>
</tr>
<tr>
<td>Botany</td>
<td>3</td>
</tr>
<tr>
<td>Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math I</td>
<td>5</td>
</tr>
<tr>
<td>Dendrology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>Fire Control &amp; Forestry Protection</td>
<td>4</td>
</tr>
<tr>
<td>Geology</td>
<td>3</td>
</tr>
<tr>
<td>Communications II</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math II</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation</td>
<td>5</td>
</tr>
<tr>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td>Communications III</td>
<td>3</td>
</tr>
<tr>
<td>Technical Math III</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Forest Mensuration</td>
<td>5</td>
</tr>
<tr>
<td>Timber Harvesting</td>
<td>4</td>
</tr>
<tr>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>Accounting I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Wildlife Management</td>
<td>3</td>
</tr>
<tr>
<td>Local, State, &amp; Federal Government</td>
<td>3</td>
</tr>
<tr>
<td>Applied Silviculture</td>
<td>4</td>
</tr>
<tr>
<td>Elements of Social Science (Human Relations)</td>
<td>3</td>
</tr>
<tr>
<td>Orientation to Employment</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>
During the 1968–69 school year, the administration and staff at Tri-County moved forward. New programs were being developed, a new building program was underway, and an organizational change was being considered. Ohio House Bill 531 (State Biennium Budget) had put heavy financial strains on the Vocational School Board. With increased financial pressures felt locally, the financial support from the Ohio Board of Regents was appealing to the district.

To investigate the possibility of forming a technical institute district, Superintendent Porter and the Technical School Director met with the Ohio Board of Regents Chancellor, February 12, 1969. The results were reported in the Board of Education Minutes and stated as follows:

Superintendent Porter and Director John Light reported on their meeting with Dr. John Millett of the Ohio Board of Regents. It was agreed at the meeting that the technical institute should come under the guidance of the Board of Regents. Supt. Porter and Director Light cited various factors that could be benefited as a result of coming under this governing body. Superintendent Porter stated that March 21 is the deadline for applying for admission and recommended that immediate action be taken. Mr. Harper moved, seconded by Mr. Pratt, requesting approval by resolution by all the district and county boards for admission of the

192Curriculum sheet developed by Forestry Advisory Committee, June, 1968, (typewritten).
technical school into the State Board of Regents system before the March 21 deadline. Roll Call unanimous.193

Plans proceeded for the change in governance in accordance with Section 3357 of the Ohio, Revised Code. By resolution dated March 20, a majority of the members of the Athens County, Hocking County, Perry County, Logan City, New Lexington City, and Nelsonville-York City Boards of Education proposed the establishment of a technical institute district consisting of the whole territory of Athens, Hocking, and Perry Counties.

On May 16, the Ohio Board of Regents approved creation of the Tri-County Technical Institute District, and on May 29, the resolution of the District's creation was filed with the office of the Secretary of State.

A Board of Trustees for the Tri-County Technical Institute District was appointed in accordance with the provisions of Sections 3357.05 and 3357.06 of the Ohio, Revised Code. Three trustees were appointed by the Governor of Ohio on July 22, and six trustees were appointed by the Athens County, Hocking County, Perry County, Logan City, New Lexington City, and Nelsonville-York City Boards of Education on August 14.194


The Official Plan of Operation, submitted to the Ohio Board of Regents, outlined the Institute's objectives and goals. It is interesting to note that the goals and objectives submitted to the Regents for approval of "higher education" technician programs were exactly the same as those developed by the Institution for the approval of programs under the State Department of Education. These goals have not changed to the date of this writing; they are:

Tri-County Technical Institute's principle objective is to provide para-professional technical education to high school graduates of all ages. Complementing the technical courses will be appropriate general education courses of college-level caliber to complete the students' education at the associate degree level. Laboratories, staff, library facilities, etc., will be maintained and updated as necessary to meet the objectives of school and the state approving agencies.

Specific Objectives

a. Technical

Adequate technical training will be given to allow students to enter their chosen para-professional occupation; post-high school technical education will train students to enter the various technologies of their choice; adult training and re-training will be given as needed by business, industry, and agriculture to allow adults to become employable as well as improve their technical abilities.

b. Academic

Academic subjects will be taught in addition to the technical, which will allow a "well rounded" educational program.

c. Social

Social objectives will be met through technical groups, student government, student organization, and community projects.
d. Psychological

Psychological effects on the students will be such that will enable them to take their place in the business, industrial, and agricultural community.

e. Health and Recreational

Health and recreational facilities will be available either through local facilities or through programs developed at this institution. 195

The Official Plan requested associate degree approval for the eleven original technical programs and two additions, Hotel-Motel Management and Police Science. 196 The curriculums proposed in the Official Plan were of the same length and standards as when they were submitted earlier to the State Department of Education.

The Official Plan, the associate degree programs, and the State Charter for Tri-County Technical Institute were all granted by the Ohio Board of Regents September 19, 1969. 197

In 1970, the Institute had grown to 959 full- and part-time students attending both day and evening classes. Environmental Health had been added to the list of programs. 198 The start-up costs of the Environmental program were financially supported by an Appalachia grant secured with the help of the regional health planners, the Ohio

196 Ibid., p. 10.
Valley Health Services. The Environmental Health program joined the School of Practical Nursing offered at Tri-County to form a core for expanding health careers. Increased enrollment, due mainly to the increases in Police Science, forced the Institute to install mobile classroom units to house the student overflow. For the 1970 school year twenty other mobile units were installed on school property as emergency housing due to the large numbers of students attending the unique courses offered only on the Tri-County campus.

On July 1, 1971, T. C. Porter resigned as President of the Technical Institute, but retained his role as Superintendent of the Vocational School. Mr. John Light was promoted from Vice President to President.

In 1971, student enrollment rose to 755 FTE and 1,056 head count. Programs in Corrections Technology and Drafting and Design were added to the course offerings. The Corrections program, a first in Ohio, was initiated to educate and train para-professionals to work in the fields of corrections, probation, and parole. Satellite or extension courses in Corrections were expanded and held for staff personnel at Junction City Treatment Center, Fairfield School for Boys, Chillicothe Correctional Institute, Lebanon, and Marysville. Technical education courses were taken to the inmates at Junction City Treatment

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Center by the Technical Institute's adult and evening division personnel.

The new mobile classroom units could not provide enough relief to hold the 1971 student enrollment. In a move to increase classroom space and provide recreational facilities for students, the Technical Institute proposed to remodel an old gym four miles from the campus. The request by the Tri-County Technical Institute to remodel for use the former Buchtel gymnasium was approved by the Nelsonville-York Board of Education December 14, 1971.200 The gym was remodeled and classrooms built into another portion of the building giving the Institute an additional 12,000 square feet of space.

On February 16, 1972, due to legislative action of the Ohio General Assembly and local approval, Tri-County Technical Institute became Hocking Technical College.

A solution to the annual problem of space shortages appeared close at hand; House Bill 457 (1972-73 Biennium Budget) contained 3.5 million dollars for constructing a new technical campus at Nelsonville. Funds from House Bill 457 would not help the crowded situation until 1974. In 1972, the enrollment at Hocking was a head count of 1,242 with 948 FTE. The problem of overcrowding was again countered with the purchase of six modular units providing an additional 4,000 square feet of space. The 1972 enrollment increase was due largely to the

addition of a Broadcast Technology and three new health programs: Registered Nursing, Medical Records, and Medical Assisting.

The three new health programs along with the existing School of Practical Nursing combined to form a new division of the Hocking Technical College – The Health Careers Institute. The new programs were developed in cooperation with the Ohio Valley Health Services. This agency once again aided the Technical College in securing a 50,000 dollar start-up grant. The Technical College and the Ohio Valley Health Services were also successful in augmenting the 3.5 million dollar state money with 445,000 dollars Appalachia for constructing additional health laboratories in the new building.

Another problem had been plaguing the Institute since its inception – student housing. In the weeks preceding the first class session in 1968, Nelsonville residents were being urged to room students. More than 100 students lived in private housing in Nelsonville that first year.²⁰¹ The addition of mobile units alleviated the problem somewhat, but by 1972, students were not enrolling at Hocking Technical College because of the acute student housing shortage. Permanent dormitories were planned for the new site, but future plans did not help the 1972 student rush for housing.

The 1972 enrollment showed the Outdoor Recreation and Wildlife program to be the most popular with ninety-six new enrollees. Forestry, Nursing, and Police Science were next in size.

⁻²⁰¹Ibid., September 6, 1968.
With five years of development under several names and two controlling agencies, the curriculums have remained constantly of high caliber and have maintained a high hour instructional requirement as illustrated in the 1972 Forestry curriculum:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro. to Forestry</td>
<td>3</td>
</tr>
<tr>
<td>Botany</td>
<td>3</td>
</tr>
<tr>
<td>Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Math II</td>
<td>5</td>
</tr>
<tr>
<td>Dendrology</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo Interpretation</td>
<td>4</td>
</tr>
<tr>
<td>Fire Control &amp; For. Protection</td>
<td>3</td>
</tr>
<tr>
<td>Tech Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Communications II</td>
<td>3</td>
</tr>
<tr>
<td>Agronomy</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>16</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforestation</td>
<td>4</td>
</tr>
<tr>
<td>Survey I</td>
<td>3</td>
</tr>
<tr>
<td>Communications III</td>
<td>3</td>
</tr>
<tr>
<td>Forestry Measurement</td>
<td>5</td>
</tr>
<tr>
<td>Entomology</td>
<td>2</td>
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<td></td>
<td><strong>17</strong></td>
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<table>
<thead>
<tr>
<th>Summer</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td>12</td>
</tr>
<tr>
<td>Special Problems</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>Forestry Mensuration</td>
<td>5</td>
</tr>
<tr>
<td>Timber Harvesting</td>
<td>4</td>
</tr>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Accounting I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
Fifth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology</td>
<td>3</td>
</tr>
<tr>
<td>Intro. to Wildlife Management</td>
<td>3</td>
</tr>
<tr>
<td>Political Science</td>
<td>3</td>
</tr>
<tr>
<td>Applied Silviculture</td>
<td>5</td>
</tr>
<tr>
<td>Sociology I</td>
<td>3</td>
</tr>
<tr>
<td>Orientation to Employment</td>
<td>1</td>
</tr>
</tbody>
</table>

18

Sixth Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry Management</td>
<td>5</td>
</tr>
<tr>
<td>Forestry Products Utilization</td>
<td>5</td>
</tr>
<tr>
<td>Lumber Grading Marketing</td>
<td>5</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

202

Another educational innovation opened at the Hocking Technical College and Tri-County Vocational School campus during the 1972-73 school year. A million dollar motel-restaurant facility was made operational. The plan to build a real operational motel and restaurant managed and operated professionally had been initiated while the vocational and technical schools were under one board. After separate boards were formed, the proposal for the motel remained with the Vocational School Board. The forty-six unit motel, restaurant, and convention area opened in 1973, managed by The Imperial House motel chain and used by Hocking Technical College students as a training center.

During its years of development, Hocking Technical College has been steadily drifting away from its parent institution, the Joint Vocational School. With a new campus, the separation will be greater.

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202 Hocking Technical College Catalog 1972-73, pp. 78-79.
After the plans for a new building program were realized with state funds becoming available, the Technical Institute purchased 250 acres of land one-half mile northwest of the presently shared complex to build a new campus. To plan the new site and buildings a master plan was developed. The master plan, a combination of the Technical College educational projections and an architect's and building plans, provides a blueprint for growth to 1980.

Prepared jointly by the Hocking staff and Kellam and Foley Architects and Planners, the master plan was released in 1973.

A summary of the plan includes objectives, programs, and future development.

The College was developed and chartered with the intent to provide career education of less than the baccalaureate level. This objective has guided all development and planning; in fact, all activities at Hocking Technical College are designed to aid a student in securing a job or improving himself in his current employment. Hands-on experience on laboratory equipment is stressed. Practical experience and practical application is encouraged in laboratories, theory, and general classes.

In addition to these objectives, the College staff emphasizes the individual approach to the fullest possible extent. The number of students in each class and laboratory is kept low in order to insure that the learning process is student oriented.

The College faculty, staff, administration, and trustees were asked to participate in the planning process and to contribute ideas
and suggestions. This process created a divergence of ideas, some of them conflicting. A consensus of general ideas and information revealed the following points:

The optimum size of the campus, if the career objective remains, will be between 1,500 and 1,800 students. This peak will be reached in approximately 1979 or 1980. If the objective of the College changes, and incorporates a significant number of adult extension programs and a two-year college transfer program, this size would double. These events are possible due to Ohio legislation that permits technical college boards to form general and technical colleges. The federal legislation is pushing adult career education at all levels and is attempting to put vocational and technical adult programs under one center. Increases to accommodate such possibilities are not programmed in this master plan due to the many uncertainties involved.

It has been generally agreed that the multi-purpose concept be adopted. This means multi-purpose in terms of school-community use, education service use, sharing of facilities between departments, and sharing of facilities between technologies. The College trustees have formally endorsed the community involvement concept to the extent of leasing campus property to agencies and services related to the College's career objectives. Some of these possibilities include:

BVR Offices on Campus
Auditorium for Community Use
Recreation Areas - picnic areas, fishing, tennis, etc.
Forest Service Fire Guard Station
Health Laboratory
Community involvement also includes using the community as a resource. The Forestry and Recreation and Wildlife programs use outdoor laboratories for approximately fifty percent of their laboratory time. The Wayne National Forest, State parks, and private forest areas are included in this type of utilization. Environmental Health students use outside facilities to a great extent also.

Programs at Hocking Technical College are identified by career, not by courses. Each career, such as Forestry Technology, is planned and submitted to the Ohio Board of Regents and the State Department of Education for approval. Both groups have program standards that each career or technology follows. Programs approved by the Ohio Board of Regents require that fifty percent of the curriculum, by quarter hour, be in the technical area; twenty-five percent of the curriculum be in basic science and mathematics related to the program, and twenty-five percent of the curriculum be in general studies. Additional electives are usually offered in the technical courses. The fifty percent technical course work is both theory and lab experience.

The State Department of Education requires a minimum of 1,650 clock hours in technical, basic, and communication classes. These standards, if carefully planned, are compatible with the Regents' standards.
Technical programs are divided into departments. These include:

- Health Department
- Engineering Department
- Public Service Department
- Business Department
- Natural Resources Department
- General Studies Department (courses, not technologies)

The above departments offer the following associate degree programs:

- Accounting
- Data Processing
- Secretarial Science
- Hotel-Restaurant Management
- Retail Mid-Management
- Corrections
- Police Administration
- Broadcast Engineering
- Ceramic Engineering
- Drafting and Design
- Electronic Engineering
- Industrial Engineering
- Mechanical Engineering
- Forestry
- Recreation and Wildlife
- Registered Nurse
- Medical Office Assistant
- Medical Records Technician
- Environmental Health
- Police Science

During the next eight years (1973-80), Hocking Technical College will add new programs at the rate of approximately two per year. Fourteen of these tentative programs have been identified and are listed by priority. The exact time of initiation will be determined by further studies, projections, and input from advisory committees. The major emphasis on program planning is in the allied health field. Hocking Technical College has been planning a regional
health training program in cooperation with the Ohio Valley Health
Services, Inc., the regional health planning agency. Hocking
Technical College will be the center for southeastern Ohio health
training up to the associate degree level programs. The second empha­
sis in program planning will be in the service and business areas.
Program priorities to be initiated at the approximate rate of two per
year by priority include:

1. Speech & Hearing
2. Physical Therapy
3. Park Enforcement
4. Public Administration
5. Forest Products
6. Medical Electronics
7. General Business Technology
8. General Engineering Technology
9. Dental Technician
10. Occupational Therapy
11. Inhalation Technician
12. Radiology Technician
13. Banking and Finance
14. Forensic Lab Technician

In program planning, the possibility exists that programs now
being offered will phase out and new programs will be developed that
cannot be identified at this time. Emerging careers will also change
this priority.

For the same eight year period (1973-1980), the enrollment
forecast for Hocking Technical College is as follows:
<table>
<thead>
<tr>
<th>Year</th>
<th>Total FTE</th>
<th>Day FTE</th>
<th>Evening &amp; Summer FTE</th>
<th>Day Head Count</th>
<th>Evening Head Count</th>
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</thead>
<tbody>
<tr>
<td>1972-73</td>
<td>870</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973-74</td>
<td>900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974-75</td>
<td>1,000</td>
<td>920</td>
<td>80</td>
<td>1,040</td>
<td>650</td>
</tr>
<tr>
<td>1975-76</td>
<td>1,120</td>
<td>1,030</td>
<td>90</td>
<td>1,176</td>
<td>700</td>
</tr>
<tr>
<td>1976-77</td>
<td>1,240</td>
<td>1,140</td>
<td>100</td>
<td>1,317</td>
<td>750</td>
</tr>
<tr>
<td>1977-78</td>
<td>1,365</td>
<td>1,265</td>
<td>100</td>
<td>1,469</td>
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<tr>
<td>1978-79</td>
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<tr>
<td>1979-80</td>
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<td>1,550</td>
<td>100</td>
<td>1,665</td>
<td>750</td>
</tr>
<tr>
<td>1980</td>
<td>1,700</td>
<td>1,600</td>
<td>100</td>
<td>1,666</td>
<td>750</td>
</tr>
</tbody>
</table>

The Phase 1 building project will provide approximately 88,000 square feet of building space including classrooms, laboratories, offices, and libraries. These space factors will provide approximately 11,550 square feet of classroom space for 770 students. Laboratories will accommodate an additional 480 students. These class and laboratory spaces, plus approximately 6,700 square feet of library, a short-order cafeteria, and miscellaneous space will house an educational enrollment between 1,000 and 1,300 day students. According to Hocking Technical College projections, this facility will be adequate until 1976 or 1977.

By 1980, according to projections, additional classroom needs will be:
Additional laboratory requirements for 1980:

<table>
<thead>
<tr>
<th>Lab Type</th>
<th>Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Allied Health</td>
<td>3,200</td>
</tr>
<tr>
<td>2 Forensic labs</td>
<td>1,400</td>
</tr>
<tr>
<td>1 Science lab</td>
<td>1,400</td>
</tr>
<tr>
<td>1 Map &amp; Surveying lab</td>
<td>1,400</td>
</tr>
<tr>
<td>1 Biology lab</td>
<td>1,200</td>
</tr>
<tr>
<td>1 (undetermined)</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Additional library and resource learning 5,634

Additional warehouse 400

Bookstore 1,200

Additional student service area 5,740

Additional cafeteria area 3,000

Additional office area 3,000

Additional staff area 2,400

Non-assignable & miscellaneous 7,704

Total additional minimum space requirement by 1980 45,728

Total square feet needed by 1980 134,596

With a master plan to guide them, construction of a new campus underway, and moderate growth expected, administrators, staff, and students at Hocking Technical College look optimistic to the future.

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Cincinnati Technical College

"If the other sixteen technical colleges in Ohio become General and Technical colleges, then Cincinnati Tech will be the only remaining member of the Ohio Organization of Technical Colleges, because unless forced will never alter our mission." This statement by Clifford House, President of Cincinnati Tech, sums up the institution's unwavering attitude toward a pure technical education program. This stand on the autonomous technical institute and the development and operation of cooperative programs are Cincinnati Tech's most unique characteristics.

The school's first name was the Cincinnati Cooperative School of Technology. Even the name focused its attention on the cooperative aspect of education, a program combining work experience with appropriate related instruction. Founded in April 1966 by the Cincinnati Board of Education, the school opened in the Fall of 1966 with 118 students enrolled in four programs: Business Data Processing, Graphic Communications, Mechanical Design, and Sales Marketing. The objective of these programs was to prepare individuals for entrance into employment in occupations which were defined as technical.

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204 Statement by Clifford House at Ohio Organization of Technical Institutes' meeting, December 8, 1972.


206 Cincinnati Cooperative School of Technology brochure material, 1966, (mimeographed).
Students were given the opportunity to earn-while-they-learn at the Cincinnati Cooperative School. The cooperative program worked in the following manner. After enrolling and being accepted into the school, the school’s program coordinator in cooperation with the employer advisory committee, and the student, selected a job station before the school year began. The job assignments were to be within the framework which served the purposes of the student’s technical career, although early quarters of work could be loosely related. As the school term progressed the work experience was to closely parallel the in-school classroom work. Work schedules and training programs were individually prepared to fit the student and his employer. The first co-op students followed a two year program that required four terms in industry and six terms in school. An example follows:

Business Data Processing Curriculum

<table>
<thead>
<tr>
<th>First Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td>2</td>
</tr>
<tr>
<td>Communication Skills I</td>
<td>4</td>
</tr>
<tr>
<td>Basic Unit Lab</td>
<td>6</td>
</tr>
<tr>
<td>Accounting for Data Pro. I</td>
<td>4</td>
</tr>
<tr>
<td>Orientation to Data Pro.</td>
<td>2</td>
</tr>
<tr>
<td>Advanced Algebra I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Term</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Employment Program</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Term</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Communication Skills II</td>
<td>3</td>
</tr>
<tr>
<td>Applications Lab</td>
<td>10</td>
</tr>
<tr>
<td>Accounting for Data Pro. II</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Algebra II</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>24</strong></td>
</tr>
<tr>
<td>Term</td>
<td>Course</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>Fourth Term</strong></td>
<td>Cooperative Employment Program</td>
</tr>
<tr>
<td><strong>Fifth Term</strong></td>
<td>Communications Skills III</td>
</tr>
<tr>
<td></td>
<td>Case Study Lab</td>
</tr>
<tr>
<td></td>
<td>Basic Computer Concepts</td>
</tr>
<tr>
<td></td>
<td>Datamath</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sixth Term</strong></td>
<td>Cooperative Employment Program</td>
</tr>
<tr>
<td><strong>Seventh Term</strong></td>
<td>Man and Society</td>
</tr>
<tr>
<td></td>
<td>Communication Skills IV</td>
</tr>
<tr>
<td></td>
<td>Stored Program Computers</td>
</tr>
<tr>
<td></td>
<td>Input and Output Devices</td>
</tr>
<tr>
<td></td>
<td>Statistics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eighth Term</strong></td>
<td>Cooperative Employment Program</td>
</tr>
<tr>
<td><strong>Ninth Term</strong></td>
<td>Tech. Writing &amp; Research</td>
</tr>
<tr>
<td></td>
<td>Computer Applications Lab</td>
</tr>
<tr>
<td></td>
<td>Computer Installations</td>
</tr>
<tr>
<td></td>
<td>Advanced Programming Sys.</td>
</tr>
<tr>
<td></td>
<td>Installation Management</td>
</tr>
<tr>
<td></td>
<td>Systems Analysis</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The primary feature of the cooperative education was that it served an educationally sound principle combining actual work experience along with more formal education. Other advantages of cooperative education, according to the school, were that cooperative employment enables:

1. Financially disadvantaged to afford their education at the Institute. About two of every three students say they can afford to attend the Institute only because their co-op earnings (average: $800 per co-op term) make it possible for them to "pay as they go."

