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From manual training to trade instruction: The evolution of industrial education in Cincinnati, 1886–1920

Lakes, Richard Davis, Ph.D.
The Ohio State University, 1988

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UMI
FROM MANUAL TRAINING TO TRADE INSTRUCTION: THE EVOLUTION OF
INDUSTRIAL EDUCATION IN CINCINNATI, 1886-1920

DISSERTATION

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

By

Richard Davis Lakes, B.S., M.Ed.

* * * * *

The Ohio State University
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Comprehensive Vocational Education
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FIELDS OF STUDY

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Trade & Industrial Education
History of American Education
Social Foundations of Education
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CHAPTER I
INTRODUCTION

Introduction

This study examines the evolution of manual training into trade instruction in one city, Cincinnati, between 1886 and 1920. The purpose of this case history is to reveal the extent to which local events prevailed and to what extent they seemed merely to reflect national trends as schools expanded their clientele and progressive educators tried to change aims and methods of education. In Cincinnati, it is possible to show both the influence of specific local interests and through school leaders the way in which national and even international progressive ideas came to one particular community.

Progressive era school reform can be more clearly understood by tracing over time the influence of one curricular innovation. By singling out industrial education, this thirty-four year study chronicles the permutations of school-based reform and provides an opportunity to evaluate educational trends, viewpoints, and practices. Furthermore, this study of the local industrial education movement offers a means of elucidating the extent to which school policy is shaped, controlled, and controverted by powerful individuals or groups.
Ideally, school reform is an *in vivo* exercise in democratic localism involving numerous constituencies. Yet school superintendents, city "bosses," municipal reformers, labor leaders, manufacturers, social workers, and educators each shaped schooling for their own ends, thereby, requiring of the others capitulation, compromise, or conflict. This study will examine the political rifts and cleavages of the local industrial education movement over time as it gained strength in the modernization of the city's school system.

Cincinnati's industrial education proponents, by and large, also shaped other aspects of the curriculum. The movement's advocacy of trade training, for example, furthered work certification and guidance and career counseling activities. This study will evaluate those "spin-off" curricular innovations that resulted from local industrial education programming as well.

With an apparent consensus over school-based reform in the solving of social problems, progressive reformers advocated a uniformity of beliefs or values that were colored by their similarity of religious, social class, racial, occupational and educational backgrounds. Those reformers who articulated a common concern for the urban poor and disadvantaged masses created a flurry of social welfare activities, many of which were established at the local level in public schools.¹

This study will examine the theory and practice of local industrial education reforms, and especially the reformers' assumptions about the schooling of culturally and racially
diverse populations in the city. Additionally, this study offers a means of understanding the social construction of gender. Normative sex role behaviors and attitudes were shaped by reform rhetoric and industrial education programs that catered to sex segregation and homosocial bonding in the classroom.

Finally, this study of Progressive era school reform provides an occasion to examine the relationships between the industrial education curriculum and other aspects of the cultural milieu of the city. In particular, local industrial educators relied heavily upon labor market demands, technological forecasting, advisory councils, and a stable industrial workforce. This study will examine those social and economic changes over time.

My account of the developing curriculum of industrial education in Cincinnati will be subdivided into three distinct chronological periods: the formative period, 1886-1900; the experimental period, 1901-1912; and the period of stabilization, 1913-1920. I use periodization, in this manner, to describe the vocationalizing "process" as it occurred gradually over time. Industrial education practices were a consequence of political, social, economic, and cultural conditions in the city. As a result, school-related practices assumed many shapes and forms before receiving wider acceptance as trade instruction in the public schools.

The first section of this chapter offers an up-to-date literature review of historical work on industrial education. Each author settles the debate (in his or her own work) over the vocational intentions of Progressive era educational reformers.
The second section examines the American antecedents of Progressive era industrial education, and adds a longitudinal perspective to the impact of vocationalism in public education. The third section presents an historical overview of Cincinnati from its founding as a military outpost in 1788 to 1920, when this study ends. A concluding section provides a series of research questions that help guide the study.

In Chapter II, I describe the competing interplay of public and private manual training practices and ideas in late nineteenth-century Cincinnati. In Chapter III, I describe the first decade of Cincinnati’s Progressive era reformers and public school vocational curriculums. The level of community acceptance of industrial education, specifically trade instruction is examined in Chapter IV. In Chapter V, the concluding chapter of this study, I summarize the contributions of Cincinnati’s thirty-four year industrial education movement to Progressive education reform in general. This chapter will also offer an interpretive essay on the social construction of gender, specifically masculinity within the manual training movement in late Victorian America. Finally, I offer recommendations for further historical research on industrial education.  

**Review of the Literature**

Several historians have tried to explain and identify the rise of publicly-funded industrial education in this country. In 1926, Charles A. Bennett wrote the first of a two-volume *History
of Manual and Industrial Education that provides a standard reference work in the field and in doing so established the basic chronology. Preoccupied with the details of formal institutions, however, his history ignores the struggles—successes and defeats—which shaped the modern curriculum. Bennett does highlight important contributors, institutions, and pedagogical practices, but he admits that "no conscious effort has been made to emphasize or even, in most cases, to indicate the relationship between the past and the present." Bennett's history of Western civilization chronicles the great men, places, and dates, but overlooks the essential political, social, and technological forces that have shaped the development of industrial education both in Europe and America. As for his assessment of Progressive era industrial education, Bennett claims no special benchmark for the start of publicly-funded occupational curriculums. Perhaps, by 1937, with the publication of the second of his two-volume industrial education history, Bennett was still too close to the Progressive era to pass judgment.

In History of Manual and Industrial School Education written in 1926, Lewis Anderson attributes the rise of vocationalism in public schools to compulsory education laws and "the continued progress of the Industrial Revolution." Yet, Anderson also recognizes the importance of human agency or voluntarism in establishing industrial education movements. The New York City Kindergarten Association, for instance, spawned the Industrial Education Association which created Teacher's College, now part of Columbia University. Anderson claims that school teachers,
too, mobilized support for industrial education, and teacher training institutions, in general, politicized many teachers to favor vocationalism.4

Melvin Barlow's *History of Industrial Education in the United States*, written in 1967, suggests that industrial educators, beginning in the late nineteenth century, placed great faith in the ability of schools to solve critical social problems. "Into the crucible," he writes, "went traditional educational ideas, social and economic needs, patterns of educational reform . . . to form the beginning of manual and trade education." Barlow suggests that voluntary interest groups—sharing similar assumptions about the benefits of reform—shaped a "new education." Fully trusting the judgement of industrial educators, he writes, "labor, management, industry, government, business, education, and the public at large joined in support of the purposes of the Society [National Society for the Promotion of Industrial Education]." "Industrial educators," Barlow continues, "always were dedicated to their educational task and seldom entertained any doubt concerning its importance in the general scheme of education."5

An important contemporary history of progressive education is Lawrence Cremin in *The Transformation of the School: Progressivism in American Education, 1876–1957*. Cremin places the rise of industrial education in a period of roughly forty years, from 1876 to 1917. He suggests that by 1910 a coalition of vocational education interest groups was in place, and ready to advance its political agenda in Congress. Cremin’s minor
analysis of industrial education, comprising no more than one-tenth of his book, is a study of prominent leaders and national interest groups.\footnote{6}

In the 1960s, monographic studies on industrial education, such as Berenice M. Fisher's \textit{Industrial Education: American Ideals and Institutions} and Arthur Wirth's \textit{Education in the Technological Society: The Vocational-Liberal Studies Controversy in the Early Twentieth Century} both explore the political movement for vocational education, culminating with federal funding in 1917. Fisher's book, an ambitious study of industrial education from the antebellum manual labor college movement to the beginning of World War I, offers a usable but loose conceptualization of the movement. She casts three categories or "images" of industrial education corresponding to three traditional periods in American history: in the Jacksonian era, industrial education in reformatories, colleges, and mechanics' institutes bolstered public attitudes toward industrialism and work discipline; in the Gilded age, industrial education for artisans, craftsmen, and engineers supported the literature of success and entrepreneurship; industrial education in the Progressive era corresponded to the human capital theory of labor resources for blue-collar occupations. Like Cremin, Fisher's Progressive era educators were consensus-builders seeking a "common ideological base" of trade instruction through the rhetoric of efficiency. Beginning in 1910, she suggests, vocational education drew support from many local communities but for different, sometimes contradictory purposes. "Overlaying the
variety of philanthropic and mobility-oriented schemes which had emerged during the nineteenth century," Fisher writes, "were the trade-training ideals which proponents of industrial efficiency, craftsmanship, business advancement and labor protection had helped to develop."7

Arthur Wirth's book draws out the competing ideologies of the vocational education movement. Wirth claims that vocationalists, in general, were strongly aligned with social efficiency philosophers, such as David Snedden. Wirth juxtaposes social efficiency advocates to humanists, who likewise, believed in educational reform but for different reasons. Wirth claims "Sneddenism" was the source of a conservative philosophy that buttressed an educational social sorting function. Wirth distinguishes between two strands of educational reform: liberal Progressivism—equated with democracy and social service—represented the Deweyan manual training wing of the movement; and conservative Progressivism represented industrial efficiency and social control—the Snedden-inspired trade training function. Like Fisher, Wirth suggests that Progressive era educators offered competing motives and conflicting values that were typical of the "dissonant state of the American psyche," and that reflected deeper "anxieties about where the turbulent forces of change might lead."8

A decade later a group of 1970s education historians—the so-called revisionists—inform by a study of power structure and political process also wrote about the rise of vocationalism in public education. Revisionists, in general, argue that trade
training is a curricular invention used by social elites to prepare students for their roles in the corporate order. In fashioning future members of an industrial work force, they argue, those children of lower-class backgrounds are singled out for blue-collar careers. Trade training, they claim, inculcates values of docility, discipline, and cooperation that are necessary for social harmony and compliance to authority on the shop floor. For example, Paul Violas in *The Training of the Urban Working Class: A History of Twentieth Century American Education* suggests that industrial education "psychically" adjusts students to the demands of modern industry.9

Revisionists look at curricular support services as well, such as vocational guidance and intelligence testing, which they claim are educational devices for the social sorting of students. Joel Spring in *Education and the Rise of the Corporate State* suggests that the basis of capitalism depends upon the perpetuation of social inequality. "Guidance into the corporate structure," Spring writes, "was one form of education designed to make the economic system run efficiently for the benefit of all." Schools served as a "feeder system to the industrial complex," Spring suggests, and students are molded and processed for their role in the corporate system.10

Intelligence testing was another source of social control, revisionists argue, because it places students into various curricular tracks closely aligned to their existing socio-economic backgrounds. Social stratification is continuous, they claim, because mental testing always culls the "hewers of
wood and drawers of water" from potential leaders, maintaining class differences and limiting mobility between classes in the process.11

How did the 1970s revisionists account for the popularization of industrial education in the early twentieth century? They suggest that Progressive era reformers, in general, sought educational solutions to massive social problems resulting from immigration, urban poverty, and industrialism. Marvin Lazerson and W. Norton Grubb in American Education and Vocationalism: A Documentary History, 1870-1970 argue that public educators embraced the rhetoric of vocationalism, which they call "a potent political force." Michael Katz, in Class, Bureaucracy, and the Schools: The Illusion of Educational Change in America, charges that, by and large, vocational educators were extremely successful in securing popular support for their agenda "regardless of the rhetoric of its sponsors." "Industrial education has proved to be an ingenious way of providing universal secondary schooling," Katz writes, "without disturbing the shape of the social structure and without permitting excessive amounts of social mobility."12

Revisionists historians claim that vocational educators, too, addressed popular concerns about international economic competition at the turn of the century. Many thought that the industrial supremacy of the U.S. was challenged in the world marketplace, especially from Germany. After 1900, manufacturer, educator, and politician alike turned to vocational educators for school-based job training. After 1917, the passage of the
federal Smith-Hughes Act, vocational educators were authorized to establish publicly-funded trade training programs in the schools. The Smith-Hughes Act, Joel Spring claims, "symbolizes the increasing tendency in the twentieth century to define a national interest in education that would be used to justify federal intervention."13

Few studies have touched upon industrial education in a limited regional or local setting. Marvin Lazerson’s Origins of the Urban School: Public Education in Massachusetts, 1870-1915 offers a path-breaking examination of pedagogical innovations at a state level. Lazerson provides a history of the rise of vocationalism in the state of Massachusetts from manual arts to trade instruction. Drawing and art, first introduced after the Civil War, marked the beginning of manual training in public education. Lazerson claims that art education was rarely a "source of controversy" because it remained compatible with the goals of educators who believed in a common general education for all students. The rise of vocationalism in Massachusetts public schools, however, was precipitated by manual training educators who offered a separate pedagogy for children of the working classes. Any earlier discussion of the place of drawing in public schools, Lazerson writes, was replaced by "larger questions about the relationship of manual training to social and industrial progress." In the late nineteenth century, manual training was accepted as a curricular innovation that served "defective" urban children of Massachusetts’ immigrants, Lazerson suggests, who needed socialization as well as industrial
discipline. By 1906, Massachusetts industrial educators, reacting to the inability of manual trainers to deliver skilled trades workers, launched a state-wide investigation (by a Governor's Commission) of public vocational education. Subsequently, the commission's recommendations cast trade training as the preferred form of industrial education, and, in Massachusetts, public education was linked with human capital development. As Lazerson suggests, by 1910, the job training function of schooling reached a "consensus on this new ideology of public education." Future political disputes were over the types of administrative structures—not the purposes of schooling—that would serve up this new education.14

Selwyn Troen's The Public and the Schools: Shaping the St. Louis System, 1838-1920 utilizes the William Torrey Harris-Calvin Woodward debates as a backdrop for the impending "vocationalist" controversy that overtook the nation in the early twentieth century. Woodward, leader of the city's manual training high school and proponent of industrial education, and Harris, city school superintendent and liberal arts advocate, aired their differences in two decades of debate at the annual meetings of the National Education Association (NEA) in the 1880s and 1890s. For Troen, the critical shift in vocationalism occurred through policy enactments in the NEA. Troen suggests that the NEA Committee of Ten in 1892, in particular, laid the groundwork for curricular specialization at the secondary school level. By 1918, Troen claims, the Cardinal Principles of Secondary Education legitimized the expansion of vocationalism in the St.
Louis schools by replacing "college entrance requirements with immediate vocational objectives as the dominant influence in shaping the high school."\textsuperscript{15}

More recently, David Hogan's \textit{Class and Reform: School and Society in Chicago, 1880-1930} offers an explanation of the rise of public school vocationalism in Chicago. Most importantly, Hogan claims 1910 as a watershed year in the history of industrial education. "By 1910, with the level of 'dropping-out' and truancy seemingly unaffected by manual training," Hogan writes, "educators and business groups began to look for new solutions."\textsuperscript{16}

In general, newer educational histories of the Progressive era challenge the revisionist perspective of political hegemony. For example, both David Hogan's work and Julia Wrigley's \textit{Class Politics and Public Schools: Chicago 1900-1950} show that, in Chicago, the making of educational policy was a dynamic process that involved workers, capitalists, politicians, and educators engaged in a continuous state of conflict over economic self-interests. Wrigley claims past historical studies have never fully recognized these "potentially destabilizing elements in society." For both writers, however, industrial education was just one of many curricular reforms occurring at that time. But industrial education was an important curricular reform, they believe, because it brought together diverse—sometimes hostile—Progressive era groups to formulate educational policy.\textsuperscript{17}
To date, the best study of the undercurrents of school reform is a four-city comparative history by William J. Reese. His *Power and the Promise of School Reform: Grass-roots Movements during the Progressive Era* offers an analysis of urban community groups and voluntary associations that shaped the direction of school reform by fighting the centralist, elitist tendencies of local school boards and superintendents in Milwaukee, Toledo, Kansas City, and Rochester, New York.¹⁸

Recently, scholars have raised questions about the efficacy of industrial education in the post Smith-Hughes years. Marvin Lazerson suggests that the expansion of vocational programs after World War I offers an area of future research on labor market supply and demand. He writes, "It is impossible to say with any certainty what effect vocational education had in local labor markets." Furthermore, the success (or failure) of student participation in vocational programs in the early decades of the twentieth century is still obscured by a lack of local studies.¹⁹

In a 1979 scholarly conference on "Work, Youth, and Schooling," Daniel Rodgers and David Tyack suggested that historians might develop new research agendas that examine vocational education from other than national perspectives. "Much of the early political history of vocationalism remains obscure," they complain; "we need to know considerably more than we do about the sources of support for vocational education, particularly at the state and local level."²⁰

Newer histories, like this study on Cincinnati, should provide a clearer description of the politics of curricular
innovation at the local level. The next section offers an overview of national industrial education practices prior to the Progressive era.

**Historical Background in Industrial Education**

Within the past two hundred years, American's attitudes toward technology and science have shaped the nature of industrial education in this country. From the days of the early republic, technological innovation was promoted by this country's leaders as an obligation or duty of good citizenship. Thomas Jefferson's concern for the success of the fledgling republic is reflected in his readiness to embrace any scientific and technological advancements that would improve the quality of life. For Jefferson, the Patent Office was a symbol of American inventiveness, and he took great pleasure in registering patents as a part of his duties as Secretary of State. Although Jefferson was at first reluctant to accept technology for fear that it would destroy his pastoral dream, he eventually realized that it could be useful in the development of domestic manufacturing.²¹

In the nineteenth century, there was a tremendous popularity about technical subjects. Lyceum lectures, for example, provided one source of self-improvement as well as an opportunity for mutual affiliation. Lyceums, which flourished in the country side during the Jacksonian period, were public lectures on technical, scientific, historical, literary, and political topics. One lyceum organizer, Josiah Holbrook, who believed in
the promotion of "useful knowledge," in 1826, proposed in the American Lyceum of Science and the Arts an association for the development of local, state, and national lyceums. Holbrook, a Yale graduate in chemistry, wanted scientific subjects, such as mechanics, hydrostatics, pneumatics, chemistry, mineralogy, and botany taught in his lyceums. (For several years Holbrook established a business in Ohio manufacturing scientific apparatus, such as globes and orreries, for lyceums and schools.) Holbrook's writings, which influenced numerous states to establish formal chartering and financial assistance for lyceums, contributed to a broader diffusion of information on science and technology.²²

Mechanics' institutes also catered to the educational needs of an urban population. At any one time, mechanics' institutes might have housed an industrial school for apprentices, a technical library, and a lyceum on some aspect of the natural sciences. One of the earliest apprenticeship libraries was established by the General Society of Mechanics and Tradesmen of the City of New York. The society was begun in 1785 by twenty-two mechanics who desired an organization for mutual aid, the care of injured workers, and the relief of dependents.²³

The most famous of the early mechanics' institutes was the Franklin Institute of Philadelphia named for Benjamin Franklin. The institute was established in 1824 for the "promotion of the useful arts" and disseminated scientific and technical knowledge through public lectures, display cabinets, a library, and prizes for practical inventions. Two years later a high school
department was founded for the "sons of tradesmen and other citizens of moderate circumstances." The three-year high school course of study consisted of English, classical languages (Greek and Latin), modern languages (French, Spanish, and German), mathematics (arithmetic, algebra, geometry, and trigonometry), and practical sciences (geography, natural philosophy, and chemistry). Drawing (landscape, mechanical, architectural, and linear), stenography, and elocution were required courses as well. The work of the institute and the mechanic arts in general were promoted through an in-house publication, *Journal of the Franklin Institute*, edited by Thomas P. Jones, secretary of the institute.²⁴

The mechanics' institute movement, patterned after the work of Scottish physician George Birkbeck, represents one of the first attempts to democratize American education. At a time when public education was in its infancy, privately-funded mechanics' institutes tried to bridge the gap created by class differences. Furthermore, the movement popularized education through the teaching of "modern" subjects. By integrating the classical curriculum with practical studies, mechanics' institutes appealed to groups engaged in commercial and industrial pursuits who desired technical knowledge solely for vocational purposes.

One popular antebellum educational innovation was the manual labor academy. In addition to a regular academic course of study, each student worked at jobs associated with the operation of the school. Male students worked on school-owned farms and in shops that produced food and supplies for the school, and female
students worked in dormitories and kitchens cleaning rooms and cooking meals. Manual labor schools substantially reduced the expenses of education for the students and made a higher education more accessible.

Proponents of manual labor colleges claimed that vigorous physical activity provided a healthy outlet for students. Some schools, like Oberlin College in Ohio, relied almost exclusively on manual labor for their daily operations. Yet manual labor colleges were unable to supply enough operating capital for farm land, industrial shops, equipment, and tools to stock a well-equipped program. As a result, these school administrators rarely provided a proper match of student interest with their assigned tasks and, obviously, adequate instruction was lacking. Subsequently, students became dissatisfied with the "busy work" philosophy accorded their work. Educators, too, more devoted to cultivating scholarship than calluses believed manual labor interfered with the purposes of a classical curriculum.25

In the antebellum period, some black abolitionists and their white allies advocated separate manual labor colleges that would teach blacks occupations in agriculture and the mechanic arts. These schools were valued for industrial training because "colored students could not then hope to acquire such knowledge as apprentices." Most attempts at establishing black manual labor schools resulted in failure. By the 1870s, however, black industrial schools, such as Hampton Institute in Virginia and Tuskegee Institute in Alabama, were established which offered normal school classes for teachers, not artisans. For example,
between 1872 and 1890, Hampton Institute graduated 723 students of whom 604 became teachers. Although touted by proponents of black apprenticeship and industrial education, both Hampton and Tuskegee actually were models of teacher training in the manual arts.26

A higher technical education was promoted in another fashion through the political struggles for state and federally funded land grant schools in agriculture and the mechanic arts. The "people's" college reform movement at mid-century developed as an effort to democratize collegiate education. The reform movement was stimulated by agricultural associations, such as granges and farmers' institutes, that promoted the study of scientific and technological innovation in agriculture. For example, Illinois farmers were instrumental in initiating the political drive for federal funding of state agricultural and mechanic arts colleges. In 1851, the Industrial League of Illinois was formed to promote a state educational institution for farmers and mechanics. Johnathan Baldwin Turner, a former professor at Illinois College in Jacksonville and practicing horticulturalist, became the League's leading spokesperson. Turner advocated practical education for the industrial classes to fit them to their future vocations as farmers and mechanics. Turner's following drew heavily from the middle classes, however, who were more interested in overthrowing elitist practices of collegiate institutions that perpetuated class divisions than in aiding the apprenticeships of artisans and tradesmen.27
American apprenticeship can be traced back to its historical roots in Europe. In the medieval period, craft guilds codified the master-apprentice relationship. An apprenticeship contract specified the master's educational obligations. Guild courts were established to set standards of workmanship, adjudicate points of conflict, and supervise the period of apprenticeship. For centuries local guilds maintained control over manpower requirements by setting admittance standards for new apprentices and establishing the length of servitude before promotion to higher levels. Successful males were virtually assured a degree of economic security as well as strong occupational identity.

Yet by the sixteenth century, European guilds had eroded as national governments usurped their power. For example, the Statute of Artificers in 1562 gave the British government authority over all local guilds and set in motion a system of public relief. Parish officials were authorized to send their indigent youths to the guilds for a term of apprenticeship. And the guilds were exploited in this fashion to relieve the burden of poverty and unemployment. The English Poor Law of 1601 hastened the decline of guild control as parish officials were authorized to supervise the training and treatment of apprentices, thereby bypassing guild court scrutiny. The closed medieval system that protected the apprentice in every step of the contract weakened as parish officials negligently "bound-out" pauper youths.²⁸

Relatively little is known of the apprenticeship of females. Traditionally girls were informally "apprenticed" to their
mothers and trained in the duties of the home. Craft apprenticeships for women were extremely rare. Girls, separated from their mothers, might have received a trade or craft training under the tutelage of their fathers and guardians. Yet the terms of apprenticeship usually were curtailed at marriage.  

Historically, industrial education for females was tied to their prescribed roles as wife, mother, and homemaker. As female work moved outside of the home, occupational instruction in traditional domestic areas, such as cooking, sewing, and cleaning, became more commonplace. Antebellum female seminaries offered an adaptation of "domestic apprenticeships" by requiring the students to perform housekeeping duties, which was compatible with the prevailing manual labor idea. These seminaries routinely educated women in the fine arts as well.

Women who desired a serious pursuit of the arts, as a vocation, went to specialized schools for advanced study. Private design schools for women opened in Philadelphia (1844) and New York (1852) for instruction in drawing, painting, wood engraving, architecture, and lithography. By the 1880s, design schools cropped up in major cities in the East and Midwest. Of the thirty-eight schools for art instruction in 1880 reported by Thomas Woody, seven were founded by women, nine were open for females only, and the remaining were coeducational. For many, nineteenth century female aspirations in the industrial arts were seen as a logical extension of their role as cultural beautifier and moral aesthete. After the Civil War, a widespread decorative
arts revival facilitated the movement of females into the industrial arts.30

Educational Beginnings in Cincinnati

By 1830, Cincinnati was an oasis of educational activity because it was one of the earliest settlements in the Old Northwest. Lands surrounding Cincinnati were officially purchased from the government on October 15, 1788, by John Cleves Symmes who already had spent over one year petitioning the Congress of the Confederation for its sale. His purchase, which was the second congressional land contract in the territory (the first being the Ohio Company of Associates on October 27, 1787) opened up settlement in the southwestern portion of what is now Ohio.

Frontier life was harsh, and the native Indian tribes were an imposing and hostile force. At first, Cincinnati was principally a military outpost offering protection to the early inhabitants. Fort Washington, built in November, 1789, on the high ground of the Ohio River, had troops garrisoned there for a period of almost fifteen years. Settlers, some attached to the army, lived in town, but smallpox and war casualties curtailed any new spurts of growth.

In 1795, Cincinnati had a population of about 500 citizens, which barely doubled in the next decade. That same year, the Greenville Treaty Line was established, which ended Indian claims to lands in the South, thereby hastening settlement in Cincinnati. Substantial population increases in Cincinnati,
however, did not occur until after the second decade of the nineteenth century, aided, in part, by Easterners fleeing the coastal regions in the War of 1812. By 1820, there were 9,642 inhabitants of Cincinnati, a 26 percent increase in ten years, which continued to double for the next thirty years, making Cincinnati one of the fastest growing cities in the West.31

Early education in Cincinnati offered many opportunities for self-improvement to both children and adults. Elementary education was financed by subscriptions for district schools, most of which were housed in rented rooms. Other educational endeavors, such as circulating libraries, enjoyed greater success due to their funding schemes, which promoted book purchases, collection, and circulation through share-holding corporations. Circulating libraries, literary clubs, and reading circles were established by the more affluent residents of the community who had the finances to purchase books and subscribe to periodicals.

In 1802, Cincinnati established its first library, with twenty-four subscribers. A second library, with over three hundred volumes, opened twelve years later. Cincinnatians who could not afford to buy books or pay dues to a library might have turned to other sources, especially for specialized reading interest. In the 1820s and 1830s, apprentice, mercantile, and agricultural libraries in Cincinnati developed large collections of technical materials. The Young Men’s Mercantile Library Association, organized in 1835, sponsored public lectures as well. The Ohio Mechanics’ Institute, subject of the next chapter, was established in 1828 and offered an apprentice and
common school library, lyceum lectures, and evening classes for artisans.\textsuperscript{32}

By mid-century, a wider selection of reading materials was available for purchase. Competition and technological advancement in the printing industry helped drive down the price of published materials, making them more affordable to the general reading public. Cincinnati was a leader in book-trade activity in the West and, at one time, the fourth largest publishing center in the country. "Graded" readers, such as McGuffey’s Readers and Ray’s Arithmetics, were published in Cincinnati and marketed to a broad audience. After the Civil War, Cincinnati publishers expanded their markets to the South, and school books were selling at a rate of more than three million copies a year. Numerous religious books, tracts, and pamphlets were printed in Cincinnati and distributed to churches and Sunday schools throughout the West. The exportation of commercial goods, like books, was facilitated by Cincinnati’s waterways.\textsuperscript{33}

Nineteenth century school educators were meticulous organizers and promoted common schools, high schools, colleges, and universities through memberships in professional associations and societies. In 1829, the Western Literary Institute and College of Professional Teachers was organized by twenty schoolmen who were interested in issues related to teaching. Some members of the institute, such as William Holmes McGuffey, Joseph Ray, Lyman Beecher, Calvin Stowe, and Samuel Lewis became leading educators in their day.\textsuperscript{34}
Early Cincinnati educators promoted technical education in a variety of ways. In 1841, the Society for the Promotion of Useful Knowledge, an offshoot of the Western Literary Institute, was organized for the purpose of promoting study in technology, invention, natural sciences, fine arts, and the practical arts. One year later, the Cincinnati Astronomical Society was organized and an observatory erected in 1844. A school for agricultural training in Hamilton County, Ohio, was founded by Freeman Grant Cary in 1846 at College Hill, near Cincinnati. His Farmer's College was a center for the promotion of technical education and Cary was a leader in the campaign for federal support of agricultural and mechanics arts colleges. (After passage of the Morrill Land Grant Act of 1862, which authorized funding of a state university, Cary unsuccessfully lobbied the Ohio General Assembly to have Farmer's College designated the state land grant school.)

Cincinnati educators played a major role in drafting early Ohio common school legislation. In 1835, the Western Literary Institute and College of Teachers secured $500 from the state to enable Calvin Stowe, who was going to Europe on business the next year, to examine Prussian elementary schools. Subsequently, Ohio school legislation incorporated many aspects of Stowe's report, the most significant being the creation of an office of superintendent of common schools in 1837. As a result, Samuel Lewis assumed the superintendency that same year, three months before Horace Mann was appointed to a similar position in Massachusetts. Lewis remained in office for only three years;
the state legislature abolished his positions by placing the duties of school superintendent with the Secretary of State. (The office of common school superintendent was restored in 1853.)

Another member of the Western Literary Institute and College of Professional Teachers was Nathaniel Guilford, Cincinnati's representative to the Ohio General Assembly. Guilford promoted popular education by writing pamphlets and sending memorials to state legislators advocating common schools. Guilford was responsible for the school law of 1825, which provided state subsidies for township schools, annual elections of district school trustees, and county school examiners. In 1850, Guilford assumed the superintendency of the public schools of Cincinnati by a state law establishing popular election to this office.

