A HANDBOOK

OF

VOCATIONAL EDUCATION

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BY

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THE old general rule was that educated people did not perform manual labor. They managed to eat their bread, leaving the toil of producing it to the uneducated. This was not an insupportable evil to the working bees, so long as the class of drones remained very small. But now, especially in these free States, nearly all are educated — quite too nearly all to have the labor of the uneducated in any wise adequate to the support of the whole. It follows from this that henceforth educated people must labor. Otherwise education itself would become a positive and intolerable evil. No country can sustain in idleness more than a small percentage of its numbers. The great majority must labor at something productive. From these premises the problem springs, "How can labor and education be the most satisfactorily combined?"

Free labor argues that as the Author of man makes every individual with one head and one pair of hands, it was probably intended that heads and hands should coöperate as friends, and that that particular head should direct and control that pair of hands. As each man has one mouth to be fed, and one pair of hands to furnish food, it was probably intended that that particular pair of hands should feed that particular mouth — that each head is the natural guardian, director, and protector of the hands and mouth inseparably connected with it; and that being so, every head should be cultivated and improved by whatever will add to its capacity for performing its charge. In one word, free labor insists on universal education. — ABRAHAM LINCOLN.

PREFACE

It has taken the United States a long time to see the need of vocational education. The industrial revolution has been so gradual and the stream of immigration has so largely supplied our demand for skilled labor that we have drifted into a perilous situation without any sense of the danger ahead. Now that we realize our position, something like a panic has seized the American people. The cry of the Nation is, "What must I do to be saved?" Some are for lightening the ship by casting out the wheat into the sea. Others propose to abandon the old craft and trust their lives to the life-boats. Educators who have been studying retardation and elimination have come to the conclusion that the "enrichment" of the course of study has gone so far that now the children are suffering from mental indigestion. They are those who would cast the

work was undertaken originally in connection with a course of lectures on School Administration given by the author in New York University. It is believed that the discussion will be useful to students of education anywhere, as well as to the general public. The employer, the employee, the taxpayer, the publicist, the legislator, are all profoundly interested in the questions here presented.

There is at present no single volume which gives a systematic survey of the general field of vocational education, embodying both the historical and the logical aspects of the subject. A vast body of material has been accumulated, but it lies scattered in magazines and monographs printed in many languages. This handbook is a digest of some of the most important of this literature. In this day of agitation and clamor for change, the greatest need is accurate information, a proper perspective, and a judicial consideration of values. The Nation has poured millions into its common schools ungrudgingly. Now it asks: "What lack I yet?" In a matter of such great importance deliberate action in the light of complete knowledge is imperative. For,