2. At the same time, because they pay federal income taxes on their earnings and state sales taxes on their purchases, the students pay back to state and federal governments some of the governmental subsidy the Institute receives for their education.

3. Financially disadvantaged students to achieve a far higher level of employment than they could attain without their associate degree in education and year of work experience. As a result they earn more than they would otherwise have earned — and pay more taxes than they would otherwise have paid.

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Cincinnati Cooperative School of Technology, (catalog), p. 11.
4. The total co-op earnings annually exceed the cost of operation of the Institute. From an economic standpoint, then, the students return more to the economy during their education than the investment in their education takes out.

5. The full co-op plan assures a more realistic, more effective technical training than classroom instruction alone.

6. The Institute has experienced a high retention rate for the first three graduating classes.

7. Those who dropped out to work full-time often obtained their full-time position because of their technical education at the Institute and their co-op experience.

8. The strong liaison between industry and the school strengthened the school's position in keeping relevant up-to-date curriculums.208

The technical content of programs at Cincinnati Tech has not only remained strong since 1966, but a comparison of curriculums indicate an increase in emphasis on the co-op feature. In 1973 the co-op terms had expanded to five as illustrated:

<table>
<thead>
<tr>
<th>First School Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills I</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Economics</td>
<td>4</td>
</tr>
<tr>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computer Operations and Assembly Programming I</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Co-op Term</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Employment</td>
<td>2</td>
</tr>
</tbody>
</table>

---

208 Cincinnati Technical Institute, Minutes of Meeting, October 20, 1971.
<table>
<thead>
<tr>
<th><strong>Second School Term</strong></th>
<th><strong>Credit Hours</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills II</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>Programming Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>Advanced Programming Design and Control</td>
<td>3</td>
</tr>
<tr>
<td>Assembly Programming II</td>
<td>5 (<strong>18 total</strong>)</td>
</tr>
</tbody>
</table>

| **Second Co-op Term**                          |                  |
| Cooperative Employment                         | 2                |

| **Third School Term**                          |                  |
| Expository Writing                             | 3                |
| Programming Mathematics II                     | 4 (**18 total**) |
| Operating Systems                              | 3                |
| Cobol Programming I                            | 8                |

| **Third Co-op Term**                           |                  |
| Cooperative Employment                         | 3                |

| **Fourth School Term**                         |                  |
| Technical Writing                              | 3                |
| Business Statistics                            | 4 (**18 total**) |
| Programming Systems I                          | 3                |
| Cobol Programming II                           | 3                |
| Systems Analysis and Design                    | 5                |

| **Fourth Co-op Term**                          |                  |
| Cooperative Employment                         | 3                |

| **Fifth School Term**                          |                  |
| Effective Speaking                             | 3                |
| Principles of Psychology                       | 4                |
| Programming Systems II                         | 5                |
| Installation Management                        | 3                |
| Research Project                               | 3 (**18 total**) |
Fifth Co-op Term

Credit Hours

Cooperative Employment 3

Not only had the cooperative hours increased, but the contact hours per quarter in school remained high.

Other distinct features of Cincinnati Tech's co-op programs include the institute's claim of: (1) being the first co-op school in the United States in which technical students co-op both years, and (2) it sponsors the largest co-op program in the nation.  

Like many other of the technical institutes in Ohio, Cincinnati Tech experienced a number of name changes. The name Cincinnati Cooperative School of Technology was used from 1966 to 1969. When chartered by the Ohio Board of Regents in 1969 it became the Cincinnati Technical Institute. By legislative change it became Cincinnati Technical College in February, 1972. Throughout the name changes the mission of the school has remained the same. The 1973 catalog states the mission very closely to the original:

The Cincinnati Technical College has a vital and distinctive educational mission to perform in the interests of the educational and economic welfare of metropolitan Cincinnati. An understanding of the precise nature of this mission requires an appreciation of these three facts:

(1) Technical education is a distinctive, relatively new and urgently needed type of higher education.

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209 Cincinnati Technical College Catalog 1973, p. 16.
210 Cincinnati Technical Institute promotional package.
(2) A technical institute is a distinctive kind of college with the special type of expertise required to meet the need for technical education.

(3) Cincinnati Technical College has a distinctive "co-opportunity" plan which enable it to serve students and employers with needs which would not otherwise be met.\(^{211}\)

Cincinnati Tech has been more vocal than many of the other technical institutes in declaring the importance of institutional autonomy in maintaining high standards. At legislative hearings and state planning meetings, the administration has consistently proposed maintaining high technical content in programs with less emphasis on the general aspects. This objective can also be illustrated in official board policy as adopted by the Trustees in 1971. A resolution reads:

We believe that existing technical institutes are serving the state well for the following reasons:

(1) Autonomous technical institutes perform a function in Ohio and in the nation that no other type of institution of higher education can perform.

(2) They successfully provide a valid higher education choice to students who for various reasons cannot, or do not wish to attend a traditional college or university, or university branch.

(3) They enhance the upward mobility of students from lower economic groups by making higher education of the type which meets their needs possible for them.

(4) They are the least costly of institutions of higher education in terms of operating costs per FTE student.

(5) Technical institutes maintain high standards for programs. 1800 clock hours.

(6) Some programs offered in institutions other than technical institutes in Ohio are erroneously classified as "technical" when in reality they are university parallel programs, except for a few occupational subjects.

(7) Technical institutes are serving needs of students as evidenced by the institutes growing enrollments: those in operation last year recorded a 40% increase in day programs and a still higher percentage in continuing education.212

This statement was distributed to the Ohio Board of Regents, State Legislators, and technical educators.

The programs in technical education that commenced in 1966 were planned by vocational educators from the Cincinnati school system and local advisory committees. Wendell H. Price was superintendent of the Cincinnati Public School system who sponsored the new technical school. The first technical education director was Robert H. Lowe. The Cincinnati Cooperative School of Technology shared a facility with Courtier Technical High School at 3520 Central Parkway. By 1968 six programs had been added to the original four: Automotive Service Management, Civil Engineering Technology, Chemical, Electronics, and Executive Secretary. Four hundred ninety-six students enrolled in

212 Cincinnati Technical Institute, Minutes of Meeting, February 16, 1971.
On March 17, 1969, Dr. Paul A. Miller, superintendent of schools in Cincinnati, proposed a comprehensive plan to expand employment education in the Cincinnati area. The plan called for the Cincinnati Board of Education: (a) to create a technical institute district; (b) to sell the Courtier Technical High School property to the state for use as the new Regents-affiliated technical institute property; (c) to create a capital fund with the new proceeds of the sale of the Courtier building and matching state and federal money; (d) to construct and equip vocational wings at all district high schools with monies from the capital fund. The proposed Courtier sale price was to be $12 million, the estimated replacement cost of the property. After a $3 million deduction required by the state as the local contribution to the establishment of the technical institute district, the net proceeds would be $9 million.

On March 24, 1969, the Cincinnati Board of Education passed a resolution proposing the creation of the technical institute district, consisting of the whole territory of the Cincinnati school district. On April 18, 1969, the president of the Cincinnati Board of Education appeared before the Board of Regents to present the Cincinnati Board's proposal, along with the proposal that the state purchase the Courtier building, rather than build a new facility to house the new technical

\[213\] Cincinnati Technical Institute, op. cit., p. 3.
Institute. The Regents approved the creation of the technical institute district May 16, 1969. \textsuperscript{214}

Several important changes occurred for the 1969 school year: a new name, a new controlling board, and a new president. The new trustees, two appointed by the Governor of Ohio and five elected by the Cincinnati Board of Education, held their organizational meeting September 15, 1969. The trustees appointed a President, Mr. Clifford House, former Dean of the Co-op School. \textsuperscript{215} The Cincinnati Technical Institute received its State Charter from the Ohio Board of Regents September 19, 1969. \textsuperscript{216}

Rapid growth occurred at Cincinnati Tech. Eighteen technical programs in 1970 drew 897 students who worked with 232 employers. Program offerings in 1971 increased to twenty-one with 1149 students working for 350 employers. In 1972 the enrollment was 1300 with nearly 400 employers participating in hiring students for the co-op program. The first four programs now had increased to the following technologies:

- Business Data Processing
- Business Management
- Hotel-Motel-Restaurant Management
- Property Management
- Real Estate
- Sales Marketing

\begin{itemize}
\item \textsuperscript{214} Ibid. pp. 4-5.
\item \textsuperscript{215} Cincinnati Technical Institute, Minutes of Meeting, September 14, 1969.
\item \textsuperscript{216} Ohio Board of Regents, Minutes of Meeting, September 19, 1969.
\end{itemize}
Secretarial
Security Administration
Civil Engineering Technology
Electro-Mechanical Engineering Technology
Electronics
Industrial Engineering Technology
Mechanical Design
Medical Laboratory
Medical Record
Medical Assisting
Surgical Assisting
Air Conditioning
Automotive Service
Aviation
Graphic Communications
Ornamental Horticulture
Plastics

The Property Management Technology is the only program of its type in the United States and is described in the following way:

The dynamic growth in the building of apartment complexes, office structures, industrial parks, and shopping centers has accelerated the demand for professionally trained property managers. Property Management is rapidly becoming a growth career field, particularly for young men and women. An effective property manager must have the ability to properly supervise maintenance, office, and accounting functions, handle tenant relations, prepare and analyze operating budgets. The successful fulfillment of these functions determines whether a property is a valuable entity to the owner, tenant, and community. Men and women who assume responsibilities as property managers are well compensated. Property management experience provides an excellent background to all other specialties in the real estate profession.

Cincinnati Technical College is the nation's first and only institution of higher learning to offer an association degree in property management. Certified Property Managers (C.P.M.'s)

assist in class instruction and counsel the college to help provide the latest principles and practices employed in the property management field. The program provides excellent cooperative employment opportunities with leading property managers and institutional owners in the Cincinnati area.218

A new dimension in education was added when the continuing education division of the school was initiated. The first classes for adult continuing education began September 8, 1970. The purposes of this division were:

1. To train adults for their first jobs.
2. To prepare persons for better jobs.
3. To keep persons up to date on new developments within their existing jobs.

The program was geared to meet the requests of any agency or group that had an educational need. A class to convene, was to have sufficient enrollment to cover the instructional costs. Five hundred ninety-four persons enrolled the first session in seventeen courses that included: associate degree credit courses, special interest courses, apprenticeship classes, job training classes, and community workshop programs. A fifteen member Council on Continuing Education was formed to serve in an advisory capacity in the development and promotion of programs.219 The continuing education division increased its objectives and by 1972 was offering courses in high schools and

218 Cincinnati Technical College, "Property Management Brochure."

219 Cincinnati Technical Institute, Minutes of Meeting, October 7, 1970.
industry, and added recreation and leisure courses such as gymnastics, yoga, karate, and auto tune up.  

President House summarized that the success at Cincinnati Tech is due primarily to its cooperative education commitment. With 50% of their students always on the job, the education resources are better utilized and also permits twelve month employment to the instructional staff. "We have been successful," House stated, "because of our extreme and radical dedication to cooperative technical education."  

Terra Technical College  

A joint vocational school was being planned for Sandusky County in 1965 and 1966 with no mention being made of technical education. The State Department of Education had not encouraged technical education and the Regents' Master Plan made no references to it in or around Fremont. Unlike many districts having leadership from the state, Terra Tech's development of technical education was a grass roots movement.  

Vanguard Joint Vocational School located at Fremont was successfully funded with the passage of a bond issue and operating levy. Mr. Roy Klay, Superintendent and Mr. John Broderick, Director were hired to plan the new school facility.  

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221 Interview with Clifford House, President of Cincinnati Technical College, March 4, 1973.
Director Broderick's previous service as an administrative intern at Chandler Technical School in Willoughby gave him experience and interest in technical education. This experience influenced him and Klay to solicit help from the State Department of Education to begin a technical education program. The request for technical education at Fremont was rejected by officials from the State Department of Education, but R. D. Purkey, Assistant Ohio Vocational Director encouraged the Vanguard people to conduct a survey of interest before giving up on the idea.222

This encouragement from one state official motivated the vocational school staff to conduct industrial and business surveys in the Fremont area. Completed in April of 1968, the survey showed that in Sandusky and Seneca counties 1731 technicians were employed, 2184 additional technicians would be needed by 1970, and 2762 more would be needed by 1975.223

Fortified with these statistics and letters of support from industry, Klay and Broderick again solicited the State Department of Education for the approval of a technical school. Again the State balked. The local community then took action by forming an educational advisory committee and an industrial advisory committee who strongly resubmitted the request to the State. With this strong backing from

222 Personal interview with John Broderick, Vice President of Terra Technical College, December 8, 1972.

education and area business and promises of financial support for start up costs from the Vanguard Vocational District, the plans for technical programs were approved. Vanguard Technical School was officially founded May 8, 1968.  

The lead time from program approval (May 8, 1968) to the tentative opening date was extremely short, but with intense work on the part of vocational school staff, area high school counselors, and advisory committees the first programs were ready for students in September, 1968. Seventy-eight students enrolled in the four programs approved by the State Department of Education. These were: Mechanical Engineering Technology, Mechanical Design, Electronic Engineering Technology, and Computer Programming.

The course of study for these programs contained more than 1900 contact hours of instruction as illustrated:

Data Processing

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>2</td>
</tr>
<tr>
<td>Punched Card Equipment I</td>
<td>4</td>
</tr>
<tr>
<td>Accounting for Data Processing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

224 From the personal files of John Broderick.

225 Vanguard Technical Institute Catalog 1969, p. 3.
<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation to Data Processing</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Communications II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Data Processing Math I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Economics II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Accounting for Data Processing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Punched Card Equipment II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Accounting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Communications III</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Data Processing Math II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Punched Card Applications</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Computer Fundamentals</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications IV</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Principles of Management</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Computer Programming I</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Programming Systems</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Psychology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Computer Programming II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Computer Applications</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elements of Supervision</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Business Systems Design &amp; Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Effective Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
Sixth Quarter

Data Processing Field Project  8
Advanced Programming Systems  4
Contemporary Affairs  3
Administrative Decision Making  \( \frac{3}{18} \)

The technical school shared facilities with the vocational school at 1306 Cedar Street in Fremont. Technical programs were offered in the late afternoon and evenings. The vocational-technical building consisted of 129,000 square feet of space including fifteen classrooms, ten laboratores, and offices.

Vanguard Tech's objectives were not to just provide quality technical education but ".....the finest para-professional programs available," and specifically to:

1. Meet the technical manpower needs of business and industry.
2. Provide students with a marketable skill.
3. Prepare students for citizenship.
4. Develop social skills. 227

In 1969, Deisel Equipment, Executive Secretary, Food Service, and Management Development technologies were added. The institute then prepared an official plan for the Ohio Board of Regents that was approved and the official State Charter granted in October, 1969.


The increased program development and increased enrollment caused overcrowding in the shared physical facility. Vanguard Tech requested and received from the Ohio Board of Regents approval of funds to build a new school. The $2,500,000 building plan was started in 1970. Also in 1970 six new programs were initiated: Electro-Mechanical, Accounting, Air-Conditioning, Real Estate, Industrial Supervision, and Nursery School Assistant. Early Childhood Education was added in 1971.

Like the other technical institutes, Vanguard Tech was caught in the designation of name change mandated by House Bill 396 and in December, 1971, the Board of Trustees resolved to change to Vanguard Technical College. 228

Vice President, John Broderick, did not accept the name change as a positive step for Vanguard. He preferred "institute" rather than "college" because he felt that the designation of college would tend to take away from the career emphasis the school had always portrayed to students and the community. 229

Vanguard Tech's new buildings were complete for the 1972 school year. The move to new facilities nearly completed the break from their former partner, the Vanguard Vocational School. The technical students now had a place of their own. The new facility had three buildings totaling 65,000 square feet of space. A structure of

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228 Vanguard Technical Institute, Minutes of Board Meeting, December, 1971.

229 Personal interview with John Broderick, Vice President of Vanguard Technical Institute, January 15, 1972.
unique round design housed administration and admissions offices. The second building contained a lecture hall, bookstore, student area, cafeteria, and library. The third building contained classrooms and fourteen laboratories.\(^{230}\) This complex comfortably housed the twenty-two technical programs and 740 students that were enrolled in 1972.\(^{231}\)

The complete break from the Vanguard Vocational School occurred in December, 1972, when the Vanguard Technical College Trustees voted to separate names with Terra Technical College replacing Vanguard.

During the development process, changes were made in course content and course names. The demanding eighteen credit hours per quarter remained with the strong emphasis on technical subjects as illustrated in the 1973 catalog:

**Computer Programming**

<table>
<thead>
<tr>
<th><strong>First Quarter</strong></th>
<th><strong>Credit Hours</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications I</td>
<td>3</td>
</tr>
<tr>
<td>Economics I</td>
<td>3</td>
</tr>
<tr>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>Fundamentals of E.D.P.</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Second Quarter</strong></th>
<th><strong>Credit Hours</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications II</td>
<td>3</td>
</tr>
<tr>
<td>Economics II</td>
<td>3</td>
</tr>
<tr>
<td>Data Math I</td>
<td>3</td>
</tr>
<tr>
<td>Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>Computer Fundamentals</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

\(^{230}\) Construction documents from Vanguard Technical Institute.
<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications III</td>
<td>3</td>
</tr>
<tr>
<td>Cost Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>Data Math II</td>
<td>3</td>
</tr>
<tr>
<td>Computer Operations</td>
<td>3</td>
</tr>
<tr>
<td>Computer Programming I</td>
<td>6</td>
</tr>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Fourth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications IV</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>Computer Programming II</td>
<td>5</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Systems and Procedures</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fifth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Cobol Programming</td>
<td>5</td>
</tr>
<tr>
<td>Business Systems Design I</td>
<td>4</td>
</tr>
<tr>
<td>Computer Installation Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Sixth Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>3</td>
</tr>
<tr>
<td>Business Systems Design II</td>
<td>4</td>
</tr>
<tr>
<td>RPG/FORTRAN Programming</td>
<td>4</td>
</tr>
<tr>
<td>Data Processing Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Business Problems Simulations</td>
<td><strong>4</strong></td>
</tr>
<tr>
<td></td>
<td><strong>232</strong></td>
</tr>
</tbody>
</table>

Five years of operation had not softened Terra Tech's technical program. The attitudes and objectives are summarized in 1973 with the following words:

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232

Ibid., p. 24.
The soundest, most profitable and most enduring investment any community can make is the education of its people. Everyone benefits with education—agriculture, business, industry, labor, and professional personnel.

Terra Technical College has been established for the express purpose of providing individuals in our community with the best training possible to enable them to become more skilled and more valuable to themselves and their respective communities.

The college will continually endeavor to provide a program of studies appropriate to the interests and needs of all its citizens, regardless of age, aspiring to improve themselves.

The future growth and development of Terra Technical College will depend largely upon boldness, innovations and articulations in our dialogue with the community in defining the role of the college in this ever changing world.

John E. Broderick
Executive Vice President

Muskingum Area Technical College

The development of the Muskingum Area Technical College closely parallels the development of its parent organization, the Muskingum Area Joint Vocational School. The separation of the two institutions has not yet been completed (March, 1973) as they still share a campus and have the same administrative head. Although developed by the vocational school board of education, the technical institute moved into its own facility when classes first convened in 1969. Unlike many of the other technical institutes in Ohio, Muskingum Tech opened with program approval from the Ohio Board of Regents and Correspondent

233 Ibid., p. 4.
status from the North Central Association of Colleges and Secondary Schools.

The beginning of Muskingum Tech can be traced back to April, 1965, when the State of Ohio approved the creation of the Muskingum Area Joint Vocational School District. To complete the career opportunities in Muskingum County, the State Department of Education in cooperation with the Ohio Office of the Appalachia Regional Commission had designated the area as one of five Southeast Ohio areas to receive Appalachia funds for the construction of a post-secondary technical education building along with a joint vocational school. The area, before being eligible for federal funds, was required to have local matching funds. These local funds became available in May, 1966, when Muskingum County voters approved a levy and bond issue for the newly created vocational school district. The Muskingum Area Vocational School District, in March of 1967, was awarded a grant of $1,642,000 from the Appalachia Regional Commission for the explicit purpose of constructing a technical institute.234

An interesting possibility occurred after the Muskingum area had secured the Appalachia grant. The local educational leaders, acknowledging the fact that technical education was becoming a responsibility of the Ohio Board of Regents, considered the possibility

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of placing the proposed technical institute on the campus of the Ohio University Zanesville branch rather than on the vocational school site. A delegation of educators from Muskingum County including Mr. Asa Tom, County Superintendent and Mr. Wallace Blake, Superintendent of Zanesville schools, met on five different occasions with Ohio University officials in Athens. The Muskingum County group offered the $1,642,000 grant to Ohio University if they would build the technical institute on the branch campus site. President Alden of Ohio University turned down the offer. One of the Muskingum delegates later stated that, "they (Ohio University administrators) did not want to contaminate their campus with technical education." 