Originally, city school superintendents were publicly elected, but the law was changed in 1873 authorizing local school boards to appoint their own superintendents. In its early years, Cincinnati's common schools were operated by a board of education called "The Board of Trustees and Visitors," consisting of one member from each ward, elected yearly. Each board member personally carried out the duties of inspecting schools and examining teachers. In 1845, school board members' terms of office was lengthened to two years. In the following years, the city's common school board went through several permutations until 1897, when the state settled upon a term of three years. In 1887, the state enacted a law of "unprecedented recognition" giving Cincinnati school superintendents complete control over
the hiring and firing of teachers, selection of school books, and supervision of the schools. This act resulted in elevating the authority of the city's school superintendent but led to conflicts with the policy making function of the board of education.38

Cincinnati educators pioneered the statewide movement for "graded" schools with the establishment of separate buildings for students who were at approximately the same age and level of instruction. The configuration of "graded" schools, such as primary, intermediate, grammar, and secondary, differed from town to town in Ohio. Yet as early as 1836, Cincinnati divided its schools into two "grades" and four year later instituted a five-grade course of study. Other communities, like Cleveland, Akron, and Portsmouth also led the movement for state common school standardization.39

In 1855, there were 10,537 pupils in the city's common schools and 251 students in the high school. By 1888, Cincinnati had twenty-nine public elementary schools with an enrollment of 28,559. There were four "graded" intermediate schools (grades 6-8), fourteen schools with intermediate departments, and two high schools. Additionally, there were 16,032 students in Cincinnati's private schools and 14,524 students in parochial schools. Black students went to one of the city's segregated common schools or the segregated high school.40

The city's common school system was affected by settlement patterns in the late nineteenth century. The original "walking city"—bounded by a downtown basin of approximately twelve miles
in circumference—disappeared as new businesses and residences reached the hilltops nearby. The subsequent geographical expansion created a strain on already limited financial resources; school board members gave preference first to teachers salaries, then routine building maintenance, and finally new school facilities. Although a national depression in the mid-1890s affected the local economy, total school expenditures topped one million dollars, and by the end of the decade, ten new school buildings had been erected, several school annexes were completed, and one schoolhouse renovation finished.41

In the early decades of the twentieth century, school leaders began a vigorous modernization program. Aided by a coalition of social reformers, business boosters, and labor leaders, a new school superintendent (Franklin Dyer’s term of office was from 1903 to 1912) implemented progressive educational curriculums that included kindergartens, manual training and domestic science classes, and physical education programs. School plants were upgraded as well. With more than fifty schoolhouses in the city in 1904, for example, none had electric lighting, twelve had inside flush toilets, and only three had central steam heat and ventilation. One decade later, there were marked improvements in the physical conditions of the schools. Eighteen new schools were erected and thirty others had been renovated at a total cost of $5,750,000 dollars. Electric lighting, flush toilets, steam heating, slate blackboards, auditoriums, and gymnasiums had been installed in over two-thirds of the district’s schools.42
Aside from curricular changes at the elementary and secondary levels, progressive educational reforms were implemented for adult populations. Public school instruction in English and civics prepared foreign-born arrivals for naturalization examinations. (Benevolent organizations, such as the United Jewish Charities and the Kitchen Garden Association, also provided Americanization classes.) The city's schools were open at night for adult residents who desired academic instruction as well as manual training and domestic science. And some neighborhood schools were opened evenings for community meetings and public events.43

Educational support services for students in the public schools expanded in the early decades of the century. Academic classes and supervised playgrounds were offered during summer terms. Tubercular students and anemic children received instruction in open-air classrooms situated on school building balconies and rooftops. Special schools were opened for the physically and mentally handicapped, and gifted and talented youth. And a school-funded bureau was established to issue student work permits and to monitor employment practices of minors.

Progressive educational reforms subsided after 1918, however, as a national post-war recession affected the local economy and retrenchment measures in education were initiated. Curricular innovations that had created additional costs amounted to over three million dollars in 1920 (due, in part, to teacher pay raises), and many school board members advocated fiscal and
pedagogical conservatism. The heady days of progressivism had ended.  

Conclusion

Cincinnati, like most urban areas in the 1880s, was undergoing rapid industrialization. One adverse consequence of the growth of industry was the erosion of apprenticeship and the widening gulf between economic and social classes. Was Cincinnati’s industrial education movement borne out of class struggle, compromise, or some other adaptation? Were racial and gender populations specifically targeted for local industrial education curriculums?

By the turn of the century, educational leaders had administrative structures, professional organizations, and political networks that successfully promoted, supported, and controlled public school reforms. Did Cincinnati’s industrial educators develop similar strategies, networks, associations, and organizations? Who were the local educational leaders and how did they wield their power in creating curricular innovations? What specific parties opposed industrial education in Cincinnati? What were the courses of study that addresses the need for industrial education? Finally, how did school programming and vocational curriculums change over time?

The body of this study will examine these questions in light of three critical periods in the evolution of local industrial education. The years from 1886 to 1900 represent a time when private manual training programs were first introduced in the
city. The years from 1901 to 1912 represent the beginning of elementary and secondary industrial education classes in the public schools. School reformers began a concerted effort to attract the children of the working classes. From 1913 to 1920, influential civic boosters and business elites entered into partnerships with public school educators, and, together, they promoted occupationally-specific trade instruction.
NOTES


Recent historians are unclear as to the complexities of social class construction. I define middle class to mean the emergence of white-collar occupational groups in antebellum America. These groups are distinct from earlier artisanal, mercantile, and agrarian groups, suggests Carroll Smith-Rosenberg. She claims the middle classes began to distinguish themselves from others by the nature of their language—cultural "discourses"—that brought meaning to their class identity; see Carroll Smith-Rosenberg, "Writing History: Language, Class and Gender," in Teresa de Laurentis, ed., *Feminist Studies, Critical Studies* (Bloomington: Indiana University Press, 1986), 31-38.

2. I define industrial education as industrially-derived shop activities in manipulative skills, tool usage, and project completion. A manual training curriculum might include broad instruction in occupational "clusters," such as woodworking, iron work, and machining. In contrast, trade instruction relates to educational programs that teach the skills and theory of specific industrial occupations, such as carpentry, cabinetmaking, iron molding, and tool and die making. In addition, vocational education refers to a wider range of occupations besides industrial, such as office, clerical, retail, and domestic.


11. Prior to World War I, intelligence testing was used on special cases of students who were classified "retarded," that is, their mental age did not match their chronological age.


20. Daniel T. Rodgers and David B. Tyack, "Work, Youth, and Schooling: Mapping Critical Research Areas," in Harvey Kantor and


22. Carl Bode, The American Lyceum: Town Meeting of the Mind (New York: Oxford University Press, 1956), 8; also, see David Mead, Yankee Eloquence in the Middle West: The Ohio Lyceum, 1850-1870 (East Lansing: Michigan State College Press, 1951). The degree to which artisans and mechanics participated in the lyceum lecture movement is unknown. Berenice M. Fisher suggests that lyceums were largely unsuccessful in attracting working-class support but successful among middle-class audiences; see Industrial Education, 23-24.


24. Ibid., 321-322. For a discussion of the work of Jones and his journal, see Bruce Sinclair, "Thomas P. Jones and the Evolution of Technical Education," in Purcell, Jr., ed., Technology in America, 62-70.


34. See Venable, Beginnings of Literary Culture, 421-422.


39. White, "History of Public Education," 396-397. The secondary schools in Cincinnati, originally private collegiate training institutes, eventually were joined to the common school system with a separate school board administering them.


CHAPTER II
THE FORMATIVE PERIOD, 1886-1900

Introduction

This chapter describes the earliest types of manual training and technical education programs in late nineteenth century Cincinnati. The first section provides an explanation of the use of manual activities, such as drawing and art, and physical activities, such as calisthenics, in the city's common school system. Although introduced relatively late in the century, these activities reflected a heightened concern by local educators for the proper character development of children. In many ways, the civic unrest in the community at large was of concern to educational leaders who, in turn, articulated a philosophy of social control.

The next section of the chapter offers a history of the founding of the Ohio Mechanics' Institute and its technical school for apprentices. Influential businessmen and civic leaders promoted the institute's evening school, in part, as advancement for promising entrepreneurs and managers or access to higher levels of education. The final section offers a history of the formation and philosophy of the privately-funded Technical
School of Cincinnati. The high school catered to the needs of the city's middle-class families who desired a curriculum that combined both academics and a manual training component.

Moral Instruction in the City Schools

Americans in the 1880s were living in a period of social tension. Frequent labor union strikes and clashes with police fueled fearful images for many, that the domestic labor force was unstable, unpredictable, and uncontrollable. Journalists such as Richard Watson Gilder of the *Century Magazine* fed an anxious public numerous xenophobic articles that advocated a limitation of new immigrants entering the United States in order to foster domestic tranquility. The explicit ethnocentrism in these articles was a reflection of popular conceptions that social problems were created by the foreign born. One contributor wrote Gilder stating, "there is not an evil thing among us, not a vice nor crime, nor disturbing element, which is not for the most part of foreign origin."¹

Rampant immigration and a volatile labor force posed potential threats to the order and security of the entire nation. In the nineteenth century, Americans looked to their schools for solutions to massive social problems: the quality of the labor force being directly related, they believed, to social stability. What appealed to an apprehensive American public was an education steeped in morality.²

Cincinnati school superintendent John B. Peaslee, fearful of the social dislocations around him, claimed that what the schools
needed was "not more of arithmetic and grammar, but more of heart culture—of aesthetic and moral training." "In the presence of so much crime, murder and lawlessness," he wrote in 1884, "it becomes the duty of the Public Schools to give special attention to inculcating lessons of mercy, kindness and justice." Peaslee, superintendent of schools from 1874 to 1886, implemented curricular innovations in moral instruction, literary training, drawing classes, and night schooling that were based upon an evangelical vision of the perfectibility of human beings and their relationship to the "inferior world around them."³

Cincinnati's common school superintendents added curricular innovations which, they believed, would increase moral and mental discipline. A heightened public demand for moral order gave educational reformers reason to focus on the urban schools in the city's downtown districts. Specifically, the actual target of their reforms were urban children of the working classes. For example, city school superintendents promoted Arbor Day celebrations. Upwards of 20,000 children annual assembled in public tree planting ceremonies at which groves of trees were dedicated to famous American authors. School superintendent John Peaslee rejoiced in the vision of all these "city-bred children, many of whom live in dark and crowded tenements "enjoying the fresh air and sunlight of Eden Park, "safe here in the deep, soft grass, where even the most anxious mother need fear nothing for them!"⁴

Curricular changes, like the Arbor Day celebrations, slowly were adopted by local school superintendents, a result of larger
social forces affecting the lives of urban youth. By the 1880s, a widening middle-class migration from the downtown inner city to the surrounding hillsides was taking place. This out-migration to the suburbs contributed to an increasing homogeneity of residential districts and a widening economic gulf between the inner city working classes and the suburban middle classes.⁵

The problems of inner city life were compounded by the close proximity of working-class neighborhoods to commercial, industrial, and entertainment districts. The quality of educational life itself was dramatically different for basin and hillside children. Hillside suburbs experienced student population increases which resulted in school building modernization. In an 1870 book on the suburbs of Cincinnati, author Sidney Maxwell suggested that schoolhouse construction or renovation outside of the inner city proceeded rapidly to accommodate new students. Cincinnati public schools in Avondale (remodeled in 1867), Clifton (newly built in 1870), and Walnut Hills (renovated in 1868) were solid, brick structures with expansive halls and rooms. In many cases, suburban school buildings were situated on large campus-like plots of land, and set back from the road a comfortable distance.⁶

By contrast, inner city public school buildings were run-down dilapidated structures—mostly built before the Civil War—that created public health problems. City health officials reported that a combination of inadequate ventilation, crowded classrooms, and poor lighting contributed to the rapid spread of
communicable diseases like diphtheria, scarlet fever, and small-pox.⁷

Education reformers, like Peaslee, were fearful that the city’s schoolhouses replicated the undesirable conditions of the worst of Cincinnati’s slum neighborhoods. Peaslee was superintendent of the Cincinnati Public Schools from 1874 to 1886, holding office for twelve years, a formidable tenure for someone who came to this position from the city schools as teacher, then principal. A New Hampshire native and Dartmouth College graduate, Peaslee assumed his office at the age of thirty-two, relatively young for so important a position.⁸

In his earliest years of tenure, Peaslee required that school students systematically practice the ruling of slates, with an additional expectation that students maintain neatness and accuracy in the execution of their lessons. Peaslee hoped that public school students would carry their slates back home for parental inspection, reflecting pride in their work. Yet this policy was not without its critics. Peaslee scoffed at teachers who objected to the formality of slate ruling which, they claimed, required too large an amount of time that could be better spent in study. But Peaslee continually defended this practice as essential for character development. "Take a careless, dirty boy," Peaslee claimed, "and very little can be done with him till his pride is touched. . . . But once touch his pride and he is yours."⁹

Peaslee expanded the curriculum to infuse a secular morality in the school day. In part, his policy was a lingering reaction
to the banning of Bible reading in Cincinnati’s public schools. In September, 1869, ten Catholic board of education members introduced a resolution challenging the school board’s right to conduct morning Bible reading exercises in the schools—a ban the Catholic board members thought might attract a larger number of parochial students into attending the public schools. An ensuing "holy war" brought forth strong anti-Popery charges in the daily press and hostile public sentiment over the issue which reached a head in November, 1869, with the banning of Bible reading in Cincinnati’s public schools.\textsuperscript{10}

Peaslee’s demand for moral instruction in the schools was considerably heightened in the early 1880s when civil disorder was rampant in the city. In March, 1884, a mob of vigilantes (including teenage boys), attempted to lynch a murderer who, they believed, had received a light sentence. This set off a three-day riot that resulted in the burning of the courthouse. Fifty-four people were killed and another two hundred wounded. For many residents—with a perceived crime wave at hand—Cincinnati was considered a lawless city. In that year alone, the number of arrests was over 56,000 or the equivalent of one-fourth of the total city’s population. The same year as the courthouse riot, Peaslee recommended that one hour per month be devoted to what he called "humane education" or lessons in public virtue. He acquired the idea from Thomas Timmons of London, England, who organized school children into Bands of Mercy. These clubs required members to recite a simple pledge that they would be kind to all living creatures, "both human and brute."\textsuperscript{11}
Peaslee believed that to prevent a decadent and immoral adult life children needed a sound moral education. The schools' responsibility for the development of intellectual skills, he claimed, were subordinate to the development of proper social behavior. While not wishing to impose additional duties upon a teacher's busy schedule, Peaslee said that the schoolteacher was expected to assist in shaping the moral outlook of children. In order to assuage his critics, Peaslee explained that one hour of humane education would show radically improved student behavior, increased daily school attendance, and heightened study habits. At each turn, Peaslee disregarded the claims of the "incidentalists," local principals who believed that the schools were not directly responsible for the moral instruction of children, other than what children acquired occasionally from their teachers. 12

Two years later, Peaslee introduced daily rote exercises that he called "memory gems" into each city classroom. The "gems" were selected literary passages from notable British and American writers. Peaslee assumed that most inner city families did not have a good home library or the knowledge of quality literature to guide children's reading tastes. He believed that inferior literature, such as easily accessible dime novels at neighborhood stores, provided children with improper role models or, worse yet, hero worship of robbers and thieves. Peaslee wrote, "There is nothing in their [children's] home surrounding to counteract these evils." Hence, he claimed it was the responsibility of the schools to interest pupils in good literature. After just one
year, Peaslee glowingly reported to the board of education that the city school students spent approximately twelve minutes daily in the memorization of eight lines per week of text. The superintendent cautioned, however, that the success or failure of his plan depended upon the teachers' cooperation and understanding of "gem" instruction. "If every teacher is alive to the importance of the exercise," he wrote, "its influence must be far-reaching, beneficient and exalting." The response of one teacher to Peaslee's "gem" instruction suggests an emerging acceptance of teachers imposing their values upon children: "I do enjoy the hour I spend with my pupils, for then it is I get nearest to them, and then it is I feel I am not a mere machine, grinding out percent, but that I am an important factor in helping them to choose that which is noble, and beautiful, and good in life."13

The curricular reforms in Cincinnati that Peaslee and later superintendents advocated reflect important assumptions about the changing relationship between teachers and students in the last quarter of the nineteenth century. Since the beginning of graded instruction in Ohio, the state common schools operated upon an examination system that determined student promotion and transfer. Promotions, which could occur at any time in the school year, meant that successful students could move to a more advanced class or section within their grade level. Transfer, an end-of-year process, meant that successful students could move beyond their level to the next highest grade. Promotional
examinations were given five to eight times during the year with one final transfer exam at the close of the school year.¹⁴

In some cases, daily recitation records were kept on pupils, and the teachers' evaluation was incorporated into transfer and promotion decisions. But, by and large, the measurement of student advancement was based upon attainment of satisfactory scores on each of the school subjects tested. Peaslee railed against this system of examinations which, for him, failed to account for the teacher's beneficial influence in shaping moral character. "More heart culture," he said, "less cramming [for examinations] and driving for percents [of tested knowledge]."¹⁵

In 1887, one year after Peaslee resigned his position, the Cincinnati school board and superintendent Emerson E. White changed the system of promotion that was based upon annual examinations without mandatory testing, and giving full weight to teacher evaluations. The city schools adopted a system of evaluation, using a scale of one to ten, that required teachers to assign monthly grades to students, average their progress biennially, and issue report cards. Of course, some teachers resisted this new task of grading because it took precious time away from lesson preparation.¹⁶

White, the new superintendent, was the quintessential common school reformer. Prior to coming to Cincinnati, White served as Ohio's common school superintendent, from 1863 to 1866, and editor of the Ohio Educational Monthly, from 1861 to 1875—two very visible positions which enabled him to propagandize for state-wide teacher training institutes, state-funded normal
schools, and a state board of examiners. Later, as president of Purdue University, from 1876 to 1883, White gained experience in administering a school devoted to agricultural and mechanic arts education.

In 1886, White accepted the board appointment as school superintendent in Cincinnati, and savored the position with hopes for developing a model city school system. Yet White's short-lived tenure—a mere three years—was fraught with political tensions leading to his dismissal in 1889. In the second year of his term, the state legislature authorized city school superintendents to hire teachers without prior board approval. In upholding the law, White publicly exposed the local practices of ward-based board politicians who gave out teacher contracts as patronage for their continued re-election.17

The practice of political patronage was in accord with other ward boss-dominated U.S. cities, like Chicago, Boston, New York, and Baltimore. Cincinnati, too, had its urban boss, George B. Cox, who sanctioned school-related appointments—from janitor to principal—out of his office above the saloon he owned and operated in the city's West End. Cox fashioned a Republican stronghold in Cincinnati by attracting middle-class suburbanites with his support of moderate urban reforms, such as city water, municipal sewer, and transportation services—improvements in the infrastructure of the new hilltop neighborhoods. Cox, a Cincinnati native, was born in 1853 of British immigrants. After his father died when he was just eight, Cox worked at a number of juvenile occupations, such as bootblack, newsboy, and delivery
boy. In the mid-1870s, Cox purchased a saloon in his own neighborhood, and, in 1878, launched a successful campaign for city alderman—a position he held until 1885. From that time on, Cox never again occupied an elected political position in Cincinnati, although he controlled the Republican machine in city elections until 1911—a factor that deeply affected the administration of public schooling in the city.

White was removed by the Cox forces in 1889. His relationship with the Cincinnati school board had deteriorated to the point that powerful board opponents attempted to block the publication of his final school report, fearing its release would expose their collusion with the ward bosses. Nevertheless, during his tenure, White continued the Peaslee-initiated morality training which, under board approval, was required in the elementary course of study. In 1888, for instance, the state of Ohio mandated temperance education in the common schools, and White suggested that one-half hour per month of "health lessons" be given on the abuses of alcohol, narcotics, and tobacco.

In the 1880s, according to William C. Smith, a student at the Second Intermediate School (grades 5-7), chewing tobacco was used more frequently in his school than cigarettes as "a small piece of the weed" could "lie dormant in the mouth to kill the [nicotine] craving until recess or after school." Some teachers used tobacco in school as well. One of Smith's arithmetic teachers chewed during class time and frequently spat in the hallway and down the stairs. Is it any wonder that public school
leaders were equally concerned about appropriate teacher behavior as role models for urban children.\(^1\)

In order for morality training to be successful, wrote William H. Morgan, superintendent of Cincinnati’s schools from 1889 to 1899, the teacher himself must be a paragon of virtue. "His physical and moral as well as his mental and intellectual character must be worthy of the proper admiration of those who sit at his feet." Morgan felt that teacher impropriety was as threatening to the social order as the "leader of the Commune, a microbe of social and political death in the system of the body politic." Morgan recognized that the successful imparting of morality training required teachers who were exemplary models of conduct. Yet Morgan believed that, in general, teachers were too intellectual and excitable—poor role models for tenement children who, likewise, were physically undernourished and underdeveloped, lacking access to playgrounds or supervised play activity.\(^2\)

There were few organized gymnastics programs in the Cincinnati schools until 1892. Prior to that time, several members of the local German Turnverein chapter (established in 1848) volunteered to teach calisthenics in the city’s normal school, and in 1891 the "Turners" petitioned the board of education for a regular program in physical culture. The next year, the Ohio General Assembly passed an act requiring the teaching of physical culture and calisthenics in large city schools. In 1893, Morgan established a department of physical culture, hired a director and four assistants, and initiated the
construction of two gymnasiums at Woodward and Hughes High Schools. The physical culture department operated on a rotating schedule throughout the city's elementary schools, offering one class every three weeks in calisthenics to teachers and students. The rest of the time each teacher led calisthenic exercises amounting to approximately five minutes per day. Towards the end of the decade, exercise with hand apparatus such as weights and dumbbells was added to the physical culture program.21

In 1894, Superintendent Morgan addressed the board of education about the effects of classroom overcrowding on student achievement. He suggested that "laggards and dullards" needed special attention in order to make more rapid progress in school. Morgan knew that student non-completion was a problem in the early teenage years. In 1896, during his tenure as superintendent, less than one-half of the public school children who completed the eighth grade continued on to high school. The highest level of student drop-outs occurred in the intermediate grades, sixty-nine percent between the ages of eleven to fourteen.22

Ohio legislators also recognized the problem of student non-completion and enacted compulsory attendance laws in the 1890s. Ohio first had a compulsory school attendance law in 1877. The law mandated schooling for children from ages eight to fourteen for twelve weeks per year of which attendance was required for six weeks consecutively. Yet a series of loopholes, one of which allowed school boards to excuse working school-age children of indigent parents, served to undermine the
effectiveness of this statute. In 1889, a more extensive compulsory school law mandated that all Ohio school-age children from eight to fourteen in city school districts must attend public or private school for twenty weeks per year, ten weeks consecutively, and to begin within the first four weeks of the term. Parents and guardians were heavily penalized if they failed to enroll their children or removed them during the school year. The law required employers to verify the literacy level of their under-age employees. Minors from fourteen to sixteen who could not read or write were required to attend school half-time during the day or at night. Finally, truant officers, commissioned with police powers, were organized to enforce the law by entering homes and shops to monitor school absences. (Ohio’s compulsory school legislation was not altered again until 1910.)

The common school education for children offered little in the way of vocational training except, perhaps, for industrial drawing. Drawing instruction, first introduced into the city schools in 1864, was provided by two art teachers, and four years later a superintendent of drawing was added to the department. In 1870, the drawing department increased to five—one supervisor who taught in two city high schools and the normal school, and four assistants who taught in the intermediate and grammar grades. Primary school teachers taught drawing in their own classes, generally through penmanship and copybook lessons. Drawing instruction required repeated exercises in two-dimensional pattern copying and coloring. Students rarely
were allowed exploration of natural forms, ornamentation, and pictorial free-hand sketching. As a result, student art work reflected a routinized, mechanical process.  

Nevertheless, the school art program received favorable recognition by city businessmen and industrialists who desired greater numbers of mechanical draftsmen and architectural assistants. Christine Sullivan, appointed superintendent of drawing in 1884, believed that drawing instruction needed to become more compatible with the vocational needs of the manufacturing community. "The idea that Public School Drawing is one thing and the drawing of draughtsmen and artists is quite another . . . is gradually passing away," Sullivan reported in 1893, adding, "Many teachers endeavor to make each pupil as much a draughtsman as circumstances will permit." Sullivan took full credit for job placement as well. In her 1886 end-of-year report to superintendent Peaslee, she related that within the past six months, at least fifteen boys had been placed in architectural and drafting offices "where a knowledge of drawing is one of the necessary requirements." In addition, she reassured Peaslee that her teachers fully believed that "... industrial drawing is of a decidedly practical nature, and has very little to do with making copies of fancy heads, old ruins, log cabins, landscapes, etc."  

"Cincinnati is a great manufacturing city," the president of the high school board of education reported in 1887, "and our young men, with a knowledge of the practical branches taught in our High Schools, and the mechanical training of a good technical
school, could readily find profitable positions." Yet public school leaders began flirting with manual training only in the 1890s.26

After the turn of the century, school administrators turned earnestly to industrial education programming. Prodded in part by manufacturers who desired practical education for the city's working classes, manual training was established in several of the downtown tenement districts for children in the intermediate grades. Moral instruction, it seems, had outgrown its usefulness as all-inclusive cultural uplift and soon became subordinated to the selective utilitarian measures of vocationalists'. A new frontal attack in the campaign for moral order was about to begin.

Adult Technical Education

At mid-nineteenth century, the ranks of Cincinnati's middle classes swelled due to industrial growth in the city. Cincinnati was among the top five manufacturers in the U.S. of meat packing, machine building, furniture-making, ready-made clothes, soap, books, and whiskey. And a favorable economic climate offered businessmen greater opportunity for capital improvements. Prudent shop owners plowed their profits back into their own establishments, expanding and improving their physical plants. Aspiring entrepreneurs--artisans and journeymen--found fewer obstructions to their search for capital ventures. This era of industrial growth in Cincinnati was also characterized by greater occupational mobility. Approximately three-quarters of the top
10 percent of local manufacturers came from the ranks of artisans and craftsmen. Additionally, the majority of these new manufacturers were native-born citizens as well as decade-long city residents. Immigrant groups, however, especially Germans, also fared well in their rise in to the middle class. By mid-century, the second generation of Germans (the first generation were skilled or semi-skilled workers) experienced an increase in occupational mobility as white-collar managers and businessmen.27

A literature of success accompanied these new middle-class manufacturers and managers. For instance, in 1886 the authors of a local guide to business claimed that "a man, to be successful in Cincinnati, must know how to make and to do, as well as how to buy and sell." The more prudent investors used their capital and business acumen to expand their shops. Their funds were not "committed to the treacherous waves of speculation," wrote Sidney Maxwell in 1878, but "turned into their business to enlarge their usefulness." The new manufacturers had occupational backgrounds as mechanics: practical men who started from the bottom and worked their way to the top. "Men have risen from the humblest ranks by dint of industry and energy alone," wrote a civic booster in 1886, "... to be the masters of princely fortunes." Additionally, their accumulation of technical expertise, from years of trade-related employment, served an important function in the rise to the top. They economized on labor costs by subdividing and specializing manufacturing processes. They
accelerated the production process by introducing new hand tools and power machinery into the factory.\textsuperscript{28}

In Cincinnati, the deskilling of production and an accompanying division of labor proceeded at different rates of speed from industry to industry. Some furniture and machinery manufacturers, for instance, quickly embraced capitalistic forms of production while others, such as carriagemakers and shoemakers retained their artisanal methods. In general, the shift in modes of production was facilitated by the availability of steam-powered machinery.

Steam energy was praised far and wide for its potential labor-saving abilities. As one writer proclaimed in celebration of the 1876 national centennial, "if I were asked what elements had most to do with the swift progress of our country, I should answer, freedom and the steam engine." "The steam engine," he continued, was "the great emancipator of man."\textsuperscript{29}

Outside of Pittsburgh and Louisville, Cincinnati was a leader in the construction of steamboats and steam engines for marine usages. Only after mid-century were stationary steam engines installed in manufacturing concerns. For example, in 1850, just 28 percent of the furniture factories in Hamilton County, Ohio (Cincinnati), were steam, water, or horse-powered. Twenty years later, 55 percent of Hamilton County furniture factories used steam-powered machinery in their production. By 1870, a majority of the city's large-scale manufacturing establishments added some power machinery to their production processes.\textsuperscript{30}
The nature of apprenticeship—technical instruction of young workers—was transformed, in part, as a result of the use of power machinery. The subdivision of work into specialized operations meant that each machine-tender needed only a limited amount of technical knowledge in the production process to carry out one's tasks. Furthermore, the specialization of occupational knowledge, the base of technical information that journeymen traditionally relied upon to control their laboring processes, became the property of managers or engineers, many of whom acquired their technical knowledge in a formal classroom setting, at technical schools financed by wealthy manufacturers. Aside from their importance as a source for prospective managerial material, technical schools fueled the white-collar aspirations of adult day laborers—and their eventual embourgeoisment. Such was the case at the Ohio Mechanics' Institute (OMI) in Cincinnati.\(^{31}\)

The Ohio Mechanics' Institute began in autumn, 1828, out of the national lyceum movement that swept through the West in the early nineteenth century. OMI was organized by Dr. John Craig, a local lecturer on natural philosophy (physics), who suggested that the city form a permanent institution for scientific and artistic instruction. In the winter of 1829, OMI was granted a state charter of incorporation and Craig coordinated an uneasy membership of mechanics and artisans, professionals and manufacturers.

In 1838, yearly public exhibitions or fairs of artisanal talent were offered by the institute. Mechanics and artisans
were the major participants in these earliest fairs. Their finest handcrafted books, saddles, quilts and samplers, maps, guns, and lamp stands, were one-of-a-kind "show" items. Yet only one-third of the local manufacturers were represented at the second fair in 1839, an unsettling experience for the shop owners. "The annual exhibition is designed to bring into favorable notice, the actual manufactures of the country," remarked one member, however, "It appears that this has not generally been understood among the mechanics!" City manufacturers viewed these fairs as an opportunity to exhibit their production methods through mass produced, marketable products "such as we keep in the shops for sale." OMI directors substituted modern corporate design for pre-modern work methods. "It is more desirable, at our annual fairs," the 1841 exposition committee reported, "to show what is regularly done by them [artisans] in their usual course of business." The conflicting ideologies between modernist manufacturers and pre-modern mechanics contributed to a lack of institutional mission at the Cincinnati institute. In the Craig presidency, OMI leadership was divided among the membership as to the "design of the Institute." Then Miles Greenwood stepped in.  