The development of technical institutes in Southeast Ohio would possibly have been greatly changed if Ohio University would have accepted the offer from Muskingum, because two other technical institutes (Belmont and Scioto) would soon emerge where Ohio University branches exist.

From 1966 to 1969 the administration under the joint vocational school planned and constructed the technical institute buildings, enrolled students, gained Correspondent status from North Central, and applied for charter from the Ohio Board of Regents.

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235 Interview with Wallace Blake, former Superintendent of Zanesville City Schools, March 18, 1973.

236 Personal interview January 14, 1972, (name withheld by request).
Two hundred seventy-nine students (FTE) enrolled in the first class (Fall, 1969) in ten associate degree technologies:

Mechanical Engineering
Electrical
Water Pollution Control
Natural Resources Conservation
Child Development
Mental Health
Computer Science
Executive Secretary
Business Management
Management (Retail)

These ten technical education programs were housed in a new physical plant located at 400 Richards Road on the east edge of Zanesville. The main technical building with 38,000 square feet contains classrooms (many with open concept), technical laboratories, and administrative offices. The technical institute shared with the vocational school dining facilities, library, a student commons area, and two laboratories.

Enrollment at Muskingum Tech increased to 660 in 1970, 799 in 1971, and fell to 784 in 1972. During this time the technical institute began a process of separation from the vocational school. A separate Board of Trustees in 1970 and an administrative reorganization in 1971 separated the two schools except that Mr. Walker Huffman remained as Superintendent of the vocational school and President of the

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237 Muskingum Area Technical Institute, op. cit., p. 3.

238 Information recorded during personal visit to the campus, September 12, 1972.
technical institute. Mr. Huffman believed that due to the sharing of the campus, he would remain in the dual capacity until facilities would no longer be shared or when the duties of the two jobs would become too complex for one person.  

In 1972, Muskingum Tech dropped the "Institute" from its name and added the word "College." The separation from the vocational school was completed with an announcement in December 1972 that effective July 1, 1973, President Walker Huffman would resign his presidency remaining as Superintendent of the vocational school district.

Technical institutes in Ohio are customarily commuter schools, but Muskingum Tech deviated from this tradition when it acquired a dormitory for eighty students from the former Bethesda Hospital School of Nursing. An Appalachia grant of $160,000 approved in 1971, provided for remodeling and enlargement to 100 students.

Muskingum Tech's curriculum structure is illustrated by the Natural Resources Conservation curriculum. This program is the only one of its kind in Ohio:

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239 Personal interview with Mr. Walker Huffman, President of Muskingum Area

<table>
<thead>
<tr>
<th>General Education Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>To be selected from:</td>
<td></td>
</tr>
<tr>
<td>Intro. to Sociology</td>
<td>4</td>
</tr>
<tr>
<td>Current Affairs</td>
<td>4</td>
</tr>
<tr>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>Appalachian Studies</td>
<td>3</td>
</tr>
<tr>
<td>U.S. Geography</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic Education Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Zoology &amp; Ecology</td>
<td>4</td>
</tr>
<tr>
<td>Math I, II, III</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>8</td>
</tr>
<tr>
<td>To be selected from:</td>
<td></td>
</tr>
<tr>
<td>Chemistry: Basic &amp; Organic</td>
<td>4</td>
</tr>
<tr>
<td>Earth Science</td>
<td>3</td>
</tr>
<tr>
<td>Field Botany &amp; Ecology</td>
<td>3</td>
</tr>
<tr>
<td>Physics I</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Science</td>
<td></td>
</tr>
<tr>
<td>Computer Applications</td>
<td>2</td>
</tr>
<tr>
<td>Economics I</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Education Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Natural Resources</td>
<td></td>
</tr>
<tr>
<td>Conservation</td>
<td>3</td>
</tr>
<tr>
<td>Technical Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Pest Control Techniques</td>
<td>3</td>
</tr>
<tr>
<td>Aerial Photography Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>Techniques of Environmental Testing</td>
<td>3</td>
</tr>
<tr>
<td>Fisheries Management</td>
<td>4</td>
</tr>
<tr>
<td>Internship</td>
<td>7-12</td>
</tr>
<tr>
<td>Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Soils I</td>
<td>3</td>
</tr>
<tr>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td>Forestry I</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Landscape Architecture</td>
<td>4</td>
</tr>
<tr>
<td>Environmental Health, Laws &amp; Enforcement</td>
<td>4</td>
</tr>
<tr>
<td>Wildlife Management Techniques</td>
<td>4</td>
</tr>
<tr>
<td>Recreation I</td>
<td>3</td>
</tr>
<tr>
<td>Stripmine Reclamation</td>
<td>3</td>
</tr>
<tr>
<td>Soils II</td>
<td>3</td>
</tr>
</tbody>
</table>
Electives:
To be selected from:
- Air Sampling Techniques 3
- Recreation II 3
- Surveying II 4
- Forestry II Management 3
- Water Sampling Techniques 4
- Field Enforcement Techniques 3

The original ten programs were increased to include:
Accounting, Air Quality Control, Architectural Drafting, Industrial Engineering Technology, and Law Enforcement. 242

The Ohio Board of Regents has been recommending cooperation and possible merging of state supported institutes in the same community. New capital funds are to be jointly used by both schools in an attempt to force cooperation.

The merging of campuses that Ohio University had refused in 1967 will become a reality. In 1972 plans were completed for a $1,000,000 common library and student center for both the university branch and technical college. The technical college will soon move its entire operation to a $3,000,000 technical building being planned for the Ohio University branch campus on Newark Road in Zanesville. The controlling boards of the two institutions will retain their own identity unless they elect to, or are forced to, form a State General and Technical College.

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242 Ibid., pp. 25-56.
Scioto Technical College

The State Department of Education helped provide the original interest for the development of a vocational school in Scioto County, and an Ohio University Seminar was needed to revive the interest to pass a levy, thus creating a vocational school and technical institute.

The Scioto County Joint Vocational School District was created in 1964 and a levy placed on the ballot in May, 1965. The levy failed by a substantial margin and the dream of a new vocational school appeared remote. The original levy would have only created a vocational school. Its failure, perhaps, was the possible break that later developed into a vocational school and a technical institute.

In 1967 Ohio University sponsored a Community Leadership Seminar at the Portsmouth branch campus. The seminar group remained intact after the completion of its formal work to form a committee called the Ohio University Community Leadership Alumni Association. With a promise from the Appalachia Regional Commission that a million dollars was available for a technical institute if a vocational school levy would pass, the committee assigned itself the task of promoting a vocational-technical school.

With the committee working on promotion, plus the million dollar bonus, a levy and bond issue was approved November 5, 1968.243 The combined local and federal funds enabled the Scioto County Joint Vocational School and Technical Institute to begin construction.

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During the planning and construction stages (1968-70), one governing body, the Scioto County Joint Vocational School District Board of Education, administered the business of the technical institute.

The county followed the state trend and requested a separate technical institute district. This request was approved by the Ohio Board of Regents November 21, 1969. The new Scioto County Technical Institute District with Mr. Frank Taylor as president developed the official plan that was approved by the Regents May 19, 1970, with the following associate degree technologies:

- Accounting
- Computer
- Executive Secretary
- Retail Management
- Food Service
- Electro-Mechanical
- Metallurgical
- Plastics
- Water and Outdoor Recreation
- Civil
- Industrial
- Dental Hygiene
- Medical Laboratory

Two hundred ninety-two students (FTE) enrolled in the thirteen technical programs when classes convened for the first time in September, 1971. In 1972, 458 students (FTE) reported to class.

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Ohio Board of Regents, Minutes of Meeting, November 21, 1969.


Personal correspondence with Mr. Tom Foti, Vice President of Scioto Technical College, March 15, 1973.
The technical vocational facilities were located on the same site eight miles north of Portsmouth near Lucasville. The technical building contains 42,000 square feet of space with eleven laboratories on the ground floor and classroom, office, and library space on the second floor. The two schools share a lunchroom located in the vocational school. A new addition of approximately 10,000 square feet housing medical laboratories was completed in 1972.

Scioto Tech elected to follow state legislation and changed its name designate to college when the law became effective in February, 1972.

The curriculums at Scioto Tech meet the standards of both the State Department of Education and the Ohio Board of Regents. The Accounting curriculum is an example:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills I</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>Typewriting I</td>
<td>3</td>
</tr>
<tr>
<td>Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>Basic Mathematics</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills II</td>
<td>4</td>
</tr>
<tr>
<td>Computer Fundamentals and Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>Business Math</td>
<td>4</td>
</tr>
<tr>
<td>Business and Office Relations</td>
<td>3</td>
</tr>
<tr>
<td>Accounting II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

247 Scioto Technical Institute floor plans, drawn by Hayes, Donaldson and Wittenmayer, Architects.
### Third Quarter

- Communication Skills III: 4
- Accounting III: 4
- Computer Fundamentals and Procedures II: 3
- Business Statistics: 4
- Business Machines: 3

**Total:** 18

### Fourth Quarter

- Principles of Sociology: 4
- Business Law I: 3
- Intermediate Accounting I: 4
- Principles of Economics I: 4
- Cost Accounting I: 3

**Total:** 18

### Fifth Quarter

- Principles of Psychology: 4
- Principles of Economics II: 4
- Systems Accounting: 3
- Intermediate Accounting II: 4
- Cost Accounting II: 3

**Total:** 18

### Sixth Quarter

- Business Organization and Management: 3
- Speech I: 3
- Tax Accounting: 3
- Credit and Finance: 3
- Auditing: 4
- Government: 2

**Total:** 248

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The Marion Technical College is one of the few technical institutes in Ohio that was formed through a direct request to the Ohio Board of Regents without input and direction first from the State Department of Education. The Marion County Board of Education requested that a technical institute district be created for all of Marion County in accordance with c 3357 of the Ohio, Revised Code. Marion County students were being made to travel south to Columbus or north to Mansfield if they chose to prepare for a technical career. On January 16, 1970, the Ohio Board of Regents approved the request and created the new technical institute district. 249

With only a paper district and no professional staff, the area representatives from education and business conducted a survey and began the preparation of an official plan of operation to submit to the Ohio Board of Regents. The survey results from seventy-three employers indicated a heavy need for associate degree personnel. 250 The individual programs decided on after analyzing the results of the survey were:

- Nursing
- Civil Engineering Technology
- Electrical Engineering Technology
- Industrial Engineering Technology
- Mechanical Engineering Technology
- Secretarial Office Education


250 Marion County Technical Institute, Official Plan of Operation submitted to the Ohio Board of Regents, December 18, 1970.
Accounting
Business Administration
Sales and Marketing

Program development, student recruiting and purchasing did not get underway until the President, John G. Lepp, assumed his duties on March 22, 1971. With only five months to hire a faculty, announce the school's mission, and recruit students, the administration had much work to do to meet its goal of opening in the Fall of 1971. This goal was met when 186 students enrolled (117 FTE) the first year. In 1972, 504 students (350 FTE) reported for the Fall Quarter. The 504 students represented approximately 50% full time day students and 50% part time and evening students.

The philosophy of Marion Tech was stated as "The Marion Technical College is a response to any student whose career objective is distinct enough that two years intensive post-secondary education will project him to a secure and responsible level of involvement in his chosen field."

Marion County Technical Institute began operations at 1465 Mt. Vernon Avenue, Marion, sharing facilities with the Ohio State University.

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251 Ibid.


University Marion campus. Classroom and laboratory space was made available by the branch for technical courses operated by the technical institute district. The technical students attended the same English, speech, and other general education courses with the Ohio State students. The common general education courses for both technical institute and university students was a first in Ohio. North Central Tech at Mansfield which also shared a campus with Ohio State had refused an offer for Ohio State to provide its general courses.

The Marion facility available for both institutions includes eighteen classrooms, a lecture hall, drafting lab, four science labs, library, listening center, food service center, and lounges. Missing from the facility were the traditional technical laboratories available to technical education students in most centers. All of the space in the shared building designated for the technical institute was paid for on a cost-sharing basis.

The sharing of a building with the university has caused the technical institute administrators considerable problems including scheduling preferences that are given to the branch and lack of identification for the technical institute (signs on the highway announce the O.S.U. campus, but not the Marion Technical College). These problems may be less acute when a new technical building is completed in 1974.

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255 Marion County Technical Institute, op. cit., pp. 6-7.
256 Personal visit to the Marion campus, July 20, 1972.
The trustees of the district approved a name change and in the Fall of 1972 Marion County Technical Institute became Marion Technical College. The curriculums of the technical college appear much the same as those of its sister institutions except the fact that general courses are taught by Ohio State. An example of Marion Tech programs is illustrated with its Civil Engineering Technology:

**First Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Mathematics I</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>Communication Skills I</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Mf. Processes</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

**Second Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics II</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Physics I</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Graphics II</td>
<td>3</td>
</tr>
<tr>
<td>Communication Skills II</td>
<td>4</td>
</tr>
<tr>
<td>Materials &amp; Testing</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

**Third Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics III</td>
<td>5</td>
</tr>
<tr>
<td>Engineering Physics II</td>
<td>4</td>
</tr>
<tr>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td>Engineering Mechanics I</td>
<td>4</td>
</tr>
<tr>
<td>Surveying II (Summer Session)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

**Fourth Quarter**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics IV</td>
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</tr>
<tr>
<td>Engineering Physics III</td>
<td>3</td>
</tr>
<tr>
<td>Surveying III</td>
<td>4</td>
</tr>
<tr>
<td>Strength of Materials</td>
<td>4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
Fifth Quarter

Hydrology 4
Highway Construction 3
Municipal Engineering 3
Hydraulics & Pneumatics 4
Elective 3

Sixth Quarter

Construction Materials & Testing 4
Advanced Structural Design 4
Construction Mgt. & Estimating 4
Civil Engineering Law 3

The first graduating class is not due to complete studies until June, 1973, so it is too early to record the achievements of the technical college in terms of placement and performance of its graduates. With these prospective graduates attending both Marion Tech and Ohio State the possibilities of interesting comparisons exist.

Central Ohio Technical College

A technical institute district was approved for Licking County by the Ohio Board of Regents October 17, 1969. The leaders in the new district without funds for a new building program elected to join the existing Ohio State University branch at Newark. By sharing the facility and administration of the branch, the taxpayers of Licking County could receive services from two institutions at a great savings to the taxpayers.258

257 Marion Technical College Bulletin 1972-73, p. 29.
258 From a conversation with J. Gilbert Reese, Board member of the Central Ohio Technical Institute, October 17, 1969.
Ohio State University accepted the offer to share facilities with the new technical institute district. In the Fall of 1971 the Central Ohio Technical College, with its own Board of Trustees, turned over the operation of its technical programs to Ohio State. With this exception of its separate Board, the merger was complete. A common student handbook stated, "Students at the Central Ohio Technical College are a regular part of the Newark Campus student body, sharing the privileges and the responsibilities of student life."  

The Central Ohio Technical Institute was formally chartered by the Ohio Board of Regents, February 19, 1971. Classes convened initially in September of 1971 with a headcount of 117 students (87 FTE). In its second year of operation the student FTE increased to 284. Program offerings the first year included:

- Accounting
- Electro-Mechanical
- Electronics
- Radiology
- Secretarial

For the second year, the following programs were added:

- Business Administration
- Glass-Plastics
- Computer Programming
- Real Estate
- Sales Management
- Nursing

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259 The Ohio State University and Central Ohio Technical College, Student Handbook 1972-73, p. 6.

260 Ibid.
Dr. Robert Barnes, the Director of the Ohio State University Newark campus was also named Director of the technical institute. Dr. Barnes became responsible for the total educational functions of the two institutions. This dual role caused a lengthy debate when Central Ohio Technical College applied for membership into the Ohio Organization of Technical Colleges. Central Ohio Tech was accepted into membership by a split vote. 261

On a shared campus at University Drive in Newark the classrooms, laboratories, and student areas are completely integrated for use by the two institutions. The curriculums at Central Ohio Tech have a high quarter hour (18) average as illustrated by the Glass-Plastics program:

<table>
<thead>
<tr>
<th>First Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Mechanical Drafting</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Plastics</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Glass</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5</td>
</tr>
<tr>
<td>Plastic Processes</td>
<td>5</td>
</tr>
<tr>
<td>Glass Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

261 Ohio Organization of Technical Colleges, Minutes of Meeting, December 9, 1972.
Operating only a year and one-half, at the time of this writing, the Central Ohio Tech is too new for a valid evaluation of its unique sharing characteristic.

Lima Technical College

The history of Allen County Technical Institute, now renamed Lima Technical College, is interwoven with the history of Owens Technical College (formerly Penta Tech).
The need for a technical institute in Allen County was expressed by many of the leaders in business and industry prior to 1967. In response to this encouragement and at the request of Dr. John Millett, Chancellor of the Ohio Board of Regents, a committee of the Lima Area Chamber of Commerce conducted a survey in February, 1967 to determine the need for a technical institute in the Lima Area. The report, submitted to Dr. Millett, verified that there was a need for a technical institute in this location.²⁶³

Money was allocated to The Ohio State University to construct the necessary facilities for a technical institute on The Ohio State University Lima Campus. The Ohio State University and the Ohio Board of Regents invited Penta County Technical Institute to operate the technical institute on the OSU Lima Campus. On December 1, 1967, Penta County Technical Institute appointed an administrator, Mr. Daniel Brown, for the Lima Technical Center, a division of the Penta County Technical Institute. Brown reported directly to Dr. Jacob See, President of the Penta Technical College. The Allen County operation was administered and funded through the Penta Tech budget.²⁶⁴

The Nursing Program was initiated at the Lima Technical Center in September of 1969 with forty-nine students. The decision to offer an associate degree nursing program was made following a

²⁶⁴ From the personal files of Dr. Jacob See, President of Owens Technical College.
study by a committee of representatives from the two hospitals, District Nurses' Association, and Allen County Academy of Medicine. After the decision was made to inaugurate the associate degree nursing program, the two hospitals began to phase out their diploma programs. The final classes were admitted to the hospital programs in September, 1968 and were graduated in 1971.

In September of 1970, new programs were initiated at the Lima Technical Center. There were programs in Business Technologies: Accounting, Computer Programming, Executive Secretary, and Retail Mid-Management; Engineering Technologies: Electrical-Electronics, Mechanical, and Mechanical Design; Public Service Technology: Law Enforcement; Home Economics: Child Development. In the Fall Quarter of 1970, 358 students attended the Lima Technical Center. In June of 1971, thirty-eight nursing students completed graduation requirements and received the Associate Degree of Applied Science from Penta County Technical Institute. Of these thirty-eight graduates, thirty-four sought and found employment.265

At the request of the Ohio Board of Regents and in keeping with the Master Plan for Higher Education in Ohio, Penta County Technical Institute phased out their administrative control of the Lima Technical Center on July 1, 1971. The Ohio State University became the agency for the interim operation contingent upon the assumption of control by the Board of Trustees of the Allen County Technical

Institute District.

Effective September 1, 1971, the Allen County Technical Institute Board of Trustees assumed control of the institution and named Dr. James S. Biddle director, Mr. Sam D. Bassitt associate director, Mr. Frank R. Hill treasurer, and Miss Dorothy Debacher acting chairman of the nursing program. Dr. Biddle and Mr. Hill, director and business officer of the Lima Campus of The Ohio State University, assumed dual assignment of function consistent with policy of the Ohio Board of Regents.

In the Fall Quarter of 1971, 468 students with 381 FTE enrolled in eight programs. In 1972 the full time equivalency had increased to 462. Effective February 17, 1972 the technical "institute" changed to "college" because of legislative action. Allen County Technical College then by Board of Trustee action became in 1972 the Lima Technical College.266

Lima Technical College shares a common campus with The Ohio State University Lima Branch, and is administered by the director of the Ohio State Branch. Does this alter the technical objectives and philosophy from that of "pure" technical institute programs? The statement of philosophy made by the Allen County Technical Institute Board of Trustees stresses career opportunities in the following manner:

266 Personal correspondence with Dr. James Biddle, Director of Ohio State University Lima Campus and Lima Technical College, March 14, 1973.
To meet the increasing demand for technicians in a period of rapid technological development, the Board of Trustees of the Allen County Technical Institute District offers associate degree technical education to serve the people of this area, and to meet the clearly demonstrable needs of the community and State. Believing that technical education is an integral part of higher education, programs have been developed with the full cooperation of The Ohio State University which operates a regional campus in Allen County. These programs are designed to contribute significantly to the total effort of higher education in accordance with community needs.

The Board of Trustees of the Allen County Technical Institute District support the following goals for technical education in Lima as contained in the June 30, 1970, report of the Ohio Board of Regents Committee on Technical Education:

1. Technical education should be conceived of as the means of preparing personnel with technical and paraprofessional competencies to function in support of professional, administrative, and managerial personnel.

2. Technical education should be recognized additionally as the means of formalizing and guaranteeing the proper preparation of personnel for new and emerging technical and paraprofessional careers.

3. Technical education should be recognized further as an added dimension of educational opportunity for persons who desire education beyond the high school but who, for various reasons, do not spend four years or more before entering upon gainful employment.

Lima Technical College, a junior member of the technical colleges, is still too new in operation to analyze or evaluate its programs. Some of the old guard technical educators have publicly declared their doubts about the survival of quality technical programs.

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267 Allen County Technical Institute, The Official Plan submitted to the Ohio Board of Regents, September, 1971, p. I.
operating as they do at Lima. Others have strongly declared that it is the program and results that count, not the administrative and physical structure. Time will be the final judge.

**Belmont Technical College**

Belmont Technical College located near St. Clairsville in Belmont County was one of five technical institutes selected by the Appalachia Regional Commission to be funded in conjunction with a joint vocational school. When the Belmont County Vocational School was created and its levies passed, the district received an additional grant of 1.2 million dollars for the technical institute. 268

The vocational school district developed a technical curriculum and began offering evening classes in January, 1970 and day classes in September, 1970 in three programs: Data Processing, Secretarial Science, and Accounting Technologies. During the first year, the sixty technical education students attended classes in the rented Masonic Temple in St. Clairsville. Programs in 1970 were funded and approved by the State Department of Education.

John Shannon, Superintendent of the Belmont County Vocational School and Technical School and his technical director, Mr. Earl Greer, prepared an official plan to present to the Ohio Board of Regents. The Belmont Technical Institute District was approved by the Regents February 19, 1971, and the Official Plan of Operation

268 Personal interview with Earl Greer, President of Belmont Technical College, March 11, 1973.
The Ohio Board of Regents approved eight programs in addition to the original three: Business Management, Retail Management, Retail-Wholesale, Electronics, Mechanical, Electro-Mechanical, and Mining Technologies. The Mining Technology, a program created to provide supervisors in the coal fields, was a first in the State of Ohio and attracted a very good enrollment from working miners. A Land Stabilization and Reclamation Technology program initiated in 1972 by President Earl Greer (Shannon had resigned) to provide technicians in the strip mine areas was the first program of its type in the United States. Wholesale Technology, due to low enrollment, was deleted from the curriculum offerings.

The technical college building, completed in 1971, contained 44,600 square feet of space and was built on land donated by the County along with the vocational school and the Belmont Campus of Ohio University.

A cooperative teaching arrangement has been worked out with Ohio University that allows second year technical students to attend social studies and humanities courses at Ohio University and Ohio University students to attend specified data processing and engineering courses at the technical college.

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269 Ohio Board of Regents, Minutes of Meeting, May 21, 1971, R-1971-51.

Washington Technical College

Washington Technical College, located on Route 676 near Marietta, is the newest and smallest of the technical colleges in Ohio. Students enrolled at Washington Tech for the first time on a part time basis only in the Fall of 1971. A headcount of sixty students (37 FTE) registered. In 1972 the enrollment was 165 representing only 126 FTE.

Washington Tech was the only one of the seventeen technical colleges that was created over the formal protests of its sister institutions. During the planning stages of development, the State Department of Education and the Washington County officials went ahead with building plans without approval from the Ohio Board of Regents who by 1969 had been given the authority to approve new technical institute districts. During a meeting of technical institute presidents, called by Chancellor Millett, officials from three neighboring institutions objected to the creation of a technical institute in Washington County because they felt that Southeast Ohio was already adequately covered. Millett indicated that he would oppose the opening of the Washington Technical Institute because he doubted that Washington County could support a technical institute large enough to meet the 500 student enrollment required by both the Regents and the State Department of Education. Although initially opposing it, all of the educators pledged full support and cooperation to the school
once it did become a reality. 271

Washington Technical College, as an area need, was first conceived by its citizenry in 1964. They felt developing the human and economic resources of the county and the surrounding area (sometimes referred to as the Mid-Ohio Valley) required locally accessible technical training. For these reasons school board members and school administrators from the county school districts implemented an occupational survey within the community. The interest in and need for career oriented educations was documented. Subsequently an operating levy and bond issue were approved for a joint vocational school with the understanding that a technical college would be part of the career education plans for Washington County.

Appalachian funds awarded on the basis of local financial support for a joint vocational school made the technical college possible. In 1969 a site was purchased and an architect employed to initiate plans for a vocational school and a two year technical college.

On December 21, 1970 a local resolution was passed requesting the Ohio Board of Regents to approve the creation of a technical institute district in Washington County, said district to consist of all territory in the school districts of Washington County. 272

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The creation of the district was passed February 19, 1971 and the official plan accepted by the Ohio Board of Regents September 17, 1971. The Technical Institute moved to its new building during the 1971-72 school year. The facility provided space for the following programs: Accounting, Business Management, Data Processing, Electrical Engineering Technology, Industrial Engineering Technology, Mechanical Engineering Technology, and Secretarial Science.

A cooperative arrangement between Hocking Tech and Washington Tech provides an additional program, Police Science, to Washington County residents. Washington Tech did not have an approved police program nor the federal funds available to policemen taking additional training. A local need and request brought about an arrangement where Hocking Tech provided instruction in Police Science and Washington Tech provided the space for instruction.

The gravest problem facing the new institution is the possibility that it cannot grow to the minimum size required by the State (500 students). Growth at Washington Tech is restricted because of its location on the West Virginia-Ohio border and Ohio does not pay state subsidy for out of state students. The institute is in competition for students with Muskingum to its north and Hocking Tech to its west. Washington Tech is too new now to make a judgement as to the possibilities of this problem being corrected.

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273 Ohio Board of Regents, Minutes of Meeting, September 17, 1971, R-1972-11.

CHAPTER VI

THE OHIO ORGANIZATION OF TECHNICAL COLLEGES

The forces acting to create change in development in technical education have been the institutions themselves with support and direction primarily from the two state agencies, the State Department of Education and the Ohio Board of Regents. Many factors and circumstances combined to make things happen. In technical education, and especially in the development of the technical institutes, one other force has had an important role, the Ohio Organization of Technical Colleges. It is difficult to measure the impact of professional organizations and associations on a movement. In addition to the Ohio Organization of Technical Colleges, a forerunner to this organization, the Ohio Association of Directors of Technical Education was formed and soon disbanded. A technical education division has been added to the powerful Ohio Vocational Association. These later two groups need mentioning in the development process of technical institutes, but their impact has not been as significant as that of the Ohio Organization of Technical Colleges.

The directors of fourteen Ohio public post high school institutions formalized a working relationship by organizing the Ohio
Association of Directors of Technical Education on July 3, 1968. The

group was represented by directors from university branches, technical
institutes, and community colleges. Membership of the organization
was to be directors of institutes eligible for state technical reim-
bursement. 275

The purposes of the organization were to promote technical
education, promote professional growth, facilitate communications,
research, lobby, aid in accreditation, and work with business and
industry. The first elected officers were: President, Clinton Tatsch,
Columbus Technical Institute; First Vice President, C. E. Stiner,
Lorain Community College; Second Vice President, H. B. Armstrong,
Cleveland Technician School; Secretary-Treasurer, Clifford H. House,
Cincinnati Technical Institute. 276

The organization collected dues and held two meetings. The
group appeared to be divided in their interests with the various types
of organizations seemingly promoting their own causes, rather than that
of technical education. The organization dried up due to lack of in-
terest, no response to meetings, and no apparent common cause. The
dues collected were returned to the participating organizations.

The common cause lacking in the Ohio Association of Directors
of Technical Education was identified with the forming of a new orga-

275Ohio Association of Directors of Technical Education, Minutes of Meeting, July 1, 1968 (typewritten).

276Ibid.
nization, the Ohio Organization of Technical Institutes. This common cause was found January 12, 1970, when Dr. Millett, Chancellor of the Ohio Board of Regents announced in a presidents and directors meeting his new plan for universities and technical colleges. This announcement stunned the technical institute presidents and directors.

The seeds for the new Ohio Organization of Technical Institutes were sown on that date, January 12. In an answer to the question, "Where do we go from here?" posed by many of the technical directors after the meeting, John Light from Tri-County Technical Institute and John Broderick from Vanguard Technical Institute drove to Penta Technical Institute the same afternoon to discuss the new developments with Dr. Jacob See, President of Penta Technical College. See, Light, and Broderick concluded that a meeting of all technical institute presidents and directors be called to discuss the new Millett proposal. Mansfield, because of its central location was suggested for this initial meeting. A telephone call to Mr. Henry Fallerius confirmed the use of North Central Tech as a meeting site. Fallerius agreed to send out invitations as soon as possible. The date for this first unified action was set for January 24, 1970.

Seventeen technical education leaders representing nine technical institutes informally met January 24 to outline a plan of action opposing the new organization structure suggested by Millett. It was agree upon that: (1) A university and technical college system would not serve the best interests of technical education. (2) The
basic philosophy of technical education would be lost in such a proposed structure as the university and general college system. (3) A position be taken by the technical institutes, and this position be presented to Dr. Millett. (4) The technical institutes needed a strong organization to be able to react to problems that are sure to occur.

The group meeting at Mansfield agreed that the first step would be to suggest an alternative structure for Dr. Millett to consider. Each institute was to respond to Dr. Millett opposing the new system. A committee representing the technical institutes made up of Dr. Jacob See, Mr. Harry Carter, and Mr. Clifford House was directed to meet with Dr. Millett to present the objections and alternatives formulated by this fledgling group at Mansfield.

This committee met with Dr. Millett February 2, 1970, and the position paper was presented to him. During this meeting Dr. Millett concluded that due to widespread objections to his suggested system of restructuring that:

1. No action concerning restructure would take place in 1970.

2. He would initiate a wide, indepth study of all two year institutions in Ohio.

3. This suggested study would be done by an out of state consultant.277

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A follow up meeting of technical institute representatives was suggested for February 27, 1970, to discuss the success or failure of their committee and discuss the possibility of formally organizing a state association.

The Ohio Organization of Technical Institutes was officially organized at the Leland Motor Hotel, Mansfield, Ohio, February 27, 1970. The technical institute representatives were elated over their success to stop or postpone the restructuring of their schools. This elation was tempered by an insecure feeling that this situation would reoccur, and that the technical institutes needed a unified front to answer such occurrences. The February 27 meeting was the official organizational meeting of the new state group. The group elected to call itself the Ohio Organization of Technical Institutes. For a permanent chairman, Dr. Charles Warman of Cincinnati Technical Institute nominated Mr. Clifford House, of Cincinnati Tech, for the position of chairman (later called president). There were no further recommendations made. Mr. House was unanimously appointed. It was agreed that there were to be three officers; President, Vice President, and Secretary-Treasurer. Mr. John Broderick then nominated Mr. John Light as Vice President and Mr. Howard Doering of Penta Tech nominated Mr. James Bowling as Secretary-Treasurer.278

The new organization in its early stages of development

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278Ohio Organization of Technical Institutes, Minutes of organizational meeting, February 27, 1970.
TABLE 1

OFFICERS OF THE OHIO ORGANIZATION OF TECHNICAL COLLEGES

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Vice President</th>
<th>Secretary-Treasurer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>Clifford House</td>
<td>John Light</td>
<td>James Bowling</td>
</tr>
<tr>
<td></td>
<td>Cincinnati Tech</td>
<td>Tri-County Tech</td>
<td>Muskingum Tech</td>
</tr>
<tr>
<td>1971</td>
<td>John Light</td>
<td>James Bowling</td>
<td>Gary Rustad</td>
</tr>
<tr>
<td></td>
<td>Tri-County Tech</td>
<td>Muskingum Tech</td>
<td>North Central Tech</td>
</tr>
<tr>
<td>1972</td>
<td>Roy Klay</td>
<td>Henry Fallerius</td>
<td>Dale Trippit</td>
</tr>
<tr>
<td></td>
<td>Vanguard Tech</td>
<td>North Central Tech</td>
<td>Columbus Tech</td>
</tr>
<tr>
<td>1973</td>
<td>John Lepp</td>
<td>Jacob See</td>
<td>Charles Warman</td>
</tr>
<tr>
<td></td>
<td>Marion Tech</td>
<td>Owens Tech</td>
<td>Cincinnati Tech</td>
</tr>
</tbody>
</table>
addressed itself to the problems of state structure, state and federal agency relationships, and accreditation. An important point in the organization structure was that membership would be open "only to those institutions that are two year in nature and which devote their entire expertise and efforts toward technical education." On the organization date February 27, 1970, the following institutions were eligible for membership:

- Clark County Technical Institute
- Cincinnati Cooperative School of Technology
- Columbus Technical Institute
- Jefferson County Technical Institute
- Four County Technical Institute
- Muskingum Area Technical Institute
- North Central Ohio Technical Institute
- Tri-County Technical Institute
- Vanguard Technical Institute
- Penta Technical Institute

Professional affiliation had been a problem for technical institute staff members. With no official organization to guide them, instructors in some institutes were leaning toward the university professor organizations, others toward the American Technical Education Association, others were members of the Ohio Education Association, and still others were members of the Ohio Vocational Association.

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279 Ibid.
Rather than go into four different directions, a strong faculty movement toward one professional organization would suit the purposes of the staff.

At the first meeting, after the Ohio Organization of Technical Institutes' organizational meeting, Mr. John Light presented the following memorandum to the Ohio Organization of Technical Institute members:

A.V.A.-O.V.A. DIVISION AFFILIATION

Needs 100 members in technical education to apply for a technical education division of the O.V.A.

Advantages:

1. Bring tech people together in a formal State and National organization.

2. By forming an affiliation, technical education would have a representative of the following O.V.A. committees: Public relations, legislation, resolutions, etc.

3. A Technical Educator would be elected O.V.A. president in rotation with the other divisions.

4. A Technical Educator would be a member of the O.V.A. Board of Directors.

5. We would have a reporter to include technical education items in the OVA REPORTER and other publications.

Applying for an affiliation does not exclude the O.O.T.I. from recommending members to join other professional groups.280

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After considerable discussion Mr. Henry Fallerius moved that
the O.O.T.I. attempt to encourage the various technical institute
faculty members to join in an effort to form a technical division
within the Ohio Vocational Association for 1970-71. The motion,
seconded by John Light, was passed by a vote of ten to one. The
new organization wasted no time in getting involved with state and
national issues. At the April 3 meeting the organization elected to
send two of its members, Mr. James Bowling and Mr. Charles Warman,
to Washington. A community college bill was being prepared for the
new year. The men sent by the O.O.T.I. were to testify on behalf of
technical institutes receiving full consideration in the wording of the
bill. This testimony was presented to a subcommittee on education
June 29, 1970. Mr. Bowling related to that committee:

It is our further contention that employment career oriented education has not always been enhanced by
being placed in the junior or community college and that quite often the employment education has been
short-changed in the local school budget until its very existence is sometimes threatened. Therefore,
we would strongly plead with this Committee and with Congress that the current bills pending before
this Committee be pulled out of the Higher Education Act and be passed as amendments to the Vocational-
Technical Amendments of 1968. By attaching the current bills as a part of the Vocational Education
Amendments of 1968, this Committee will insure that within the State of Ohio, and I suspect within the
other states, that the funds would be administered by and given to those institutions operating pro-
grams of technical education.

Ohio Organization of Technical Institutes, Minutes of Meeting, April 3, 1970 (mimeographed).
We, in technical education, do not feel that a degree is necessary, while it may be desirable. We do feel that every boy and girl of this country with the interest, inclination and ability to be a technician or specialist should have that opportunity made available to them. Particularly more so now that we are now in such a rapid expansion of technical knowledge in order that he may earn a liveable wage and in order that he might not become another burden on an already overburdened welfare system. We plead with you that you help us fulfill the intent of this Committee and this Congress by writing the safeguards within your bills which will insure that schools such as those represented by the Ohio Organization of Technical Institutes and their students are not prohibited access to your help. Thank you.282

Mr. Warman's remarks were directed primarily toward the value of cooperative career education, similar to that being offered at Cincinnati Technical Institute.

After the crisis of reorganization had passed, the O.O.T.I. fell into a period of calm. During the months of April through October of 1970 the organization's meetings began to become argumentative, speculation on problems not obvious to all the members, and irrelevant issues. Several potential members began balking at joining the organization and several charter members threatened to drop from the group. President House recognized the growing internal problems and streamlined the agenda and meetings to avoid these problems. By the end of the year the organization was strong, and it was obvious that it would not fold as did its predecessor, the Ohio

Association of Directors of Technical Education.

The major accomplishments of the O.O.T.I. during its first year of operation included the fight against a new state structure, beginning of a technical division within the Ohio Vocational Association, and most important, it emerged as a unified group.

To begin its second year the organization elected John Light as President, James Bowling, Vice President and Gary Rustad, Secretary-Treasurer. The new officers accepted the responsibility of leadership with only one major problem confronting them, cooperation between the new emerging technical institutes and the universities. Many members of the O.O.T.I. still feared a university take over and hoped for a period of time to gain strength enough to prevent such a future occurrence. The association submitted a resolution to Chancellor Millett in February, 1971, recognizing a need for cooperation between technical institutes and universities, especially where technical institutes and branches existed in the same community. The resolution promised technical institute cooperation at the same time reiterating the position that technical education would be best served only if technical institutes were to remain autonomous organizations. Specifically the resolution stated:

1. The two institutions which enter into discussions about possible cooperative relationships should do so as equals, as they have equal status as public corporate bodies.

283 Ohio Organization of Technical Institutes, Minutes of Meeting, December 17, 1970 (mimeographed).
2. The development of such cooperative relationships should not be construed as an opportunity for one institution to exercise dominance over another, for such control would violate established statutory provisions for the governance of the respective institutions by Boards of Trustees.

3. It must be recognized that in those instances of a common campus — such as at Mansfield and Lima — where technical institutes cooperate with branches of Ohio State University — cooperative arrangements are more easily established than in situations where geographic separation of campus exists.

4. The University should recognize and respect the separate and distinct mission of technical education being fulfilled by technical institutes and the institutes recognize and respect the branch function of providing general education.

5. While it may be possible in some instances for universities to provide useful counsel of technical institutes regarding recruitment of students or faculty, and other matters, it must also be understood that technical institutes may be able to provide counsel to the universities on ways and means of improving their operations.

6. No institution should be forced into cooperative relationships, for there is a vast difference between cooperative relationships and compulsory relationships.
7. Any cooperative relationship should be approved by respective administration or Boards of Trustees of the institutions involved, whichever are appropriate. A new and unfamiliar relationship with the universities began for the technical institutes in 1971. Miami University's School of Applied Science under Dean Bower had recognized the value of associate degree graduates matriculating into the third year of a baccalaureate program. Dean Bower made several presentations to the O.O.T.I. membership and requested an associate membership for Miami University into the organization. The College of Education, Bowling Green State University, hosted the O.O.T.I, April 17, 1971, for a meeting to discuss cooperation and common problems. The program's theme: Cooperation, Universities and Two Year Colleges was conducted by O.O.T.I. President John Light and featured remarks by Bowling Green President, Dr. Hollis Moore, Dr. Charles Lione, Dean of Bowling Green University Graduate School, Dr. George Bowers, Miami University, and representing technical institutes, Clifford House, John Broderick, Walker Huffman, and Henry Fallerius.

Miami University followed with an invitation for the O.O.T.I. to visit the Oxford campus as Dean Bower's guest. The purpose of the

284 Ohio Organization of Technical Institutes, Minutes of Meeting, February 12, 1971.

285 Ohio Organization of Technical Institutes, Minutes of Meeting, April 17, 1971.

286 Program prepared by Bowling Green State University for the Ohio Organization of Technical Institute's meeting, April 12, 1972.
May 14, 1971, invitation from Miami was to acquaint persons from the technical colleges with the opportunities, programs, and facilities of the university. In his address to the group Dr. Phillip R. Shriver, Miami University President stated that ".... we can expect to enroll a number of your students in the years ahead. With this realization, we, of course, will compete for your best students."

The break through with the universities did not alter the technical organization's ties with the State Department of Education. A meeting was requested by O.O.T.I. President John Light and subsequently the organization planned a two day workshop with the State Department of Education-Division of Vocational Education for August 12 and 13, 1971. Dr. Martin Essex and Dr. Byrl Shoemaker participated in the workshop for the State Department of Education. Technical education standards were reviewed and plans for minor changes were discussed. The State Department's position remained that it would only fund technical education if the programs would remain at the high clock hour requirements demanded by them.

The Ohio Board of Regents had a bill introduced to the Ohio General Assembly providing for the changing of name designate of technical institutes to technical colleges. The bill introduced to the Senate by Stanley Aronoff appeared hung up in committee. After considerable debate concerning the merits of a name change, the O.O.T.I.  

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287 From a mimeographed report, recorded by the author at the workshop on technical education held August 12 and 13, at the Ramada Inn, Columbus.
decided that the issue should be settled one way or another and instructed its president to visit legislators in an attempt to urge them to carry the bill to a vote. After several meetings with legislators and committee members, Senate Bill 396 became law as it passed in the House of Representatives November, 1971, and was signed by the governor to become effective February 16, 1972. The new law made it mandatory that institutes become colleges, unless the trustees of the technical colleges by resolution, and approval from the Regents, elect to remain institutes.

In December, President Light cited the following accomplishments of O.O.T.I. for 1971:

1. Establishing a communications line between technical institutes.
2. Encouraged and was responsible for several legislative changes.
3. Increased its membership.
4. Established better relationship between technical institutes and the State Department of Education, the Ohio Board of Regents, and the universities.²⁸⁸

Mr. Roy Klay, President of Vanguard Technical College became the organization's third president in 1972. During Mr. Klay's term as president two significant position papers affecting technical institutes were completed and circulated. A position on funding reached

²⁸⁸Ohio Organization of Technical Institutes, Minutes of Meeting, December 17, 1971 (mimeographed).
the governor in time for his 1973–75 biennium budget, and a concise, candid position paper on technical education in Ohio was completed.

During an address to the O.O.T.I., State Finance Director Dr. Harold Hovey warned the members that the 1973–75 state budget for higher education would be severely limited. The organization heeded the warning and through a series of meetings and correspondences with legislators and state officials presented data that indicated that technical education programs needed special consideration in the new budget. Timing of a position on financing to the Department of Finance and the Ohio Board of Regents was considered by the group as important as the position itself. The position was completed with the following results:

The Ohio Organization of Technical Colleges, which includes as members fourteen autonomous state-supported technical colleges, unanimously adopted the following position at their meeting in Columbus on September 22, 1972.