In 1847, OMI directors began a subscription campaign for financial stability. Greenwood, owner of the Eagle Iron Works and newly-appointed board president, supervised the subscription drive, which netted $18,000—enough to pay off prior debts and begin construction of a new building. Greenwood's personal
donation to OMI, in excess of $12,000, helped clear the indebtedness that plagued the institute in its early years. Greenwood, a model of manufacturing and civic leadership, provided the visible guidance for the institute that OMI financial backers desired. Greenwood was born in New Jersey in 1807 and at age ten moved with his family to Cincinnati. As a small boy, he worked diligently at a series of odd jobs to support his invalid father. Beginning in 1825, Greenwood traveled in the Midwest, first to New Harmony, Indiana, where he went to school, and later to Pittsburgh, where he worked in an iron foundry. He returned to Cincinnati in 1829 to work in the local foundries, and three years later, in partnership with Joseph Webb, established a small ironworks with ten employees.

In its earliest years, the Eagle Iron Works forged a variety of items ranging in size from ornamental iron works, hardware, and locks to steam engines and printing presses. (The foundry displayed twenty-one pairs of cast butt hinges at the 1841 OMI fair, and Greenwood was a member of the 1842 fair committee of arrangements.) By the 1850s, Greenwood had already bought out his partner and could boast a payroll of 350 workers with an annual production of goods valued at $360,000. Ten years later, Eagle Iron Works doubled in size and capacity as Greenwood turned his establishment into a U.S. Arsenal for the manufacture of cannons and guns. Greenwood was active in community service as a member of the volunteer fire service. Later, he became chief engineer of the city's paid fire department (established in 1853, one of the earliest paid urban fire-fighters in the nation). His
ironworks also was supplier of the city's steam engine fire equipment.\textsuperscript{34}

From 1847 to 1853, as OMI president, Greenwood encouraged greater participation of business interest, through board memberships, in the policy-making function of the institute. Few mechanics were executive officers in those years. Yet co-owners and sole proprietors in city businesses were well-represented during Greenwood's tenure. In one year alone, for example, from 1852 to 1853, there were: 3 sole proprietors—a justice of the peace, a dentist, and a real estate agent; 7 co-owners—a civil engineer, a bookseller, a coal & coke dealer, a carriage-maker, a cigar manufacturer, a tinplate maker, and a jewelry manufacturer; 2 mechanics—a bricklayer and a machinist; and 2 unknown. The next year, Greenwood's last, the board composition shifted to 6 sole proprietors, 4 co-owners, 2 mechanics, and 2 unknown. In the Greenwood years, the greatest fluctuations in board representation were in numbers of co-owners and sole proprietors, with mechanics in the minority as board members.\textsuperscript{35}

In 1856, OMI directors proposed an industrial museum for the permanent display of locally produced goods which, they felt, would be popular "especially among the manufacturers." That same year a School of Design was organized for a series of lectures on science, including chemistry, physics, anatomy, and geology. The board believed that mechanics exhibited a "great deficiency in scientific attainments." Additionally, OMI-sponsored exhibitions became highly competitive events attracting regional and national attention with the awarding of cash prizes and medals for
outstanding product improvements or inventions. As added inducement for fair entrants, equipment storage, power hook-ups, and fixtures were offered free of charge. In the 1870s, OMI industrial expositions were jointly sponsored by the local chamber of commerce and the Cincinnati Board of Trade.36

In 1882 the board of directors of the Ohio Mechanics' Institute established a School of Technology, absorbing the former School of Design. OMI directors continued to offer evening trade-related coursework in the three established departments: the artistic department for painter, plasterers, wood-carvers, cabinetmakers; the mechanical department for machinists, metal workers, pattern makers, foundry workers, and blacksmiths; and the architectural department for carpenters, masons, woodworkers, and builders. Yet the directors fortified all departmental curriculums with core requirements in physics, elementary mechanics, geometry, and mathematics. This move to infuse science into the technical curriculum greatly upset some of the members of the institute—many of them holding lifetime memberships—who felt that OMI was "turning out the mechanics," "sweeping away old landmarks," and transforming the institute into a "branch of the University." But the curricular reforms captured greater student interest, and attendance rose 24 percent the next year.37

In 1884, OMI directors renamed their technical school the Industrial and Art School which was opened five nights per week instead of two. In addition, a Department of Science and the Arts was created which offered lyceum-like evening lectures on
house ventilation, sanitary plumbing and sewerage, food
cultivation, and water supply—topics that might attract the new
middle-class homeowner.\textsuperscript{38}

At OMI, the reclassification of students into three grades,
elementary, intermediate, and advanced, resulted in curricular
additions to the existing departments. New teachers, hired for
the upper division courses, were recruited from the white-collar
professions. The Hannaford brothers, Charles and Harvey, taught
the intermediate and advanced grades in the architecture
department. By day, they worked as junior partners in their
father’s architectural firm of Samuel Hannaford & Sons—the
oldest such firm in the city which was established in 1857. At
OMI, the brothers developed a rigorous course of study in
building design geared toward a professional study in
architecture. In their classes, scale drawings and renderings
were required as well as a complete set of working plans upon
conclusion of the course sequence.

Other instructors, such as Louis G. Dittoe, member of Dittoe
& Wisenall, and George S. Werner of Werner & Adkins, though
senior partners in their own architectural firms, contributed
their skills to evening classes in the department as well. James
B. Stanwood taught geometry and mathematics to upper-level
students in the mechanical department. Stanwood, a former
machinist, was a full-time draftsman at Lane & Bodley engine
builders until 1886, when he resigned to pursue a mechanical
engineering degree at the Massachusetts Institute of Technology.
(In 1889 Stanwood assumed the directorship of the Technical
School of Cincinnati.) At OMI, Stanwood led his students through intricate algebraic problems in the strength of materials. His advanced machinery department students were expected to solve complex machine design problems. Stanwood also lectured in the Department of Science and Arts on machine building components, such as "The Slide Valve and the Steam Engine Indicator."39

"We are advancing by degrees from the mere drawing school of the past," wrote John Heich, principal of the school in 1887, "imparting practical knowledge that will greatly benefit all who are fortunate enough to attend." OMI school directors, successful middle-class businessmen, echoed the claims of Heich by expanding the technical curriculum in the 1890s so that more students might be better prepared to enter industrial management positions directly or, as the case may be, apply to colleges where they could "reach for a higher range of scientific education." OMI directors offered three new departments in the industrial and art school: mathematics, carriage drafting, and electrical. The department of mathematics provided classes in arithmetic, algebra, and geometry for beginning and advanced students that supplemented their regular course of study in one of the technical areas. The carriage drafting program represented an early example of an educational "partnership"; OMI directors tailored a course of study specifically for the local carriage-making industry, supplied the physical space for instruction, and hired a local carriage draftsman as the instructor. The industry supplied the first class of twenty-seven students, drawn chiefly from the carriage-making
trade. The electrical department, begun in 1896 with forty-nine pupils, offered instruction in incandescent and arc lighting, dynamos and motors, appliances, transportation systems, and industrial processes, like electroplating and electrotypesetting.40

From its inception the Industrial and Art School exhibited growth in yearly attendance in the antebellum years. (There were marked decreases of students in the Civil War conscription years, however.) OMI school directors were faced with rebuilding their program in the post-war years, in part, due to the availability of drawing instruction in the city schools and the University of Cincinnati's School of Design. In the early 1880s, the OMI technical school finally exceeded its previous peak enrollment with a record 428 students in 1883—just before the economic depression precipitated a drop of sixty-five machines trades students the following year. The late 1880s were a period of rapid growth for the school. Enrollment figures doubled in a matter of four years, reaching a record 720 students in 1890. In 1891, there were 832 students and eighteen teachers at OMI's Industrial and Art School with a projected enrollment of 1,200 the next year.41

An examination of departmental-level enrollments from 1883 to 1890 reveals steady growth in both architecture and mechanical programs. OMI student enrollments in these departments drew predominantly from the machining and building trades, respectively. For example, in the 1890 class of mechanical department students, 53 percent were machinists. The next
largest groups, clerks and pattern-makers, comprised only 7 percent of the department's student body. The same trend is evident in the architectural class with building trades students--carpenters (39 percent) and bricklayers (8 percent)--comprising the largest block of enrollees; student enrollments suggest the collective action of highly occupationally-identified trades, such as one would find among unionized workers. Yet unions never supported the OMI technical school. In general, OMI school directors posed a threat to traditional apprenticeships by removing technical instruction from worker-controlled shop floors to the owner-controlled classroom.42

Prominent civic boosters articulated their views on industrial education that often was colored with strong anti-union sentiment. George Ward Nichols, Cincinnati booster of art education and music and author of Art Education Applied to Industry, believed that industrial schools should be provided by the state or by wealthy persons, with the cooperation of unions since strikes drained capitalists of funds, he claimed, that could be put into the support of industrial schools. Nichols wrote, "If a hundredth part of the money which has been deceitfully and fruitlessly obtained from the working-man upon pretense of the rights of labor had been used co-operatively in establishing industrial schools, the interest of the mechanic and workman would have been far in advance of their present position."43
In addition, a middle-class message of worker self-improvement accompanied most rhetoric on the benefits of a technical education. When the local carriage-making industry initiated the carriage drafting department at OMI, school superintendent Champion remarked that a student who had graduated would find himself "in demand" and "his services valuable," because "in these days of division of labor and duplication of parts, the knowledge required for the practical all-round carriage-maker has begun to be felt as a scarce article." Champion promoted a middle-class ideal that technical education could ameliorate the economic difficulties created by the deskilling of manufacturing jobs. Cincinnati labor unionists, however, interpreted the transformation of labor in a different manner. In May, 1886, industrial action for an eight-hour day left over 32,000 city workers on strike. The unionized carriage-workers, for example, closed all of the major factories in their industry by May 3rd.44

Full-time students were enrolled in all three OMI departments, but the largest group were in the artistic department. Over the years, this department was plagued by fluctuating enrollments as students, mostly female, "shopped around" for the city school that offered a design program best suited to their needs. In the late-1880s, the broad sweep of OMI's technical curriculum brought greater interest among females "indicating a new departure," remarked the board of directors, who predicted "a large increase in their numbers in the coming years": by 1888, the board devoted one room entirely to the
"ladies" due to their increase. Although the architecture and machinery departments were "favored with their presence" in coeducational classes, the majority of females enrolled in the artistic department. "The young ladies," wrote school superintendent Champion, "have the advantage of soft hands and delicate touch, (denied boys and young men fresh from their daily toil in factory and shop)." The superintendent was particularly enamored with the fine work of these upper-level female students who, he suggested, proved to be capable artists: "the 'boys' must sharpen their pencils . . . otherwise their sister pupils will carry off the honors." OMI classes in charcoal drawing, water-color, engraving, and carving prepared students for industrial pursuits in the manufacture of furniture, jewelry-making, silversmithing, and art pottery. Eventually, the popularity of art education and the promise of female employment in the industrial arts prompted OMI directors to establish day classes in china-making, glass painting, and watercolor.45

In general, the popularity of OMI's artistic department was due to the interest of local middle-class women in the arts and crafts. Post-Civil War OMI expositions, in particular, offered women an exposure to domestic beautification through the practical application of the fine arts to manufactured goods. Exposition promoters trumpeted the ability of industrial designers to contribute to economic growth in the city's industrial revolution. As one writer put it, utilitarian art was not merely the "adornment of the private boudoir," but a "source of national wealth." Yet the majority of women in the domestic
arts and crafts movement possessed the leisure and funds for avocational classes in carving, painting, and sculpturing.\footnote{46}

Two Cincinnati women were the leaders of the crafts revival in the city. Mary Louise McLaughlin and Maria Longworth Nichols (wife of George Ward Nichols) were proponents of the decorative arts who helped finance the city's display at the Women's Building in the 1876 Philadelphia Centennial Exposition. More importantly, local female employment in the industrial arts increased due to their efforts in establishing the Rookwood Pottery, a successful business that grew out of their interest in the art pottery movement. Rookwood, noted for its innovative use of glazes, hired locally trained female designers, painters, and potters, often soliciting potential employees directly from the design classes at the Cincinnati Art Academy. At one time, Rookwood's staff of eighty decorators was two-thirds female, but an inequitable treatment based upon gender kept females as junior decorators at a lower rate of pay than their senior-level male counterparts.\footnote{47}

The local art furniture movement—unlike production furniture-making establishments—similarly catered to the aesthetic needs of middle-class females. Public and private wood-carving classes provided local women with a creative outlet for their artistic talents. Benn Pitman, an English emigrant who settled in Cincinnati in 1852, promoted commercial shorthand or phonography (a system developed by his brother, Sir Issac Pitman) but also became interested in wood-carving. His natural affinity for carving—and the educator that he was—led to a
voluntary teaching stint at the University of Cincinnati's School of Design beginning in 1873. When the school was absorbed by the Art Academy in 1887, Pitman continued to offer wood-carving instruction at its new location in Eden Park, next to the Art Museum.

The academy wood-carving classes were subdivided into four grades of difficulty. In the lower-level classes, Pitman emphasized the study of natural forms, such as leaves and flowers, as ornamental decoration; surface and low relief carving; and elementary wood preservation techniques. In the upper-level classes, students practiced both low and high relief carving and advanced carving in difficult materials, such as hardwoods or metals. Generally, the students practiced their carving techniques upon a piece of furniture which they intended to purchase. That is, they would contract with a local furniture manufacturer for a custom-made mantelpiece or chest of drawers that could be disassembled prior to carving, then reassembled by the cabinetmaker at his shop. These middle-class women added their aesthetic sensibilities to the domestic environment or, as Pitman advised, "... beautify good construction, and add adornment to the necessaries of life."48

Apart from the therapeutic value that hand work provided for middle-class women of leisure, the OMI message of success was far more suggestive among male industrial workers. OMI directors consciously promoted a masculine model of mobility and self-help through yearly catalogs, circulars, and press releases (see FIGURE 1.). "There are boys there with the grime of their daily
Ohio Mechanics' Institute
Industrial and Art School.

WANTED.

Wanted—the world wants boys to-day,
And she offers them all she has for pay,—
Honor, wealth, position, fame.
A useful life and a deathless name.
Boys to shape the paths for men,
Boys to guide the plow and pen,
Boys to forward the task begun;
For the world's great work is never done.

The world is anxious to employ
Not just one, but every boy
Whose heart and brain will e'er be true
To work his hand shall find to do.
Honest, faithful, earnest, kind;
To good awake, to evil blind;
Heart of gold without alloy.
Wanted—the world wants such a boy.

Boys of the Institute you can show
What heart, and brain, and work will do,
And let the world around you know
That you have the vim to carry you through.

FIGURE 1. Circular of the Ohio Mechanics' Institute, n.d.
(SOURCE: Cincinnati Historical Society)
toil still on their hands and faces," wrote a newspaper reporter for the Cincinnati Times-Star, a recent visitor to the school. "They are not always going to work at the bench," he wrote, "Not they." "There are always plenty for that, and there is always plenty of room up higher." 49

For nineteenth century Cincinnatians, however, Miles Greenwood epitomized the Algerian self-made man, and when he died in 1885, OMI directors eulogized "the greatest friend the Institute ever had." "Thousands of young mechanics . . . and those who follow them, will cherish the lesson of his useful life," the directors wrote, "long after time shall have erased it from the iron columns and countless articles of domestic use that his factories have made." The OMI adult technical curriculum would serve yet another generation of aspiring mechanics. 50

The Manual Training High School

The manual training high school in the U.S. was the pioneer effort of Calvin M. Woodward who in 1878 combined shop work and academics at his school on the campus of Washington University in St. Louis. He called his new pedagogy "symmetrical education" because he believed it heightened both intellectual and physical development. "Manual education should be as broad and liberal as intellectual," Woodward wrote, who avoided the teaching of trades because they were "too narrow for educational purposes." Occupational training, Woodward claimed, required that students practice and perfect the making of marketable items. Woodward thought, however, that shop projects should be discontinued once
the students learned the tool usage and laboring process for any
given task. "If the shop were intended to make money," he said,
"the students would be kept at work on what they could do best,
at the expense of breadth and versatility." Woodward claimed
that the addition of limited shop time, eight or ten hours per
week, justified the added expense of materials, tools, and
teachers. Although not wishing to alienate his fellow liberal
educators, Woodward appealed to the manufacturer and businessman
who desired "practical" results from school. He hoped his
adolescent boys would become adequately prepared for life by
engaging in manipulative tasks that paralleled the real world of
industrial work. "Our great object," Woodward claimed, was to
"foster a higher appreciation of the value and dignity of
intelligent labor, and the worth and respectability of laboring
men." 51

In 1884, the Toledo, Ohio, school system established the
first public manual training curriculum in the state which
offered teenage school children instruction in carpentry and
cooking. Manual training in Toledo was justified as a legitimate
part of the "manual culture" curriculum that included music,
drawing, writing, and physical training. Yet some common school
educators were skeptical of the industrial curriculum there. One
Ohio educator, writing in Ohio Educational Monthly in 1888,
surmised that the popularity of Toledo's manual training program
far exceeded its putative benefits to the taxpayer. "Everybody
agrees that several screws are loose in the social machine, but
by no means do all agree that public school manual training is
the one thing that will put a screw-driver into the hands of the present generation of young Americans." H.C. Adams of Toledo's High School countered that his manual training program was not merely job training. "We do not teach trades," Adams claimed, "We will agree with the opponents of manual training as to that." Another educator suggested that the Toledo manual training high school graduates would raise the number of male secondary school graduates in the state: it "furnishes a fertile theme for discussion, as well as a hint as to how the boys may be kept in schools until they complete the high school curriculum." Within educational circles, debates about the effects of manual training were protracted and heated affairs.52

John Hancock, the Ohio State Commissioner of Common Schools from 1888 to 1891, similarly questioned the ability of manual training schools to "unite with the book-work" of the public schools. Yet Hancock hoped that the manual training high school would assist in the career aspirations of dropout prone boys who "desired to be a part of the great business world." In manual training high schools, Hancock suggested, the shops and drafting rooms would provide a protected work place "where they [boys] can feel themselves employed." Hancock believed that a greater number of males continuing onto secondary schools provided the necessary readjustment of gender misproportions—educators like Hancock already claimed that the high school was too feminized. Additionally, Hancock believed that high schools would legitimize learning—in a middle-class sense—so that boys would accept academic instruction more readily as a necessity for career
preparation. He wrote, "Many boys who have gained a certain amount of information—information enough to begin to appreciate how much there is to learn, will desire more knowledge, and we will see more of the right class of young men at polytechnic schools, preparing themselves to apply the arts and sciences to the practical work."⁵³

In 1882, a special committee on technical education was formed at the Ohio Mechanics' Institute to investigate the possibility of establishing a manual training high school in the city. The three-member committee, consisting of William L. Robinson, building contractor; John S. Woods, paper manufacturer; and Gazzam Gano, insurance company executive, was instructed to "confer with similar delegates from other bodies interested in the movement." Their report, delivered the next year to OMI directors, emphasized the spirit of cooperation needed to start a city-wide manual training high school. Although reluctant to undertake additional expenses and facility expansions, OMI directors agreed to a preliminary investigation of a school site at Music Hall, in the Power Hall Building. Three years later, in 1886, OMI directors were still uncertain as to the source of revenue needed for such a school—they were $7,500 in debt due to recent ground-floor improvements of their building at Sixth and Vine—but suggested that their upper floors be renovated for additional property rentals.⁵⁴

In that same year, the Technical School of Cincinnati (TSC) was established by monetary pledges from sixty-four civic-minded men who believed that a manual training high school would benefit
the city's growing commercial and manufacturing needs. The school was incorporated on July 27, 1886, with a capital stock of $5,000 issued in $50 shares. William L. Robinson was appointed chairman of the TSC board of directors in October, and the school opened the next month, at Music Hall, with just three students and a meagre operating budget. The second year attendance jumped to forty pupils, and by June, 1888, there were sixty-four in attendance, with twenty-nine in the first year, thirty in the second, and five special students.²⁵

Some of the original TSC board members also belonged to the Ohio Mechanics' Institute, Order of Cincinnatus, or the Commercial Club. The Order of Cincinnatus, begun in 1882, promoted technological advancements through industrial expositions. The Commercial Club of Cincinnati, founded in 1880, promoted the city's civic and commercial welfare.²⁶

In the fall of 1887, several members urged the Commercial Club to raise the necessary funds for the continued support of TSC. One year later, on December 1, 1888, at a club banquet, the subject of industrial education was mentioned in uplifting speeches about the importance of TSC to the city "that would be felt through generations." Afterwards, more than $30,000 was pledged from among fifty subscribers. Founding organizers of the school, men like Charles Schiff, president of the municipally-owned Cincinnati Southern Railroad, pledged $10,000; Matthew Addy of Addyston Steel and Iron Works pledged $1,000; Procter & Gamble soap manufacturers pledged $2,000; and Stewart Shillito, a dry goods merchant, pledged $1,000. Succeeding
Robinson as board chairman was Melville E. Ingalls, president of the Cleveland, Cincinnati, Chicago & St. Louis (Big Four) Railroad, and $1,000 donor, who believed that TSC held "the Seed and Promise of Lasting Life."  

The technical school was opened to youths fourteen years of age or older who were "prepared for entrance to High School." All candidates for admission to the first year or advanced classes were required to pass two placement examinations which determined their abilities in reading, writing, spelling, geography, English, arithmetic, and mathematics. Special students, admitted if they had completed the "mental work" of their grade level, were summarily exempted from TSC academics and attended only shop and drawing classes. TSC tuition was costly, with a $75 charge in the first year that escalated to $150 in the fourth year, reflecting additional operating costs for machine-powered shops in the upper-level grades. Also, students were required to pay for all books, $5 to $6 per year; drawing instruments, $10 to $15 per year; and their own shop aprons and coveralls. A $5 refundable deposit was required from each student for possible damages to the school or equipment.

Students were not allowed to offset their tuition by the sale of shop articles—although they had to pay for shop materials they used—and were warned that "there is no chance for pupils to pay their way [in school] by their labor [in shop]."  

The four-year TSC curriculum (changed to three years in 1890) consisted of a six-hour school day subdivided into seven forty-five minute periods and two periods of recess. Four
periods were devoted to academics: mathematics, science, English, and history. The remaining school day consisted of two periods of shop work and one period of drawing. Shop classes emphasized tool instruction in carpentry and joinery, wood-carving and turning, patternmaking and molding, iron forging, blacksmithing, brazing and soldering, and machine tool operations.

In its early years the technical school was supported by city manufacturers, businessmen, industrial leaders, civic boosters, and educators. Invited speakers at the first and second closing exercises in 1887 and 1888 included a superintendent and ex-superintendent of the local common schools, a physics and a chemistry professor at the municipal university, a city inspector of industrial smoke and fire escapes, and a local minister. In addition, the school directors received product donations from the industrial community for the carpentry, wood turning, and drawing departments. Exposition commissioners at the Cincinnati Centennial of 1888 permitted the use of a gas-powered Van Duzen engine--on display in Machinery Hall at the rear of Music Hall--for metal turning operations in the third-year TSC classes. That year, the technical school was temporarily displaced from its home in the art rooms at Music Hall during the exposition but was housed on the third floor of the 5th District School, courtesy of the Cincinnati Public Schools. Later, industrial donations of shafting, pulleys, belts, engines, lathes, and grinders enabled TSC directors to begin permanent operations in the forge and machine shops for the 1890 to 1891 academic year,
and two additional shop instructors were hired that year as well.59

TSC shop classes were based upon the Russian system of classification, identification, and use of hand tools. In the late nineteenth century, Russian technical educators perfected an occupational taxonomy of pedagogical significance. The 1876 U.S. Centennial Exposition in Philadelphia was a showcase of Russian advances in industrial education; there were three important exhibits from the Pedagogic Museum in St. Petersburg, the St. Petersburg Practical Technical Institute, and the Imperial Technical School in Moscow. The international team of eight judges responsible for evaluating education-related displays evidently were impressed with the Russian exhibits. They reported that the schools "cut the knot" by streamlining the teaching of industrial subjects. "Practical instruction," they wrote, "could be reduced to a comparatively few simple elements which . . . may be easily mastered . . . as to give zest and satisfaction." In the schools, shop activities in woodworking, forging, and machining were complemented by illustrated tool grouping that showed the instruments used for each task. Additional models taught successive steps in a variety of work processes. The Russians introduced a theory of instruction that reduced the study of mechanical arts to a series of formal shop exercises in tool proficiency. The end result of student labor, however, was never the actual creation of finished hand-crafted items.60
TSC students worked through a series of graded instruction in tool usage, layout, sketching, and execution of simple repetitive exercise in wood joinery or metal welding. Usually the instructor offered a demonstration of the daily lesson, the students recorded each lesson in a notebook, and in the remaining shop period students performed the task. Additionally, students worked alone without peer interaction since shop practice was "intended to be disciplinary and to promote habits of self-reliance." Each student, issued a set of hand tools, was assigned his own workbench or forge and anvil. Altogether, interaction with other pupils was minimized even though shop quarters in the art rooms at Music Hall were cramped. In fact, student self-reliance and independence were reinforced by the directors’ advice to "mind your own business" or M.Y.O.B., which became the school motto.61

One unintended consequence of the shop system of individualized instruction was the necessity for numerous hand tool sets, separate job stations or work areas, and duplicates of power machinery. With yearly student attendance increasing, TSC school directors needed capital improvements for the shops. In 1888, the school moved back to Music Hall, on the second floor of the north wing of Power Hall, and the carpentry and woodturning shops, combined in a 5,400-square-foot space, cost the directors $13,245.31 to equip. The next year, the directors anticipated expenditures for tool sets, school furniture, and physical apparatus for additional industrial shops and science laboratories "as the increased attendance will demand." TSC
directors defrayed operating expenses, however, by having students fabricate in-house equipment, especially once the shops were fully operative. For example, from 1891 to 1895, the machining classes built a 15-horsepower compound stationary steam engine which replaced a smaller slide-valve engine in the basement of Music Hall as the principle power source for the school shops. The students built two additional steam engines, a 10-horsepower slide-valve engine and a 30-horsepower triple-expansion engine; fifteen wood lathes for the carpentry shop; and, later, a 200-light dynamo for electricity in the physics laboratory. In just one year, the carpentry classes built two bookcases, one for the library and the other for a classroom, and six frames for pictures of the past graduating classes.62

In 1888, TSC Principal Klemm recommended that physical culture be integrated into the curriculum and asked that the board of directors approve the purchase and installation of gymnastic equipment in a small section of the school. Daily morning and afternoon recess, Klemm maintained, provided ample exercise time for the "harmonious development of the human being." Klemm seemed overly concerned with the physical well-being of his students and viewed their inactivity as potentially debilitating—substantiated by a Victorian medical community that claimed sedentary activity and overwork, especially among middle-class men and women, created nervous instability as well as physical degeneration. Consequently, TSC directors promoted manual training as preventive medicine. "How
many are there who follow sedentary occupations and who do not take sufficient exercise?" asked George Carothers, secretary and treasurer of the school. "If they understood constructive drawing and the use of tools," he continued, "perhaps, they would enjoy better health and a longer lease on life."63

That same year Eamons R. Booth assumed the assistant principalship of the school (Booth was principal from 1889 to 1898), and he, too, supported the notion of manual work and "vigorous physical exercise." Booth had made a detailed study of the central nervous system, the surface structure of the brain, and the circulatory system; he first formed his ideas on manual training as instructor at Calvin Woodward's school in St. Louis.

In 1889, Booth addressed the Ohio Teachers' Association at Toledo about his psycho-physiological theory. Booth believed that the brain was composed of three primary functions: sensory, intellectual, and psycho-motor. The psycho-motor area related to the arms, legs, head, and trunk, he continued, and was physically located on the brain surface between the other two functions. The human brain was divided into two hemispheres with an outer layer of brain cells connected by an inner layer of nerve fibers, and he noted that the neural fibers were the telegraphic lines that communicated messages between the body parts and brain cells via the spinal cord. Since the circulatory system, which carried nutrients in the blood, supplied the brain with nourishment, Booth argued that heightened mental powers were dependent upon the actual number of well-developed brain cells. The motor functions were the essential vehicle for transmitting fresh blood
to all areas within the brain via the cerebral arteries. As a result, he said, the intellectual functions are "cleansed of all dead tissue and toned up to their highest pitch."64

Manual activity, Booth claimed, was healthful because it supplied the intellect with the purification properties of fresh blood. Booth reasoned that the effect of physical activity upon increased blood circulation was "the most powerful line of argument in favor of Manual Training." Yet Booth pointed out that manual labor, like calisthenics, military drill, and gymnastics could fail to stimulate the faculties if they became merely reflex automatic activities. Furthermore, the most educative aspects of psycho-motor action, he held, involved the development of adolescent self-discipline. Booth cautioned that a boy's overattention to physicality could become morally vitiating. "Ideas that are constantly associated with the physical powers are low," he wrote, "and if indulged in will sooner or later determine the individual's character." Since Booth believed that the use of tobacco, overexertion in athletics, excess of light reading and amusements, and peer group exploits threatened to undermine the strength and will power of adolescent boys, he also believed that manual training at TSC offered adult supervised activity that counteracted these evils. Booth left TSC in 1898 to pursue a career in osteopathic medicine.65

The Technical School of Cincinnati met the needs for professional engineering education at a time when engineering colleges were just beginning to organize. Engineers were, by and
large, practitioners who acquired their expertise in the field. In the late nineteenth century, however, technical education at the post-secondary level was changing rapidly. U.S. graduates of 126 engineering schools almost tripled in the last two decades of the nineteenth century—in the 1880s, there were 3,837 graduates and in the 1890s, 10,430 graduates. In the first decade of the twentieth century, the number of engineering graduates again doubled to 21,000. Consequently, manual training high schools laid a foundation for pre-engineering education and job training that was enhanced by greater articulation between manual training schools and the engineering profession.