We believe that the subsidy per technical FTE at state-supported institutions of higher education should be increased in the next biennium for the following reasons:

1. Quality technical education by necessity requires small classes for much the same reasons that baccalaureate professional education does, yet the subsidy per baccalaureate professional education ($1,530) is nearly twice that of the technical education FTE (810) and the subsidy for baccalaureate general education component of technical education programs ($480). General education comprises one-half of the technical education curriculum.
2. Quality technical education by necessity requires more hours of instruction in the laboratory, and laboratory instruction is costlier than classroom lecture instruction.

3. Quality technical education by necessity requires able professors with rich industrial expertise. To attract such talent, technical colleges must pay salaries comparable to those professors of baccalaureate professional programs. Further, technical colleges employ professional general educators rather than graduate students and must pay salaries adequate to attract such general educators.

4. Technical colleges are developing institutions and need competent staff to plan and develop new programs and curricula and to provide additional manpower needed in the accreditation process.

5. The allocation per FTE has not kept pace with inflation, which is being experienced at an annual rate of about 6 percent; in fact, the subsidy for the general education component of technical education last year was decreased 12 percent (from $540 to $480).

6. The average instructional cost per FTE in technical colleges is lower than that for other institutions not because the education offered is cheaper but because the subsidy rates received are smaller.

7. The highest priority in public higher education in Ohio is technical education. Technical education enrollment will increase 45.1 percent in the next biennium while all other types of higher education will increase only 10.8 percent.
8. By the nature of the programs they offer and the clientele they attract and serve, technical colleges enroll students who could not afford to pay higher rates of tuition.

We are confident that an increase in the subsidy for technical education can be accomplished in the next biennium without an increase in the total appropriation for higher education.\textsuperscript{289}

The paper was submitted to the Regents just a week before their recommendations went in to the State Department of Finance. When the governor's budget was released, the work of the organization was evident. Technical education subsidy increased for the next biennium by twenty-three percent while most of the other higher education subsidies received a three to nine percent increase.\textsuperscript{290} The drive to retain quality technical education programs through a system of state assisted autonomous technical colleges was to be taken to legislators, business, and the public through a position drafted by the organization and completed in December, 1972, which reads:

The Organization of Technical Colleges endorses the following position concerning technical education, career and occupational programs conducted by state-assisted institutions of higher education.

1. \textit{Since the primary intent of the General Assembly is to provide technical career education funds for students preparing for specific technical occupations, state}


Subsidies for technical education should be limited to students who have declared themselves candidates for such specific technical education degrees already approved by the Board of Regents. If such a limitation is provided by the subsidies based on student enrollment in technical education programs, not only would it be unnecessary to increase the appropriations for higher education in the 1973-75 biennium, except to allow for inflation, but also, it would be possible to increase the current FTE subsidies to the equitable level necessary to accomplish the purpose of the General Assembly.

2. Because the intent of the Ohio General Assembly is to provide monies to educate technicians for needed specific occupations and because Ohio Technical Colleges are best qualified to achieve this intent, the Ohio Technical Colleges should be recognized and designated as the primary educational system to provide the State of Ohio with career-oriented two-year technical education programs. Technical colleges under statutory requirements have submitted detailed plans before offering occupationally-oriented two-year programs. These programs have produced technicians of which a high percentage are employed. The surveys projecting needs in specific occupations in the state of Ohio, upon which carefully detailed programs were based, indicate that the current structure of technical colleges can adequately fulfill this need.

3. In order to avoid wasting tax monies duplicating technical education programs currently mandated by statute to state-assisted technical colleges and institutes, funds for equipment and operating costs for occupation-oriented technical education should be directed for use only by technical, general and technical, and community colleges. Only these institutions should be permitted to award associate degrees
in applied business and/or applied science. Technical colleges and institutes in the state of Ohio are able to provide for all programs of technical education demanded by business, industry, and the professions.

The physical plant and faculties of universities and their branches are best qualified to present courses leading to the Associate of Arts degree and four-year baccalaureate programs in the professions, but most such institutions are not developed to provide occupationally-oriented two-year associate degree programs. If technical education programs are added to the universities and their branches, expensive duplication and waste of tax money is the result.

Signed by:

Belmont County Technical College
Central Ohio Technical College
Cincinnati Technical College
Clark Technical College
Columbus Technical Institute
Hocking Technical College
Jefferson County Technical Institute
Marion Technical College
Michael J. Owens Technical College
Muskingum Area Technical College
North Central Technical College
Northwest Technical College
Scioto Technical College
Stark Technical College
Terra Technical College
Washington Technical College

As the year 1973 began, there were sixteen members in the organization with Mr. John Lepp, Marion Technical College as its president. The seventeenth technical college, Allen County, had already petitioned the organization for membership and will make it

100 percent with all seventeen technical colleges, eligible for funds as defined in section 3357 of the Ohio, Revised Code, a part of the Ohio Organization of Technical Colleges.

By 1973 the organization through its activities is almost synonomous with the development of technical colleges in Ohio.
CHAPTER VII

THE TECHNICAL COLLEGES 1973: CONCLUSIONS, ANALYSIS, AND SPECULATION

Technical education was introduced in Ohio at Barberton in 1959. The technical institute originated with the first charter issued in 1966. The history of technical institutes in Ohio actually began with the establishment of the Canton Area Technician School in 1960, as this is the oldest technical college still in operation in Ohio. The history of the technical colleges only spans thirteen years at the date of this writing.

Examining the patterns of development of the seventeen technical colleges we see that each institute had unique characteristics and methods of development. They offer a variety of programs - almost each one of them boasting a unique program. The difference of origins and administrative patterns is a tribute to the local influence indicating that they are more local than state institutions. Even with the diversity of origins, programs, and facilities; the standards, philosophy, objectives, and curriculums remain not only remarkably close among institutes, but these important factors have remained stable throughout the years of growth and change. The technical colleges have been able to keep the best of the old as they
progress and grow.

Enrollment growth was restricted during the early years of development because of limited facilities. In 1965 when there were ten technical centers, only two operated in their own facility. In 1963 the annual report from the Ohio Division of Vocational Education listed 745 technical students in Ohio. This figure increased to 2,646 in 1967. In 1971 this figure substantially increased to 10,214 and to 12,845 in 1972. The 485 percent increase in technical students between 1967 and 1972 could be contributed to several factors: increased acceptance of career programs by the public, increased financial support from the Ohio Board of Regents, continued support from the State Department of Education, new and separate physical facilities, and the ability to award the associate degree for successful completion of a technician program.

Educational institutions have always been plagued by financial problems. Technical institutes operating under the State Department of Education reimbursement pattern could not operate a complete school without heavy subsidy from a district either by direct funds or use of buildings. When technical education was first funded in 1959 the unit reimbursement (15 to 25 students in one program) was $8,000. By 1972—thirteen years later—the base rate for unit reimbursement was still $8,000 per unit. In 1966 the $8,000, plus a modest instructional fee, would just cover instructional cost allowing nothing for operation of plant, administration, guidance, maintenance, etc. With this financial structure still in affect in the
TABLE 2

TECHNICAL COLLEGE ENROLLMENT BY HEADCOUNT AND FULL TIME EQUIVALENCY 1971 AND 1972

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belmont</td>
<td>258</td>
<td>380</td>
<td>217</td>
<td>298</td>
</tr>
<tr>
<td>Central Ohio</td>
<td>114</td>
<td>330</td>
<td>87</td>
<td>284</td>
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<tr>
<td>Cincinnati</td>
<td>1,210</td>
<td>1,290</td>
<td>1,209</td>
<td>1,400</td>
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<td>Clark</td>
<td>958</td>
<td>950</td>
<td>900</td>
<td>947</td>
</tr>
<tr>
<td>Columbus</td>
<td>1,823</td>
<td>2,050</td>
<td>1,869</td>
<td>1,916</td>
</tr>
<tr>
<td>Hocking</td>
<td>937</td>
<td>1,180</td>
<td>755</td>
<td>923</td>
</tr>
<tr>
<td>Jefferson</td>
<td>626</td>
<td>740</td>
<td>384</td>
<td>455</td>
</tr>
<tr>
<td>Lima</td>
<td>469</td>
<td>530</td>
<td>381</td>
<td>462</td>
</tr>
<tr>
<td>Marion</td>
<td>187</td>
<td>500</td>
<td>117</td>
<td>350</td>
</tr>
<tr>
<td>Muskingum</td>
<td>989</td>
<td>880</td>
<td>799</td>
<td>784</td>
</tr>
<tr>
<td>North Central</td>
<td>498</td>
<td>720</td>
<td>486</td>
<td>624</td>
</tr>
<tr>
<td>Northwest</td>
<td>278</td>
<td>320</td>
<td>265</td>
<td>268</td>
</tr>
<tr>
<td>Owens</td>
<td>810</td>
<td>1,110</td>
<td>698</td>
<td>826</td>
</tr>
<tr>
<td>Scioto</td>
<td>319</td>
<td>480</td>
<td>295</td>
<td>458</td>
</tr>
<tr>
<td>Stark</td>
<td>122</td>
<td>280</td>
<td>128</td>
<td>243</td>
</tr>
<tr>
<td>Terra</td>
<td>556</td>
<td>750</td>
<td>457</td>
<td>576</td>
</tr>
<tr>
<td>Washington</td>
<td>60</td>
<td>165</td>
<td>37</td>
<td>126</td>
</tr>
</tbody>
</table>
late 1960's when many of the new technical institutes were emerging, they had the alternative to be funded by the Regents or seek a new method of support. The infant organizations could not, even had they so desired, muster the potential force to bring about a change in the financial structure.

In 1969 the state support for a technical unit under the State Department of Education was $8,000. The same unit for twenty students under the higher education appropriation would generate $17,100 with the combined federal and state support.292 The $17,100 was a realistic amount, and not excessive, to operate a high quality technical program. For the projected 1973-74 school year, the same number of students will generate $19,060 from state and federal sources.293

In expenditures for capital improvements, the technical institute received $7,000,000 from the Regents in 1965.294 This was two percent of the higher education capital budget. In the 1971-73 biennium technical institutes received $72,945,000 in capital improvements or 47 percent of the higher education budget. The only other major source of income for technical institute construction was the $6,500,000 received in Southeast Ohio from the Appalachia Regional Commission. In all except one of the technical colleges the curricu-


lum standards remain high enough to qualify for National Defense Education Act funds through the State Department of Education. This standard has remained constant while the course offerings have expanded during the last thirteen years. Engineering technologies were the major programs in the 1960's. The curriculum offerings have shifted to greater numbers and emphasis on service technologies and health technologies.

As new programs develop in the 1973 and 1974 school years, the high contact hour standards long cherished by technical educators may begin to drop. A freeze in federal funds has caused the State Department of Education to curtail reimbursement of new programs. As these new programs develop with no federal support funds, the technical colleges will often offer two year programs with fewer hours.

The technical curriculums offered at the technical colleges are traditionally set up for a two year program. With a full two year program objective, it would appear that adult education or continuing education has been sometimes neglected. This would depend on an interpretation of what constitutes adult and continuing education. In the early years of development, technical institutes because they offered programs only to adults, could be classified as an adult education institution. Many institutions began their complete operations in the early afternoon and evening hours, and although the curriculums were usually set up on a two year basis, many of the students attended on a part time basis while working during the day.
After the technical institutes had matured and moved into their own facilities, new programs of short duration, seminars, hobby courses, developmental remedial studies, and vocational skill courses began to appear. As these programs became more popular, divisions or departments of adult education began to appear in the program offerings. In 1966 through 1970 it was rare to find reference to adult or continuing education in the institutes' bulletins, although the standard associate degree programs were usually offered in the evening hours. By 1971 all of the institutes chartered and in operation for two years or more were advertising adult education in one form or another. Jefferson Tech listed them as improvement and non-credit courses. North Central Tech referred to its Evening Division - Credit and Non Credit Department. Columbus Tech's Adult Continuing Education program took many forms. The new emphasis on adult education is typically illustrated by Nick Visnic, Director of Cincinnati Technical College's division of Continuing Education in his report to the President:

Winter-term classes currently concluding at Cincinnati State Technical College, Division of Continuing Education, show an increase over the 1971 fall term in the number of credit and non-credit classes offered (20 increased to 23) and the total number of students enrolled (273 increased to 317). The average enrollment per class remains approximately the same—13.8 stu-
dents this term compared to 13.6 in the fall.

At the Northwest Extension Center at Colerain High School an increase in offerings brings the class count from four to six with a total enrollment increasing from 46 to 83 for a 13.8 average per class.

The Sheetmetal Apprenticeship Training Program added one new class this term to bring total training classes to 49 and total student enrollment to 468.

The actual number of students enrolled in all winter-term courses is 868. However, 376 of the apprenticeship trainees have two classes a week, thus bringing the total student contacts to 1244 in 78 class sessions each week.

Four new classes in an interim term have begun operations this month. Two credit courses—Machine Tool and Manufacturing Processes No. 2112 and Offset Press Operation No. 1440—are under way at the Northwest Extension. A 36-hour course in Occupational First Aid has been added to the Electricians' Joint Apprenticeship Training Program and a 9-hour, non-credit class in Yoga II has been started in a six-weeks mini-term.

Sixty-eight staff members—66 instructors and 2 supervisors—have been employed during the 1971-72 terms to date. Of these, 25 have taught one term and 43 two terms.

In addition, a Civil Air Patrol class uses the facilities one night a week as a part of the community service program.298

In the 1972 school year all of the technical colleges had a director of adult or evening education.

The primary deterrent to adult education in technical colleges has been the lack of funding for programs and courses that do not qualify as associate degree credit work. These non credit

courses must exist on fees alone. In many of the technical colleges, a policy exists where non credit courses can be offered only if instructional costs are completely covered by tuition or other fees. This makes the non credit courses somewhat of a stepchild to the credit courses as they do not, under the current funding process, pay their operational and administrative costs. The adult or non credit division, ironically, finds itself in the same stepchild situation as the technical programs did in their early years of existence when they operated in someone else's facilities.

This funding problem may soon be solved. Dr. Max Lerner, has worked with technical college presidents to work out a new state formula that would provide operational funds for non credit courses on technical college campuses. This new system may be introduced into the next state budget. The method in its rough stages takes the following form. For non credit subsidy, the technical college would calculate \(0.90 \times \text{student clock hours of instruction}, \) e.g.: \(20 \times 240 \times 0.90 = 4,320.\) Non credit subsidy could include up to 10 percent of the technical colleges total state subsidy.\(^{299}\) This new idea would place adult education in a favorable position for expansion and improvement on the two year campuses.

Another decision facing the technical college administrations and trustees is a possibility of becoming a State General and Technical College. Introduced as Senate Bill 329 by Messrs. Regula,

\(^{299}\) Taken from mimeographed worksheets prepared by Dr. Max Lerner for technical education workshop, January 24, 1973.
Armstrong, and Ocasek of the 109th General Assembly (1971-73), the bill enables a technical college to offer an arts and science program granting an associate of arts degree. This move would create a college similar to the community college districts except for the provisions that require community colleges to pass a local levy.\(^\text{300}\) This drift toward a more general and comprehensive institution is being considered by Owens Technical College, Columbus Technical Institute, Clark Technical College, and Northwest Technical College. This new legislation enables branches and technical colleges that exist in the same community to merge. None of these institutions appear to be interested in the move to merge at this time.

The Ohio Board of Regents' staff members have indicated that they expect the Regents to put pressure on the various two year campuses to eventually become State General and Technical Colleges. This pressure has been relieved considerably by the drop in enrollment experienced by the universities and branches in the Fall of 1972. With dropping enrollments at the campuses, the arguments for new general facilities is not very strong. Northwest Technical College submitted a formal application to form a General and Technical College to the Ohio Board of Regents in March of 1973. Due to the apparent pressures caused by low enrollments and a statement from the Regents that a study needed to be completed, the request was tabled.\(^\text{301}\)

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\(^{300}\) For complete text of Senate Bill 329 see Appendix D.

\(^{301}\) Ohio Board of Regents, Minutes of Meeting, March 18, 1973.
Although the administration at Northwest Technical College was disappointed in the refusal to create a general and technical college, some technical educators sighed with relief. To these technical educators, the trend toward generalization is a dangerous one for the preservation of quality technical education programs.

With all of the technical colleges following a philosophy and objective of career preparation, the students tend to be more job and goal oriented. Most of the studies dealing with students are statistical. These studies illustrate certain characteristics of the technical students. The majority of technical college students attend day school (66.9%), but a sizable percentage is listed as evening students (33.1%). Of the 10,202 students enrolled in 1971, 7,115 of these were male (67.9%). 16.3 percent of the students were married. These figures would indicate that with a third of the students in evening programs, many students at technical colleges probably work at other jobs full time. The thirty percent female student figure should increase as service and health technologies expand and increased acceptance into other careers previously considered for males will provide women more opportunities in technical careers. Technical colleges should increase their efforts to recruit a higher percentage of women into technical programs.

In 1972 the enrollment at state universities in Ohio decreased while enrollment in technical colleges increased twenty-five

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302 Ohio Board of Regents, Student Inventory Data, 1971, pp. 74-75, 97-98.
percent. There were observations and arguments that students usually headed for four year programs are instead attending a two year technical college. This viewpoint is not shared by all technical educators. In an address to a joint education and finance committee meeting of Ohio Legislators, this author stated that generally students attending our technical colleges would not be attending school at all if our programs were not in existence. Technical colleges, the author explained to the legislators, are not taking students away from the university but are offering Ohio citizens an educational alternative. 303

Dr. Roland B. Thompson, Director of the Board of Regents' Project on Enrollment Projections for Higher Education stated that:

There may be pertinent factors which have been overlooked but which will influence enrollments in specific institutions. New buildings may have been approved for construction. New campuses may be under construction. New programs may have been requested or some institutions or regional campuses may have been closed.

In evaluating future enrollments certain conditions must be kept in mind:

1. There is a finite number of high school graduates each year which number will soon begin to decline since the number of births each year has declined more than 20 percent since 1957.

2. A decreasing percentage of these graduates have been going on to post-secondary education for several years.

303 From an address by John J. Light to legislative finance and education committee members, Columbus, March 21, 1973.
3. As enrollments have decreased, institutions of higher education, particularly the private institutions, have become desperate for students.

4. Each college cannot expect to attract an increasing percentage of students from an increasing drawing area which obviously impinges on other colleges which are also clamoring for more students.

5. The shift toward public institutions, particularly the community colleges and technical institutes, must be kept in mind.

6. The influence of vocational programs in the secondary schools and the desire for job-oriented training in post secondary education must be taken into consideration together with the increasing costs.  

With enrollment increases in the technical colleges and another increase predicted for 1973, and a continuously high percentage of its graduates being placed in technical fields, the future looks bright for the technical colleges. In 1972, according to charts prepared by the Ohio Board of Regents, more than eighty percent of the 1972 graduating technicians entered their chosen technical career. With graduating students in related employment, going to the service, and entering a four year university, the 1972 placement figures for technical college graduates would be nearly one hundred percent.

The philosophy and objectives of the seventeen technical institutes are in every case career oriented. The development of technical competencies and job placement were listed as top priority

<table>
<thead>
<tr>
<th>Technical Institutes</th>
<th>Associate Degrees in Technologies</th>
<th>Employed</th>
<th>Transferred</th>
<th>Other</th>
</tr>
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<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Clark County</td>
<td>184</td>
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<tr>
<td>Columbus</td>
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<td>59</td>
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<td>Four-County</td>
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<td>10</td>
<td>16</td>
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<tr>
<td>Jefferson County</td>
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<td>75</td>
<td>5</td>
<td>13</td>
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<tr>
<td>North Central</td>
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<td>10</td>
<td>14</td>
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<tr>
<td>Penta County</td>
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<td>146</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Stark County</td>
<td>33</td>
<td>16</td>
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<td>14</td>
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<tr>
<td>Tri-County</td>
<td>133</td>
<td>81</td>
<td>9</td>
<td>43</td>
</tr>
<tr>
<td>Vanguard</td>
<td>47</td>
<td>35</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,192</td>
<td>821</td>
<td>125</td>
<td>246</td>
</tr>
</tbody>
</table>
in all institutions whether developed in associate with vocational schools or university branches. As institutes evolved from technical center, to technical institute, to technical college the vocational philosophy and objective has remained paramount.

The documentation of curriculum development and content through years of development indicate little change in the technical course offerings. More than 50% of the curriculums have remained technical. Laboratory and contact hours in technical courses have remained high (in excess of 900 hours for the two years) in sixteen of the seventeen technical institutes. In the development and evolution of technical offerings the data clearly indicates no weakening of course content to a general nature. The leadership and communications courses established as part of the curriculum under the State Department of Education have become more general in nature. During the influence of the "collegiate" pattern the general portions of the curriculums have included more sociology and psychology and fewer supervision and leadership courses. Courses are now referred to in terms of credit hours more often than contact hours as was the case during the developmental years under the State Department of Education.

Technical institutes that developed with a joint vocational school often had identity problems, with the community confused about "high school" and "post high school" programs. The most serious problem with this arrangement was the lack of a full time facility for the technical institutes as they usually "shared" on an evening
basis. The technical institutes developing with a vocational school grew and prospered well under this sharing arrangement. Due to pressures on growth and funds this situation of sharing was due to change. Technical institutes developing on a common campus with a university branch, due to the autonomy of the technical institutes have been able to grow and provide a sound technical program. Programs at Marion, Newark, and Lima, where students share classrooms and general subjects, are too new to analyze.