An examination of job placements and parental residents of 227 TSC graduates from 1890 to 1900 provides a description of relatively homogenous middle-class characteristics of high school enrollees. Forty-five percent of graduates entered technical fields, like drafting, machining, and engineering. Five percent of graduates attained supervisory status in industry as managers or superintendents. Additionally, TSC graduates entered professional fields, such as medicine and law (2 percent); architecture (10 percent); and education (3 percent). Fifteen TSC graduates entered out-of-state engineering colleges, such as Purdue University, Rose Polytechnic, Massachusetts Institute of Technology, and Rensselaer Polytechnic. And eighteen graduates entered family businesses. Interestingly, fifty-two of the graduates accepted technical positions outside the Cincinnati environs, in places as far away as California and Alaska. In Cincinnati, suburban neighborhoods were well represented from
among 107 local graduates; over 53 percent lived on the hilltop areas of Price Hill, Clifton, Mt. Auburn, Avondale, and Walnut Hills that circled the downtown river basin. In the 1890s, TSC directors reached a much larger and younger audience with sloyd classes for the intermediate grades. (In 1888, Boston’s Sloyd Training School opened its doors and helped spread the idea of teaching industrial arts in the grammar grades.) At first, TSC directors experimented with a five-month, short-term sloyd session for boys aged thirteen or older. In September, 1894, an intermediate department was established providing two fifty-minute periods of sloyd daily. TSC director James B. Stanwood believed that sloyd would curb youthful flight into industry at this critical juncture in a boys life. "To keep boys interested in school is our aim," he wrote, "and we feel that the younger they are . . . the greater the chances for making them attached to school life." Twenty-four students were enrolled that first year, increasing to thirty-five in the 1896 to 1897 academic year. Many of the intermediate department students were supported by scholarships raised, in part, from TSC donors. In the mid-1890s, the technical school directors were faced with financial difficulties. Barely able to pay off its yearly deficits running into the thousands of dollars, the school was strained by an economic depression that affected the city and the nation. From 1893 to 1897, wages and production declined, banks and businesses failed, and the national unemployment rate soared to 20 percent. Local public school educators, feeling the
effects of the depression on the children of the poor, organized relief efforts to furnish clothing and books, and local labor unions raised money for free books for children of the unemployed. Even the Ohio Mechanics' Institute lost rental income from its community hall due to depression-related cancellations of public events.\(^6^9\)

At one time, TSC directors predicted that with an enrollment of 250 students the school would become self-sustaining. Until then, the directors relied upon annual subscriptions, payable in five yearly installments. Because of the depression, however, subscriptions were uncollected, creating a critical shortage of cash revenues. Additionally, TSC directors curtailed a scholarship program initiated in 1891. By the end of the decade, TSC was still unable to recover fully from its financial plight. Anticipating low enrollments, TSC directors were forced to raise tuition to $5 in each of the classes, and students were expected to pay yet another yearly school fee of $7.50 for shop materials. Enrollments in both departments in fact remained low. The intermediate department, with seven students, was discontinued at the end of the 1899 to 1900 academic year. In 1901, the technical school was officially transferred to the management of the University of Cincinnati and relocated at the Clifton campus.\(^7^0\)

Although the school had graduated just 227 students, TSC directors looked with pride upon their small contribution to the education of Cincinnati's middle classes. They had taken the boy from the "threshold of the Technical School . . . out into the
world where he will be able to successfully fight the battles of life and need never become a mere 'hewer of wood and drawer of water.'

Conclusion

In the formative period, from 1886 to 1900, technical programs were implemented in privately-financed intermediate, secondary, and post-secondary settings. Local middle classes, desiring the advantages of occupational mobility without the drawbacks of prolonged and limited apprenticeships, invested in industrial education for their children. In Cincinnati, both the Ohio Mechanics' Institute and the technical high school, sensitive to the post-graduate plans of middle-class youth, promoted technical and professional careers.

By the early twentieth century, an enthusiasm for industrial education was shared by Cincinnati's civic leaders, manufacturers, educators, and municipal and social reformers. Their agitation for manual training surfaced in the curriculum of the city's public schools.
NOTES


13. Ibid., (1883), 63; ibid., (1886), 81-82. Also, see John B. Peaslee, "Moral and Literary Training in Public Schools," Education 2 (November 1881):150-165.


15. CPS, Annual Reports (1884), 61.


18. "An Important Decision," Ohio Educational Monthly 29 (March 1900):181-182; "Dr. White Defeated By The Cincinnati Boodlers," idem, 38 (1889):275-276; CPS, Annual Reports (1889), 56-57. Temperance education was added to the Ohio common school curriculum, and teacher licensing on the subject was mandatory. The state exam required, in part, an appropriate knowledge of the relationship between alcohol and narcotics to human anatomy. For a sample list of state examination questions, see Ohio School Reports (1889), 183, 189.


21. CPS, Annual Reports (1892), xx, 87; ibid., (1893), 44-45, 55, 78; Janet Miller, "Urban Education," 335; Shotwell, Schools of Cincinnati, 282-289. On the German Turnverein and the public schools, see Thomas W. Nightingale, "A History of Physical Education, Sport, Recreation and Amusement in Cincinnati, Ohio in the Nineteenth Century," (Ph.D. diss., Ohio State University, 1979). Interestingly, Morgan's emphasis on systematic physical activity in the schools coincided with his desire to employ more male teachers to offset the large number of female teachers in the city schools. By 1900, there were 980 teachers in the public elementary and high schools, 829 females and 151 males. See Cincinnati Board of Education, History of the Schools of Cincinnati and Other Educational Institutions, Public and Private (Cincinnati, 1900), 134. Also, see "Men as Teachers," The Ohio Teacher 20 (April 1900):197.
22. CPS, Annual Reports (1894), 47; ibid., (1901), 78.


25. CPS, Annual Reports (1886), 114-115; quoted in Caldwell, "History of Art Education," 113. On drawing instruction in the Boston common schools, see Arthur D. Efland, "Art and Education for Women in 19th Century Boston," Studies in Art Education 26 (1985):133-140. In preparation of an exposition commemorating the centennial of the founding of Cincinnati, school superintendent Emerson E. White cautioned the board of education about the "undue emphasis" upon design careers. "It must never be forgotten," he said, "that the central duty of the school is not to make artists or artisans, but to prepare the young to meet successfully the obligations and duties of coming manhood," see CPS, Annual Reports (1887), 77.

26. CPS, Annual Reports (1887), 33-34. Cooking classes for high school females were established in September, 1892, at Woodward and Hughes High Schools, and sloyd and sewing classes for deaf children were established in September, 1895.


32. John B. Foote, The Schools of Cincinnati (Cincinnati, 1855), 82-91; Ohio Mechanics' Institute (hereafter, OMI), Report of the Annual Fair, 1839-1841, Pamphlet Collection, Ohio Historical Society. Labor historians suggest that communities of artisans shared similar pre-modern ideologies. For example, the artisans of New York City regularly celebrated public anniversaries, like the 4th of July, with parades rich in the symbolism of their crafts and the new Republic, see Sean Wilentz, Chants Democratic: New York City and the Rise of the American Working Class, 1788-1855 (New York: Oxford University Press, 1984); also, see Herbert G. Gutman, Work, Culture, and Society in Industrializing America (New York: Alfred A. Knopf, 1976).

33. Fiftieth Anniversary of the Ohio Mechanics' Institute, 1828-1878 (Cincinnati, 1878), 12-15.


35. Businessmen and co-owners of manufacturing establishments comprised the largest group of OMI board members. In Greenwood's tenure they represented the following: publishing houses; a lock manuf.; a civil engineering company; a sheeting & cotton yarns manuf.; a fancy enameled grates & railings manuf.; a cigar manuf.; a scale & tin ware manuf.; a coal & coke dealer; a jewelry manuf.; a pork & beef packing house. See Williams' Cincinnati Directory (Cincinnati, 1851-1853).


38. One OMI commencement speaker, in 1892, specifically addressed the need for the improvement of homes among the working classes, and "startled his audience by asserting that the working people of Cincinnati have poorer homes than those of their class in any other American city." See Clarke, Art and Industry, 3:681.


40. Clarke, Art and Industry, 3:661-679; OMI, Annual Reports (1896), 36

41. Ibid., 3:673-674.

42. Anti-union sentiment at OMI played a major part in the promotion of a proposed manual training department in 1886, see Clarke, Art and Industry, 3:626; Ross, Workers on the Edge, 167, 323.

43. George Ward Nichols, Art Education Applied to Industry (New York, 1877), 24-25; Clarke, Art and Industry, 3:679; Ross, Workers on the Edge, chap. 11.


45. OMI, Annual Reports (1889), 19.


53. *Ohio School Reports* (1889), 16. John Hancock, a native of Clermont County, Ohio, was Cincinnati's superintendent of schools from 1867 to 1874, see William H. Venable, *John Hancock, Ph.D.* (Cincinnati, 1892), 31-36.

54. *OMI, Annual Reports* (1883), 12-16; ibid., (1886), 8-9.


57. Langsam, *Centennial History*, 147; Eamon R. Booth, "History of the Technical School of Cincinnati," MSS 708, Folder 1, 2:4, Cincinnati Historical Society. Besides Ingalls, the directorship of the "Big Four" Railroad (chartered in 1845) consisted of Cornelius Vanderbilt, William K. Vanderbilt, and J. Pierpont Morgan, see John Paul Jones, "The Big Man of the Big Four,"
Cincinnati Historical Society Bulletin 32 (Fall 1974):78-103; and
S.B. Nelson and J.M. Runk, History of Cincinnati and Hamilton
County, Ohio: Their Past and Present (Cincinnati, 1894), 292-293.


59. Ibid., 3:700-711.

60. Reports of the United States Centennial Commission, U.S.
International Exhibition Philadelphia 1876 (Washington, D.C.:
Government Printing Office, 1880), 8:165. One of the earliest
occupational classification schemes were British hydrographer
Joseph Moxon's monthly illustrated catalogues of artisan tools
beginning in 1677.

61. Ibid., 3:700-701; TSC, Catalog (1890-1891), 18. On
middle-class work ethic in nineteenth-century juvenile
literature, see Daniel T. Rodgers, The Work Ethic in
Industrial America, 1850-1920 (Chicago: University of Chicago
Press, 1974), chap. 5. By 1892, TSC directors recognized that
instruction in science laboratories and shops benefitted from
some group activity where four or five students selected a
"leader or foreman who superintends" and reported to the teacher
on the progress of the group; see TSC, Catalog (1892-1893), 19.

62. Clarke, Art and Industry, 3:717; TSC, Catalog (1895-1896),
15, 21-23.

63. Clarke, Art and Industry, 3:703, 713-714; F.G. Gosling and
Joyce M. Ray, "The Right to be Sick: American Physicians and
Nervous Patients, 1885-1910," Journal of Social History 20
(Winter 1986):251-267; and Barbara Sicherman, "The Paradox of
Prudence: Mental Health in the Gilded Age," Journal of American
History 62 (March 1976):890-912; also, see James Whorton,
Crusaders for Fitness: The History of American Heath Reformers
see Richard H. Shryock, Medicine and Society in America,
67-72.

64. E.R. Booth, "Industrial Education," 415-439, and "The
Philosophy of Manual Training," National Education Association

65. Booth had been superintendent of schools in Kirkwood,
Missouri, and his enrollment in the American School of Osteopathy
at Kirkwood provided him with an opportunity to study under
founder Andrew Taylor Still. Osteopaths, slowly gaining
respectability as legitimate medical professionals, advocated
"drugless" cures such as proper diet, nutrition, and exercise.
Although noted particularly for their use of bonesetting
techniques in the restoration of wellness, osteopaths, like many
pre-modern physicians, believed in the restorative properties of
blood, a derivation of an earlier humoral theory of disease; see


67. TSC, Catalog (1900-1901), 24-36.


70. TSC, Catalog (1890-1900); ibid., Report of the Board of Trustees (1889-1896); Catalogue of the Technical School, University of Cincinnati Bulletin No. 16 (May 1902), 9.

CHAPTER III
THE EXPERIMENTAL PERIOD, 1901-1912

Introduction

This chapter explores the complex events involved in the implementation of manual training classes in the public schools of Cincinnati under superintendent Franklin Dyer. In the first section of this chapter I describe how some key local reformers allied with school superintendent Franklin Dyer and comprised the progressive leadership. The next section explains the public manual training curriculum in several tenement district schools for the children of the industrial working classes. The third section of this chapter takes up the relationship between manufacturers and Dyer in setting up a public school for local machine and printing trades apprentices. The fourth section describes the part-time schooling arrangements that Dyer created in the city—as a result of the 1910 child labor law—for working children under age sixteen. The next section, on the Vocation Bureau, describes the operations of the school bureau, including the psychological research on 1,000 working and non-working youths in the city. Secondary Education in Transition offers Dyer's rationale for manual training and domestic science classes in the local high schools. The last section of the chapter
describes the school superintendent's use of cooperative education—first developed by Herman Schneider at the University of Cincinnati—for the vocational component of two of the city's high schools.

The Progressive Leadership

In the nineteenth century, most proponents of manual training high schools believed that their courses were coterminous with academic subjects in the classical high school curriculum. Students who took classes in shop work and cooking, they claimed, were enriched by a deeper intellectual understanding and broadening of cultural values. By the turn of the century, however, some manual training educators deviated from the conventional wisdom in their field and promoted a viewpoint more applicable, they thought, to the industrial demands of an orderly, disciplined, and efficient work force. In the first decade of the twentieth century, these new manual training advocates together with other progressive educators launched a reform movement that permanently transformed the elementary and secondary school curriculum.¹

Franklin Dyer, a native of Warren County, Ohio, and an 1879 graduate of Ohio Wesleyan University, was a classroom teacher who moved through the ranks of public school administration via positions as superintendent in several small towns around southwestern Ohio. Prior to returning to Cincinnati as superintendent in 1904 (Dyer was assistant superintendent there
in 1902), he served as dean of the Ohio State Normal School in Oxford for one year.

Over time, Dyer realized that progressive education in Cincinnati would be hindered by the political machine of George B. Cox. Cincinnati's ward-based school board elections often ensured that board members were Cox nominees who had received prior election approval by local precinct captains. Once elected to the school board, these men became "the absolute creatures of the machine that made them." Dyer favored a small, seven-member, city-wide school board and non-political merit appointments to teach or administer, but he faced difficult opposition from the Cox forces. By 1911, there were twenty-nine ward-based members and four at-large members—a temporary compromise between the large and small board forces that lasted until the 1913 Jung Act authorized small school boards in Ohio. Rather than fight the political battles between large and small school boards, Dyer resigned in 1912 to become superintendent of the Boston City Schools at an annual salary of $12,000, one-third more money than his income in Cincinnati. During his tenure, however, Dyer earned the backing of state and local progressive educators, social reformers, manufacturers, labor leaders, and several influential school board members to forge a coalition dedicated to educational reform. ²

In 1904—Dyer's first full year—the city's public school administrators organized a professional association called the Schoolmaster's Club. The club disseminated a unified message of educational reform. Monthly luncheon meetings provided an
opportunity for members to participate in formal paper presentations and discussions about school reform. An annual March dinner meeting featured invited addresses by important national figures in the progressive education movement: Paul Hanus of Harvard College delivered a paper on industrial education in 1909; and, in 1912, David Snedden, Massachusetts Commissioner of Education, presented "Tendencies in Industrial Education." In 1909, the club established a Committee on Industrial Education and Legislation and participated in state lobbying for the creation of an industrial education commission that was proposed by the Ohio state chapter of the National Society for the Promotion of Industrial Education (NSPIE). In 1910, Dyer was named to the board of directors of Ohio NSPIE.3

By bringing together a variety of business persons, labor leaders, and educators in discussions on industrial education, NSPIE (the predecessor of the American Vocational Association) served as an umbrella organization for activities geared to the educational, industrial, and social "conditions and sentiments" of the differing regions. Begun in 1906 by a group of nationally prominent manual training educators, NSPIE developed into a highly efficient lobbying interest group. (NSPIE peak membership years were from 1908 to 1910 with approximately 1,000 dues-paying members.) Early on, NSPIE leaders recommended methods of campaign propagandizing that were based upon a sound knowledge of local industrial conditions coupled with an ability to "preach the gospel of practical education for efficiency whenever the opportunity might arise." After just one year of operations,
NSPIE officers claimed a federation of thirty-eight state committees, of which Ohio was one.4

Beginning in 1907, a group of Ohio businessmen and educators organized a NSPIE committee devoted to publicity for industrial education at the state level. Ohio NSPIE, primarily composed of urbanites, had sixty-three members in 1909, with the majority residing in the state's four largest cities: Cleveland (15), Cincinnati (9), Columbus (8), and Dayton (3). Ohio NSPIE, which was centered in Columbus, introduced several industrial education bills in the state legislature that proposed a commission for the study of industrial training needs. Other state legislatures proposed similar investigatory groups, modeled after the Massachusetts governor's task force on industrial education: Maryland in 1908, and Michigan in 1909. Yet in Ohio, the industrial education commission was never empaneled because state legislators refused to authorize the necessary funds.5

Ohio NSPIE leaders were more successful in the passage of two other important pieces of legislation, the Tuttle bill, and the 1910 child labor law. The 1909 Tuttle bill permitted city school boards to fund manual training and domestic science classes. One year later, in the spring, the 1910 child labor law was enacted that, in part, upgraded the compulsory education law for working minors. Franklin Dyer, Edward N. Clopper (Ohio Valley secretary of the National Child Labor Committee), and Edith Campbell (Cincinnati school board member and director of the Schmidlapp Bureau for Women and Girls) were instrumental in achieving passage of the new child labor law.6
Edith Campbell and Edwin Clopper were progressive activists who devoted their lives to social service and educational work throughout Ohio but primarily in Cincinnati. Clopper, a Cincinnati native, received his baccalaureate degree in 1897 at Bethany College, West Virginia. Shortly thereafter, he launched a teaching career in Cincinnati. Then he spent the next eight years in Puerto Rico serving the island's public education system. In 1903, Clopper became superintendent of schools in San Juan District; in 1907 he was appointed general superintendent of the schools of Puerto Rico. Upon his return to the United States in 1908, Clopper was appointed field secretary of the National Child Labor Committee (NCLC) and authorized to investigate the conditions of child labor in the Ohio Valley. (NCLC staff photographer Lewis W. Hine worked with Clopper on this study.) Clopper served in this capacity from 1908 to 1921 (except for one year, in 1910, when he became superintendent of the Cincinnati House of Refuge). During his tenure in Cincinnati, Clopper wrote many books, articles, and reports including Child Labor in City Streets, his 1912 dissertation at the University of Cincinnati (UC) that was published as a book. In later years, Clopper devoted his time to academic teaching, first at the University of Cincinnati and then at The Ohio State University.7

Edith Campbell, a native of Ripley, Ohio, devoted over fifty years to social service in Cincinnati and Ohio. In 1906, after completing the master of arts degree at the University of Cincinnati, Campbell was asked by banker and philanthropist Jacob Schmidlapp to direct a fund for the education of young girls "in
preparation for womanhood by bringing their minds and hearts under the influence of education." The Charlotte R. Schmidlapp Fund, established in memory of Schmidlapp's nineteen-year-old daughter killed in an auto accident in France, was a scholarship loan program and, later, an employment bureau for needy girls and working women in Cincinnati. Campbell, a former research assistant in the UC Department of Economics, served as "investigator" of local educational and employment conditions of girls and women as well as loan interviewer for the Schmidlapp Fund. In 1911, Campbell was elected to the Cincinnati board of education as a member-at-large, receiving a last-minute political endorsement from fellow Cincinnatian and U.S. president, William Howard Taft. In 1912, Campbell helped organize the Grand Rapids, Michigan meeting of the National Vocational Guidance Association, and she served on its executive council as well. In 1921, Campbell became director of the Cincinnati Vocation Bureau of the public schools—an office she had created in 1910. In later years, Campbell was appointed to many committees devoted to educational and social work, such as the local Community Chest board of directors and The Ohio State University board of trustees.8

Dyer also worked closely with UC president Charles Dabney. A native Virginian, Dabney believed that the economic future of the South was dependent upon the development of its natural and human resources. Viewing the devastation of the Civil War-torn countryside, Dabney embarked upon an educational career with the "conscious purpose" of aiding in the material progress of his
fellow Southerners. In 1880, after receiving the Ph.D. in chemistry from the University of Goettingen, Dabney carried out an earlier pledge to rebuild the agricultural base of his beloved region—a twenty-five-year professional commitment that included employment as professor of chemistry at the University of North Carolina, director of the North Carolina and Tennessee agricultural experiment stations, U.S. Assistant Secretary of Agriculture, and president of the University of Tennessee.9

In 1904, Dabney arrived in Cincinnati to become president of the municipal university situated on the hillside suburb of Clifton. The new position offered Dabney the opportunity to fulfill his dreams of progressive education. Higher education, Dabney claimed, developed accomplished leaders armed with the latest scientific and technological advances. "Ours is a day of experts," he charged; "in every field of industry, in all matters of health and sanitation, and even in charitable and religious work we confide more and more in the specialist."10

In 1905, Dabney opened the College for Teachers, established, in part, on Dyer's insistence that the hiring of public school teachers be placed on meritocratic grounds—that is, restricted to those who had received formal instruction in pedagogy. Prior to that time, the city normal school (established in 1868) supplied a large proportion of teachers for the public schools. At the time the normal school closed its doors in 1901—due to a surplus of teachers "clamoring for appointment in the local schools"—there was no other local agency for teacher training. In order to fill this void, the university offered extension
classes on Saturdays and summer schools for teachers. When the Cincinnati school board ruled that college graduates with formal pedagogical training would be placed on a "preferred list" for appointment to the schools, that action hastened the creation of a college for teachers, one that offered pedagogical training as well as merit lists of qualified candidates for the city's schools. In a period of seven years, from 1906 to 1913, the UC College for Teachers supplied about 56 percent of the teaching appointments to the local schools. By 1914, there were 194 graduates of the college, a three-fold increase since the opening of the school.\textsuperscript{11}

Over the years, Dabney hosted an annual conference of Secondary School Principals and Teachers in Accredited Schools of the University, an organization that established uniform standards for high school graduation, and Dabney brought nationally known educational leaders to campus; men such as G. Stanley Hall of Clark University, Paul Hanus of Harvard College, Paul Monroe of Columbia University, Charles H. Judd of the University of Chicago, and U.S. Commissioner of Education Philander P. Claxton came to Cincinnati to share their experiences with local progressive educators.\textsuperscript{12}

In 1907, U.S. Commissioner of Education Elmer E. Brown addressed the UC Class of 1907. The university, he said, was "an agency deliberately erected by the city to influence and possibly to recast the ideals and purposes of the city's life." "One indication of excellence," he stated, "was a system of public education able to hold the attendance of pupils beyond the
earliest grades." Brown liked what he saw in Cincinnati. The university was a barometer for progressive reform and the final rung in an educational ladder that began in the elementary grades. Yet the progressive leadership in Cincinnati knew there was more work yet to be done.13

Elementary Industrial Training

In 1900, the Cincinnati school board recommended manual training courses, but no formal action was taken that year. The next year, school board president Robert Stewart suggested manual training be included in the intermediate grades below high school. Stewart claimed that over two-thirds (69 percent) of Cincinnati’s school-aged youth dropped out between the eighth grade and sophomore years of high school. "There is no question in my own mind," he wrote, "that if we could offer to these children that judicious mixture of hand work and brain work . . . there would be less of financial necessity urged as an excuse for leaving school, and we would go a long way towards doing away entirely with ‘lack of interest.’" In 1902, the school board-appointed Committee on Manual Training agreed that shop work and domestic science should be offered in the lower grades but the board overruled funding for these schools.14

In 1903, a group of manufacturers approached principal O. P. Voorhes of the Oyler School about establishing a manual training department. The Oyler School was situated in the industrial West End, the worst section of town and physically cut off from the downtown basin by railroads, factories, vacant lots, and the Mill
Creek. "It was so different from other communities," wrote Scott Nearing in *The New Education*, his 1915 book on progressive schooling practices in the U.S.; "There were the ugly straggling factory buildings, the miserable homes, their squalid tenants, and worst of all there were the rough, boisterous, overage, uninterested incorrigible boys and girls." Nearby, stood Shantytown at the mouth of Mill Creek which was the city's garbage dump and sewer. Shantytown's squatters "huddled together in their miserable shacks" amid piles of garbage, effluent, and refuse.15

In that same year, without board approval, Voorhes solicited over $1,000 from local manufacturers to be used, he was told, for shop equipment, but the school board directed he return all but $85.00, which was used for the purchase of a piano for the kindergarten. In 1904, when Franklin P. Dyer assumed the school superintendency; he authorized Voorhes to establish a manual training program that was in agreement with the manufacturer's wishes. "You have only one problem to solve," he told Voorhes, "that of the West End."16

Voorhes established the first manual training center in the public schools, providing a minimum of one-and-one-half hours of weekly shop work for seventh and eighth grade boys. (In September, 1905, Dyer established a department of manual training and opened four more centers in existing schools.) The shops of the Oyler School, with each student participating in the fabrication of useful, practical items, closely paralleled the actual conditions of industry—along a hierarchical division of
labor. In each shop, the boys were subdivided into work groups with a student-appointed superintendent, general manager, foreman, and timekeeper, who recorded attendance and tardiness. Students were credited with "wages" for the time they worked and were "paid" a grade on their report card based upon the total wages (set by superintendent and foremen) earned in a ten-week period. Foremen were entitled to "dock" workers for laziness or disorderly conduct with each offender summarily removed from the shop for a day. The Oyler shop activity siphoned off the excess energy of the "wild boys and dishevelled girls of the West End," who now attacked their academic subjects with renewed interest. "That one day of practical work did the trick," Voorhes claimed; "it made the other four days of academic work taste just as good as pie."\(^{17}\)

Beginning in 1908, several Cincinnati schools in the West End offered industrial training in the elementary grades. Over-age children, labeled as "retarded" or "subnormal," were placed in special classes for one hour of daily instruction in shop work and domestic science and one-half hour in the gymnasium. Many of these students also were singled out as attendance problems because, Dyer claimed, they "come from families that 'move' from once to a dozen times a year."\(^{18}\)

That year, 176 elementary pupils at the Sherman School were classified as retarded and relocated to the First Intermediate School for "special instruction." The shop teacher, formerly an owner of a novelty shop, taught the Sherman School boys how to manufacture and sell small items, such as Christmas stockings and
lamp shades, instructing them in the details of small business administration. The domestic science teacher used a fully furnished residential apartment with a kitchen, laundry, dining room, bedroom, and sewing room for training in housework. The Oyler School, another center for elementary industrial education, offered fifty pupils (second through sixth graders) a scaled-down version of the manual training system that was developed by Voorhes for the older boys.¹⁹

Franklin Dyer had hoped to establish enough industrial training centers throughout the district to enroll almost 2,000 retarded public school children. By 1911, 400 of these children were provided industrial training. (In 1910, over 4,787 elementary school children were enrolled in one of thirty-two manual training centers district-wide.) In advancing his plan for elementary industrial education, Dyer told the school board, "Segregation, classification and adaptation of the curriculum is the necessary method of treatment of retardation it seems to me." Dyer believed that modified manual training—as trade instruction—prepared the overage pupil for his or her eventual role as an industrial worker. Local manual training, he said, was moving in the direction of industrial training.²⁰

In 1911, an industrial training center was opened on the east side of town at the Douglass School, a newly-renovated segregated public school for Afro-Americans. The Douglass School, formerly the Elm Street School, was recently renamed in honor of Frederick Douglass—reflecting the pride of Walnut Hills, a burgeoning suburb with over 3,600 black residents (a two-fold population
increase since the 1890s). The sixteen-room school served as a model of progressive education with playrooms, kindergartens, vocational training facilities, a gymnasium, and auditorium. Yet because blacks exhibited a higher proportion of children "more uniformly older than their grade," Dyer promoted industrial training for all Douglass School students.21

The Douglass School was the sole remaining link to Cincinnati's nineteenth-century black school system, run by an all-black school board, called the Independent Colored School System. At its height, the black schools employed eighty-seven teachers and enrolled 3,800 students. After 1874, however, black control was undercut by state legislation that abolished the school board. And thirteen years later, a state law allowing black students to enroll in white schools provided legal grounds for the local school board to dismantle the black schools. Consequently, "All the colored schools were . . . placed upon a plane of suffrancé that is both humilitating and galling, alike to teachers and pupils," wrote one historian of the local public schools in 1902. Although segregated schools were officially outlawed, the local school board made allowances for black student attendance at "colored" public schools, in part to encourage black attendance in the school system. Furthermore, since over $160,000 was spent on renovating the Douglass School, the board felt that they had satisfied the conditions of "separate but equal" as stipulated in the 1896 U.S. Supreme Court case of Plessy v. Ferguson.22
This, then, was the board's rationalization for permitting the duplication of educational facilities for black and white students in Cincinnati. For example, in 1909, a school for blacks was endowed by Sallie Peters McCall, a white philanthropist who bequeathed $400,000 for the creation of an industrial training school. Four years later, The Colored Industrial School opened its doors in the West End to eighty-five students, free of charge. The school offered three-year apprenticeship training programs in the building trades, tailoring, cooking, dressmaking, and millinery. Concurrently, a similar vocational curriculum in the public schools was offered to the city's white apprentices.23

Apprenticeship Continuation Schools

NSPIE leaders considered Cincinnati an important venue for industrial education reform. In autumn, 1910, NSPIE brought German educator George Kerchensteiner to the United States and scheduled a stop in Cincinnati as part of his six-city tour. Kerchensteiner, superintendent of Munich schools, was an authority on continuation schools. In 1869, German continuation schools were established as compulsory for fourteen to seventeen year olds who entered industrial occupations; students went to these schools for 240 hours per year, or about six hours per week. German continuation school instruction usually occurred one hour before or one hour after work and was subdivided into a four-part course of study: physical science, business affairs, civic affairs, and physical training. The 1910 NSPIE publicity
barrage that accompanied Kerchensteiner's American visit provided wide exposure for the German method of industrial education. That same year, in September, the Cincinnati Public Schools began a continuation school for apprentices, one of the first of its kind in the country.²⁴

Frederick A. Geier, president of the Cincinnati Milling Machine Company and state chapter member, held a national office as NSPIE vice-president and was responsible for bringing the fifth NSPIE meeting to Cincinnati in 1911. In addition, as president of the National Metal Trades Association (NMTA), a lobbying organization of open-shop manufacturers, Geier represented the interests of local machine manufacturers in the development of apprenticeship training in the city's public schools.²⁵

At first, local manufacturers established their own on-site industrial schools. In 1906, Houston, Stanwood & Gamble was one of the first local machine manufacturers to establish an in-house apprenticeship training school. One year later, the Cincinnati Milling Machine Company followed suit. Each firm employed an instructor who had complete charge of the apprentices. Students were supplied with daily instruction in all operations of the plant. At night, young apprentices sought supplemental shop classes in the public schools, but the dropout rates were high, however, especially among the boys in the industrial trades, and few manufacturers could afford to fund their own shop training programs. School superintendent Dyer complained that the apprentices' mental capabilities were diminished after an
exhausting work day. "Concentrated attention to a machine for ten hours leaves little surplus energy to draw on at night," he wrote. Dyer concluded that the only reasonable solution to the problem of apprenticeship instruction was the "daytime proposition" of continuation schools.  