The National Legislative Acts, especially the National Defense Education Act of 1958 and the Vocational Education Acts of 1963 and 1968, through funding, have enabled the technical institutes to maintain a high number of technical hours as they meet the standards of the State Department of Education. Without these funds, the number of contact hours in technical programs will drop. State legislation, including the name change to college, State General and Technical Colleges, and increased central power to the Ohio Board of Regents tend to pull the technical institutes to a more general position. The autonomy of the technical institutes, now protected by c 3357 of the Ohio, Revised Code, enables them to develop and grow according to their local needs and objectives. Under the present autonomous condition, funded by both the federal government through the State Board of Education and the state of Ohio through the Ohio Board of Regents, the technical institutes offer high quality programs and curriculums, have increased enrollments, increased financial security, and high job placement. The evidence of this study indicates that at this
point in time collegiate pressures have not weakened technical programs offered at technical institutes in Ohio.
APPENDIX A

MEMORANDUM OF UNDERSTANDING ON TECHNICAL AND VOCATIONAL EDUCATION BETWEEN THE OHIO BOARD OF REGENTS AND THE OHIO DEPARTMENT OF EDUCATION

The need to strengthen and expand the commitment of State government to vocational and technical education is clearly recognized. Although it is not always possible to make a sharp distinction in definition between vocational and technical education, certain characteristics of organizational structure and program level can be identified which make it possible to establish a separate identity for each of these two educational programs.

Vocational education is a program planned to assist people to enter employment or to upgrade themselves in their current employment. Many occupations require the development of work skills with supporting instruction in science and related subjects. High school programs of vocational education can provide students with sufficient skills and knowledge to enter employment upon graduation. Others who have missed vocational preparation at the high school level or who have become unemployed may need to enroll in vocational courses at various times during their adult life. Another important feature of the vocational program is the supplementary training thus made available to employed workers to help them hold their job or prepare for advancement. The organization and operation of vocational education is the responsibility of the secondary school and of the Ohio Department of Education.

Technical education is a post-high school program planned to prepare high school graduates for entrance into para-professional occupations as support personnel for professional practitioners. Such occupations are concerned with design, development, testing, consulting, and supervision. Technical education, in comparison to vocational education, gives the major program emphasis to the acquisition of scientific and technical knowledge with work skills as a corollary. Persons are prepared for entrance into employment as technicians through two-year post-high school technical programs in one of three
APPENDIX A—Continued

types of institutions — the community college, the technical institute, or the university branch. While certain areas of instruction in technical education may be transferable to a baccalaureate program in a university or college, the program organization and content of the technical program must remain true to its unique goal and function. The academic community which tends to grant status only to baccalaureate and graduate programs must not allow the technical education programs to develop into poor quality, indifferently operated activities. The successful completion of the technical education program results in the award of the associate degree. The organization and operation of technical education recognized by the associate degree is the responsibility of the Ohio Board of Regents, with cooperation and assistance from the Division of Vocational Education, State Department of Education.

It is the position of the Department of Education and of the Ohio Board of Regents that opportunities for vocational and technical education should be greatly expanded throughout the State. Increased educational opportunities must be accomplished, however, through the efficient use of physical facilities and human resources. The Board of Regents and the Department of Education agree to the following principles governing the expansion of educational opportunities for vocational and technical education:

1) That determinations concerning the need for, and organization of vocational education shall be made by the Department of Education and by the individual school districts.

2) That determinations concerning the need for, and organization of technical education shall be made by the Ohio Board of Regents and by the individual institutions of higher education.

3) That on the basis of a legal and financial commitment to technical education, the Department of Education will cooperate with the Ohio Board of Regents in the development of and support of technical education. Such assistance from the Department of Education shall be limited to those technical programs meeting the standards of the Department and shall not handicap the development of vocational education.
4) While technical education will grow in several different administrative patterns, there must be no duplication of effort or taxation. Technical education is developing in Ohio in the following administrative organizations:

Community Colleges

Technical Institutes (Such technical institutes may be separate entities or organized in conjunction with a joint vocational school district).

Branch University Centers

5) That cooperative efforts will be undertaken for the joint use of certain physical facilities, and of appropriate professional staff and ancillary services, in those circumstances where technical and vocational education programs have been established in the same area.
APPENDIX B

STANDARDS FOR TECHNICAL EDUCATION

STATE DEPARTMENT OF EDUCATION

JUNE 12, 1972

TECHNICIAN TRAINING PROGRAMS

Technical education is a level of education in keeping with our technological revolution and the changing needs of both people and industries and businesses in our economy. This level of education is planned to prepare para-professional people in engineering, business, agriculture, distribution, health, and public service occupations.

Such para-professionals can be prepared in a two-year post high school technical program to work in team relationship with both the professional people and people at the skilled or vocational levels of employment.

Technical education is concerned with design, development, testing, supervision, or mid-management functions. The technician does not replace the professional person or the skilled worker. The technician does, however, enable the professional person to work at his highest level of education and training by providing supportive services to the professional. The technician enables the skilled worker to function effectively and economically through coordinative and interpretive functions served by the technician between the skilled worker and the professional.

Desired Outcomes

The technician in industry, business, distribution, and agriculture holds the key position between the professional and the craftsman or vocationally trained worker (a para-professional).

Technicians must be able to design, develop, and test with the use of instruments, gauges, applied science, mathematics, common sense, initiative, and diagnosis. He, or she, collects data, makes computations, performs laboratory tests, and develops reports.
They organize, program, supervise, and control the machines in our plants, offices, and distributive centers.

**Enrollment Requirements**

Enrollment requirements shall be those established by the Ohio Board of Regents.

**Qualifications of Instructors**

Faculty qualifications shall include:

A. Faculty members shall be competent in the specific area of the technology in which they teach, normally holding the baccalaureate or higher degrees in fields of concentration appropriate to their teaching assignments and have at least one year employment experience in a technical field related to their area of instruction.

Technical competency in the specific area of the technology gained through five or more years of experience may be substituted for baccalaureate degree work.

B. Department chairman or persons responsible for curriculum planning and supervision must hold the Master's degree or other advanced preparation and experience in an appropriate field of concentration.

C. A minimum of 60 percent of the curriculum shall be taught by faculty members who devote their full time to teaching and/or administrative responsibilities at the institution in question.

D. A significant proportion of all faculty members shall have had recent experience in agriculture, industrial, business, distributive, or professional practice pertinent to the technologies which they teach, and such experience should be kept up-to-date through professional association, consultative practice, and individual reading and research.

E. Faculty members shall be adequate to assure proper attention to individual students.
APPENDIX B—Continued

Time Schedule

Each technician training curriculum shall operate in conformance with the following general time distribution for both part-time and full-time students:

A. Special laboratory and related technical subjects - A minimum of 50 percent of the total instruction time for the program shall be devoted to specialized laboratory experiences and related technical subjects in such things as engineering layout, electronic theory, machine design, chemistry, physics, mathematics, metallurgy, business principles, management functions, business or secretarial procedures, production methods, and analysis of materials.

B. Basic laboratory experiences - A minimum of 15 percent of the total instructional time for the program shall be devoted to basic laboratory or manipulative experiences in the use of such things as equipment and instruments, hand and machine operations, blueprint reading, drawing, sketching, display and layout, etc.

C. Communicative and leadership subjects - A minimum of 20 percent of the total instructional time of the program shall be devoted to the development of skills in oral expression, written forms of communication, graphic forms of expression, human relations, supervisory techniques and other leadership development skills.

D. The remainder of time (a maximum of 15 percent) shall be distributed according to the need of the area of instruction. The percentages listed will be based on 1650 hours minimum requirement—not on the total contact hours proposed.

Length of Course

In-school courses of instruction shall be two years in length when conducted on a full-time basis. Such programs may be operated for a longer period of time when on a part-time basis. A minimum of twenty-five class and/or laboratory hours per week for a period of thirty-three weeks shall be considered an academic year (825 contact hours). With some types of technologies, it may be more desirable to develop a curriculum of 1800 hours for a two-year program.
Cooperative courses of instruction shall not be less than eighty-eight (88) weeks in length for a two-year program. Fifty-five (55) weeks shall be devoted to in-school instruction and thirty-three (33) weeks to the cooperative phase of instruction. Each cooperative unit must have an assigned coordinator to carry on the functions assigned.

**Maximum Class Size**

Enrollment shall follow the standards established for reimbursement. The maximum class size shall be twenty-five (25) students in laboratory subjects and thirty (30) students in related technical instruction areas.

**Physical Facilities**

Technician education training classes should be conducted in class-rooms, shops, and laboratories, which are adequately equipped to meet the standards required in the area for which the training is being given. Physical facilities must be reviewed and approved by the State Department of Education prior to final approval of the program. Separate facilities for identity apart from the secondary education facilities are desirable but not necessarily indicative of quality.

**Method of Instruction**

Instruction shall be based upon the standards found to exist in industry, business, distribution, or agriculture, and developed into a meaningful curriculum. Both group and individual instruction and methods should be used. Basic and special laboratory classes will normally be taught on an individual basis with each student progressing at his own rate of speed. Related technical, communicative, and leadership subjects should make use of the group instruction method of teaching.

Instructors and instructor-coordinators of related technical and laboratory subjects must work together in order to assure a correlation of material so that maximum results will be obtained.

**Minimum Student Records**

The following minimum information must be kept on file for each student.

A. Name, age, and address
B. Date enrolled
C. Results of standardized aptitude and achievement tests
D. Previous education and/or work experience
APPENDIX B—Continued

E. Name of technology being pursued
F. Progress record by subject in terms of performance objectives
G. Evaluation progress
H. Placement and follow-up
I. Record of employment of on-the-job training

Technical Education Reimbursement Policy

Preliminary application for approval of a technology program that will begin in the Fall must be submitted to the Division of Vocational Education, Ohio Department of Education by May 1st.

Reimbursement for approved technical education programs is established on a unit basis. In order to receive support, all programs must operate in conformance with the standards established for operation of such programs. Requests shall be made on the Form VE-21. Reimbursement may be made from available vocational funds for Post-Secondary (Technical) Director, one per center, supervisors and Vocational Guidance counselors. For additional information please check reimbursement schedule.

Standard for a Unit

A unit constitutes a class or section operating as a separate group receiving instruction on a full-time basis. Each approved unit must be operated as a separate class with a homogeneous group. Minimum class size shall be 15 for the first year of a program and 12 for the second year.
APPENDIX C

TAXONOMY OF TECHNICAL DEGREE PROGRAMS, TITLES

I. Business Programs

Accounting Technology

Training for keeping books of accounts; compiling and preparing financial statements and reports; supervising activities of those engaged in bookkeeping.

Advertising Technology

Educating for preparing advertisements which appear in newspapers, magazines, and on radio and television; for books, periodicals, packages, and store displays.

Automotive Service Management Technology*

Preparing for one to serve at a mid-management level of a firm which supplies gasoline, oil, and related products to automotive service stations and other outlets; to perform functions related to warehousing, transportation, and wholesale or rental marketing of these products.

Aviation Management Technology*

Training for serving as a manager of small and medium-sized airports.

Banking/Finance Technology

Training for working in all aspects of the banking/finance industry, including bank operations, loan and mortgage departments, and trust departments.

*For statewide enrollees
APPENDIX C—Continued

Business Management Technology

Educating for serving in a line or staff relationship at mid-management level in business, with an emphasis in accounting and managerial techniques.

Commercial Art Technology*

Preparing for one to be employed as a commercial artist in a studio (art services enterprise) or in free-lance work calling for skills in illustration, painting, sketching, lettering, layout, design, touch-up, etc.

Computer Programming Technology

Teaching for one to design, write (code), and test computer programs based upon specifications provided by management.

Court/Conference Reporting Technology*

Training for performing court/conference secretarial duties and stenotyping testimony, speeches, discussions.

Executive Secretarial Technology

Instructing to perform general secretarial duties and assist the executive officer in effective and efficient operation of his office.

Food Service Management Technology

Preparing for entry level managing of a restaurant, cafeteria, club, fast food, or institutional food service operation. Management areas include training and supervising personnel; planning menus, kitchen and dining rooms; purchasing food, equipment, and furnishings; analyzing and controlling costs; orienting consumers.

General Secretarial Technology

Training to perform general secretarial duties, such as filing, taking dictation, transcribing, typing, operating office equipment, and serving as receptionist.

*For statewide enrollees
APPENDIX C—Continued

Graphics Technology

Educating to work in all areas of mass communications—packaging, photography, drawing, and advertising—to transmit information visually.

Hotel/Motel/Resort Management Technology*

Training to serve at mid-management level in hospitality industry, in food purchasing and preparation, catering, housekeeping, convention planning or front office management.

Industrial Management Technology

Training for one to perform as a management aide in small and medium-sized industries.

Industrial Marketing

Preparing to perform sales and marketing functions involving a specialized technical knowledge of products and/or services appropriate to industrial firms, manufacturers, and other business and governmental units.

Insurance Technology

Training to work in life and health insurance or in property and liability insurance, investigating losses and processing claims.

Investments/Securities Technology

Preparing one to work in a brokerage house as a securities salesman or in trust department of a financial institution as trust officer.

Legal Secretarial Technology

Educating to perform general secretarial duties and to assist an attorney or someone in a judicial capacity in the effective and efficient operation of the office.

Medical Office Assisting Technology

Educating to assist a physician in a private office, hospital, or clinic, and to perform clerical and administrative duties.

*For statewide enrollees
Medical Secretarial Technology

Teaching one to perform general secretarial duties in a hospital, physician's office, or clinic.

Office Management Technology

Training to serve as an aide in the management of offices, including the supervision of personnel.

Office Service Technology

Training to perform at the level of a clerk-steno; for typing, filing, duplicating, as well as limited stenography.

Procurement/Materials Handling Technology*

Preparing one to locate and select vendors and supervise delivery of materials necessary for construction, business and industry.

Property Management Technology*

Training to serve at mid-management level in a firm which manages residential or commercial properties, or as building manager of an office building, public building, or industrial plant.

Radio-Television Broadcasting Technology*

Educating to serve as programmer and announcer for radio and/or television stations.

Real Estate Technology

Preparing to serve as a real estate salesman or assist broker in a real estate office or as a specialist in a financial institution which has functions related to real estate.

Retail Marketing Technology

Training to serve at mid-management level in retailing organizations, and for providing sales and marketing services appropriate to the needs of the ultimate consumer.

*For statewide enrollees
Security Administration Technology*

Instructing to serve at mid-management level in a private or public corporation performing managerial functions designed to safeguard person and property and to eliminate or minimize losses due to theft, arson, accidental fire, explosion, sabotage, industrial espionage, etc.

Systems Analysis Technology

Teaching to study information and processing requirements in an organization, to design the flow of operations and preparation of the specifications for the processing system; to know principles of programming, discover the fundamental logic of a system, produce sound plans and appreciate the effects of new facts in planning.

Traffic Management Technology*

Training one to plan and supervise the safe and efficient movement of freight from source to destination by rail, truck, water or air.

Wholesale Marketing Technology

Instructing to serve sales and marketing functions in the movement of goods from the factory to the consumer through intermediate distribution organizations.

II. Health Programs

Biomedical Instrumentation Technology*

Educating to maintain, calibrate, and evaluate performance of electro-mechanical equipment used in medical fields in general hospitals and medical centers; bio-medical equipment centers; research and maintenance divisions of manufacturing and electronic firms.

Dental Assisting Technology

Preparing to perform receptionist, bookkeeping, and dental office managerial duties, assist in chair-side technique, sterilization of instruments, and other duties under direct

*For statewide enrollees
supervision of the dentist in private practices; or private and public clinics; local, state or federal government agencies.

**Dental Hygiene Technology***

Training to qualify by license to perform prophylaxis, fluoride applications, X rays, laboratory procedures, and patient education in private dental practices; or private and public dental clinics; school systems; local and state health departments; armed services; or other governmental agencies.

**Dental Laboratory Technology***

Preparing to perform, from the dentist's instructions, highly skilled technical procedures in the fabrication of dentures, crowns, and bridgework in private practices and/or commercial dental laboratories or in public clinical laboratories at local, state or federal levels.

**Dietetic Technology**

Training to serve at mid-management level as a para-professional in hospitals, clinics, community health and welfare agencies, educational systems and commercial enterprises where food services, nutrition counseling and education, food produce and consumer research are a vital concern.

**Medical Assisting Technology**

Educating one to perform receptionist, bookkeeping, and other office managerial duties and assist the physician in physical examinations, routine laboratory tests and patient-record keeping in private physicians' offices; or clinics; hospital outpatient departments; or to perform similar ambulatory patient services at local, state, or federal levels.

**Medical Laboratory Technology***

Teaching to assist the professional in performing specific pathology laboratory examinations such as chemical testing of body tissues and fluids, identification of microorganisms, blood-cell typing and blood counts in public or private pathology laboratories of hospitals; clinics; physician offices at local, state, or federal levels.

*For statewide enrollees
Medical Library Technology

Teaching one to contribute to selection, cataloging, and compiling of medical literature, and utilization of medical audiovisual aids in hospital and medical center libraries at the local, state, or federal levels.

Medical Records Technology*

Training to contribute to analyzing, correlating, transcribing and maintaining patient health/medical records in: hospital; public or private clinics at local, state, or federal levels; industrial health clinic or insurance company.

Mental Health Assisting Technology*

Training one to assist in the recognition, motivation, care and treatment of the mentally ill and retarded under professional direction in public or private facilities, at community, state, or federal levels.

Nursing, RN

Training one to be an Associate Degree registered nurse, licensed by the state, who under professional direction of physicians, provides nursing care to patients and performs specialized duties in hospitals or other health care facilities including clinics, physicians' offices, schools, industries, or also in health services at state or federal levels.

Occupational Therapy Technology

Preparing one to assist an occupational therapist in the use of purposeful rehabilitative activity of persons with emotional or physical disabilities in: hospitals; or schools for retarded; mental health or geriatric centers at local, state or federal levels.

Ophthalmologic Technology

Training a person who will, under direction of a physician specializing in eye diseases, use tests and instruments to aid in diagnosing sight problems in: private or public eye clinics; physicians' offices; or in municipal, state or federal health services.

*For statewide enrollees
APPENDIX C—Continued

Optometric Technology

Educating to use tests and instruments for examining the eye for defects and faults or refraction under direction of an optometrist.

Pharmaceutical Technology *

Training one who will, under the direction of the professional pharmacist, assist in routine drug dispensing, and maintain stock inventories, pharmaceutical records, and consumer relations in: private pharmacies; industry; hospitals; clinics; or other health facilities at local, state, or federal levels.

Physical Therapy Technology

Preparing a person who will, under direction of physical therapist, promote patient restoration of muscular function through prescribed exercises and/or use of ultra sound, heat or cold treatments in: hospital or clinic—public or private, at all levels—nursing or convalescence homes.

Public Health Technology

Educating to assist the community health professional in communication, inspection and evaluation of community health/environmental problems in: community or county health departments; or in state or federal health agencies.

Radiologic Technology

Preparing one to perform radiologic examinations, under physician's direction, for the purposes of diagnosis and treatment of physical diseases and injuries in: hospitals; or clinics; private physicians' offices; industry; research centers; or in state or federal institutions and services.

Respiratory Therapy Technology

Training a person who, under physician's direction/orders, will administer oxygen, other gases and medication, and operate equipment for patients with respiratory diseases in: public or private hospitals at local, state, or federal levels; or in private corporations or research laboratories.

*For statewide enrollees
APPENDIX C—Continued

Surgical Assisting Technology*

Educating one to assist the surgeon in his office, performing clinical and administrative duties; and in the hospital operating room, performing such functions as preparing sterile surgical equipment, keeping operating room in order, passing instruments, holding retractors, cutting sutures.

III. Engineering Programs

Architectural Technology

Training one to assist in conceiving and drawing of plans for buildings or structures, supervising building of the structure, and landscaping its surroundings.

Aviation Technology*

Training to maintain aircraft, including airframe and power plant, and supporting systems of both.

Ceramics Technology*

Preparing to serve as para-professional to the ceramics engineer; to work in such fields as glass, refractories and electronic ceramics; to assist in such duties as quality control, production supervision, and research and development.

Chemical Engineering Technology

Training to help discover, explore, develop, test, perfect, and produce new chemical products; to assist in modifying and improving methods of making known chemicals.

Civil/Construction Technology

Training one to participate in the construction process from initial planning to project completion, either of new structure or modification of existing structures.

*For statewide enrollees
APPENDIX C—Continued

Climate Control Technology

Educating to design, develop, plan, produce and install machines and systems that control the temperature and environment of buildings, materials, or systems; to serve as trouble-shooter for this environmental equipment.

Drafting and Design Technology

Instructing to plan, prepare, and interpret mechanical, architectural, structural, pneumatic, marine, electrical/electronic and topographical designs, with ability to design or re-design jigs, fixtures, dies, tools, mechanisms and machines.

Electrical Engineering Technology

Training one to design, develop, install, control, and operate electrical power production and distribution systems.

Electronics Engineering Technology

Training to assist the electronics engineer in prototype development and testing, and in systems analysis (including design, selection, installation, calibration and testing).

Electro-Mechanical Technology

Training one to work with both mechanical and electrical controls and devices in handling, designing, developing, planning, making, installing and trouble-shooting modern devices combining electrical, electronic and mechanical systems.

Fluid Power Technology

Educating to design, develop, plan, make, install, and trouble-shoot hydro, pneumatic, and fluidic systems.

Industrial Technology

Training one to serve as para-professional to the industrial engineer as foreman or supervisor.

Instrumentation Technology

Instructing in how to help automatic measurement and control specialists design, install, adjust and maintain systems of instruments.
APPENDIX C—Continued

**Mechanical Engineering Technology**

Training to assist the mechanical engineer in designing, building, testing and producing machines and devices, and in teaching the care and operation of these.

**Metallurgical Technology**

Educating to assist the engineer in conducting tests on metal, working in production plan design and development, and preparing pertinent and comprehensive metallurgical reports.

**Mining Technology***

Training one to locate deposits, help direct drilling, separate and refine materials, supervise both underground and surface operations.

**Paper Technology***

Preparing for serving in the paper industry in production, quality control, or as service or sales representative of the manufacturer.

**Plastics Technology***

Educating to plan, manage or supervise production of plastic products.

**Printing Technology**

Training to serve in various capacities in the printing industry, including—but not limited to—supervision in typography, typesetting, cold typesetting, and offset and platen press makeup and operation.

**Radio-Television Engineering Technology***

Instructing in setting up, operating, and maintaining all electronic and electrical equipment required in the radio or television broadcasting facility.

**Surveying Technology**

Training one to work as a surveyor for land development or building construction firms.

*For statewide enrollees
APPENDIX C—Continued

Telecommunications Technology*

Training one to service, trouble-shoot, install, and test microwave transmitters, receivers, antennas, power supplies, terminals, central office equipment and switch-gear in the telecommunications industry; training includes work in electronics, from DC to microwaves, and in switch-gear, traffic, networks, management, and economics as applied to the industry.

Welding Fabrication Technology*

Educating one to serve as an aide to the welding engineer in developing welding procedures or doing detail work in product design. Training is intermediate between the skilled craftsman and the engineer.

IV. Natural Science Programs

Preparing for providing farmers with financial credit, power, fuel, and transportation services, and other farm and supply services; arranging contract marketing and processing.

Agricultural Inspection/Regulation Technology*

Training one to serve as government food inspector.

Agricultural Power/Equipment Technology*

Educating one to specialize in selection, operation, and maintenance of agricultural power machinery and equipment.

Agricultural Research/Laboratory Technology*

Training to assist the professional in testing, analyzing, diagnosing, experimenting and investigating incident to biologically oriented endeavors in a laboratory.

Air Quality Control Technology

Educating one to be skilled in the operation of monitoring and testing equipment, and qualified to perform air quality inspections required by federal and state laws.

*For statewide enrollees
Child Care Management Technology

Training one to operate and manage care day centers or nursery schools.

Crop Management Technology

Training one to plan, plant, cultivate, care for, harvest and market crops such as grain, cotton, and fruits or vegetables for commercial purposes.

Dairy Cattle Production/Management Technology*

Training for breeding and raising dairy cattle for the production of milk and milk products and managing a dairy cattle business.

Farm Management Technology

Teaching one to apply managerial controls, personnel policies, procurement and marketing principles in farm management.

Feed Grains Technology*

Training in buying grain from farmers to convert into feed; supplying farmers with feed, seed fertilizers, fuel, and miscellaneous farm supplies.

Food Preparation Technology

Educating for managing a kitchen—as chef—in a restaurant, hotel, club, ocean liner, or institution; training includes planning, preparing and cooking meals, as well as using culinary skills in developing recipes; other skills relate to supervising cooks and bakers and to food supplies inventory control.

Food Processing Technology

Training one to buy, process, preserve, package, inspect, grade, store, and market food products such as dairy products, poultry, eggs, meats, fish, vegetables, fruits, cereals, and grains.

*For statewide enrollees
APPENDIX C—Continued

Forest Management Technology*

Training for protecting, managing, harvesting, and replanting forests to provide both forest products and recreational resources; for conserving and managing related plants and wildlife.

Horse Production/Management Technology*

Teaching one to breed and raise horses or mules for racing, riding, working, or other purposes; to show and market them. Producer-manager works at tracks, stables, ranches, farms, and training schools.

Laboratory Animals Technology*

Educating one to breed, raise, and handle biological research animals; to assist in the care and treatment of pets and other animals in animal hospitals and care centers.

Landscaping/Gardening/Turf Technology

Training for assisting horticulturalist in planning and establishing basic plantings and conveniences appropriate to gardens, parkways, parks, golf course greens, homes and commercial and industrial installations.

Land Stabilization and Reclamation Technology*

Teaching one to plan and supervise the stabilization of soil and the reclamation of land, for employment by surface mining companies, construction companies, engineering firms, and federal and state agencies.

Meat Animals Technology*

Educating one to raise beef, sheep, and swine and manage livestock production and enterprises.

Municipal Waste Disposal Technology*

Training for supervising operation of a waste disposal plant, including: assigning personnel; inspecting operations; supervising minor maintenance; and supervising repair of valves and pumps.

*For statewide enrollees
Nursery/Greenhouse Operation/Management Technology

Preparing one to produce and market ornamental nursery plants and greenhouse flowers and related crops for commercial purposes; to manage nursery, greenhouse, garden center, or flower shops.

Parks/Recreation/Wildlife Technology*

Training one to serve as park manager or ranger, wildlife area manager, game protector or production foreman, or assistant naturalist, for employment by state department of natural resources, metropolitan park systems, and by other governmental agencies.

Plant Health/Protection Technology

Educating a person who will, through the application of specialized techniques and procedures, attempt to avert the consequences of insects, diseases, nematodes, weeds, and other pests upon normal plant growth and development. Employment may be in agricultural chemical firms or in state and federal agencies.

Soil Fertility/Plant Nutrition Technology*

Training to apply technical methods and provide specialized services, on the basis of soil and plant analyses, to meet the nutritional needs of growing plants as an employee of a state/federal agency, commercial fertilizer firm, or other soil amendment industrial enterprise.

Teacher Assisting Technology

Training one to assist the classroom teacher and/or counselor in carrying out their functions; as a para-professional, the teacher assistant serves in elementary and secondary schools, both public and private.

Veterinarian Assisting Technology*

Educating one to assist the veterinarian in the care of large and small animals.

*For statewide enrollees
APPENDIX C—Continued

Water Quality Control Technology

Training for skill in the operation of monitoring and testing equipment and for qualifying to perform water quality inspections required by federal and state laws.

Wood Utilization Technology*

Educating one for the development and production of products derived from wood, such as lumber, pulp, and paper, specialized building materials, tar and medicinal products.

V. Public Service Programs

Air Traffic Control Technology*

Training one to guide aircraft safely through the air-space system; the technician gives pilots information on weather, altitude, speed, traffic, and takeoff and landing instructions.

Audio-Visual Technology

Teaching how to recommend and propose audio and visual presentations to support educational and information services and repair and maintain audio-visual equipment.

Correctional (Community) Technology

Training one to work with individuals paroled or on probation in helping them through the rehabilitation process, through community-based programs.

Correctional (Institutional) Technology

Training to work with inmates assigned to correctional institutions; to function much as a correctional counselor.

Early Childhood Education Technology

Educating one to serve as a teacher in pre-kindergarten school program of activities.

*For statewide enrollees
Fire Science Technology

Preparing to fight fires and rescue people, conduct fire inspections, teach fire prevention practices, and possibly help establish fire insurance rates or sell fire prevention devices.

Law Enforcement Technology

Teaching to work on a federal, state, or local level, with responsibility for protecting life and property, enforcing traffic and highway laws, recovering stolen property, and apprehending law violators.

Library Technology

Training one to assist head librarian; to be in charge of circulation, including reserve material, photocopy and interlibrary loans; to make simple bibliographic search and answer basic reference questions; to work in acquisitions section, invoicing books, periodicals, and serials; to do pre-cataloging and to be responsible for binding.

Recreational Services Technology

Preparing to plan and carry out recreational programs for public, business, industrial, religious, or youth organizations.

Regional Planning Technology

Preparing to do research and draw community plans; to assist professional planners in attempting to encourage urban growth patterns to provide maximum comfort, safety, and convenience.

Social Services Technology

Training one to work for a city, county, or privately-funded agency doing social casework and group work, and how to advise community action groups in obtaining legal rights.

*For statewide enrollees
APPENDIX D

STANDARDS FOR THE APPROVAL OF
ASSOCIATE DEGREE PROGRAMS

1972

I. Introduction

The decade of the sixties witnessed a growth of Associate degree programs under the state system of public higher education in Ohio. During this period of time the Ohio Board of Regents has approved numerous programs offered in a variety of two-year institutions using standards which were adopted in 1966.

The purpose in adopting new standards at this time is:

A. To maintain the quality of Associate degree programs, particularly in the field of technical education.

B. To encourage the admission of students who are adequately prepared, or who may become prepared, to benefit from these education programs.

C. To supply the state's and community manpower needs with individuals who have graduated from Associate degree programs.

D. To avoid needless duplications of instructional facilities and programs in various sections of the state.

E. To insure instructional programs of quality with the finances available.

II. Definitions

The definitions developed by the Ohio Board of Regents to implement its legal charge are the following:
APPENDIX D—Continued

A. "New Degree" means any new appropriate recognition or award for completion of a prescribed program of study in a state-assisted institution of higher education designated by the customary forms of Associate, Bachelor, Master, Specialists or Doctor titles.

B. A "New Degree Program" means any prescribed program of study in a state-assisted institution of higher education which constitutes an area of concentration or specialization, leading to a designated degree.

III. Institutional Requirements

A two-year college should provide a reasonable choice of curricula to prospective students and enroll a student body of sufficient size to indicate public acceptance of the college as a viable institution of higher education.

A. Within three years after its creation a two-year college should offer a minimum of five distinctive Associate degree programs with a distribution among no fewer than four of the following: Industrial and Engineering Technology, Natural Science Technology, Business Technology, Health Technology, Public Service Technology.

B. The two-year college should attain an enrollment of 500-full-time equivalent students within three years after becoming a degree-granting institution.

C. The institution should possess physical facilities including classrooms, laboratories, offices, and equipment adequate to the instructional programs offered.

D. State universities operating multi-campus branches and community college with more than one campus should apply for approval of degree programs based upon the needs of the particular area served. Approval will be issued for degree programs on the basis of individual campuses.
E. Experience clearly indicates that advisory committees are beneficial in keeping the educational program relevant to the needs of communities. It is necessary for each two-year campus to maintain local advisory committees.

IV. Procedure for Consideration

1. Any state-assisted college or university desiring to introduce a new degree or new degree program, should obtain preliminary staff approval. Such approval ought to be obtained at least 6 months prior to formal application. (Hopefully before November 1, of each year). Preliminary staff approval may be obtained by the president or director of the institution by presenting such request to the Vice Chancellor of two-year campuses of the Ohio Board of Regents.

The request may be in the form of a letter. The request should indicate the reasons for considering such a new degree program, the number of students expected to enroll, the availability of similar programs offered by other institutions (private or public) within a 30 mile radius of the requesting institution, and preliminary cost estimates. The Board of Regents will consider the manpower needs on a statewide basis. It is conceivable that several programs of one type may be needed in one section of the state while in another type of program only one may be needed for the entire state.

2. Formal proposals for new degree programs should be presented to the Ohio Board of Regents for approval or disapproval after all required internal clearances or approvals have been provided, including approval by the Board of Trustees or Board of Directors of the institutions.

3. The proposals for a new degree or new degree program should be presented to the Vice Chancellor for two-year campuses, of the Ohio Board of Regents in ten copies at least 2 weeks before final approval is requested.

4. The proposal will be reviewed by the staff of the Board of Regents. If it is deemed desirable to do so, the Vice Chancellor may refer the request to an advisory committee for evaluation in terms of need and in terms of standards.
APPENDIX D—Continued

of desired performance. Or the proposal may be referred by the Vice Chancellor to a consultant for evaluation in terms of need and in terms of standards of desired performance.

5. The Vice Chancellor will present a recommendation to the Chancellor of the Board of Regents for approval or disapproval of each proposed new degree or each new degree program received by the Board. The interested institution shall be given an opportunity to present a statement of position on the matter at the same time.

6. The Ohio Board of Regents will consider the approval or disapproval of each new degree request or each new degree program request at an official and regularly scheduled meeting of the Board.

V. Information Needed

Each proposal for a new degree or new degree program should provide the following information:

A. Designation of the new degree program with a brief description of its purpose.

B. A summary and classification of each course comprising the curriculum in accordance with the standards set forth below.

C. A catalog description of each new course required for the degree program.

D. Administrative arrangement for the program: department and school or college involved.

E. Evidence of need for the new degree program including employment opportunities for graduates and how these opportunities were established.

F. Prospective full-time enrollment, including the procedure for how this was established.

G. Facilities and equipment available for the program and their adequacy.
APPENDIX D—Continued

H. The number of new faculty members needed meeting the Board of Regents standards.

I. Projected financial needs to support program and adequacy of expected subsidy and other income to meet these needs.

J. Information about use of consultants and advisory committees in development of degree proposal or degree program proposal, with copies of reports from such consultants or advisory committees.

K. The total F.T.E. enrollment on the campus for which the new degree program is proposed.

L. A listing of associate degree programs currently offered.


N. Student Service programs available.
   1. The extent to which developmental education is available.
   2. Evidence of a satisfactory student testing guidance and counseling program.
   3. Evidence of an adequate student placement service.
   4. Evidence that student financial aids are available.

VI. Faculty Standards

Full-time faculty members and administrative personnel should be provided in numbers which will assure:

1. Familiarity and identification with the goals of the field of concentration,

2. Continuity of program,

3. Continuing interchange of ideas and experiences within the faculty,
4. Adequate attention to individual students in the program.

5. A minimum of 60 percent of the curriculum should be taught by faculty members who devote full-time to the teaching and the administrative responsibility of the college.

A. Persons holding top leadership responsibility at the department level should hold the Master's degree or a baccalaureate degree with other advanced preparation and experience in an appropriate field of concentration.

B. Faculty members whose assignments are primarily in the technical areas should evidence competency based on these criteria:

1. Formal education appropriate to the specialization, usually including the Bachelor's or Master's degrees, or their equivalence, demonstrated by expertise, licensure, or certification, and

2. Practical experience other than teaching in the appropriate specialization, as demonstrated by full-time employment (approximately 5 years,) in the career area or a related field, and

3. Evidence of involvement with the field of concentration through activity in professional associations; consultative practice; participation in seminars, workshops, and formal course work; and individual reading and research.

C. Members whose assignment is primarily in the teaching of general studies curriculum should generally possess a Master's degree in the subject matter discipline.

VII. Students

Students accepted for admission to Associate degree programs should be high school graduates or demonstrate appropriate evidence of high school graduation equivalency.
APPENDIX D—Continued

VIII. Student Services:

Institutions granting Associate degrees should have an adequate student service program including the following:

A. Developmental education should be available for all entering students whose high school preparation is less than adequate for the program.

B. Student testing programs, guidance, counseling, and program advising should be provided.

C. Adequate placement services should be provided to assist graduates in finding suitable employment or transfer to a baccalaureate program.

D. Student financial aid should be provided to assist students of limited resources to pursue appropriate two-year curricula.

IX. Curriculum Standards

A. For approval Associate Degree programs must contain a minimum of 90 QUARTER CREDITS OF enrollment and should not exceed a maximum of 110 QUARTER CREDITS, exclusive of physical education.

B. Academic Quarter — The Academic Quarter should be of 11 weeks duration with not less than 10 full weeks devoted to the instructional program. Institutions desiring to deviate from this standard, because of unique educational programs, may be granted special permission provided the institution agrees to lengthen the normal class hours to compensate for fewer weeks of instruction.

C. Academic Credit — for successful completion of courses should be expressed in conventional QUARTER CREDIT OF enrollment. One unit of credit generally should be awarded upon the basis of one clock hour of study per week, in classroom, laboratory, or clinical experience. Internship in cooperative education will vary from this guideline.
APPENDIX D—Continued

D. Curriculum Components for Technologies

Technical education is concerned with design, development, testing, supervising, or mid-management functions. The technician does not replace the professional person or the skilled worker. The technician does, however, enable the professional person to work at his highest level of education and training by providing supportive services to the professional. The technician enables the skilled worker to function effectively and economically through coordinative and interpretive functions served by the technician between the skilled worker and the professional.

The technician in industry, and business holds a key position between the professional and the craftsman or vocationally trained worker.

The technician must be able to design, develop, and test with the use of instruments, gauges, applied science, mathematics, common sense, initiative, and diagnosis. The technician collects data, makes computations, performs laboratory tests, and develops reports.

The technician must be able to organize, program, supervise, and control the machines in plants, offices, and distributive centers.

Degree programs offered as technical education include two-year curricula falling in the categories of Industrial and Engineering Technology, Natural Science Technology, Business Technology, Health Technology, Public Service Technology. These programs should provide as a minimum:

1. **FORTY-FIVE QUARTER CREDITS** of TECHNICAL specialization in courses clearly identifiable with the technical skills, proficiency, and knowledge required for career competency. Most courses classified as technical should include laboratory experience.

2. **TWENTY-ONE QUARTER CREDITS** of basic related studies; these courses should be carefully selected to serve as a base to the technical field and should be closely related to the technical specialty.
APPENDIX D—Continued

3. TWENTY-ONE CREDITS of non-technical or general studies; these courses should include oral and written communications, humanities, and social studies. The non-technical and general studies requirement may be a standard institution requirement for all technical programs offered by the institution.

E. Transferability of Credits

The primary objective of an Associate degree technical education program is the preparation of students for immediate employment at the conclusion of two-years of study. In the development of two-year curricula, appropriate attention should be given to the requirements of four year technology curricula into which a graduate may desire to transfer and to the general requirements of baccalaureate programs. The desirability of providing for transfer of credits, however, should not hinder the development of a sound two-year program.

X. Library

Adequate library facilities and holdings appropriate to the subject matter taught should be available, and adequate financial support should be dedicated to the continued updating of library resources.

XI. Program Review

On a five years cycle each public two-year college offering two-year Associate degree programs in technical education should submit to the office of the Vice Chancellor of the Ohio Board of Regents a review document for each Associate degree program. The review document should include:

1. The current listing of courses
2. The qualifications of the faculty
3. Number of full time students enrolled by years (for the past 5 years)
4. The number of graduates by year (for the past 5 years)
APPENDIX D—Continued

5. The job placement record for these graduates
   a. the number transferring to 4 year programs
   b. the number going to work and the nature of the job
   c. the number going to military service
   d. the number not available for employment.
APPENDIX E

OHIO, REVISED CODE, CHAPTER 3357

(TECHNICAL COLLEGES)

3357.01 Definitions.

As used in sections 3357.01 to 3357.19, inclusive, of the Revised Code:

(A) "Technical college" means an institution of education beyond the high school, including an institution of higher education, organized for the principal purpose of providing for the residents of the technical college district, wherein such college is situated, any one or more of the instructional programs defined in this section as "technical-college," or "adult-education technical programs," normally not exceeding two years duration and not leading to a baccalaureate degree.

(B) "Technical college district" means a political subdivision of the state and a body corporate with all the powers of a corporation, comprised of the territory of a city school district or a county, or two or more contiguous school districts or counties, which meets the standards prescribed by the Ohio board of regents pursuant to section 3357.02 of the Revised Code, and which is organized for the purpose of establishing, owning, and operating one or more technical colleges within the territory of such district.

(C) "Contiguous school districts or counties" means school districts or counties so located that each such school district or county shares at least one boundary or a portion thereof in common with at least one other such school district or county in the group of school districts or counties referred to as being "contiguous."

(D) "Technical college program" means a post high school curricular program provided within a technical college, planned and intended to
APPENDIX E—Continued

qualify students, after satisfactory completion of such a program normally two years in duration, to pursue careers in which they provide immediate technical assistance to professional or managerial persons generally required to hold baccalaureate or higher academic degrees in technical or professional fields. The technical and professional fields referred to in this section include, but are not limited to, engineering and physical, medical, or other sciences.

(E) "Adult-education technical program" means the dissemination of post high school technical education service and knowledge, for the occupational, or general educational benefit of adult persons.

(F) "Charter amendment" means a change in the official plan of a technical college for the purpose of acquiring additional lands or structures, disposing of or transferring lands or structures, erecting structures, creating or abolishing technical college or adult education technical curricular programs.

3357.02 Creation of technical college districts; submission of proposals.

A technical college district may be created with the approval of the Ohio board of regents pursuant to standards established by it. Such standards shall take into consideration such factors as the population of the proposed district, the present and potential pupil enrollment, present and potential higher education facilities in the district, and such other factors as may pertain to the educational needs of the district. The Ohio board of regents may undertake a study or contract for a study to be made relative to its establishment or application of such standards.

A proposal to create a technical college district may be presented to the Ohio board of regents in any of the following ways:

A. The board of education of a city school district may by resolution approved by a majority of its members propose the creation of a technical college district consisting of the whole territory of such district.

B. The boards of education of two or more contiguous county, city, exempted village, or local school districts may by resolutions approved by a majority of the members of each participating board of education propose the creation of a technical college district consisting of the whole territories of all the participating school districts.
C. The board of education of any county may by resolution approved by a majority of its members propose the creation of a technical college district consisting of the whole territory of such county.

D. The boards of education of any two or more contiguous counties may by resolutions approved by a majority of the members of each participating board of education, propose the creation of a technical college district consisting of the whole territories of such counties.

E. Qualified electors residing in a city school district, in a county, in two or more contiguous school districts, or in two or more contiguous counties may execute a petition proposing the creation of a technical college district comprised of the territory of the city school district, county school district, two or more contiguous school districts, or two or more contiguous counties, respectively. Such petition shall be presented to the board of elections of the most populous county in which the technical college district is situated and shall bear the signatures of at least two percent of the total number of resident electors who voted in the last preceding election for governor in the territory of such proposed district. Such petition shall set forth the necessity for the district, a demonstration that it will be conducive to the public convenience and welfare, and a description of the territory to be included in the proposed district.

Upon receiving a petition duly executed pursuant to division (E) of this section, the board of elections of the most populous county shall certify the fact of such petition to the boards of elections of the other counties, if any, in which any of the territory of the proposed district is situated. The proposal to create a technical college district shall be placed on the ballot by the board of elections and submitted to vote in each affected city school district, county, or group of contiguous school districts or counties, at the next primary or general election occurring more than sixty days after the filing of such petition. If there is no primary or general election occurring within ninety days after the filing of such petition, the board of elections of the most populous county shall fix the date of a special election to be held in each affected city school district, county, or group of contiguous school districts or counties, such date to be not less than sixty days after the filing of the petition. If a majority of electors voting on the proposition in the proposed technical college district vote in
favor of, the board of elections of the most populous county
in which the proposed district is situated shall certify such
fact to the Ohio board of regents.