In the spring of 1909, half-a-dozen local machine builders turned to the school board for assistance in establishing day classes for apprentices in machining. "The future development of our industrial interest upon which the growth of the city is largely dependent, will be materially advanced," claimed the six manufacturers who wrote to Dyer requesting cooperation with the public school board. As a result, a continuation school for machine apprentices opened that September under the auspices of a three member, board-appointed Committee on Continuation Schools. In-house training was still given by journeymen in eighteen machine shops, but public school teachers supplemented shop work with theoretical instruction.  

Almost 200 apprentices, aged sixteen to twenty-one, were enrolled in weekly half-day classes beginning in September, 1909. Each employer arranged to pay their apprentices regular wages while in school for four years, forty-eight weeks per year. Two teachers, both experienced tradesmen, were employed by the school board to instruct the apprentices in mathematics, science, shop theory, and general culture (i.e., reading, writing, spelling, civics, and history). Student evaluations were based upon written reports by the employer or foreman as well as teacher observations at the job site. After four years of successful
work, each apprentice was given a diploma of completion, and eligible, if desiring, for admittance to the Engineering College at the University of Cincinnati.  

Local union machinists, not included in the policymaking structure of the continuation school, monitored the school's progress through its Central Labor Council (CLC), an American Federation of Labor (AFL) regional organization representing over 35,000 members and eighty-one locals. Established in 1896, the council published The Chronicle, a weekly journal that served as a watchdog for labor disputes, strikes, boycotts, and violations of child labor, female labor, and union labels.

At an August 31, 1909, meeting of the council, the continuation school was discussed, and the CLC Committee on Education and Legislation authorized to "look into this matter" and report back to the general membership. A month elapsed before the committee reported that they had interviewed Dyer and Frank Ball, superintendent of manual training, and received both men's assurances that a school board member would address the council in the near future. Meanwhile, Dyer suggested that the committee members visit the continuation school. In 1910, Dyer and Ball attended the CLC March meeting, and two months later, the council endorsed the continuation school. In the fall, the CLC education committee visited Dyer again, this time insisting that he employ trade unionists as manual training instructors. The committee members reported that "Dyer made no objections to anyone so long as they were capable of filling the position."
Yet a hostile relationship between union machinists and their employers was reflected in the attitude of the CLC towards Dyer's intervention in apprenticeship training. For many years the city's machinists felt they were being abused by machine manufacturers—who continually refused to capitulate to the demands of striking workers. In 1893, a violent seven month strike in opposition to the introduction of piece work failed as union strength was undercut by 600 co-opted machinists who agreed to new manufacturing methods. Two years later, when 1,500 machinists pushed for a nine-hour work day, local employers settled on a nine-and-one-half hour day. In 1901, 6,000 striking machinists continued the nine-hour day movement and a twelve-and-one-half cents daily wage increase but were met with bitter opposition from the manufacturers.31

In 1912, The Chronicle claimed, "Cincinnati is one of the largest machine centers in the world and the wages paid are the lowest." To the city's organized machinists, it was no secret that Cincinnati employers paid their workers wages that were low compared to other machine-tool manufacturing centers in the nation. For example, from 1891 to 1915, the wages of Cincinnati machinists averaged 18 percent less than their counterparts in Boston, and 9 percent less than fellow workers in Philadelphia. In addition, Cincinnati machinists worked two hours per week longer on the job than the Boston machinists, and one hour longer than Philadelphia's workers.32

Powerful Cincinnati manufacturers, and their local NMTA chapter, held tight reign over worker union organizing activity.
Substantial numbers of local machinists left town, drawn to other cities because of the higher wages. The exodus of skilled machinists alarmed the local machine manufacturers who searched for "a new and good supply of first class machinists." In 1902, manufacturer William Lodge, president of the Lodge & Shipley Machine Tool Company suggested—and eight other firms agreed—that local employers needed to hire immigrant labor. Among their plans were the funding of a hiring hall in New York City to entice immigrant German machinists to settle in Cincinnati. One local firm, the Cincinnati Shaper Company, wrote to the German Society of New York and the Irish Emigrant Society about the labor bureaus established by each organization. In addition, Cincinnati machine manufacturers turned to the local community for a supply of native-born apprentices. In-house apprenticeship training programs were established by these companies for the purpose of enticing local boys to learn the machine trades. When, in 1910, the apprenticeship continuation school for machinists opened, local NMTA members shifted their focus to the public schools for the promotion of industrial education.33

In May, 1911, a joint committee of local printing employers in the Ben Franklin Club and their labor affiliates of the Allied Printing Trades Council requested that the school board open a continuation school offering day instruction in the printing trades. Forty-three students from among eleven printing trades attended the school in September of that first year. This time, the local printers unions participated fully in the establishment
of the school. "The schools have the approval of the labor organizations of the city and of the manufacturers," Dyer wrote in his annual report of 1911, reflecting a concern that unionized labor not be excluded in this process.34

In another trade, after a decade of rivalry in the 1890s, Cincinnati Typographical Union Local #3 and the Cincinnati Printing Pressmen's Union Local #11 both affiliated with the CLC, and together they resisted the trend towards manufacturer-dominated industrial education. The city's union typesetters and pressmen were knowledgeable about industrial education since their national unions offered trade school instruction for apprentices. In 1903, Typographical Union Local #3 established a trade school for the instruction of unemployed typesetters. In 1910, the International Typographical Union established a correspondence apprenticeship school in Chicago; and the next year, the International Printing Pressmen and Assistants Union opened a trade school in Tennessee.35

"The Trade Schools are not wanted by the trade union movement, as they are destructive to the cause," the CLC education committee resolved at its July 12, 1910, meeting in response to a recent conference of city manufacturers on the subject. The CLC was merely concurring with established AFL policy on private trade schools. Deeply wary that industrial education could be used by manufacturers in a deceptive manner, AFL leaders believed that if skill training were relegated to the private sector, industrialist would have total control of a system that circumvented traditional apprenticeships.36
In the late nineteenth century, union leaders pilloried open-shop manufacturers who financed private trade schools. These schools produced an influx of new workers or "half-baked journeymen," the national AFL leadership proclaimed. Additionally, AFL leaders felt that short-term training programs, usually lasting no more than six weeks, resulted in a flood of unskilled labor threatening to lower the prevailing closed-shop wage rates. They charged that these schools recruited strike-breakers, competed with adult labor on the open market, and inculcated anti-union sentiment among young students. The AFL commitment to guard against such educational abuses created an internecine battle with manufacturer's associations that carried into the twentieth century.\textsuperscript{37}

CLC members pledged that Cincinnati would not become known as a private trade school town. The council endorsed apprenticeship continuation schools, in part, because they felt classroom instruction (and anti-union sentiment) was removed physically from manufacturer control. E. L. Hitchens, a CLC representative, claimed that the continuation school was "little short of an inspiration." Hitchens emphasized that the real benefit of the school was that it taught employers how to treat their apprentices. "The workman must not be considered a mere 'hand,'" Hitchens wrote, "but a mind and a soul as well." "The manufacturer learns," he continued, "that the work is going to be done better and his product carry a higher value by reason of the more intelligent labor bestowed upon it." Nevertheless, the CLC did not give carte blanche to either Dyer or the school board.
When passage of the 1910 child labor law provided for the establishment of compulsory continuation schools—through local school board regulation—the council carefully monitored the city's educational response.\(^{38}\)

**Compulsory Continuation Schools**

The new child labor law went into effect in Ohio in 1908. The new law, named the Reynolds law after Cleveland representative James A. Reynolds, a national officer of the International Order of Machinists who introduced the measure in the Ohio General Assembly, retained the provisions of the 1889 compulsory school law relating to attendance but now mandated strict compliance with an eight-hour work day for children aged sixteen to eighteen. In addition, the work day for these youths was limited to the daylight hours of 7:00 a.m. to 6:00 p.m., with a maximum of forty-eight working hours per week.\(^{39}\)

The Reynolds bill was supported by the Ohio Federation of Labor, an organization of over 400 AFL affiliates who were particularly adept at mobilizing support for labor issues in the state legislature. Ohio manufacturers, however, strongly opposed Reynolds on the grounds that the regulation of hours was "paternalistic" and "un-American." They claimed the bill created a widespread reduction in the employability of minors leading to "child-idleness." Yet inconsistencies in existing child labor laws, which the Reynolds legislation failed to address, still allowed children aged fourteen to sixteen access to employment if they provided their employer with an age and schooling
The certificates were easily obtainable from the local school superintendent who simply verified the minor's age as well as ability to read and write.\textsuperscript{40}

In 1910, Franklin Dyer supported additional legislation that rectified the incompatibility between child labor laws and the compulsory school age of fourteen. Dyer feared that the few years of employment by minors were "practically wasted" because "the boy or girl shifts from one position to another, and at the end of the two years realize[s] that little has been accomplished and two good years of learning ... were taken from him." Although Dyer desired to raise the compulsory school age to sixteen, he supported the 1910 child labor bill because the new legislation increased the difficulty for youths to obtain work certificates.\textsuperscript{41}

Prior to 1910, Ohio school superintendents were authorized to issue a general work certificate to any qualified applicant. The new legislation, however, stipulated that each new applicant be enrolled in school the previous year and pass a fifth grade examination successfully. In addition, the school board was required to verify employment prior to issuance of the certificate. The employer was required to sign a pledge that he would surrender the certificate to school authorities upon termination of the youth's employment. These tough measures were meant to curb the widespread use of minors for itinerant and dangerous labor.\textsuperscript{42}

The 1910 child labor law required that part-time day schools be established for working minors who had not already completed
an eighth grade education or reached sixteen years old. Furthermore, schooling was not to exceed eight hours weekly, and attendance was restricted to the daytime hours of 8:00 a.m. to 5:00 p.m. In January, 1911, the Cincinnati Board of Education adopted a resolution providing continuation schooling for four hours weekly and allocated $15,000 towards the creation of twelve centers at school buildings "convenient to the industrial sections of the city."^43

The continuation schools, designated for compulsory attendance, began service in September, 1911, with three full-time teachers and forty part-time staff. Over 1,100 students attended the school that first month, registering with the school system the place and time arranged by their employer. (One center was open all day, seven center were open from 4:00 to 5:00 p.m., and six centers were open on Saturday afternoons.) The students were grouped by the last grade completed and arranged into classes averaging twenty-five students.^44

A course of study was formulated with two-thirds of the time devoted to academic study in math, spelling, English, hygiene, civics, and moral instruction. The remainder of the time was set aside for industrial work "applied as closely as possible to the vocation." Dyer was encouraged by the compulsory continuation school attendance that rose steadily every month. (In 1912, for example, the twelve centers enrolled 1,295 students of which 459 were male and 836 were female.) Yet he realized that the schools offered little incentive for youths to learn a trade. "Few are in a vocation in which they expect to remain," he wrote; "they
have been thinking of a few dollars a week, and not of a life occupation." Following an investigation of 450 children at his continuation center, Woodward High School Principal Pliny Johnston reported that the boys earned about $4.00 per week and girls averaged fifty cents less. "These children are not bringing in much money to their parents," he wrote, "and their work is displacing grown people." Local public school educators knew that the continuation school could never hope to offer these youth saleable skills, much less change the social and economic conditions that drove children into the workplace. Johnston concluded, "Though our continuation school is helping them very much and we are all intensely interested, we cannot help but be impressed with the uselessness of this [child] labor and sacrifice." 45

The Vocation Bureau

The 1910 child labor law provided the greatest hardship for children under sixteen who had not attained a fifth grade education but needed to work in order to support themselves or their families. These indigent children were now required to attend school full-time. In July, 1910, Edwin Clopper, NCLC Ohio Valley Secretary, reminded the school board that a supplemental provision of the 1910 child labor law provided relief for indigent youths forced to attend school. The child labor relief law, as it was called, authorized local truant officers to report cases of indigency to the school board. Then the school board was required to supply these youth with free textbooks or
personal items, such as eye glasses, shoes, and clothing needed for school.46

To many social workers, the city's welfare system was in a sorry state. Private funds were administered by the Associated Charities (organized in 1897), a central clearinghouse of relief organizations. "If the mother were found in positive need of the child's assistance," Edith Campbell explained, "the case was reported to the charities for investigation." Yet public funds were also allocated for relief victims, often ending up in the pockets of ward-based Overseers of the Poor, political appointees who "distributed goods with an eye for their own political advancement." And at another level, a school board-appointed truant officer investigated relief cases.47

Understandably, Campbell and Clopper were perplexed by the inefficiency of organized welfare agencies in the city. Campbell complained to her colleagues that many people—including the truant officer—wrongly believed welfare stigmatized the child or induced idleness through the awarding of relief. "Rather than the spirit of investigation and experimentation," Campbell charged, "boards of education were fearful of pauperizing the child or parent." Together, Campbell and Clopper persuaded Dyer to let NCLC handle the city's work certification process—at no expense to the schools—by placing a clerk in an office provided by the board of education.48

Out of this arrangement with the school board, the Vocation Bureau was established as a department of the Cincinnati Public Schools. Initial funding for staff salaries was provided by
money raised from the private sector. From its earliest years, the Vocation Bureau issued work certificates; however, Campbell and Clopper realized that the office could also collect valuable data on working youth—more than the usual vital statistics. Dyer, too, believed that thorough record-keeping on each child provided an important source of case histories, "since the children change jobs often requiring a new certificate every time." Furthermore, Dyer saw an opportunity for the bureau to become a research laboratory for "an intelligent understanding of the effect of child labor."49

A clerk was hired in September, 1910, to handle the issuing of employment certificates. Campbell and Clopper suggested, however, that the operations could be enhanced by the addition of an experimental laboratory. In March, 1911, Helen Thompson Woolley was hired to direct psychological testing. Woolley received her Ph.D. degree in 1900 from the University of Chicago, where she studied philosophy and neurology. Her dissertation "Psychological Norms in Men and Women," was a pioneering study of sex differences. By subjecting fifty university undergraduates (two equal groups of males and females) to a battery of laboratory tests for manual dexterity and sensory awareness, Woolley concluded that, overall, men and women were less "unique," that is, similar both emotionally and intellectually. After a post-doctoral fellowship in Paris and Berlin, Woolley returned for a promising academic career at Mt. Holyoke College. Yet she left after one year to follow her husband-to-be on a succession of jobs furthering his medical career. From 1905 to
1908, Woolley and her husband traveled to Yokahama, Japan; Manila, Philippines; Bangkok, Thailand; and in the U.S. to Illinois and Nebraska. In 1909, Woolley finally settled in Cincinnati with her husband, then newly-appointed to the staff of the University of Cincinnati medical school.50

Helen Woolley’s work at the Vocation Bureau consisted of administering psychological and physical tests to working children. With a staff of assistants, she examined almost 1,000 fourteen-and-fifteen-year-olds over a five year period. From her study of the comparison between working and non-working children, Woolley believed that there was a relationship between children’s mental and physical tests and their success or failure at work. She subdivided the total population of tested pupils into two equivalent groups and immediately began testing the "treatment" group of working minors. In November, 1912, one-and-one-half years later, she began testing the "control" group of full-time students. Each child was given a battery of mental tests, and a case history was compiled on his or her age, physical characteristics, industrial history, home and occupational life. Additionally, she noted exactly how much manual training and domestic science each working student had received prior to leaving school.51

In 1926, the Woolley study was published as An Experimental Study of Children. (Woolley had not begun the statistical analysis of the study until 1922, one year after she left the Vocation Bureau to accept the directorship of the Merrill-Palmer School in Detroit.) Woolley concluded that the majority of
children entering an occupation are "inferior mentally and physically" to the control group of school children. Her tests helped to explain the elements of school "elimination" at the point-of-departure from school which, at that time, was age fourteen. However, she did not assess the degree to which pre-vocational education (i.e., compulsory continuation schooling) affected job performance, since additional schooling, to her, was an ex post facto circumstance.52

Using a variety of construction puzzles and scientific apparatus, Woolley ascertained the levels of motor coordination in both groups of children. "If the schools could lay more stress from the start on training manual dexterity of various kinds," she wrote half-way through her study, "children of the class who leave the schools early . . . would be the gainers in many ways." Furthermore, Woolley used the test data to evaluate manipulative skills based upon gender differences, and, most importantly, to offer predictions on vocational success. For instance, the results of a card sorting test (an index was obtained by dividing the time of completion by the accuracy in percent) laid the scientific basis, she claimed, for the employment of girls in occupations "requiring steadiness of hand, or fine motor control." "For positions requiring strength, or for mere rapidity of motion . . . boys would be better." Thus, Woolley's experimental study shed "some light on the problem of vocational guidance," to a newly-established profession in which she played a major role. (Woolley was an executive officer of the
National Vocational Guidance Association [NVGA] in 1918 and NVGA president in 1921.)

Because the psychological laboratory at the Vocation Bureau was busy with the Woolley study, the psychological clinic at the University of Cincinnati provided diagnostic services for the public schools. Students were evaluated for retardation, mental and physical defects, truancy, delinquency, incorrigibility, and super-normality. Directed by Burtis B. Breese, a student of William James at Harvard, the clinic served as a research laboratory for university students studying psychological methods and as a training laboratory for teachers of special classes (now called special education).

In 1912, the mental testing movement was still in its infancy, and Woolley herself believed that "experimental psychology is as yet a coarse and clumsy tool." Woolley even claimed that school teachers themselves "could furnish information about pupils that would be as trustworthy as the psychological tests." By the latter part of the decade, however, experimentalists--armed with a battery of I.Q. and other tests--had a more powerful diagnostic tool that aided the school in social sorting, curricular differentiation, and vocational guidance.

Secondary Education in Transition

"It is time to take a very forward step in the educational work, a time to inaugurate a departure in our educational scheme," wrote New York manual training educator and trade school
proponent Arthur D. Dean in 1906. "The establishment of trade schools will keep pace with the growth of the industrial system and supply its needs," he wrote. Manual training high schools, Dean complained, were unable to provide adequate industrial training; in 77 percent of the cities offering manual training, he claimed, shop work was merely an elective "with absolutely no relation to school work." Furthermore, Dean believed that youth who desired to become mechanics were misdirected by the unsound advice of "schoolmasters" who told them to take manual training.56

Local manual training educators such as Frank Ballou, principal of the Technical School of Cincinnati from 1904 to 1907, concurred with Dean's assessment of the present situation. In correspondence with Dean, Ballou offered insight into the limitations of manual training. "I am fully convinced in my own mind," he wrote, "that the manual training high schools or technical schools do not meet the requirements of the present time placed upon them by the industrial situation." These schools, he claimed, were simply an "attachment to a classical or modern language secondary school course of study." Additionally, he felt that the manual training schools were unable to prepare youth for job entry. "I am quite positive," Ballou wrote, "that when the graduates from such courses enter the industrial field the public as well as the graduate is going to be disappointed in the character of the work which the graduate is going to be able to do." Ballou acknowledged the growing trend in industrial training, and realized that the latest "battle ground for
educators" was the changing purpose of the public secondary school curriculum.\textsuperscript{57}

Since 1893, when the National Education Association Committee of Ten, under the leadership of Harvard President Charles W. Eliot, sought standards for accreditation of the nation's high schools (that facilitated uniformity in collegiate admissions procedures), educators have been hashing out the details of a high school curriculum appropriate for the needs of non-college-bound students. Although the NEA committee's intent was to provide a uniform secondary education for "the preparation of their life's duties"—regardless of the student's post-graduate intentions—men like Eliot acknowledged the need for differentiated curriculums. Eliot's modification of the doctrine of formal discipline challenged classicists, such as Charles Dabney, who feared that changes in the high school curriculum would adversely affect the character of boys.\textsuperscript{58}

"The boy's soul is stamped with the die of the 'almighty dollar' before it has reached its manhood size," Dabney remarked in an 1896 commencement address before the graduates of Virginia Polytechnic Institute. Dabney believed that youth could never realize their true life's calling deprived of a liberal education. An abbreviated common schooling, he felt, contributed to arrested intellectual development. Dabney claimed that boys were victimized by their own lack of education and forced to engage in dead-end occupations. The boy is "set adrift on the great ocean like a lightly built pleasure bark, worthless for any
heavy seas." These boys lacked the "compass to guide and engine to drive" them through the storm, Dabney wrote.59

Despite this rhetoric, the "democratization" of the high school proceeded rapidly in the early twentieth century, especially in Ohio. In 1899, there were 57,031 students enrolled in the state's public high schools. By 1909, secondary school enrollment rose to 73,317, a 22 percent increase in ten years. Furthermore, the 1902 Brumbaugh Law defined the state's high school and elementary curriculums, established standards for admittance and examination to the high schools (the so-called Boxwell-Patterson exams), and set-up a three-tier "graded" system of high schools based upon the minimum number of years in the course of study required for graduation. As a result of this classification scheme, from 1902 to 1908 over 200 high schools were newly registered in the state.60

"The high school has erred quite naturally in following the plan of the academy whose function it was to prepare for college," wrote Ohio school commissioner John W. Zeller, in 1910, who, like other progressive leaders, tried to impress upon his fellow state school men and women the necessity for industrial education. A former superintendent of the Findlay, Ohio, schools, Zeller was a proponent of industrial education and worked closely with the leadership of Ohio NSPIE in their lobbying efforts at the state house. Zeller believed that common schooling should "serve the masses as well as the classes." Manual training and domestic science, he said, was an important curricular subject for the "90 percent of those who ... do not
remain to graduate." Many educators, like Zeller, believed that
the classical curriculum was dead. Indeed, teachers had
difficulty enrolling students in classical subjects, such as
Greek and Latin. In 1911, for example, there were only
sixty-four high school students studying Greek in the Cincinnati
Public Schools. In comparison, 1,081 high schoolers were
enrolled in manual training and domestic science in the city that
year (see Table 1).61

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<tr>
<th>Year</th>
<th># in M.T.</th>
<th># in D.S.</th>
<th>M.T.&amp; D.S.</th>
<th># in High School</th>
<th>% MT/DS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td>93</td>
<td>125</td>
<td>218</td>
<td>2,269</td>
<td>9.6</td>
</tr>
<tr>
<td>1907</td>
<td>47</td>
<td>75</td>
<td>122</td>
<td>2,287</td>
<td>5.3</td>
</tr>
<tr>
<td>1908</td>
<td>149</td>
<td>181</td>
<td>330</td>
<td>2,590</td>
<td>12.7</td>
</tr>
<tr>
<td>1909</td>
<td>284</td>
<td>260</td>
<td>544</td>
<td>3,332</td>
<td>16.3</td>
</tr>
<tr>
<td>1910</td>
<td>339</td>
<td>331</td>
<td>670</td>
<td>3,662</td>
<td>18.3</td>
</tr>
<tr>
<td>1911</td>
<td>425</td>
<td>656</td>
<td>1,081</td>
<td>4,119</td>
<td>26.2</td>
</tr>
<tr>
<td>1912</td>
<td>764</td>
<td>853</td>
<td>1617</td>
<td>3,146b</td>
<td>51.4</td>
</tr>
</tbody>
</table>

SOURCE: Cincinnati Public Schools, Annual Reports (1906-1917),
Table X. Superintendent's Report. *cooking was the only subject
offered until 1911 bexcluding night high schools

These figures suggest the changes that occurred after Dyer
implemented manual training and domestic science in two of the
city’s high schools in 1906. In that first year, almost 10
percent of the school population enrolled in shop classes for
boys and cooking for girls, both offered for one-and-one-half
hours daily. By 1911, industrial education enrollments increased
quickly with over one-quarter of all high school students attending classes in vocational subjects (see Table 1.). Dyer accepted manual training in the secondary schools for its educative and cultural value. "An opportunity to take it [manual training] along with other cultural subjects should be permitted," he wrote in 1909. Yet he cautioned the school board that "to confine the use of our well equipped schools to this purpose, would be to deceive or disappoint the public." That year, Dyer searched for an alternative method of funding vocational shops—one that would reduce expenses and please local taxpayers—and adopted Herman Schneider's cooperative education plan for use in the public schools.  

**Industrial High Schools**

Herman Schneider was an instructor in civil engineering at Lehigh University in Pennsylvania. In 1899, while walking across the campus absorbed in thought, Schneider heard a nearby blast from a Bessemer furnace which provoked his new synthesis of school and work. Schneider devised a plan whereby his students would work part-time in the local steel mills. He had been turning over in his mind the feasibility of university-run industrial shops in connection with engineering education and admitted that, indeed, the Bethlehem Steel Company's furnaces provoked an idea "to evolve plans to bring the commercial shop and the University into some kind of co-operation."  

The germination of his ideas began at Lehigh, but after four years of failure to convince his colleagues as to the usefulness
of his plan, Schneider moved on to the University of Cincinnati. There he received a more favorable reception. In 1904, Schneider presented his plan to Charles Dabney, and he received permission to begin installation of a co-op course. In autumn, 1906, Schneider offered the first cooperative engineering course, with the participation of twenty-eight students alternating half-days between fourteen factories. After six years, Schneider claimed an enrollment of 400 students and a five-fold rise in corporate involvement.64

Schneider was an active writer and lecturer on industrial education and provided consultation for others desiring to implement cooperative education, especially at the secondary level. (He was one of the earliest members of Ohio NSPIE and served as chapter vice-president from 1909 to 1912.) Beginning in 1908, the Fitchburg High School in Massachusetts established a cooperative industrial education program modeled after Schneider’s UC plan. That first year, twenty pairs of students were placed in one of seven job sites and alternated on a weekly basis between school and shop. On Saturdays, both students worked in the shop; the boy who was returning to school for the next week assisted the shop-bound boy with preliminary information on forthcoming job duties. Schneider kept abreast of the developments at Fitchburg through correspondence with W.B. Hunter, director of the cooperative industrial education course, and together both men shared ideas on the experimental growth of their programs.65
For Schneider, the cooperative plan at Fitchburg offered a new form of trade training. Schoolboys were placed in shops, at prevailing wage rates, where they could learn trades under conditions similar to formal apprenticeships. (A contract was signed between the school, shop, and student stipulating the terms of instruction both on the job and in school.) By utilizing the industrial community, Schneider realized that trade training could be provided in realistic settings without the expenses of establishing industrial laboratories on school grounds. Yet Schneider also felt that academic work must accompany the teaching of a trade, and he believed that only trained school teachers could provide that service.

Schneider's plan differed from traditional corporation or union trade training programs, however, since the apprentices were students first, owing their allegiance to their school. Consequently, neither their employers nor their fellow tradesmen knew quite where the students' loyalties lay. At Fitchburg, the use of student workers initially created hostility from unionized labor, but director Hunter related that "opposition from labor quarters, which was somewhat severe at first, has ceased and we expect no further trouble." In 1916, Schneider, too, experienced opposition from striking machinists who claimed that co-op students were scab laborers. Schneider replied that in the case of strikes, he always removed his students from their work stations and maintained "a neutral position."66

Beginning in 1909, Schneider's cooperative plan (weekly student rotation between school and shop) was integrated into the
last two years of a four-year industrial course for boys and girls at Woodward and Hughes High Schools in Cincinnati. Dyer believed that in the industrial high school, "the whole group of studies relates as closely as possible to the needs of an industrial vocation." Thus, he formulated a curriculum heavy in shop activity and drawing. In the first two years of the four-year curriculum, the students received a double period of shop or laboratory work amounting to three hours daily. Woodward principal Johnston compared the larger time block spent in manual training with the pianist who practices three hours per day and "gains greater facility than the one who practices one hour per day." In addition, students at the industrial high school took academic classes in applied mathematics, art, and sciences that were closely related to industrial occupations.

In preparation for their eventual vocational choices, the students learned about the industries of Cincinnati through a course on industrial geography and through school-sponsored field trips to local factories. At the end of their second year, the students selected a trade or occupation for co-op job placement in their last two years of school. Girls as well as boys participated in the cooperative education program, but the curriculums for the industrial high schools were segregated by gender. Boys prepared for industrial occupations that led to work in foundries, machine shops, cabinetmaking shops, and the building trades. Girls prepared for work in millinery, dressmaking, and the other needle trades as well as department store clerking and homemaking. In addition, there were two other
four-year industrial high school curriculums, commercial and art, neither of which operated on the cooperative education plan. The former offered training in bookkeeping, penmanship, stenography, and typewriting that led to office occupations. The latter (for females only) offered training in the fine arts for advanced study at the Art Academy.  

Most local educators claimed that the cooperative education plan provided students with a better opportunity for career choice. In addition, many manufacturers supported the plan because they received student apprentices who were at least sixteen years old, a suitable level of maturity, they felt, for learning a trade. The students, too, favored the cooperative education plan because of the income they earned on the job.  