3357.03 Filing of certificate or resolution creating the district
with the secretary of state.

Within thirty days after approval by the Ohio board of regents of a
technical college district proposed pursuant to section 3357.02 of the
Revised Code, such board shall file with the secretary of state a copy
of its certification or resolution creating the district. Such copy
shall be filed and recorded in the office of the secretary of state
in the same manner as articles of incorporation are required to be
filed and recorded under the general law concerning corporations.

3357.04 Responsibilities of district; place of business.

A technical college district organized pursuant to section 3357.02 of
the Revised Code shall be a political subdivision of the state and a
body corporate with all the powers of a corporation, and shall have
perpetual existence, with power to sue and be sued, to incur debts,
liabilities, and obligations, to exercise the right of eminent domain
and of taxation and assessment, to issue bonds, and to do all acts
necessary and proper for the carrying out of the purposes for which
the district was created and for executing the powers with which it
is invested.

A technical college district established pursuant to section 3357.02
of the Revised Code, shall have as its temporary office or principal
place of business the office of the board of education of the most
populous school district in such technical college district until a
permanent place of business is established pursuant to section 3357.06
of the Revised Code.

3357.05 Appointment of trustees; term.

Within ninety days after a technical college district is created pur-
suant to section 3357.02 of the Revised Code, trustees shall be ap-
pointed to serve as a board of trustees of the technical college dis-
trict. Appointees shall be qualified electors residing in the tech-
nical college district and shall not be employees of any governmental
agency. The term of office shall be three years with the exception of
initial appointments as provided in this section. Trustees shall be
appointed in the manner provided by this section.
APPENDIX E—Continued

A. If a technical college district embraces the territory of one or more school districts and more than half of the territory of each such district is in the same county, seven trustees shall be appointed. Two trustees shall be appointed by the governor with the advice and consent of the senate. Of the initial appointments, one shall be for a two year term and one for a three year term. Five trustees shall be appointed by the county, city, and exempted village boards of education of school districts whose territories are embraced in the technical college district. Prior to the appointment of the trustees, the president of the board of education of the city school district having the largest pupil enrollment shall call a caucus of the members of the aforementioned boards of education at a time and place designated by such president. At such caucus the board members shall select, by majority vote of the attending members, the five trustees. Of the initial appointments, two shall be for one year terms, two shall be for two year terms, and one shall be for a three year term. If there is a vacancy, such vacancy shall be filled by the authority making the original appointment for the balance of the unexpired term.

B. If a technical college district embraces territory other than described in division (A) of this section, nine trustees shall be appointed. Three trustees shall be appointed by the governor with the advice and consent of the senate. Of the initial appointments, one shall be for a one year term, one for a two year term, and one for a three year term. Six trustees shall be appointed by the county, city, and exempted village boards of education of school districts whose territories are embraced in the technical college district. Prior to the appointment of the trustees, the president of the board of education of the city school district having the largest pupil enrollment shall call a caucus of the members of the foregoing boards of education at a time and place designated by such president. At such caucus the board members shall select by majority vote of the attending members, the six trustees. Of the initial appointments, two shall be for one year terms, two shall be for two year terms, and two shall be for three year terms. If there is a vacancy, such vacancy shall be filled by the authority making the original appointment for the balance of the unexpired term.
APPENDIX E—Continued

3357.06 Powers and duties of boards of trustees.

Each member of the board of trustees of a technical college district, before entering upon his official duties, shall take and subscribe to an oath that he will honestly, faithfully, and impartially perform the duties of his office. The board shall meet upon call by the trustee first appointed by the governor. The trustee who calls the meetings shall serve as temporary chairman. Members of the board shall proceed immediately to elect from among them a chairman of the board and such other officers as they deem necessary. The board shall elect a secretary of the technical college district, to serve at its pleasure. The board shall adopt a seal, and shall keep records of all its proceedings, which records shall be open for public inspection. A majority of the board shall constitute a quorum, and the board may act on any matter by majority vote of its whole membership. The board may designate in its rules and regulations matters of an administrative nature which may be acted upon by a vote of a majority of those present when a quorum is in session. The trustees shall serve without compensation, but may be paid for their necessary expenses when engaged in the business of the board.

The board of trustees of a technical college district may adopt rules and regulations governing its own proceedings, and shall designate the permanent principal place of business of the district.

3357.07 Technical institute plan; consultants; filing with board of regents.

The board of trustees of a technical college district shall prepare an official plan for a technical college within the district. Such official plan shall include, but not be limited to, a demonstration of need and prospective enrollment, a description and location of lands, buildings, facilities, and improvements proposed to be occupied by such college; a proposed schedule for acquisition of such lands or improvements, for construction or improvements, and for operation of the college; estimates of cost of lands and improvements; proposed organization and program of such college, consistent with the proposed lands and improvements; and a proposed budget for the first two years of operation of such college.

In preparing such official plan, the board of trustees of a technical college district may retain consultants in the fields of education, architecture, law, engineering, or other fields of professional skill which may be needed in the preparation of plans for a technical college.
APPENDIX E—Continued

Upon completion of the official plan, the board of trustees of the technical college district shall file a copy thereof with the Ohio board of regents which may approve or disapprove any provisions thereof and with the board or boards of education of school districts whose territories are included in the technical college district. If the Ohio board of regents disapproves the official plan or any provisions thereof, the board of trustees of the technical college district may prepare a new plan or may present amended provisions of the plan. If the Ohio board of regents approves the official plan, it shall certify a copy of its action to the board of trustees of the technical college district and issue a charter creating the technical college to be known by the name set forth in the official plan. The official plan shall be appended to and shall become a part of such charter, and such charter shall not thereafter be changed except by charter amendment with the approval of the Ohio board of regents. A proposal for a charter amendment shall be filed with the Ohio board of regents and with local boards of education as provided in this section for an official plan.

3357.08 Financing of plans.

For the purpose of preparing the official plan for a technical college, pursuant to section 3357.07 of the Revised Code, the board of trustees of a technical college district may receive and expend gifts, grants, bequests, or devises, or public funds appropriated for such purpose pursuant to law.

3357.09 Power of board of trustees to own and operate a technical college.

The board of trustees of a technical college district may with the approval of the Ohio board of regents:

A. Own and operate a technical college, pursuant to an official plan prepared and approved in accordance with section 3357.07 of the Revised Code;

B. Hold, encumber, control, acquire by donation, purchase, or condemnation, construct, own, lease, use, and sell, real and personal property as necessary for the conduct of the program of the technical college on whatever terms and for whatever consideration may be appropriate for the purposes of the institution.
APPENDIX E—Continued

C. Accept gifts, grants, bequests, and devises absolutely or in trust for support of the technical college;

D. Appoint the president, faculty, and such other employees as necessary and proper for such technical college, and fix their compensation;

E. Provide for a technical college necessary lands, buildings or other structures, equipment, means, and appliances;

F. Develop and adopt, pursuant to the official plan, any one or more of the curricular programs identified in section 3357.01 of the Revised Code as technical-college programs, or adult-education technical programs;

G. Establish schedules of fees and tuition for: students who are residents of the district; students who are residents of Ohio but not of the district; students who are nonresidents of Ohio. The establishment of fees and tuition schedules and regulations governing the determination of residence shall be subject to approval of the Ohio board of regents. Students who are nonresidents of Ohio shall be required to pay higher rates of fees and tuition than the rates required of students who are residents of Ohio but not of the district, and students who are residents of the district shall pay smaller tuition and fee rates than the rates for either of the above categories of nonresident students;

H. Authorize, approve, ratify, or confirm, with approval of the Ohio board of regents, any agreement with the United States government, acting through any agency designated to aid in the financing of technical college projects, or with any person, organizational agency offering grants-in-aid for technical college facilities or operation;

I. Receive assistance for the cost of equipment and for the operation of such technical colleges from moneys appropriated for technical education or for matching of Title VIII of the "National Defense Education Act," 72 Stat. 1597 (1958), 20 U.S.C. 15a-15e. Moneys shall be distributed by the Ohio board of regents in accordance with rules and regulations which the board shall establish governing its allocations to technical colleges chartered under section 3357.07 of the Revised Code.
APPENDIX E—Continued

J. Grant appropriate associate degrees to students successfully completing the technical college programs and certificates of achievement to those students who complete other programs;

K. Prescribe rules and regulations for the effective operation of a technical college, and exercise such other powers as are necessary for the efficient management of such college;

L. Enter into contracts and conduct technical college programs or technical courses outside the technical college district.

3357.10 County treasurer to be custodian of district funds.

The board of trustees of a technical college district shall elect a treasurer, who is not a member of the board, to serve at its pleasure. The treasurer may be the person serving as secretary under section 3357.06 of the Revised Code. The treasurer shall be the fiscal officer of the district and shall receive and disburse all funds of the district under the direction of the board. No contract of said board of trustees involving the expenditure of money shall become effective until the treasurer certifies that there are funds of said board of trustees otherwise unappropriated sufficient to provide therefor. The accounts of the board of trustees shall be kept in the manner prescribed by the bureau of inspection and supervision of public offices. The bureau may examine the accounts of the technical college district and technical college pursuant to sections 117.01 to 117.19, inclusive, of the Revised Code.

When the treasurer of the district ceases to hold such office, he or his legal representatives, shall deliver to the board of trustees or to his successor, all moneys, books, papers, and other property of the district in his possession as treasurer. In case of the death or incapacity of the treasurer, his legal representatives shall, in like manner, deliver all moneys, books, papers, and other property of the district to the board of trustees or to the person named as his successor.

Any board of trustees of a technical college district may select a depository for the funds of a district, in the manner provided in sections 135.01 to 135.21, inclusive, of the Revised Code, upon the adoption of a resolution declaring such intent.
3357.12 College ownership vested in board of trustees.

The ownership of a technical college, created and established pursuant to section 3357.07 of the Revised Code, including all right, title, and interest in and to all property, both real and personal, pertaining thereto, shall be vested in the board of trustees of the technical college district in which such college is situated. The board may acquire by appropriation any land, rights, rights-of-way, franchises, easements, or other property necessary or proper for the construction or the efficient operation of any facility of the technical college district, pursuant to the procedure provided in section 5537.06 of the Revised Code, with respect to the Ohio turnpike commission, and insofar as such procedure is applicable.

3357.13 District bonds are suitable investments.

Technical college district bonds, issued pursuant to section 3357.11 of the Revised Code, shall be lawful investments of banks, savings banks, trust companies, trustees, boards of trustees of sinking funds of municipal corporations, school districts, counties, the industrial commission, the state teachers retirement system, the public employees retirement system, and shall also be acceptable as security for the deposit of public moneys.

3357.14 Tax exemption.

The exercise of powers granted by sections 3357.01 to 3357.19, inclusive, of the Revised Code, shall be in all respects for the benefit of the people and for the increase of their knowledge, prosperity, morals, and welfare. A technical college district shall not be required to pay any taxes or assessments upon any real or personal property acquired, owned, or used by it pursuant to sections 3357.01 to 3357.19, inclusive, of the Revised Code, or upon the income therefrom, and the bonds issued pursuant to such sections and the transfer of the income therefrom, including any profit made on the sale thereof, shall at all times be free from taxation within the state.

3357.15 State financial aid.

Financial aid to a technical college from the state, to be used for the payment of operating costs of such college, shall be paid to the board of trustees of the technical college district in which such college is situated, only upon certification by the Ohio board of regents that such college is in condition to receive students and is operable and upon approval of its official plan and the issuance of a
APPENDIX E—Continued

charter to such college as provided in section 3357.07 of the Revised Code. Financial aid for equipment may be paid to the board of trustees after approval of its official plan and issuance of a charter to such college.

3357.17 Intergovernmental relations.

The board of trustees of a technical college district, and its agents, shall cooperate with boards of county commissioners of the county or counties comprising the district, with boards of education in the district, and with other public agencies representing the people of the district, in providing for educational, social, civic, and recreational activities, in buildings and upon grounds under control of the board of trustees, provided that such cooperation shall not interfere with the principal purpose of such district which is to provide technical educational service beyond the high school for the people of such district. The board of trustees shall prescribe such rules and regulations for occupancy of buildings and grounds as will secure fair, reasonable, and impartial use.

3357.18 Approval of plans by board of regents.

The Ohio board of regents shall approve or disapprove proposed official plans of technical college districts, prepared and submitted pursuant to sections 3357.01 to 3357.19, inclusive, of the Revised Code, and issue or decline to issue charters for operation of technical colleges, pursuant to section 3357.07 of the Revised Code.

The board shall approve an official plan, and issue a charter, only upon the following findings:

A. That the official plan and all past and proposed actions of the technical college district are in conformity to law;

B. That the proposed technical college will not unreasonably and wastefully duplicate existing educational services available to students and prospective students residing in the technical college district;

C. That there is reasonable prospect of adequate current operating revenue for the proposed technical college from its proposed opening date of operation;

D. That the proposed lands and facilities of the technical college will be adequate and efficient for the purposes of the proposed technical college;
E. That the particular proposed curricular programs, being one or more of the programs defined in section 3357.01 of the Revised Code, as "technical-college," and "adult-education technical programs," are the programs for which there is substantial need in the territory of the district.

The employment and separation of individual personnel in a technical college and the establishment or abolition of individual courses of instruction shall not be subject to the specific and individual approval or disapproval of the Ohio board of regents, but shall occur in the discretion of the local management of such college within the limitations of law, the official plan, and the charter of such college.

The Ohio board of regents may make such study as it deems advisable or contract for such study to be made relative to the application of divisions (A) to (E), inclusive, of this section in its approval or disapproval of official plans of the technical college districts or the issuance of charters for the operation of technical colleges.

3357.19 Duties of board of regents.

The Ohio Board of regents shall:

A. Organize an advisory committee for each of the major areas of the technical college program such as engineering, health, and agriculture. Each committee shall have a minimum of nine members who are identified with the technical field involved. At least three of the nine members shall be selected from the faculties of accredited institutions of higher learning. The advisory committee shall advise and counsel the Ohio board of regents concerning the organization and operation of the technical colleges.

B. Promulgate rules, regulations, and standards in conformity with Chapter 119 of the Revised Code relative to the qualifications of teaching personnel in technical colleges, and require conformity to all such rules, regulations, and standards as a condition upon the issuance of a charter to any technical college and upon the continued operation of such colleges;

C. Promulgate rules, regulations, and standards relative to the quality and content of instructional courses in technical colleges, and relative to the awarding of certificates of achievement or associate degrees to students in such colleges, and require conformity to all such rules, regulations, and standards as a condition upon the issuance of a charter to
APPENDIX E—Continued

any technical college and upon the continued operation of such college;

D. Conduct studies and examinations of the operation and facil­

ities of technical colleges, and require reports from such colleges, from time to time as the board deems necessary, and revoke or suspend pursuant to Chapter 119 of the Revised Code, the charter of any technical college found to be in substan­
tial violation of law, of rules, regulations, or standards of the board, or of the approved official plan of such college;

E. Employ such professional, administrative, clerical, or sec­

retarial personnel as may be found necessary to assist the board in the performance of its duties;

F. Perform biennial examinations of the budget requirements of the technical colleges in the state, and present recommend­

ations to the governor with respect to such budget require­

ments;

G. Perform research studies relative to technical college educa­

tion.
APPENDIX F

OHIO, REVISED CODE, CHAPTER 3358

GENERAL AND TECHNICAL COLLEGES

3358.01 Definitions

(A) "General and Technical College" means an institution of higher education established as provided in such sections, organized for the principal purpose of offering programs of education beyond the high school normally not exceeding two years duration and leading to the award of an associate degree, such programs shall include programs in the arts and sciences and in technical education, as well as adult continuing education in these fields.

(B) "Arts and Sciences Program" means a general curriculum of two years or less duration provided within a general and technical college, planned and intended to enable students to gain academic credit for courses comparable to the general education or general studies courses offered in the first two years of accredited four-year colleges and universities in the state, and designed to enable students to transfer to such colleges and universities for the purpose of earning a bachelor's degree or to complete a general studies curriculum after two years with the appropriate recognition of academic achievement through receipt of the associate in arts degree.

(C) "Technical Education Program" means a post high school program usually of two years duration planned and intended to prepare students to pursue careers in which they provide immediate technical assistance to professional or managerial persons generally required to hold the baccalaureate or higher academic degrees in professional fields. Technical education programs would include, but are not limited to business technologies, engineering technologies, educational technologies and public service technologies.

(D) "Adult Continuing Education Program" means the offering of short courses, seminars, workshops, exhibits, performances, and other higher educational activities for the general educational or occupational benefit of adult persons.
3358.02 Creation

(A) A State general and technical college may be created with the approval of the Ohio Board of Regents upon the proposal of the board of trustees of a technical institute district, or upon the proposal of the board of trustees of a state university, and pursuant to an agreement entered into under Section 3358.05 of the Revised Code, except for colleges created under division (B) of this Section, a State general and technical college may only be created to take the place of a technical institute or of a university branch, but may not take the place of both a technical institute and a university branch in the same community without the consent of both boards of trustees.

(B) (1) Qualified electors residing in a county or in two or more contiguous counties may, in the manner prescribed in division (C) of section 3354.02 of the Revised Code, execute a petition proposing the creation of a State general and technical college within the territory of a county or two or more contiguous counties in which there is located no university branch or technical institute. Upon the certification to the Board of Regents that a majority of the electors voting on the proposition in the territory in which the proposed college is to be located voted in favor thereof, the Board may create a college within the territory included in the petition.

(2) The Board of County Commissioners of a county in which there is no university branch or technical institute and which has a population of not less than seventy-five thousand may, by resolution approved by two-thirds of its members, propose the creation of a State general and technical college within the county. Upon certification to the Board of Regents of a copy of such resolution, the Board may create a college within the county.

(3) The Boards of County Commissioners of any two or more contiguous counties in which there are no university branches or technical institutes and which have a combined population of not less than seventy-five thousand may, by a resolution approved by two-thirds of the members of each such board, jointly propose the creation of a technical college within the territory of such counties. Upon certification to the Board of Regents of a copy of such resolution, the Board may create a college within the county.

(C) A State general and technical college is a body politic and corporate located in a particular place or places offering an arts and sciences program, a technical education program, and an adult continuing education program. A State general and technical college shall receive a charter from the Ohio Board of Regents. The Board of
APPENDIX F—Continued

Regents shall not require the passage of an operating levy as a condition for the Board's approval of the establishment of a State general and technical college.

3358.03 Board of Trustees

The government of a State general and technical college is vested in a board of nine trustees who shall be appointed by the Governor, with the advice and consent of the Senate. Trustees shall be appointed for six-year terms, the terms of three trustees expiring every second year, except that initial appointments shall be made three for two years, three for four years, and three for six years. Where a State general and technical college succeeds to the operations of a technical institute, the initial board of trustees of the college shall be comprised of the members of the board of trustees of the technical institute district, to serve for the balance of their existing terms, and such additional number appointed by the Governor, with the advice and consent of the Senate, as will total nine members; and the terms of such members appointed by the Governor originally and to all succeeding terms shall be such that, in combination with the original remaining terms of the members from the technical institute district, the eventual result will be that three terms will expire every second year. The trustees shall receive no compensation for their services, but may be paid for their reasonably necessary expenses while engaged in the discharge of their official duties. A majority of the board constitutes a quorum.

3358.04 Officers of the Board of Trustees

The board of trustees of a State general and technical college shall annually elect from their members a chairman and a vice-chairman, and they may also appoint a secretary who need not be a member of the board. The board of trustees shall employ a president, appoint or approve the appointment of other necessary administrative officers, faculty members and operating staff, although approval of the appointment of operating staff may be delegated to the president. The board shall fix the rate of compensation of the President, principal administrative officers, and faculty. The board shall do all things necessary for the creation, proper maintenance, and successful and continuous operation of a state general and technical college, and may adopt and at any time amend bylaws, rules, and regulations for the conduct of the board and the government and conduct of the college.
APPENDIX F—Continued

3358.05 Transition

Upon proposal by the board of trustees of a technical institute district, the board of trustees of a State university, or both, and upon approval of the establishment of a State general and technical college by the Ohio Board of Regents, an agreement between the board of trustees of the proposing technical institute district, State university, or both, and the Ohio Board of Regents shall be entered into to effect the transition of the technical institute or university branch, or both, to a State general and technical college, including provision therein for the transfer of assets and contracts, assumption or discharging of liabilities and obligations, the date as of which such transition shall be effected and such other matters as are necessary or appropriate to such purpose. Nothing in the agreement may, or shall be construed to, affect the rights of holders or owners of bonds or notes issued pursuant to section 3357.11 of the Revised Code until such bonds or notes are returned or provisions therefor made. Such agreement shall be entered into by the Ohio Board of Regents on behalf of such State general and technical college and is binding upon such college and its board of trustees. The board of trustees of a technical institute district shall not approve an agreement for the transfer of assets of a technical institute district, unless it finds and determines that such agreement adequately provides for the achievement of the purposes for which the district was created and will be beneficial to the people of the district.

3358.06 Powers of the board

The board of trustees of a State general and technical college may receive, and hold in trust for the use and benefit of the college, any grant or devise of land and any donation or bequest of money or other personal property, to be applied to the general or special use of the college as directed by the donation or bequest. The board of trustees of a State general and technical college may enter into all contracts and agreements necessary to the acquisition of property for, and the operation of, such college.

3358.07 Financial support

The General Assembly shall support a State general and technical college by such sums of money and in such manner as it may provide, but support may also be obtained from other sources.
3358.08 Applicability

In addition to the express applicability of Chapter 3345 of the Revised Code to State general and technical colleges by reason of being State colleges or colleges supported by or receiving support from the State, Sections 3345.01, 3345.021, 3345.03, 3345.04, 3345.05, 3345.07, 3345.09, 3345.11, 3345.12, 3345.14, 3345.16, 3345.17, and 3345.18 of the Revised Code are also applicable to State general and technical colleges and each State general and technical college and its board of trustees has the same authority thereunder as a State university and its board of trustees.
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