Unlike manual training and domestic science, which "broke up the iron scholasticism of our schools," Johnston told an audience at NSPIE's annual meeting in 1911, the vocational curriculum in the high schools had yet to be appraised critically. In fact, few students were aware of the industrial high school curriculums. (In 1911, for example, first year enrollees in the cooperative programs represented only 10 percent of the entire high school population, although the proportion rose to 15 percent in 1913.) Unbeknownst to Johnston, however, local classicists were gathering strength for a confrontation with vocationalists—one that would periodically erupt in the ensuing decade.
Conclusion

When David Snedden, Massachusetts Commissioner of Education, addressed the Cincinnati Schoolmaster's Club in 1912, he not only predicted the future trend in industrial education but laid to rest any further discussion on the question of manual training. "Our industrial education," he said, "must make a decided break from the conventional academic courses and must become much more highly specialized than at present." He added, "The vocational school must work with the view of actual production and not along theoretical lines, even in such a subject as manual training."71

Dyer, too, believed that an academic education "diverted children from work with their hands and allured them to the professions." "Yet the number needed for the professions," he continued, "is not more than five percent of the population, while the number needed in industry and business is nearly ninety-five percent." From 1906 to 1912, through his progressive leadership, Dyer transformed the Cincinnati public school curriculums to accommodate the needs of industry. Furthermore, his plans for the infusion of vocational subjects at both elementary and secondary levels soon attracted higher proportions of public school students. By , one-third of all day students were enrolled in some type of industrial education, with manual training and domestic science classes augmented by elementary or secondary-level industrial training programs and voluntary or compulsory continuation centers (see Table 2.). Yet vocational education did not come cheap. In 1911, for example, over $40,000 of the school budget was allocated for
shops and laboratories. Interestingly, large enrollments in the industrial curriculum offset instructional expenses which averaged $3.85 per pupil in 1911 (see Table 2.). By comparison, the expenses for instruction in classical subjects that year were estimated to be $18.00 per student.  

**TABLE 2.**
Proportion of Manual Training & Domestic Science Students in the Public Schools Based Upon Average Daily Attendance

<table>
<thead>
<tr>
<th>Year</th>
<th>#M.T.&amp; D.S. # Students</th>
<th>%M.T.&amp;D.S. in schools</th>
<th>Expenditures in schools equip.&amp; supp.</th>
<th>Cost student</th>
</tr>
</thead>
<tbody>
<tr>
<td>1906</td>
<td>4,113</td>
<td>33,330</td>
<td>12.3</td>
<td>11,144.85</td>
</tr>
<tr>
<td>1907</td>
<td>4,210</td>
<td>33,540</td>
<td>12.6</td>
<td>7,919.12</td>
</tr>
<tr>
<td>1908</td>
<td>5,624</td>
<td>34,079</td>
<td>16.5</td>
<td>7,051.50</td>
</tr>
<tr>
<td>1909</td>
<td>7,390</td>
<td>35,645</td>
<td>20.7</td>
<td>5,180.23</td>
</tr>
<tr>
<td>1910</td>
<td>7,080</td>
<td>35,598</td>
<td>19.9</td>
<td>16,126.62</td>
</tr>
<tr>
<td>1911</td>
<td>7,286</td>
<td>36,444</td>
<td>20.0</td>
<td>41,220.95</td>
</tr>
<tr>
<td>1912</td>
<td>11,812</td>
<td>35.544</td>
<td>33.2</td>
<td>18,716.48</td>
</tr>
</tbody>
</table>

SOURCE: Cincinnati Public Schools, Annual Reports (1906-1912), Table IX. Superintendent's Report; Report of the Business Manager. *excluding night high schools

In January, 1913, Dyer's successor, Randall J. Condon came to Cincinnati from the superintendency of Providence, Rhode Island public schools. Prior to that, Condon had served as superintendent of Helena, Montana, schools where he also was president of the NSPIE state chapter. Condon's reputation as a progressive educator preceded him. The *Journal of Education*
reported that "Mr. Condon has everywhere stood for the most pronounced advancement in school activities. Everywhere he has been opposed by the anti-progressive people, in school and out, but he has never compromised."73

Upon assuming his duties in Cincinnati, Condon reported to the local press, "I thoroughly believe in industrial education, and shall try to give every boy that goes out of Cincinnati schools some trade and make every girl a housewife, even though she does not become one." In his first official communication to the school board, Condon pledged to continued Dyer's agenda for school reform, "to conserve his ideals and to advance along the lines which he has marked out." From 1913 to 1920—the period of stabilization—Condon hastened the implementation of elementary and secondary-level trade instruction and vocational guidance for the school children of Cincinnati.74
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12. The University Record 5 (December 1908):10; ibid., 6 (December 1909):11; ibid., 7 (December 1910):12; ibid., 8 (December 1911):30; ibid., 9 (December 1912):33.

13. Elmer E. Brown, "The Self-Respect of Cities," Commencement Address, University of Cincinnati, June 1, 1907, pp.7, 9; Charles W. Dabney, "The University of the City," Commencement Address, University of Cincinnati, June 1, 1907, Dabney Biographical File, UC Archives.

14. Cincinnati Public Schools (hereafter, CPS), Annual Reports (1901), 79.


18. CPS, Annual Reports (1908), 66; ibid., (1911), 58-60.

19. CPS, Annual Reports (1910), 57; ibid., (1911), 49, 60.


24. "Cincinnati a Laboratory in Industrial Education," Survey 27 (December 9, 1911):1328-1329; From October 28 to December 16, 1910, Kerchensteiner visited Cincinnati, St. Louis, Chicago, Boston, New York, and Philadelphia. The New York Times provided comprehensive coverage of his New York addresses, see December 1, 1910, p.4b; December 4, 1910, pt.5, p.13. Three editorials in industrial education journals offer a review of the Kerchensteiner visit, see Manual Training Magazine 12 (December 1910):178-180; ibid., 12 (February 1911):272-273; and Vocational Education 1 (November 1911):118-122. Reaction to the impact of Kerchensteiner's visit is difficult to gauge. Bernice Fisher suggest that the German continuation school model was interesting to the National Association of Manufacturers because it opened up new possibilities of relating to public school educators. She writes, "The businessmen carefully picked out those elements of the German system which appealed to them most—cooperation between manufacturers and educators, the combining of trade and general education—and became far more enthusiastic about this
divided scheme than they were about the full-time trade school." See Industrial Education (Madison: University of Wisconsin Press, 1967), 118. Also see, Ralph C. Busser, "Part-Time Schools for Industrial Workers in Prussia," U.S. Bureau of Education Bulletin #9 (1913).


27. CPS, Annual Reports (1909), 65-68; ibid., (1910), 72; CPS, Minutes 28 (May 24, 1909), 48.

28. CPS, Annual Reports (1910), 70-72.


34. CPS, Annual Reports (1911), 72-73; ibid., Minutes 28 (May 22, 1911), 589; ibid., 28 (July 17, 1911), 628.

35. "Historical Sketch of the Cincinnati Printing Pressmen, Assistants and Offset Workers Union Local #1," Ohio Labor History Collection, University of Cincinnati Archives and Rare Books; E. George Lindstrom, "Trade Instruction Versus Industrial Education From the Point of View of a Practical Trade Unionist," Vocational Education 1 (March 1912):273-275; Musselman, "Quest for Collective Improvement," 21-22.


38. CPS, Annual Reports (1912), 51-52.


42. Ibid.


44. On November 6, 1911, the Cincinnati School Board resolved an official distinction between compulsory continuation schools—attendance required by the 1910 child labor law—and voluntary continuation schools for apprentices, established by manufacturers in the machine and printing trades, see CPS, Minutes 28 (November 6, 1911), 730.

45. CPS, Annual Reports (1911), 74-78, quoted at 76; ibid., (1912), 119.

46. CPS, Minutes 28 (July 5, 1910), 356; ibid., 28 (July 18, 1910), 365.


49. CPS, Annual Reports (1910), 74.

51. CPS, Annual Reports (1911), 81; Woolley, An Experimental Study, 9.


54. CPS, Annual Reports (1912), 61; "Burtis Breese," Biographical File, UC Archives.


56. Public confidence in trade schooling superceded manual training as the solution to the problem of industrial education, see Paul Douglas, American Apprenticeship and Industrial Education (New York: Longmans, Green & Co., 1921), 190-191; Arthur D. Dean, "Principles and Methods to be Pursued in Organizing Trade Schools," Massachusetts Labor Bulletin 10
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60. Ohio School Reports (1899), 7-10; ibid., (1902), 8-10; ibid., (1906), 26-27; ibid., (1909), 32; "The Brumbaugh Law," Ohio Teacher 22 (July 1902):381-382.

61. Ohio School Reports (1910), 13, 20; see John W. Zeller, "Vocational Education and the State," Ohio Teacher 31 (February 1911):267-271; CPS, Annual Reports (1911), 32. I do not imply that local classicists passively handed their curriculum over to the vocationalists. As described in the next chapter, school superintendent Condon was painfully aware of the conflict by a vocal group of teachers of classical subjects.


63. Clyde W. Park, Ambassador to Industry (Indianapolis: Bobbs-Merrill, 1943), 44; Schneider to Feiker, October 19, 1912, Herman Schneider Papers, Box 1, UC Archives.

64. Park, Ambassador to Industry, 5. Under Charles Dabney's guidance, the College of Engineering expanded rapidly in the first decade of the twentieth century. From 1903 to 1914, UC engineering student attendance rose four-fold due to the cooperative education program. A close relationship between Dabney and Schneider lasted throughout their long careers. Schneider once wrote to Dabney, "I want again to thank you most heartily for having given me the finest thing one man can give

65. Paul J. Ringle, "Cooperative Industrial Education: The Fitchburg Plan," Paper presented before the American Educational Research Association, April 13-17, 1981, Los Angeles, California (ERIC Document ED200 774), 6-10. Hunter to Schneider, November 4, 1908; Hunter to Schneider, January 14, 1909; Schneider to Hunter, January 18, 1909; Hunter to Schneider, March 25, 1909; Hunter to Schneider, June 1, 1909; Hunter to Schneider, July 6, 1909; Hunter to Schneider, September 2, 1909; Schneider to Hunter, September 8, 1909, Herman Schneider Papers, Box 1, UC Archives.

66. Hunter to Schneider, November 4, 1908; Schneider to Hubbard, February 18, 1909, Herman Schneider Papers, Box 1, UC Archives; "Students Taught to be Scabs," *The Labor Advocate* 3 (February 12, 1916):3.


68. CPS, Annual Report (1910), 36-37. In the same time period, the public high schools in Atlanta, Georgia, were segregated by gender, see Report of the Survey of the Public School System of Atlanta 2 vols. (New York: Teachers College, Columbia University, 1921-1922), 2:204-211.


70. Johnston, "Vocational Plans," 79; CPS, Annual Reports (1910), 36; ibid., (1912), 53.

71. Cincinnati Schoolmaster's Club, Minutes 25 (August 24, 1912), 21.

72. Dyer to Magruder, November 12, 1910, William T. Magruder Papers, Box 40/1/6, OSU Archives; CPS, Annual Reports (1911), 32.


74. "Condon Has Arrived in the City," Cincinnati Enquirer January 1, 1913, p.20c; CPS, Minutes 29 (January 6, 1913), 71.
CHAPTER IV
THE PERIOD OF STABILIZATION, 1913-1920

Introduction

This chapter describes the innovative educational programming and leadership that developed during the first seven years of tenure of school superintendent Randall Condon. The first section provides a brief explanation of administrative reform in Ohio and Cincinnati. Local progressives, in general, reorganized their public institutions along the lines of scientifically-managed corporations. The second section reveals the problems of establishing school policies (i.e., industrial education programs, textbook and machine shop purchases) that were favorable to a broad taxpaying public. Several interested constituencies, such as business leaders or labor unionists, formed ad hoc committees to intercede in school board affairs.

The third section of this chapter surveys the social problems of early school-leaving among Cincinnati children. Local progressive educators, in particular, were concerned about the potential for greater school dropouts—due to revisions in the 1913 Ohio child labor law which raised the age of compulsory schooling. The next section, Trade Instruction in the War Years, traces Condon's involvement with the Ohio State Board for
Vocational Education, an administrative branch of the federally-funded Smith-Hughes Act in 1917. Condon directed state funds toward Cincinnati's programs and institutions for vocational teacher training and trade and industrial education.

The fifth section of this chapter provides background information on the local development of career counseling and job placement. Early vocational guidance activities originated in eighth grade civics classes as well as civics clubs organized by the local chamber of commerce. Later, the Vocation Bureau offered career counseling, job placement, and occupational interest testing. The final section describes local school board challenges to the expansion of vocational education in the early 1920s. Precipitated by a classicist backlash in the immediate post-war years, some school board members opposed additional expenditures in vocational subjects.

Efficiency and Reform

Randall J. Condon assumed the superintendency at the same time that the city became inundated with torrential rains and high water. In January, and again in March, 1913, the Ohio River spilled over its banks and, in the latter month, reached record flood levels. During the crisis Condon received a series of object lessons in municipal organization and social voluntarism.

The need for cooperation, efficiency, and control among relief agencies was never greater. In the earlier flood a citizens relief committee composed of officials from city government, private welfare agencies, social organizations, and
civic associations distributed emergency supplies to victims of the high water. That relief committee was reorganized in March to attend to the welfare of local citizens and aid the flood stricken cities of Hamilton, Middletown, and Dayton. No deaths due to drowning were recorded in the immediate vicinity, but food supplies for stranded or homeless victims were acutely low. The flood relief committee coordinated the efforts of over 2,000 volunteers and numerous private relief agencies that "placed their workers at the command of the committee, received supplies only from them, and worked in territory allotted by the committee."1

Cincinnati Mayor Henry L. Hunt headed the operations from City Hall, "a scene of great activity day and night," and expedited the relief operations by "disregarding all technicalities and official red tape" in obtaining supplies. Hunt was elected mayor on a Democratic ticket in 1911 and began systematic departmental reform in city government. He improved the city's sewer system, for example, and reorganized the engineering department to include a "subdivision for complaints" to gather information on residents' needs and a "subdivision of design" to ensure that the work conformed to the city's development plans. Furthermore, Hunt instituted measures to reclassify engineers through civil service examination "to increase professionalism and lessen political influence over the department."2

The city's purchasing department became a model of scientific planning and corporate management as well. After an extensive
investigation by the Cincinnati Bureau of Municipal Research, (a nonpartisan and independent investigatory agency of municipal government organized in July, 1909) the department was reorganized in January, 1912, a purchasing agent appointed, and all city departments required to use authorized vendors. Bureau director Rufus E. Miles suggested that the city could realize a savings of over $100,000 per year just in that one department. After an investigation of the business department of the board of education that same year, the bureau recommended that the school board install a system for recording costs of equipment and supplies, building repairs, and new construction. In an attempt to centralize school building operations throughout the district, the bureau suggested accountability in operations; school janitors, for instance, began to report fuel expenditures directly to the purchasing department.3

Ohio’s leading politicians similarly endorsed progressive reform and efficiency of operations in state government. From 1909 to 1913, Judson Harmon, governor of Ohio, called for major efficiency measures that would correct the fiscal improprieties in past Republican administrations. In his 1909 election campaign, he pledged to reform the inequalities in the state taxation system. Under prior Republican administrations, he charged, local tax assessors often ignored or undervalued vacant land and commercial properties in return for political favors. Intangible assets, such as bank accounts and stocks and bonds, similarly went unreported as taxable income.4
Harmon's hard hitting efficiency campaign was meant to reduce state spending in all areas of governance, including schools. The fiscally conservative governor—not a foe of public schooling per se—claimed that his administration could rectify the diminished earning capacity of the state's inhabitants. Even so noble a cause as the funding of public education, Harmon argued, must be protected from the potential for fraudulent fiscal practices. "We are all so earnest about our schools," Harmon wrote in a 1911 veto message to the Ohio General Assembly, "that it is harder to secure economy in their management and maintenance than in any other department of the government, so many seem to fear that they will be thought to be opposed to education."\(^5\)

In 1912, delegates to the Ohio Constitutional Convention resolved, in part, to reform the Ohio school code. Within a year of the convention, Harmon's administration enacted legislation that authorized a statewide survey of common school practices. A three member gubernatorial commission was empaneled whose tasks were to examine county-level school supervision, teacher training and certification requirements, and uniform consolidation and centralization of school districts. (Edith Campbell, local school board member, was appointed one of the commission members.) The commissioners hired social scientists at the Bureau of Municipal Research of New York at a cost of $10,000 to supervise the survey. "The school survey is the biggest educational fact of the year," claimed one member of the Central Ohio Schoolmaster's Club in 1913. "It promises to result in more
good to the schools of the state than any other agency within your lifetime and mine." The educational commission was a victory for Ohio's industrial educators as well, who, from 1907 to 1912, tried to organize a fact-finding commission through their state chapter of the National Society for the Promotion of Industrial Education (NSPIE).  

**Civic Boosters and the Schools**

In the autumn of 1913 Condon appealed to members of the Cincinnati Chamber of Commerce for assistance in developing a city-wide survey of industrial employment and educational needs. This was not the first time, however, that civic leaders legitimately were welcomed into the process of educational policy-making. The state authorization of small urban school boards (Jung Act of 1913) brought greater participation of local elites in the politics of schooling in Cincinnati. The Jung Act, sponsored by Theodore Jung, a member of the Cincinnati Business Men's Club, ended the practice of large, ward-based school board memberships and substituted, instead, a small seven-member nonpartisan board. (On January 5, 1914, the twenty-nine member ward-based school board officially was superceded by a seven member at-large board.) As early as 1910, local progressive reformers, like John Withrow, tried to get the state legislature to pass the bill, but the incumbent Republican administration would not budge in their opposition to Jung. When the Democrats took control of the statehouse, however, they easily passed the small school board bill. Withrow, a prominent local physician,
believed that school boards should be "made up of men and women who have won success in the best of the various human occupations." Potential board members, he felt, should be chosen from among a slate of candidates named by an impartial citizens school committee. The group he founded in August, 1913, called The Citizens Council of Public Education, in actuality was composed of civic elites from the Business Men's Club, Chamber of Commerce, Woman's City Club, Taxpayer's Association, Federated Improvement Association, and the Walnut Hills Business Club. The Citizens Council subsequently controlled the nomination and campaign process for all future school board members until the 1960s.7

The industrial survey, begun in January, 1914, was conducted by two committees of the Chamber of Commerce. One was the Civic and Industrial Committee responsible for a compilation of current information on local manufacturing, including railroad accessibility, availability of raw materials, worker's housing costs, freight rates, etc. The other was the Industrial and Commercial Education Committee responsible for gathering specific information on the conditions of the local printing industry. (Printing was chosen first from among three other industrial possibilities--machine shop, clothing, and shoes and leather--because the committee thought the number of local printing establishments would yield a sufficient sample size.) With the assistance of several NSPIE officers who were experienced in occupational analysis techniques, the committee
developed a survey questionnaire for printers which was then sent to 219 local employers and employees. An educational committee was organized by Condon in January, 1914, to assist the Chamber of Commerce in gathering information on "the vocational phases of our local school system." This committee consisted of school board members, Chamber of Commerce members, teachers from academic, manual training, and domestic science departments, several members from the Vocation Bureau, and technical educators from the Ohio Mechanics' Institute (OMI) and the Young Men's Christian Association (YMCA). From among fifteen members present at the January 31st meeting, three subcommittees were formed: to study industrial education surveys from other cities; to gather information on local vocational education practices in the schools, such as prevocational schools, day trade schools, evening school; and to compile a list of local vocational education practices outside of the public schools, such as trade training classes at OMI and the YMCA. Condon, too, tried to educate his staff about industrial education and sent several employees from the manual training and domestic science departments to the NSPIE annual meeting in Grand Rapids, Michigan, on October 22 to 25, 1913. In addition, Condon sent one teacher to Germany in the summer of 1914 for a study of the Munich continuation schools.

In December, 1913, superintendent Condon brought NSPIE secretary Charles Prosser to Cincinnati to meet with local parties interested in the "question of vocational education." A joint meeting of the industrial education committees of the
Business Men's Club and Chamber of Commerce was held at City Hall on December 8th and 9th. Also present there were Edith Campbell and John Withrow of the school board, OMI president John Shearer, Herman Schneider of the University of Cincinnati, and National Chamber of Commerce president Herbert Miles.¹⁰

Industrial education committee member Frederick A. Geier, of the Business Men's Club, chaired the two-day meeting that resulted, in part, in the preparation of a new compulsory education bill to "harmonize conflicting provisions in the present law." Committee members recommended that the Greenlund Code be altered to authorize: dropping the age limit for work certificates for girls from sixteen to fifteen years old; summer employment for both sexes at age fourteen; completion of the sixth grade as a condition for employment during the school year; and the establishment of compulsory continuation schools. The joint meeting had an additional result, uniform recommendations for promoting industrial education in the state that included: elementary-level prevocational courses "to enable the child to make a more intelligent choice of vocation;" continuation schools and cooperative educational arrangements with employers and school systems; evening industrial education for adult daytime workers; salary increases for industrial teachers and supervisors to attract "a new type of teacher, one who has had the practical experience in industry"; and an "associate board of vocational education" for the state administration of vocational education (similar to the Wisconsin plan) with adequate representation by employers, employees, and educators.¹¹
In April, 1914, the Central Labor Council organized a nine-member Special Committee on Vocational Training to keep abreast of local developments in industrial education, and monitor local educational policy making. CLC members, in general, felt disenfranchised by the small school board. At their February 22, 1910, meeting, for example, the council "by an almost unanimous vote," rejected the Jung bill, and in 1915, council members supported a proposal by Hamilton County state legislator William Klein to restore large school boards in Ohio. CLC members also evaluated potential school board candidates for their positions on the purchasing of school supplies bearing the union label and the awarding of contracts to union shops. CLC action against the American Book Company is a case in point.12

Beginning in 1912, within the first year of Condon's tenure as school superintendent, CLC leaders protested the school board's choice of textbook publishers, and specifically, the awarding of contracts to the Cincinnati-based American Book Company (ABC), an employer of non-union labor. CLC members from the Allied Printing Trade's Council and the Printing and Pressmen's Local Union were active in pressuring the board to reconsider its choice of textbook publishers.13

Ever since ABC's predecessor, Truman & Smith, sold the first McGuffey Readers to the common schools, the American Book Company--the largest publisher of school textbooks in the country--held a virtual monopoly on sales to the Cincinnati Public Schools. Called the "book trust" by its business rivals, ABC was founded in 1890 through a merger of four publishing house
"giants in the field," with a combined capital stock of over 4.5 million dollars. From a base of operations in New York City, Chicago, and Cincinnati, ABC agents covered more territory than their closest rivals in the hotly contested and often scandalous struggle for school board dollars. "Nothing this side of manslaughter was excluded from the repertory of the great book agents of those days," wrote an ABC vice-president on his company's founding. "Political maneuverings, i.e., chicanery of the ward politics variety, and outright purchase of support was a recognized necessity."\(^{14}\)

The continued acceptance and renewal of ABC's five-year contracts with the Cincinnati schools certainly was an important business coup for the local publishing house. For civic boosters, too, the textbook contracts with ABC represented an important business ethic, that is, the obligation of local establishments to patronize Cincinnati's commercial vendors and "home" industries. When CLC delegates visited school board members in April, 1915, and again in January, 1916, urging nonrenewal of ABC's contract--the five year contract was to expire December 5, 1916--a textbook war seemed imminent.\(^ {15}\)

"There was no textbook fight in Cincinnati," Randall Condon said at a National Council of Education meeting in Detroit in February, 1916. Textbook adoption, he claimed, was a cooperative effort among school personnel with shared decision-making; a four-step approval process began with district-wide school teacher committees, then the list went to the Committee on the Course of Study, then to the superintendent, and finally to the
school board. Four months later, in June, Condon submitted a list of thirty-one textbook contracts for board approval—only nineteen of which were for the American Book Company. Needless to say, civic boosters were outraged at Condon's report that, they felt, discriminated against locally-manufactured products. One week after the report was presented to the school board, the Chamber of Commerce issued a complaint against Condon and called for an immediate investigation into the procedures for textbook selection—a delaying tactic which, they hoped, would postpone school board approval of the contracts. "Teachers engaged on Text Book Committees," a Chamber of Commerce spokesperson claimed, "had not been instructed to favor Cincinnati industries when articles of equal merit were before them." To the dismay of business boosters, however, the list of textbook selections were unanimously approved by the school board on July 1, 1916.16

On the 16th of July, a committee was appointed by the Federated Improvement Association to investigate charges that Condon discriminated against home products in the purchase of machine lathes from Hartford, Connecticut. Organized in 1907 as a watchdog of civic betterment, the Federated Improvement Association of Cincinnati was composed of delegates from among forty affiliated neighborhood welfare organizations. By 1916, the 10,000 member association had won a series of progressive educational and social reforms including playgrounds, athletic fields, civic instruction, and school gardening. With one dissenting vote, Condon was exonerated of the charges at the federation's August meeting. The investigating committee had
found that of the fifty-one machines bought for the schools since January 1, 1913, thirty-four were made in Cincinnati and seventeen outside of Cincinnati. Machines purchases from other cities, the committee reported, were necessary because of their specialized function and power adaptability to school usage. Furthermore, the committee revealed a lengthy process of approval for school equipment before vendor contracts were awarded: both Condon and Elmer Christy, superintendent of industrial arts, were required to secure board approval for proposed shop equipment; and a list of board approved shop tools (with technical specifications) then were forwarded to the business manager who advertised for competitive bids and awarded contracts. "It is very evident," the committee concluded, "that Dr. Condon has nothing whatever to do either with the selection or purchase of metal or wood working tools." 

Four years later, in 1920, the school district advertised for bids on twenty-eight specially equipped direct-line engine lathes. (Due to limited shop space at the East Side High School, ceiling-mounted countershafts were not recommended.) Some local machine-builders representatives, such as J. Wallace Carrel of Lodge & Shipley Machine Tool Company, complained to school board members that the drive—a friction-controlled cone pulley—was not made by them "nor do we know of any lathe manufacturer who does." Other machine shop spokespersons concurred that the lathes with specialty drives were "not made or used in Cincinnati." Faced with a strike that prohibited future production runs of the retrofit lathes, local machine builders
feared that the schools would favor out-of-town contractors. A compromise was reached, however, between several local firms and the school board whereby ten to fifteen used lathes would be loaned to the manual training shop until such time as new lathes could be delivered. "We men of the machine tool industry of this city," wrote one representative of the American Tool Works to Elmer Christy, "feel that for the City of Cincinnati to buy outside of the city machine tools which are made here, would so harm the prestige of the city that it would be very detrimental."18

Child Labor and the Schools

In 1913, the Ohio School Survey Commission initiated a study of overage elementary school youth in Cincinnati. With the assistance of the Cincinnati Bureau of Municipal Research and the Vocation Bureau, the commissioners calculated the rate of retardation of children who, they assumed, began first grade at age six and progressed "at the normal rate of one grade per year." The commissioners reported that approximately 56 percent of the 31,000 school children in Cincinnati were retarded. The highest percentage of retardation, they claimed, were in the third to seventh grades. Higher retardation rates, however, existed among working school children of both sexes: approximately two-thirds of all applicants for work certificates in the years between 1911 and 1913 were classified as retarded. The state commissioners were alarmed at the figures and strongly
recommended that Cincinnati educators "reduce the number of over-age children." 19

"Pushing up the age limit at which pupils may leave school has increased the percentage of retardation in the group of pupils who apply for work certificates," claimed Helen Woolley in reference to the 1913 Ohio child labor law (the Greenlund Code) which raised compulsory schooling for boys and girls to age fifteen and sixteen respectively. Work certificates were required for both sexes as well: one year, for boys from age fifteen to age sixteen, and two years, for girls from age sixteen to eighteen. Within one year after enactment of the Greenlund Code the retardation rate of females receiving work certificates rose 24 percent. "Something should be done for these children," complained Helen Woolley, director of the Vocation Bureau, "and something different than we are now doing for them."

Additionally, the code's nonrenewal of compulsory continuation schools (as established in the 1910 child labor law) meant that over one-half of the 3,245 students enrolled in the Cincinnati continuation schools in 1912 would return to school full-time the next year. "This unexpected change which largely destroyed the value of the well matured plans for the school," Condon reported in his 1913 report to the school board, "has made it necessary to consider the needs of the situation from a new angle." 20

"There are hundreds of children working in factories in violation of the law," claimed Edith Campbell before an audience of labor unionists. Campbell, too, blamed the inadequacies in the 1913 child labor law which, she believed, failed in several
important instances: first, the compulsory continuation school provision in the 1910 law was not renewed; second, there was an insufficient number of factory inspectors to police child labor violators; and, finally, there was widespread non-compliance both among employers and minors in regard to the requirements for work certificates. City social workers and educators alike were concerned with the large number of violations among underage females; for example, A.J. Willey, director of attendance for the board of education, estimated that in 1916 alone there were 1,800 girls employed under the legal age of sixteen. Underage females desiring work often chose to list a fictitious Kentucky residence "causing the inspectors much trouble" in unearthing the deception. In addition, employers often violated the provisions of the law that restricted the hours of female labor to fifty-four per week.21

Candy manufacturers, in particular, complained that the law unjustly discriminated against them; they claimed that an exemption from the hours statute for female laborers was justifiable on the grounds that they were dealers of perishable goods. On December 11, 1916, one such employer, the Dolly Varden Chocolate Company, told the board of education that they were inconvenienced by the requirement that their female employees acquire work certificates. "We will send no more girls to the Child Labor Bureau," a company spokesperson said, "as the girls seldom return to the shop and the company is deprived of their service." Superintendent Condon reviewed the case and reported the next week that, indeed, the names of sixty girls at Varden's
had been sent to the school for age verification. The school authorities determined that only sixteen out of the sixty youths had proper papers and requested the company send the remaining girls to the bureau. When instructed to do so by company officials, however, the girls never arrived there or returned to work. This firm was reprimanded by school officials for employing females without age and schooling certificates prior to "putting the girl to work." 

Other manufacturers who directly violated the provisions of the child labor law were prosecuted. Beginning in the fall of 1916, a special corps of state inspectors (the local press called them a "flying squadron") reported several child labor offenses in Cincinnati. Violators eventually were brought to trial, including a clothing manufacturer who employed a fifteen-year-old girl in his mill, and a former Democratic councilman and his business partner who employed two underage youths as pin setters in their bowling alley.

The stepped-up state prosecution of child labor violators coincided with the recent federal enactment of the Keating-Owen Act which regulated child labor among mining and manufacturing firms engaged in interstate commerce. Although President Woodrow Wilson signed the bill on September 1, 1916, it took another year before the enforcement provisions were in place. With American entry into the war, in 1917, opposition to child labor legislation intensified among manufacturers.

Aside from the legal prosecution of child labor violators, progressive reformers advocated school-based industrial training
programs for children of both sexes. "We have made little advance in the vocational training of women . . . we will have to have a change of attitude toward the girl," claimed Edith Campbell in a March, 1915, address before the National Education Association Department of Superintendents meeting in Cincinnati. She told the predominately male audience: "You have to decide whether the woman's place is in a home or in the home." The training of girls for industrial careers, according to feminist Campbell, was an important component in female social, political, and economic independence.25

Industrial classes for girls were established in the public schools due, in part, to the 1913 child labor law which required females to remain in school until age sixteen: female applications for work certificates rose 14 percent that year, and, as a group, females represented almost two-thirds of all child laborers in the city (see TABLE 3.). Five industrial centers offered day instruction for females "who enter industry or assume responsibility in the home." Girls were given courses in office occupations, garment-making, and other industrial trades. On March 10, 1915, a school for the sewing trades was authorized by the school board. The two-year vocational curriculum provided girls over fourteen years of age shop training in hand and machine sewing, power machine operations, trade dressmaking and millinery, art needlework, and textile design. Shop equipment consisted of fourteen single-needle, heavy-duty industrial sewing machines and twenty electric or treadle-operated domestic sewing machines. Operating along the
lines of an industrial shop, the school director accepted customer orders for dressmaking and embroidery, such as sewing swimming suits for the physical education classes of the public schools and uniforms for a local hospital.\textsuperscript{26}

\begin{table}
\centering
\caption{Work Certificates Issued by the Cincinnati Public Schools}
\begin{tabular}{|c|c|c|c|}
\hline
Year & \# of CERTIFICATES & \% BOYS & \% GIRLS \\
\hline
1912-13 & 2,450 & 51.4 & 48.6 \\
1913-14 & 1,207 & 37.9 & 62.1 \\
1914-15 & 1,044 & 56.7 & 43.4 \\
1915-16 & 1,878 & 45.5 & 54.5 \\
1916-17 & 2,102 & 40.4 & 59.5 \\
\hline
\end{tabular}
\end{table}

SOURCE: Adapted from Annual Reports of the Work Certificate Office in the Vocation Bureau, Cincinnati Public Schools, Annual Reports (1912-1917).

Eighty-five girls signed up for the Sewing Trade School that first year (which increased to 113 the next year) with almost three-fourths of the students enrolled in power machine operations. With the release of the chamber of commerce industrial survey on garment-making in 1917, local school authorities felt justified in promoting power sewing for girls even though there was a long standing "prejudice against factory employment." In cooperation with the newly—formed Textile Sewing Trades Association—a manufacturer’s organization established by the local chamber of commerce while the survey was being completed—Condon promoted the garment industry’s "modern, sanitary and well ordered shops and factories" and the high wages "ranging from $6 to $20 a week for well trained and skilled workers." (In May, 1916, the sewing trades association
distributed 8,000 pamphlets to eighth grade girls in the public schools with information about factory conditions and wages.\textsuperscript{27}

Almost one-quarter of the juvenile occupations for females with certificates in 1915 involved employment in the local garment industries, but an even larger number of girls were employed as sales clerks. In the academic year 1916 to 1917, for instance, 360 girls were employed in department stores compared to 292 in the sewing trades. Throughout this period, however, shoe, paper, candy, and cigar factories employed more females with work certificates than industrial sewing or department store work (see TABLE 4.).\textsuperscript{28}

### TABLE 4.
Occupations of Child Laborers with Work Certificates (in Percentages)

<table>
<thead>
<tr>
<th>OCCUPATION</th>
<th>1912-13</th>
<th>1913-14</th>
<th>1914-15</th>
<th>1915-16</th>
<th>1916-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERRANDS\textsuperscript{a} (M)</td>
<td>42.4</td>
<td>48.9</td>
<td>52.2</td>
<td>46.2</td>
<td>44.8</td>
</tr>
<tr>
<td>ERRANDS\textsuperscript{b} (F)</td>
<td>2.8</td>
<td>0.5</td>
<td>3.5</td>
<td>3.6</td>
<td>4.0</td>
</tr>
<tr>
<td>FACTORY\textsuperscript{c} (M)</td>
<td>25.8</td>
<td>21.3</td>
<td>18.6</td>
<td>24.6</td>
<td>22.6</td>
</tr>
<tr>
<td>FACTORY\textsuperscript{c} (F)</td>
<td>24.8</td>
<td>30.7</td>
<td>29.6</td>
<td>36.2</td>
<td>29.0</td>
</tr>
<tr>
<td>DEPT STORE (M)</td>
<td>10.6</td>
<td>6.9</td>
<td>12.3</td>
<td>8.7</td>
<td>9.9</td>
</tr>
<tr>
<td>DEPT STORE (F)</td>
<td>22.6</td>
<td>26.6</td>
<td>26.6</td>
<td>25.6</td>
<td>28.8</td>
</tr>
<tr>
<td>OFFICE WORK (M)</td>
<td>6.4</td>
<td>3.9</td>
<td>6.5</td>
<td>10.0</td>
<td>10.5</td>
</tr>
<tr>
<td>OFFICE WORK (F)</td>
<td>2.2</td>
<td>8.1</td>
<td>7.9</td>
<td>6.7</td>
<td>10.7</td>
</tr>
<tr>
<td>SEWING/TAILOR (M)</td>
<td>1.5</td>
<td>2.2</td>
<td>0.6</td>
<td>1.7</td>
<td>2.7</td>
</tr>
<tr>
<td>SEWING/TAILOR (F)</td>
<td>16.6</td>
<td>22.4</td>
<td>23.8</td>
<td>24.0</td>
<td>23.3</td>
</tr>
<tr>
<td>MISC.\textsuperscript{d} (M)</td>
<td>10.3</td>
<td>16.8</td>
<td>9.7</td>
<td>8.7</td>
<td>9.5</td>
</tr>
<tr>
<td>MISC.\textsuperscript{d} (F)</td>
<td>31.0</td>
<td>11.7</td>
<td>7.1</td>
<td>3.5</td>
<td>3.9</td>
</tr>
</tbody>
</table>

\textbf{SOURCE:} Adapted from Annual Reports of the Work Certificate Office in the Vocation Bureau, Cincinnati Public Schools, Annual Reports (1912-1917). \textsuperscript{a}messenger boys, newsboys, or wagon boys; \textsuperscript{b}Indoor messengers for private firms; \textsuperscript{c}shoe, paper goods, candy, metal goods; \textsuperscript{d}home industry, trade apprentices, engraving & printing, laundry & domestics (female only).
In 1911, the compulsory continuation schools offered salesmanship classes to two hundred girls employed in local department stores. Several years later—following the 1913 child labor law—Condon created a visiting teacher position for biweekly salesmanship classes in several local stores. This measure was meant to accommodate the training needs of girls who were over the compulsory school age of sixteen and required to hold work certificates until age eighteen. Each participating employer supplied a classroom (for a minimum of twenty girls) on their own premises "free from interruption during study hours" but within the working day. The curriculum consisted of principles of merchandising, marketing, and sales as well as customer relations and employee conduct. In the former category the girls were instructed in "pushing profitable lines," "forcing the sale," and "pleasing fussy customers," while in the latter there were lessons on "working with the right spirit," "using tact," "earning confidence," and "loyalty."\(^{29}\)

The local board of education sanctioned the salesmanship schools even though private trade training traditionally generated hostility from organized labor. These corporation schools were a significant departure from prior vocational practices in the city's public schools. Consequently, in January, 1914, Condon issued a statement defending the use of public funds to support private trade training. "The controlling motive is to be the education and social improvement of the employees themselves," he said, "even though one of the direct results [of the school] is an improved service for the
employers. "I have no hesitation in sending teachers into commercial and industrial establishments," he added. In September, 1914, Condon established salesmanship classes as an elective in the cooperative high school course at Woodward High School: ninety students were enrolled that fall term.30

School-aged messenger boys, too, were provided cooperative work and study arrangements with employers—almost one-half of all juvenile male occupations were in some form of daytime or nighttime errand work (see TABLE 4.). Local educational and social reformers, in particular, expressed concern about the pernicious effects on youths exposed to unsupervised urban night life.

Edward Clopper investigated the street trades in Cincinnati as part of his job as regional secretary for the National Child Labor Committee. In 1908, Clopper reported that over 200 messenger boys aged fourteen to twenty were employed by two local telegraph companies and the city's U.S. Post Office. One hundred Western Union boys, for instance, worked both day and night shifts (only boys over age sixteen were allowed night work). (In 1910, the age limit was raised to eighteen for the nighttime hours of 9:00 p.m. to 6:00 a.m.) Western Union day workers averaged $15 to $35 per month income, but a portion of their earnings went toward the purchase of their own uniforms (caps were supplied by the company). In general, errand boys were called upon to carry their messages or packages to destinations "whose character is known or believed to be questionable," and
Clopper condemned the street trades for "the immoral influences surrounding this work."\(^3\)

In autumn, 1914, the board of education opened a trade school for messenger boys age fifteen to sixteen. Condon believed that the school could ease the transition for boys "on the point of leaving school" by offering them half-time cooperative work as an incentive to complete their eighth grade studies. Condon regulated the number of minors applying for jobs in the messenger service at two local firms: officials of the Western Union Telegraph Company and the Cable Company agreed to hire only boys recommended by Mary Conway, principal of the continuation school. School board member John Withrow believed that the school should be set up along industrial lines. "If we are to train for the trades we must do the training among actual shop conditions," he said. "We must have the particular kind of lighting, the same kind of construction, the same type of machinery and furniture." Housed in a former elementary school building owned by the board of education, the messenger service school provided trade instruction in electricity and telegraphy. The Western Union Company donated ten telegraph machines for installation in the school—enough machines for a shop class of twenty pupils with one-half of the class alternating biweekly between school and work—and the school board hired a telegraphy teacher recommended by the company. The messenger school was "properly constructed and adapted to new vocational training." (By 1917, school enrollment was about fifty students.)\(^\text{32}\)
"It was not the army we must shape and train for war but rather . . . a nation," wrote Woodrow Wilson in May, 1917. On February 23, 1917, Wilson signed the Smith-Hughes bill which provided over seven million dollars in federal funding to the states for vocational programs and vocational teacher education. A seven-member federal board for vocational education administered the day-to-day operations of the act. To facilitate interaction with the federal board, each state was authorized to designate an agency for the distribution of vocational education funds. In most cases, the existing state board of education served as administrative agent for Smith-Hughes monies. The coordination of federal funds required each state to develop a detailed plan for equipment needs, teacher qualifications, and curriculum offerings.\(^{33}\)

On March 2, 1917, Condon was in Columbus influencing state legislators in a scheme for the apportionment of Smith-Hughes funds favoring local industrial education. Condon claimed Cincinnati would benefit greatly from the "new movement," but he feared that "if the money were distributed on a geographical basis the state would not be able to make the best use of the resources thus supplied." That August, a seven-member state board for vocational education was created to administer the operations in Ohio. Six of the members were gubernatorial appointments, and the Superintendent of Public Instruction served as ex officio member and secretary: there were two educators, two businessmen, one physician, and one homemaker. John Withrow,
Cincinnati school board president and physician, was a member of the first state board of vocational education until his resignation in April, 1918, at which time Randall Condon was named to the board as Withrow's replacement.34

Condon and William P. Burris, dean of the Teacher’s College at the University of Cincinnati (UC), were architects of the state plan for a regional system of vocational teacher instruction. As early as March, 1917, Condon requested Burris to "shape up a plan which will permit the College for Teachers to become a beneficiary under the provisions of the Smith-Hughes Act." "It will not, I think, be necessary to wait for action of the Ohio Legislature . . .," claimed Condon. Both Condon and Burris were confident that the city’s municipal university and public school systems soon would become recipients of federal vocational education funds. That year over $150,000 in combined state and federal funds were used for vocational education in Ohio, with one-half or $78,000 in matching funds provided by the state of Ohio. One year later, the state board of education adopted Burris’ plan for training trade teachers and teachers of home economics in the region.35

In the spring of 1917, David J. McDonald (formerly a teacher educator at the University of Indiana) was appointed by Burris as professor of vocational education at the University of Cincinnati. He was responsible for organizing industrial teacher education evening classes in Cincinnati and Dayton (two centers were established later in Middletown and Springfield). Six part-time staff were hired to teach trade science, design, and
mathematics classes. That first year there was a combined enrollment of 150 at the two centers with almost three-fourths of the students coming directly from the trades, such as printing, machining, electrical work, drafting, carpentry, and plumbing.\(^3\)

In February, 1918, Condon appointed John F. Arundel as director of vocational education in the city’s school system. Arundel, a former elementary school principal, was confronted with the immediate task of administering war-related program funds under the War Training Department of the Federal Board for Vocational Education. That past summer Condon authorized usage of the messenger service school for the training of U.S. Signal Corps radio operators and telegraphers "with no great amount of time [spent] in theory." Within one week of the opening of classes, in July, 1917, enrollment had reached over two hundred draftees, including civilian males and females "eager to prepare for commercial telegraphic service in the event of a scarcity of operators caused by the draft." (By June 30, 1918, war-related radio classes were offered in twenty-six Ohio schools with a total enrollment of 632 draftees.) On May 18, 1918, the local board of education approved a government contract for the education of an estimated 750 men "in various technical lines needed for the army service." Three months later, in August, over 800 soldiers received an intensive eight-week course, six hours per day, in machine shop, welding, sheet metal, automotive, carpentry, and the electrical trades.\(^3\)

In June, 1918, congress passed the Smith-Sears Act which authorized vocational rehabilitation for disabled soldiers and
sailors—the Federal Board for Vocational Education was responsible for training these men "in some useful employment."

Condon anticipated the board's suggestion that the public schools begin to serve the vocational needs of returning soldiers. In April, 1918, the local Committee on War Education—Condon was a member—recommended that the school board enter into a contract with the government for the re-education of 250 wounded soldiers. "Our desire and purpose," Condon reported to the school board, is "to cooperate to the fullest possible extent with said board in any plans which it may wish to develop in Cincinnati for the re-education of disabled soldiers." Vocational director Arundel, too, believed that the Cincinnati Public Schools could provide classes in occupational therapy for wounded soldiers "as soon as the government calls upon the city for this kind of help in the war." The November 11th Armistice with Germany, however, brought an abrupt end to the European conflict. With the demobilization of the Signal Corps units, local war education classes ended, and the rehabilitation programs were never established.38

In the fall of 1918, Condon pressured the school board "to hasten the completion" of East Side High School (later Withrow High School) which was scheduled to become a governmental hospital for wounded soldiers during the war. Although plans for East High were started in 1914, building construction did not begin for another year, and numerous strikes and material shortages delayed the school's opening until September 8, 1919. Several daytime vocational programs were established at the high school even though the industrial shops were not fully operative.
(As previously mentioned, ten to fifteen used lathes were loaned to the school in 1920.) In December, 1918, for example, the board approved an auto mechanics program funded under the provisions of the Smith-Hughes Act. Over 100 youth aged fourteen or older applied to the school when it opened in January, 1919; only fifty-two boys, however, were admitted that first year. The auto school shops equipment consisted of donated automobiles and motorcycles turned over to the school board by the U.S. Army after the war. A second daytime vocational school, funded by the Smith-Hughes act, was opened at Woodward High School beginning in February, 1919. The course was endorsed by the same coalition of local employers and trade unions that supported the Printer's Apprenticeship Continuation School in 1911.39

Vocational Guidance

The Smith-Hughes Act "should not be looked upon as a menace to present good forms of education," said Elmer Christy, director of the industrial arts department in an address before the Cincinnati Schoolmaster's Club in January, 1919. "But it [Smith-Hughes] will undoubtedly lead us to make a much closer analysis of the characteristics of the boys and girls in our elementary schools in order that they may be directed into the most profitable channels for their life work." Vocational educators, like Christy, anticipated the time when the expansion of trade instruction would result in greater need for vocational guidance.40
Vocational guidance first was conceived during the Dyer superintendency as civics education within the city's elementary schools. Under Condon's tenure, however, the movement became integrated into the high school curriculum. A full-time employee directed district-wide guidance efforts (established in 1915 as the Department of Civic and Vocational Service) that resulted in a variety of novel record-keeping methods for registering student career choice.\textsuperscript{41}

The guidance movement attracted the city's elites and civic boosters who participated in numerous career orientation activities. Local chamber of commerce directors, in particular, believed that vocational guidance "gave the businessman a direct point of contact with the boy." In 1915, twenty eighth-grade civics clubs—numbering over 2,000 students—were organized by the chamber of commerce (through a Committee of Sponsors) into a federation called the Civic and Vocational League. Weekly league lectures at the chamber offices were provided by the sponsors "so that the boys may be inspired to good resolve, to be successful men, and get the business man's point of view." In later years the league sponsors funded a newsletter, an annual dinner, and numerous industrial and civic excursions. During the war years the 4,000 member league participated in activities such as the Junior Red Cross as well as a thrift stamp and book drive campaign for military men overseas. In the post-war years, league sponsors encouraged school board officials to expand civics classes for school children, future teachers, and non-naturalized adults.\textsuperscript{42}
Vocational guidance activities usually were the responsibility of classroom teachers, many of whom integrated the study of occupations into their regular curriculums. In the city's elementary schools academic teachers were assisted by manual training teachers who presented class lectures on various aspects of the skilled trades. According to many educators, guidance activities, especially for the eighth grade classes, were essential, considering the vocational choices (or "life career motives") students faced. Eighth graders received information about curricular offerings in the city's high schools. In addition, the physical, academic, and social characteristics of eighth graders were recorded on a vocational record card that the teacher periodically updated. The vocational guidance record card was used in the city's high schools as well.43

Vocational guidance in the high schools, claimed departmental director Frank Goodwin, was "a systematic effort to keep the life career motive before the students." At some of the city's high schools, each student was assigned a teacher who served as a career adviser. Often, high schoolers in the lower grades were provided information on careers, and upper-level students were exposed to a variety of lectures on higher education, including college choice, financial considerations, and curricular offerings. Finally, in May of their last year, many high school seniors were interviewed about their post-graduate plans.44

In 1914, the local chamber of commerce established a Vocational Service Bureau to assist public school students with
part-time job placements. In 1915, the Vocation Bureau of the Cincinnati Public Schools opened an office for career counseling and job placement: the office registered over 1,000 students and found jobs for about one-half of them that year. In most cases, a placement officer reviewed each student's case history, family background, and guidance record card in order to assess job potentiality. At other times, students were requested to participate in mental testing as well. Vocation Bureau officials conducted monthly follow-up studies on each students' wages and advancement in industry for a period of three years.45

"We believe that our series of mental and physical measurements will furnish a valuable aid in advising young people with regard to the choice of an occupation," claimed Helen Woolley, director of the Vocation Bureau and researcher on retardation among elementary-level working children. With the opening of the placement office, however, Woolley directed her staff to study the causes of academic failures in the city's high schools. In the winter of 1917, for instance, the bureau completed a study of eighty Woodward High School students who experienced academic failures in the previous year. Bureau researchers concluded that in 40 percent of the cases student failures were due to "a lack of encouraging home conditions" and recommended that a course of study—industrial in content—be adapted to fit their mental capacity.46

In 1920, Woolley directed a study of vocational guidance among public school students, the first of its kind in Cincinnati. We could adequately diagnose "defectives," she
claimed, but the bureau "had developed no systematic way of giving vocational information to children while they are still in school or of stimulating directly their vocational interest."

With the assistance of the dean of the graduate school at Colorado State Teacher's College, bureau staff gathered data on the vocational aims of seventh through twelfth graders. "The inquiry is arousing great interest among teacher and pupils," Woolley surmised, "and will doubtless result in giving some information of real importance to the school authorities." "

Woolley hoped that the guidance movement would develop sophisticated diagnostic tools for career assessment; experimental psychologists, like herself, participated in adult aptitude testing of recruits during the war. Yet immediate post-war vocational guidance in educational settings changed little, and by 1922, vocational guidance personnel were still relying upon public school teachers to impart occupational information and vocational advice.

The Anti-Vocationalists

"I believe thoroughly in Industrial Education in all its phases, but I believe as thoroughly in a classical education--and that each is best for those who can most benefit by its pursuit," wrote Randall Condon in his first official report to the school board in 1913. It was not until after the war, however, that Condon turned his attention to the improvement of classical education in Cincinnati when, in May, 1919, he established a college preparatory course of study for the Walnut Hills High
School. "Nothing has been recommended since my association with
the board which I consider more vital to our high schools," wrote
a local school board member in support of the classical high
school. One former Cincinnatian wrote the local press supporting
Condon's decision to establish a classical high school "in which
there shall be no 'fads and frills,' but straight education in
the real essentials." 19

The immediate post-war period was marked by hostility from
classicists who believed that educational reformers had
substituted manual training and domestic science for Greek and
Latin. Many felt that a return to the humanities in American
public education signaled a reaffirmation of American culture.
In the humanities "we are dealing with the problems of
democracy," Irving Babbitt of Harvard College said, ". . . If you
secure only material efficiency, and fail to train the heart and
mind in high ethical standards then you will have no protection
against the wild excesses of Bolshevism." The American Academy
of Arts and Letters proclaimed that "thoughtful Americans . . .
ought to encourage rather than discourage" the study of classical
languages and history. "The triumph of the opposite policies,"
academy members claimed, "will lower the intellectual and
aesthetic standards of our secondary schools, and the average
culture of the American people." And a classical committee
within the National Education Association proposed that the
classics "should be immediately restored to their place" in the
curriculum. "We shall have to combat and expose many vagaries
which are now attempting to secure public favor as plausible theories of education," said the committee members.50

"The work done in Cincinnati under the Smith-Hughes Act has met with the approval of the Washington authorities," wrote the editor of the School Index in April, 1919, in reference to a report by the Federal Board for Vocational Education that praised the quality of vocational work being done locally. But local opposition to vocational education reached crisis proportions in the early 1920s when several school board members—led by Malcolm McAvoy—threatened to restrict funding for trade training.51

At a school board meeting on December 22, 1919, McAvoy, prominent attorney and bank official, voiced his concern that vocational programs were too costly for the school system to continue to support. "Through recurring and increasing deficits," McAvoy claimed, "our Board may find itself forced to reorganize or discontinue entirely some one or more of the numerous vocational courses and collateral activities that have been established during the past decade . . ." McAvoy believed that the removal of vocational programs would release funds which could then be used for securing teacher pay raises.52

Local school board members were sympathetic to the need for generating greater school revenues. State millage for educational purposes—as mandated by the Smith law of 1911—remained at the same rate since the law's inception. Subsequently, local municipalities could collect only a fixed amount of revenue for their schools. With the added pressure of teacher salary negotiations, school board members like John
Withrow realized that funds would not be available "to meet the request of the teachers." But the movement against the expansion of vocational programming, McAvoy felt, was a necessary retrenchment in order to alleviate budgetary deficits.53

Unbeknownst to other board members, McAvoy introduced a resolution at a school board meeting on March 8, 1920, to eliminate courses in school gardening and poultry-raising. A heated debate erupted between McAvoy and Franklin Dyer, former school superintendent and current board member, who charged that if adopted the resolution "will put back the schools to a place they occupied twenty years ago." More importantly, Dyer claimed that the resolution "involves the whole question of vocational training" and challenges the traditional board policy along these lines. McAvoy's resolution passed that night; days later, however, it produced a shock wave among civic and community leaders who rushed to pen letters of support for Condon. Many felt that the McAvoy resolution was a personal attack upon Condon's policies and a vote of "no confidence" as superintendent these past seven years. (Less than one year before, on May 12, 1919, the school board voted unanimously to renew his contract for another five years.)54

At the next school board meeting on March 22, 1920, Condon placed a plan before the board for cooperative part-time vocational classes for apprentices. Three trade schools were to be established for boys aged fifteen or older who desired to learn printing or sheet metal work. The programs would qualify for Smith-Hughes funding, said Condon, and were part of a
"well-defined policy for the organization and extension of vocational education through full-time, part-time and evening school classes." Condon’s cause was championed by John Withrow who warned his colleagues that "if we abandon vocational education Cincinnatians of the next generation will walk within the shadow of the Acropolis but they will walk without food." The plan was approved by a narrow margin but not without Condon’s first threatening to resign should the issue fail.55

McAvoy continued to attack Condon’s policies at a board meeting on February 14, 1921, when he unsuccessfully tried to block an $8,000 appropriation for the printer’s trade school. At the next board meeting, on February 28th, McAvoy introduced a resolution requiring "no further expansion of vocational courses in the school," but that too was defeated. Yet McAvoy succeeded in committee where he had failed in the general assembly by requiring Condón to present a detailed itemization of vocational school expenses including plans for consolidating trade schools in several centralized locations. On March 26th Condon presented his report to the committee, but McAvoy strenuously objected to its approval and recommended instead that the figures be verified by the business manager—apparently McAvoy felt that Condon failed to account for depreciation of shop equipment. The school board concurred with McAvoy’s request at its meeting on March 28th, and on April 9th, Condon was directed to amend the report to include comparative salary costs for teachers of vocational and academic subjects. (Condon submitted the report on vocational education at the May 9th school board meeting.)56
Throughout the early 1920s, Condon continually defended his plans for the expansion of vocational education. A progressive educational reformer with eight years experience as school superintendent in Cincinnati, Condon appealed to the board members to "move forward along sane and well considered lines." "Forever alive; forever forward," he said, "or reaction and retrogression." Cincinnati’s vocational programs were "the seed," he believed, that "developed into the settled policy of the land."57

Conclusion

The substitution of trade instruction for manual training occurred in the earliest years of Condon’s tenure. The "new" industrial education, Condon and his supporters believed, required curricular revisions more closely aligned with occupational specialization. Traditional manual training, they felt, was "soft" in generic tool usage, shop handicrafts, and a general study of industrial processes; the future industrial worker needed job training with school shops fully-equipped for trade instruction. Upon the recommendations of several advisory groups or trade associations, Condon authorized the purchase of heavy stationary equipment and power tools for the textile, machining, printing, automobile, and telegraphy shops. These same advisory groups assisted Condon in the development of vocational curriculums, textbooks, and shop materials and supplies. Vocational teachers, too, often were selected upon the recommendation of their respective trade associations.
Smith-Hughes funds accelerated the opening of local vocational high school programs after the war; inexpensive, used tools and equipment were offered to the school board through the liquidation of local military schools as well. Yet the expansion of vocational education did not go unnoticed as anti-vocationalists in the early 1920s challenged Condon to defend his position on industrial education. School board members, too, were forced to evaluate expenditures for vocational education in lieu of pending teacher pay raises and a post-war depression in 1921 that affected real wages. As a result, in the immediate years following the period of stabilization the development of vocational programs were stymied by economic retrenchment as well as the vocal criticisms of the anti-vocationalists.56
NOTES


5. James K. Mercer, Ohio Legislative History (Columbus: Edward T. Miller, 1913), 1:144-145.


7. "Urge Important School Changes," Ohio State Journal, January 27, 1910, p.7; The Optimist 2 (June/July, 1913):22; ibid., 2 (October,
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19. CPS, Annual Reports (1915), 166; Report of the Cincinnati Bureau of Municipal Research, 16-17. Also, see Rufus E. Miles, "The Ohio Institute for Public Efficiency," Municipal Research 77 (September 1916):11-12.


The Children: A History of The National Child Labor Committee and Child Labor Reform in America (Chicago: Quadrangle Books, 1970), 130-142; and Clarke A. Chambers, Seedtime of Reform: American Social Service and Social Action, 1918-1933 (Minneapolis: University of Minnesota Press, 1963), 12-13. NCLC officials tried to counteract the growing public acceptance of child labor through school-related NCLC functions, such as exhibitions, programs, and lessons on the dangers of child labor. A committee of local social activists, including Randall Condon and Helen Woolley of the public schools agreed to host the traveling exhibit in the spring of 1918, see "Child Labor Day," School Index 4 (January 4, 1918):129; "Announcement of Exhibit to be Held by the National Child Labor Committee," idem, 4 (March 8, 1918):206; "Child Labor Exhibit," idem, 4 (February 22, 1918):190.


26. CPS, Annual Reports (1914), 198; ibid., (1915), 31; ibid., (1916), 82-83; ibid., (1917), 96-98; CPS, Minutes 30 (March 10, 1915):183.


28. CPS, Annual Reports (1917), 254.

29. CPS, Annual Reports (1914), 84-85; ibid., (1915), 83-84. Department store salesclerks resorted to various methods of shop-floor subterfuge in undermining the "lessons" of their employers, see Susan Porter Benson, Counter Cultures: Saleswomen, Managers, and Customers in American Department Stores, 1890-1940 (Urbana: University of Illinois Press, 1986), chap.4.

30. CPS, Annual Reports (1914), 85.


Reports (1917), 8; ibid., (1918), 183, 188. On a history of Smith-Hughes funding in the state of California, see Harvey Kantor, "Learning to Earn: The Origins of Vocational Education in California, 1900-1930," (Ph.D. diss., Stanford University, 1985).


35. "State Adopts Cincinnati Plan," School Index 5 (September 20, 1918): 17; Condon to Burris, March 9, 1917, Burris to Condon, April 12, 1917, Office of the Dean, William P. Burris Papers, Box 7.5, UC Archives. Beginning in July, 1918, the following state institutions offered vocational teacher training: trade and industrial education at UC, University of Toledo, and Cleveland State University; vocational agriculture at Ohio State University; and vocational home economics at UC, Ohio State University, and Miami University, see Ohio School Reports (1918), 187.


37. "Arundel Appointed Director of Vocational Education," School Index 4 (March 1, 1918): 194; "Many Kinds of Training Received by Soldiers This Summer," idem, 5 (September 6, 1918): 1; CPS, Annual Reports (1917), 101-102; "Arundel is Quitting Schools After 50 Years," Cincinnati Enquirer April 5, 1956, p. 1; "Schools to Train Telegraphers in View of Urgent Needs of Reserve Signal Corps," Cincinnati Enquirer June 29, 1917, p. 7; Ohio School Reports (1918), 192; CPS, Minutes, May 18, 1918 and August 7, 1918. Many pamphlets and circulars on war education were prepared by the Federal Board for Vocational Education and distributed to educators, such as William O. Thompson, president of Ohio State University, see William O. Thompson Papers, RG 3/e/48, file 17, Ohio State University Archives. On war preparedness and military training in general, see John Patrick Finnegan, Against the Specter of a Dragon: The Campaign for American Military Preparedness, 1914-1917 (Westport, Conn: Greenwood Press, 1974) and Michael Pearlman, To Make Democracy Safe for America; Patricians and Preparedness in the Progressive Era (Urbana: University of Illinois Press, 1984).

rehabilitation of civilians injured in industrial accidents, and the federal board administered the provisions of this act as well.


41. CPS, Annual Reports (1913), 218-22; Frank P. Goodwin, "Vocational Guidance in Cincinnati," Vocational Education 3 (March 1914):249-259.


45. CPS, Annual Reports (1915), 32; Helen Woolley, The Vocation Bureau of Cincinnati: Serves All the Children of All the Schools In These Ways (Cincinnati: Board of Education, 1922); 5; Cincinnati Chamber of Commerce, Annual Reports (1914), 41.


52. CPS, Proceedings (December 22, 1919), 29-30.


54. CPS, Proceedings (March 8, 1920), 6; "New Formed Majority Attacks Established Policy of School Board," School Index 6 (March


CHAPTER V
SUMMARY AND CONCLUSIONS

Introduction

This study has been based upon several important assumptions regarding educational reform in the Progressive era. First, many believed that the public schools should offer programs attracting a broader clientele than ever before. Local curricular innovations were based, in part, upon progressive convictions that, indeed, the city was composed of heterogeneous communities requiring vastly different "solutions" to the educational problems of the day. Second, school-based reform was shaped by the middle-class values of local civic and educational leaders. A curriculum heavy in prevocational subjects, for instance, was targeted to potential eighth-grade dropouts. Local educators assumed that working-class adolescents favored manual training over academic subjects because these same students followed the career paths of their parents into industrial occupations. Third, curricular innovations often represented the conflation of gender with social class. Manual training ideology, for example, abounded with the rhetoric of middle-class masculinity; gender segregation and homosocial bonding in industrial education classrooms and shops reinforced class-bound
gender identity. Finally, educational progressivism was sustained by a cultural milieu or zeitgeist that promoted liberal reforms. Program after program of social welfare measures were offered for guidance and uplift to the unwashed. Few industrial educators, in particular, ever questioned the soundness of a socio-economic system that provoked "dysfunctional" behavior. The roots of the tree were healthy, many believed, some branches just needed pruning. With these assumptions in mind, we now turn to the summary and conclusions of this study.

The evolution of industrial education in the local schools seems to parallel the lives of several important school leaders, especially superintendents Peaslee, White, Morgan, Dyer, and Condon. Their career paths closely follow the chronologies presented in the body of this work and are the subject of summaries in the first part of this chapter. Following that is an interpretive essay on gender identity and industrial education. The transformation from manual training to trade instruction reflects changing notions of masculinity in late-Victorian America. Advocates of each movement offered their theories and practices in novel and unique ways, ones that suited the perceived needs both of the social-classes and gender identities of the communities of which they were a part. The next section provides an overview of the national industrial education movement in the period under study. A final section offers several suggestions for further research on the origins of industrial education.
The Formative Period, 1886-1900

Fearful of the proximity of poor districts to the inner city, urban elites moved into outlying suburban neighborhoods offering—among other things—better schools. In fact, new school buildings were constructed or renovated at a rapid pace in the suburbs. For those people who remained in the inner city, however, working-class neighborhoods were interspersed among business and manufacturing districts: the worst tenements, for example, in the West End, were segregated by race as well. Throughout the downtown districts there were obsolete neighborhood school buildings that contained crowded classrooms that created health problems due to inadequate heat and ventilation.

Late-nineteenth-century civic elites worried about heightened immigration, violent labor struggles, and business recessions and failures that, they believed, created social instability. Educators, too, articulated similar fears of social dislocations. Many Cincinnatians, therefore, turned to public school educators for salvation from a declining social order and the restoration of civic stability.

City school superintendents, in particular, introduced variations on themes of civic and social education. From 1874 to 1886, Superintendent John Peaslee introduced lessons in "public virtue" to elementary school children which required the weekly memorization of uplifting literary quotations. From 1887 to 1889, Superintendent Emerson White introduced health and moral lessons on the dangers of alcohol, nicotine, and narcotics. And
from 1890 to 1896, Superintendent William Morgan continued the effort to counter unhealthy habits by establishing a physical culture department for instruction in gymnastics and calisthenics.

Leading American manual training educators, such as Calvin Woodward, promoted tool usage and handiwork as physical culture as well. Some educators promoted manual training as a means of manly character-building; others believed that manual training offered boys an opportunity to prepare for adult occupations.

Manual training had been introduced into the public schools as early as 1864, first, as drawing instruction for elementary school children, and six years later as industrial drafting for high schoolers. In the 1880s, community support for public school manual training increased as the commercial drawing and design fields expanded. (Other institutions, such as the Art Academy, the Ohio Mechanics' Institute, and the University of Cincinnati established drawing and art classes which resulted in institutional competition for new students.) After the turn of the century, manual training and domestic science courses were offered to public elementary school students.

For older youth, such as teenagers and young adults, manual training and trade instruction were offered in two private institutions, the Ohio Mechanics' Institute (OMI) and the Technical School of Cincinnati (TSC). The Ohio Mechanics' Institute—one of the oldest technical schools in the United States, established in 1828—offered evening apprenticeship instruction to young men and women. Students were enrolled in
one of three courses of study: artistic, mechanical, or architectural. By the 1880s, OMI directors strengthened the school curriculum with academically rigorous classes in physics, mechanics, geometry, and mathematics. Students were tracked into departmental-level ability groups as well. OMI directors hired white-collar professionals as part-time evening instructors in order to provide role models of successful businessmen.

Teenage sons of middle-class industrialists—many of whom could afford to delay their entry into the workforce for another three years—enrolled in the city's manual training high school which offered a curriculum rich in the industrial arts. Although exposed to shop classes in woodworking, blacksmithing, and machining as well as traditional high school academic subjects, most graduating students sidestepped the trades for careers in industrial management. Others chose to enroll in engineering or professional schools.

As a result of the national economic depression in the mid-1890s, however, TSC directors faced unfavorable financial operations through low enrollments and diminished endowments. In 1901, the school was transferred to the main campus of the University of Cincinnati and operated by the Engineering College.

The Experimental Period, 1901-1912

In the new century, educational changes were facilitated by organized groups of progressive reformers. Cincinnati's reform leadership consisted of public school administrators, university academics, and social service workers who promoted
curricular reforms throughout the city’s elementary and secondary schools. Many believed that manual training helped remedy retardation, absenteeism, and early school-leaving among students in the city’s tenement school districts. Shop activities promoted student interest in school, they argued, and manual training increased mental retention in academic subjects.

In the earliest years of Franklin Dyer’s superintendency, elementary industrial education was confined to a single manual training center, the Oyler School, in the city’s West End. Situated within the industrial basin, the school was attended by children from the nearby tenement districts. The school principal, O.P. Voorhes, first introduced the idea of organizing shop classes in 1904. Following an industrial shop model, boys were organized into work groups or gangs, and peers were designated foremen or managers. Girls were provided a five-room fully furnished apartment for domestic science instruction and "hands on" training. The Oyler method of industrial education became so popular that by the end of Superintendent Dyer’s tenure in 1912, thirty-two centers in elementary schools had been established throughout the city. Among these was the segregated Douglass School for the training of black students. Two years later, a private trade school for black apprentices also was established in the city’s West End.

In implementing schools for apprentices in the machine and printing trades, Franklin Dyer aroused the anger of local labor unionists who charged that Dyer relied solely upon local factory owners for input about the schools. Although union machinists
were excluded from the policymaking functions of the machine 
apprenticeship school, union printers did take part in the 
advisory council of the printing trades school. Unionists in 
general distrusted manufacturer domination in public industrial 
education, and the local American Federation of Labor affiliates 
closely monitored Dyer's school board policy concerning 
apprenticeship education.

The Ohio Child Labor Law of 1910 strengthened public school 
control over the training of apprentices by authorizing part-time 
continuation schools for working youth, aged fourteen to sixteen. 
Continuation schooling allowed working children to receive an 
academic education in "basic skills," such as reading, writing, 
and mathematics, while retaining their income-producing jobs.

In 1911, Dyer established the Vocation Bureau for the 
administration of student employment certificates and other 
record-keeping functions. Under the direction of Helen Woolley, 
a psychologist trained at the University of Chicago, the bureau 
staff initiated a research program of mental testing of a sample 
of 1,000 working and non-working children in Cincinnati. Her 
work resulted in the development of psychological tests and 
evaluation instruments used to measure student retardation. 
Woolley's nationally-acknowledged five-year study eventually was 
published, in 1926, as An Experimental Study of Children.

Industrial education enrollments in the public high school 
increased slowly but steadily in the Dyer years. Dyer 
implemented cooperative education programs in the local high 
schools. Modeled after Herman Schneider's civil engineering
program at the University of Cincinnati, cooperative education allowed for alternating periods of trade-related classes in school and part-time experiences in industrial, manufacturing, office, clerical, sales, or domestic occupations. In 1912, over one-quarter of all high school students were enrolled in vocational classes such as manual training or domestic science.

By the end of the experimental period, approximately one-third of all elementary and secondary day students in the public schools had been exposed to some form of vocational education. By 1912, over fifty percent of the city's students were exposed to high school vocational programs—where job orientation was deemed most critical to immediate post-school career performance. Yet vocational shops and laboratories were costly enterprises because operational, maintenance, and equipment purchases, shop supplies, and teacher salaries required unprecedented expenditures. In the last three years of Dyer's tenure, for example, the school board averaged $17,000 in shop expenditures alone. Dyer's promotion of cooperative arrangements with local industrialists—who absorbed most of the shop-related costs—offset public criticism of vocational education.

The Period of Stabilization, 1913-1920

Educational change came with Randall Condon's promotion of trade-specific vocational education in 1913. Condon relied upon the support of progressive members on the school board who helped to further a reform agenda that met with little direct opposition from the city's variegated social classes. Condon knew the
obstacles to educational reform, however, from previous experience as superintendent in Providence, Rhode Island. His first words to the Cincinnati school board echoed a cautious sentiment: "I shall hope to demonstrate that I am a progressive but not a radical; that I am conservative but not reactionary."

Condon, too, believed that Cincinnati reformers already had established organizations to assist the schools in their work. The public schools were just one of the many social institutions in the city, he believed, that were "bound together by a unifying spirit of co-operation."  

Yet school board conflict heightened during Condon's first decade of tenure, and at times he met intense public resistance to specific school board actions. The difficulties he experienced over textbook adoptions and machine shop purchases, for instance, reflected his problems with some labor unionists and civic booster. Attacks on the superintendent, however, were defused through bureaucratic devices such as teacher-selected curricular committees and purchasing department staff.

Most noted for his development of trade instruction, Condon opened a trade school for messenger boys in 1914, and machinery was donated by cooperating telegraph companies. In 1915, a sewing school was opened with a two-year vocational curriculum devoted solely to the needle trades. Under the auspices of a sewing trades association of garment manufacturers, power machinery was purchased for the school shops.

The programs created by Condon presented a greater opportunity for participation by businessmen and trade
associations in the vocational education of local youths. Condon relied upon these ad hoc advisory groups, such as the Sewing Trades Association, for recommendations about school curriculum, shop equipment purchases, cooperative work stations, and occupational forecasts.

In 1917, matching federal and state funding through the Smith-Hughes Act further facilitated the local expansion of vocational education. One year later, Condon was named to the state board for vocational education to administer federal funds for vocational education. With the assistance of the dean of the University of Cincinnati Teacher's College, Condon appropriated funds for industrial teacher training at the municipal university and several satellite centers. In addition, Condon appointed a director of vocational education, John Arundel, who administered military training programs, such as motorcycle and automobile repair, radio operations, and telegraphy in the city schools. Eventually, these war-related programs were transferred into vocational education shops for full-time, day trade students.

Condon promoted vocational guidance, too, because he believed it prepared youths for their future "life careers." Business and civic leaders also believed that school-based guidance activities provided the "right" information about careers. For instance, the local chamber of commerce sponsored school clubs and civics leagues that provided elementary and high school youth with lessons on work, occupations, and higher education. The Vocation Bureau first initiated a department of career counseling and job placement in 1915, to assist students with the transition from
school to work. By 1920, the bureau was in the forefront of the national guidance movement when an experimental occupational interest testing program was initiated to facilitate student job choice.

In the early 1920s, several board members complained about the expansion of vocational programs in the school system. They were reluctant to approve additional expenses for vocational programs in an era of economic retrenchment. Others, such as local classicists, attacked vocational education as a curricular "frill." School board members critical of vocational education challenged Condon to verify shop expenditures—which he did—and curtail the expansion of vocational programs—which he refused to do. Despite the controversy, with the assistance of civic boosters and educational reformers, Randall Condon achieved the necessary school board support for yet another vocational shop at East Side High School and another apprenticeship program, the Printer's Trade School.

In general, Cincinnatians were proud of their progressive schooling reforms (see FIGURE 2.). Some thought that vocational education encouraged greater business and industrial development. Industrial educators, it was noted, were instrumental in promoting trade schools, fully-equipped shops, industrial advisory groups, and cooperative work sites that contributed greatly to the period of stabilization.
FIGURE 2. Map of School Sites

KEY

1. Apprentice Continuation School
2. Art Academy
3. Auto Trades School
4. Douglass School
5. First Intermediate School
6. House of Refuge
7. Hughes High School (Old Site)
8. McCall Industrial School
9. Messenger Service School
10. Ohio Mechanics' Institute
11. Oyler School
12. Sewing Continuation School
13. Sewing Trades School
14. Sherman School
15. Technical School of Cincinnati
16. University of Cincinnati
17. Woodward High School
Gender Identity and Industrial Education

Popular concerns about the feminization of native-born males was in the forefront of educational reform rhetoric in the late nineteenth century. Some educators believed that there was a massive male under-representation in the field of teaching; in 1880, 57.2 percent of the country's school teachers were women but by 1910, that figure had jumped to almost 80 percent. Additionally, others feared an increase of male student dropouts, especially at the secondary level. Daily attendance rates of male students dropped significantly in the latter years of schooling judging from the report of the Commissioner of Common Schools in 1905; males exceeded females by almost 3 percent in daily attendance at elementary schools, at the high school level male attendance dropped 14 percent. Thus, common assumptions linking male sex-role development and feminine influences in education surfaced.²

Psychologist G. Stanley Hall, for example, claimed women teachers impressed undue maternal influences upon boys. Hall fashioned a theory of separate female collegiate education that gained wider acceptance after publication of his two-volume book, Adolescence, in 1909. Other progressive educators promoted the so-called feminization argument through gender segregation in manual training, domestic science, and various trade training classes. The feminization argument appealed to non-educators also. Some employers of printing establishments in Cincinnati, for example, complained that young apprentices were too "soft" for the hard work required in their trade. "They fail to grasp
the work idea properly," these employers wrote in a survey of printing trades in 1914, "and are not properly amenable to discipline." The reasons for this state of affairs, they charged, was that there were too few men teachers "in the upper grades of the elementary schools." In general, employers feared that boys going into apprenticeships often were ruined by prolonged schooling.³

Albeit the feminization fears, attracting boys to higher levels of schooling was a problem more skillfully handled by manual training educators in privately-financed high schools in the late nineteenth century. Here homosocial bonding and role modeling was encouraged and manual training educators promoted character development and internalized standards of middle-class mobility—modeled after the occupational successes of the boys' fathers.

An emergent ideal of success accompanied the rise of nineteenth century, middle-class businessmen. Prescriptive literature, such as Orison S. Marden's periodical Success and the novels of William Dean Howells or Robert Herrick provided advice and guidance for aspiring manufacturers and managers of the period. Sound financial investments, these popular writers claimed, required men who were thoroughly knowledgeable about the businesses they sought to purchase and direct; entrepreneurs especially were cautioned against blind market speculation. Some of the most successful of these new businessmen had occupational backgrounds as mechanics and were in fact practical men who started from the bottom and worked their way to the top. They
had purchased the small industrial and manufacturing concerns where they were employed, and they formed new business partnerships. Furthermore, many a successful owner had economized on labor costs by the specialization of manufacturing processes and accelerated production by the introduction of new hand tools and power machinery in the factory.4

Yet the sons of such pioneer American entrepreneurs would lead different lives because limited opportunities for Algerian success existed in the late nineteenth century. Therefore, as the middle classes replicated their social structures for their children, schooling became the vehicle for launching youthful careers. In the late nineteenth century, in particular, businessmen fueled the movement for secondary education by advocating curricular reforms or establishing their own manual training and technical high schools—ones that were more closely attuned to middle-class occupations. The classical high school was no longer considered appropriate, for instance, for a future businessman desiring immediate "practical" education for his post-graduate employment.5

Victorian males responded favorably to the development of manual training with its emphasis upon manly character-building. Manual training pedagogy, many believed, was a salvation from bookish academics and a protected feminine environment. And manual training high schools provided a physical space separate and apart from the highly feminized public schools. Masculine character flourished in the manual arts, too, as manliness in society could be reclaimed from the moral domination of females.6
On purely psycho-physiological terms, manual training was a salve for "nervousness"—the Victorian Era disease that afflicted middle-class men and women with increasing physical degeneration. For instance, Eamons Booth, director of the Technical School of Cincinnati, articulated a philosophy of disciplined, high-minded living for middle-class males. Fearful of the debilitating effects of neurasthenia, Booth promoted manual training as a corrective to sedentary activities—typified by the overindulgent lives of upper-class "gentlemen." Properly supervised motor activities, these manual training educators claimed, rejuvenated and purified the blood. And manual training activities also developed student self-discipline and Spartan habits of conduct—sorely lacking, the educators argued, in the morally vitiated society at large. Finally, they said, manual training instruction provided shop exercises that inculcated self-help, Algerian adroitness, and a display of technical expertise. 

The directors of the Technical Schools of Cincinnati (TSC) promoted in masculine terms the middle-class ideals of their founders—many of whom had become self-made businessmen during the antebellum years. Their stories are found in the pages of "booster" biographies written in the early twentieth century. For example, George E. Winchell was proprietor of a local metal and tin war manufacturers. In 1843, twenty-six year old George Winchell and two friends, L.C. Camp and Thomas E. Greenfield, arrived in Cincinnati from New York and began work in a local tin shop owned by Myron Robinson. Within a year, the three men bought out Robinson and established the firm of L.C. Camp & Co.
Over the next five years Camp retired from the business, and Greenfield died, leaving sole ownership to Winchell. In later decades, Winchell acquired several business partners, until in 1881 he organized the George D. Winchell Manufacturing Company. Though Winchell never received a high school diploma, he made sure his youngest son did: Clifford E. Winchell graduated from the local manual training high school in 1892. Another example was Victor Knecht, owner of the Phoenix Iron Foundry. Knecht received twelve years of schooling in Germany before emigrating to Cincinnati, and three years later, he was apprenticed as an iron molder. In 1866, journeyman Knecht, "desirous that his labors should more directly benefit himself," established the Eureka Foundry with several business partners. The next year he purchased an interest in the Phoenix Iron Foundry, and soon became sole proprietor of that firm. Kencht’s youngest son, Arthur E., graduated from TSC in 1894, and in 1898 he received a baccalaureate in mechanical engineering from Ohio State University.8

Perhaps the business failures and recurrent recessions in late-Victorian America made "true believers" of middle-class fathers who exhibited heightened parental concern for their sons’ future occupations. Likewise, the fathers of TSC graduates feared that competition and the vicissitudes of fortune spelled doom for their sons. Manual training high schools, in general, accelerated the occupational mobility of those graduates. For example, placement statistics from the Manual Training High School of Washington University, St. Louis, suggest that the boys
generally shunned industrial jobs, favoring instead, bookkeeping, drafting, or higher education. (These three categories represented 45 percent of the total of all graduates in the school from its opening in 1878 to 1903.) Calvin Woodward, director of the manual training high school, realized that his school did not profess to "produce mechanics." Many graduates would be "called up higher," he said, "to greater responsibilities and to larger rewards."[9]

Gender identity played an important role in the development of industrial education. Its proponents highlighted manly character-building that included working with one's hands, learning a trade, developing self-discipline, and earning a livelihood. More importantly, industrial educators fully believed that common schooling left the boy unprepared to accept his future role as breadwinner and family provider. "The civilized boy in school is taught many theories," claimed one educator, but he is unprepared for "the serious duties of life." Industrial educators promoted adult male responsibility as the breadwinner—an idea that is inextricably bound to the definition of modern masculinity.[10]

**Conclusion: From Manual Training to Trade Instruction**

This curricular history in Cincinnati provides evidence to suggest that trade instruction was part of a larger national movement in progressive education. What follows is an attempt to articulate some of the reasons for the collapse of the manual training movement and the transition to vocational education.
The occupational preparation of students into the labor force has been an historic concern of American educators. Rationales for publicly-funded vocational education arose, in part, from social and educational reformers, civic elites, political leaders, and industrialists who articulated similar concerns for social order.

Americans in the late nineteenth century were living in a period of cultural tension. Frequent labor union strikes and clashes with police fueled fearful images that, for many, the domestic labor force was unstable, unpredictable, and uncontrollable. One popular misconception was that foreign-born workers in the U.S. threatened the social fabric with their "bomb-wielding" anarchism. Others believed that immigrant youths displaced native-born workers in union-controlled quotas for apprenticeships. Nevertheless, the perceived volatility of the labor force threatened the order and security of the entire nation.

Common school leaders, in particular, attempted to resolve social dislocations through the teaching of industrial discipline. School primers and readers were filled with vignettes of exemplary workplace behaviors. For example, Jacob Abbott wrote short stories for children that involved a protagonist youth named Rollo. In one lesson on work Rollo refused to pick up the nails that his father requested, and the boy was sent to bed without his dinner. Through punishment, Abbott claimed, Rollo learned how to be a good worker. Common school educators, too, prepared students for workplace
repertoires, such as the acceptance of routine tasks, the completion of assignments, and the submission to authority that were embodied in daily classroom drill and lesson recitation.\textsuperscript{11}

Nineteenth-century educators increasingly turned to manual training for a curriculum that was adapted to the schooling of industrial workers. Although manual training offered a cursory and broad overview of occupations, hand tool groups, and craft instruction, civic and industrial leaders were attracted to a pedagogy steeped in industrial discipline.

Manual training initially was implemented in juvenile reformatories where moral uplift of delinquents, orphans, paupers, and incorrigibles was deemed a cultural imperative. Yet nineteenth-century reformers also believed that manual training offered a competitive edge in the job market. Manual training was promoted as "practical" education for aspiring middle-class entrepreneurs as well.

Late-Victorian Americans also emphasized the manly character-building aspects of manual training whereby school boys were exposed to a curriculum rich in physical activity; this was different from the academically-dominated public schooling. Boys were separated from girls in schools, too, because these educators believed that each sex required gender-differentiated activities. Like the early advocates of physical education, manual trainers claimed that children recapitulated the human race through homosocial bonding and adolescent "gang" activity. Manual trainers, therefore, deemed that their task was to furnish
adult-supervised physical activities that channeled adolescent energy into socially productive ways.\textsuperscript{12}

Ironically, later progressive educational reformers believed that, by and large, manual training was too academically oriented for effective job training—especially in blue-collar occupations. Manual training was a "mustard relish, an appetizer . . . without reference to any industrial end," claimed the members of the Massachusetts (Douglas) Commission on Industrial Education who, in 1905, investigated the educational needs for the state's drop-out prone youth.\textsuperscript{13}

Sociologist David Snedden, spokesperson for the emerging vocational education movement, desired school shops outfitted with power tools, equipment, and operations similar to those already in place on the shop floor. Social efficiency advocates, like Snedden, rallied around the vocational education movement because it provided a forum for their belief that each individual—based upon his or her father’s occupational standing—occupied a preconceived niche on the social spectrum. The task of vocational educators, they claimed, was to prepare youths for adjustment to their life-long industrial occupations in as realistic a work setting as possible in the schools.\textsuperscript{14}

Vocational educators were wedded to other equally important assumptions about youth, schooling, and the labor market. First, vocational educators claimed there was a decay of traditional trade apprenticeships. Labor unions, they believed, could no longer adequately train future workers in the skills of their trades. Second, vocational educators believed that unskilled
adolescents were subjected to the vagaries of "dead-end" or juvenile occupations. If youths were to become responsible adult workers, they argued, it was the role of the schools to train students for satisfying entry-level positions. Third, vocational educators believed that large numbers of students dropped out of school simply because they were bored; sedentary activities, such as reading and writing, were not as stimulating as shop classes.15

Vocational educators found other allies who promoted a similar philosophy of social efficiency. Mental testing advocates in the early decades of the twentieth century provided corroborative empirical evidence for the selection and sorting of school-age youth into various curricular tracks. Armed with their crude psychological instruments, the mental testers classified as "retarded" early school-leavers and overage children. As a result, special classes in vocational education were established to assist these students in their transition to work. And vocational guidance personnel, aided by diagnostic tools for occupational assessment, counseled greater numbers of students to consider their career options.

Ultimately, differing assumptions about social classes guided the leaders of the manual training and vocational education movements. Manual trainers believed that their high schools provided access to white-collar occupations and college education, especially in engineering programs. In general, middle-class students entered manual training programs in increasing numbers after the turn of the century, when manual
training and domestic science classes were firmly entrenched in the public schools. Other educators with "higher" ideals promoted manual training as democratic empowerment for workers. Liberal progressives, such as John Dewey, Jane Addams, and Helen Marot, advocated an Arts and Crafts Movement philosophy, whereby workers—inaugured by the industrial arts—would somehow instill aesthetic sensibilities into the completion of their daily tasks.16

While liberals like Marot desired to educate workers for participatory shop-floor management, most vocational educators were guided by the conservative utilitarian practices of their field. Trade instruction was predicated upon the social division of labor; middle-class managers designed and conceptualized industrial operations and working-class laborers performed and executed the skill required to complete a task. Turn-of-the-century upgrading of machines, tools, and plant layout, for instance, required the intervention of engineering "experts" which further subdivided conceptualization from the execution of skill.17

The philosophical differences between manual training and vocational education rested upon basic assumptions about technology and modernism in American life and institutions. Manual training pedagogy emphasized basic hand tool groups associated with pre-industrial occupations. Like their arts and crafts counterparts in England, American manual trainers glorified artisanship and pastoral life in America. This anti-modernism was reflected in their views on urbanism as well.
Manual trainers believed that urban children lacked exposure to hard physical labor. Unlike their rural counterparts to whom farm chores were a source of daily physical activity for the boy, urban children needed continuous exposure to hand work through shop experiences.

Vocational educators, too, acknowledged social problems associated with technology and modernism in American life but rarely, if ever, included a cultural study of industry in their curriculums. For vocationalists, trade instruction offered purely instrumental value, that is, the development of manipulative skills for employability. Vocational curriculum writers highlighted the technological advancement of each occupation or trade. School boards purchased power tools and equipment for their use in vocational shops. And teachers, employers, and parents expected vocational school graduates to be familiar with the work processes in a trade or industry.

The vocational education movement captured a wider appeal than manual training, however, because Progressive era reformers believed that the schools' function was to provide employability skills to dropout-prone youth. As this study showed, in the period of stabilization, public school personnel concentrated their efforts on accommodating potential school-leavers to an industrial curriculum. Trade instruction met the educational needs of students who chose part-time schooling and work, especially when continuation schools were readily available.
Research Questions For Further Study

This final section offers several research questions for further study on industrial education. Contemporary industrial educators, in particular, might benefit from an inquiry into historical social, political, and economic problems.19

Did business elites try to impose fixed labor market strategies through industrial education in schools? Business and civic elites—and to a lesser degree labor unionists— influenced the development of industrial education in many public schools. Yet businessmen and civic elites supported public trade training for any number of reasons, including the promotion of anti-union practices and the production of skilled labor. Given manufacturers' influence in the destiny of public industrial education, one must question whether or not a significant number of business leaders really thought about imposing a fixed labor market strategy through the use of schools.

What is the relationship between economic downturns and industrial education programming? National economic recessions or depressions, such as the Panic of 1907, probably provided a better supply of unemployed skilled tradesmen than trade schooling ever could. But the extent to which economic downturns affected the relationship between labor markets and industrial education programming in many cities is unresearched.

What are the career paths of trade school students? Experience in Cincinnati suggests that some industries, such as machining and printing, turned increasingly to the public schools for the trade education of their new recruits. Supporters of
industrial education assumed that trade school students would be outfitted for greater socio-economic opportunities. Occupational mobility studies among public vocational school students might reveal the extent to which these views were a reality.\textsuperscript{20}

How does social class and gender identity influence industrial education programming? The development of shop-floor culture in schools is an important historical issue. Unlike the shop dynamics at the technical high school with its emphasis upon individualism through the completion of assignments and minimal interpersonal contact—even tool sets were individualized for student usage—the vocational shops at Oyler School promoted cooperative labor. Yet a clearly defined social code based upon peer reward and punishment operated as well. Students not only understood the chain of command, but deferred to the authority of foreman and superintendent or suffered loss of privileges. In the context of contemporary working-class masculinity, therefore, shop-floor allegiance and loyalty are fomented among work groups. Apparently the same dynamics operate among working-class, school-age youth and are exhibited through a collective animus towards teachers and schooling. To what degree did this occur in the earlier periods as well?\textsuperscript{21}

How was industrial education developed in other urban settings? Cross-comparative studies of industrial education are warranted either through research on cities of comparative population size or industrial strength to Cincinnati. Similarly, an intra-state study of industrial education in Ohio in these same years might prove worthwhile.
1. Cincinnati Public Schools, Minutes 29 (January 6, 1913), 71; idem, Annual Reports (1914), 38.


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17. On utilitarianism and vocational education, see Katy L.B. Greenwood, "A Philosophic Rationale For Vocational Education: Contributions of Charles A. Prosser and His Contemporaries from 1900 to 1917," (Ph.D. diss., University of Minnesota, 1978); Harry Braverman, Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century (New York: Monthly Review Press, 1974); and David Nelson, Managers and Workers: Origins of the New Factory System in the United States 1880-1920 (Madison: University of Wisconsin Press, 1975), chap. 3. Vocational educators acknowledge this division of labor in their curriculums, through the analysis of occupations—a practice which continues today. Job analysis is inadequate, too, because vocational instruction requires continuous curriculum revisions since job practices change over time. Job analysis fails to account for the historic changes in industrial operations through technological change, union and management arbitration, or the shop-floor negotiations of participants themselves. Finally, job analysis fails to identify commonalities among an array of occupations that might facilitate a worker's future skill transferrability as well as career choice.


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