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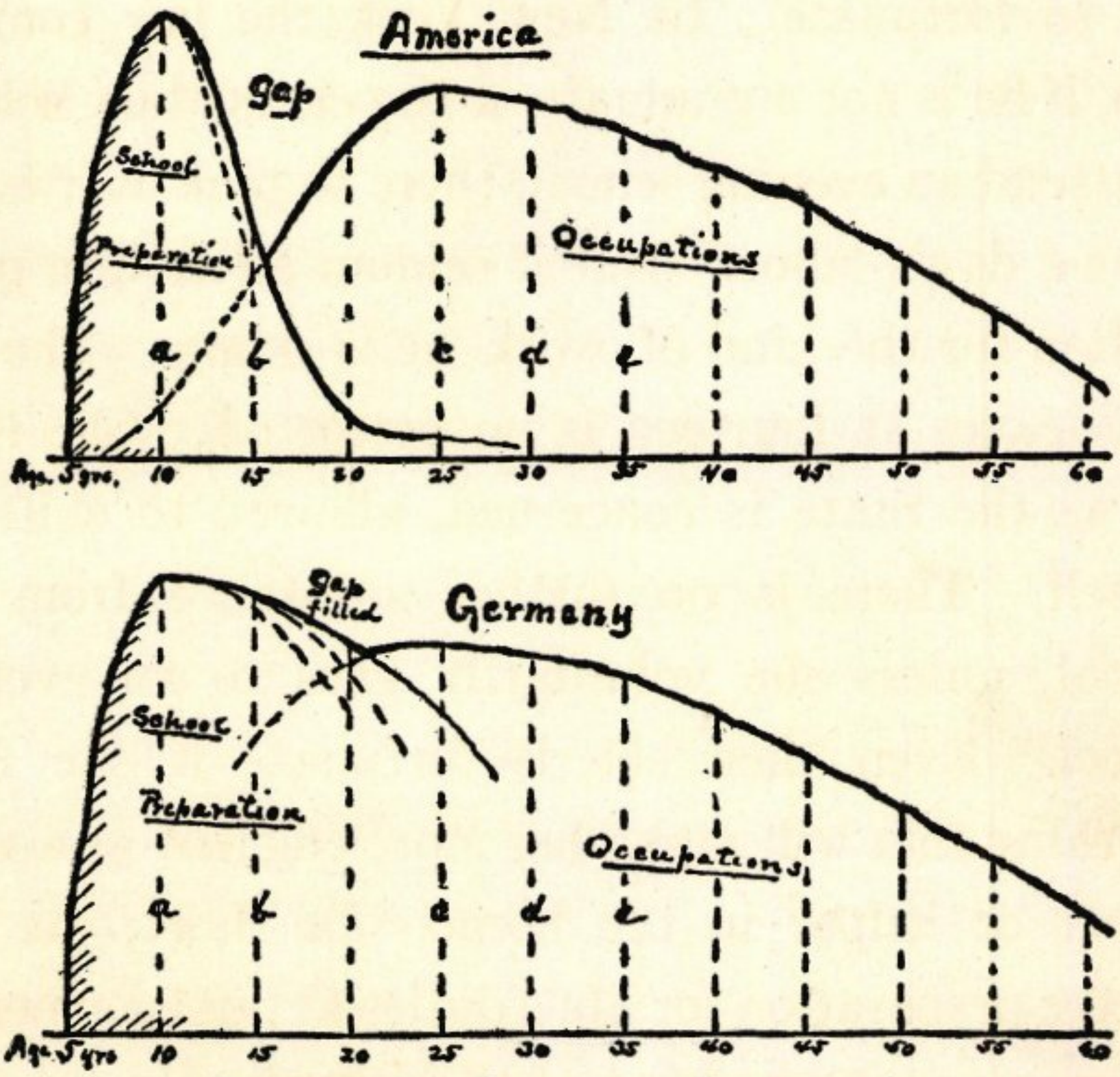
CHAPTER I

INTRODUCTION

I. Equal Opportunities for All. — One of the fundamental principles underlying a public school system is that it shall offer equal opportunities for all. The American public school boasts of this as one of its characteristic merits. An examination of the facts shows the claim to be unfounded. The opportunities are equal only in the sense that all classes may freely partake of the common training given in the elementary school. Beyond that there is no longer even a pretense of maintaining equality of opportunity. For the fortunate few whose ambition and economic condition impel them to prepare for a profession, the state has opened high schools leading to colleges and professional schools. Colleges are often free to this class of students.

and he may never drift into the particular thing for which he is best adapted. The years between fourteen and sixteen are largely wasted, because



RELATION OF SCHOOL TO INDUSTRY.[1]

what was learned in the elementary school is soon forgotten, and no new form of instruction is provided to supplement it. There is no supervised apprenticeship system which insures thorough training in a vocation. In this condition we find the majority

[1] The author cannot vouch for the accuracy of this diagram; but there is no doubt in his mind that the facts correspond in a general way with the graphic representation, which is taken with permission from Hodge's *Association Educational Work*.

able resources are our people, and second, that we are wasting people more than we are wasting anything else. . . . If one will look carefully about he will see, in any community, so many ways in which labor-power is being wasted. . . . There are, first, the army of the unemployed, or the involuntarily idle; second, the imperfectly employed, or the untrained; third, the improperly employed, or the acquisitively rather than productively employed; and fourth, the voluntarily idle, commonly known as the leisure class."

II. **Training for Citizenship.** — The State cannot continue to spend vast sums on high schools and universities and neglect vocational training without repudiating the reasons usually given for maintaining schools of any sort as a public charge. Self-preservation by training future citizens is the justification of the State for spending money on schools. We have come to a point where the State must enter the field of industrial education, and thus give equal opportunity to artisan, farmer, merchant, and professional man. Justice to the individual and the welfare of the State both demand this course.

There is sound psychology and profound philosophy in the saying, "Nothing succeeds like success." The man who is riding on the tide of success sees rainbows on every leaden sky. He

may drown his sorrow in debauchery, join the ranks of criminals, or seek refuge in suicide.

1. *The Habit of Success.* — Dr. Luther Halsey Gulick has a chapter in one of his books on *The Habit of Success*, from which the following is quoted: —

"The principle of the habit of success is constantly demonstrated in athletics. In practicing for the high jump, the beginner will start with the stick at that height at which he can jump it easily, and he will raise it every time that he clears the stick, so that he must always jump higher. And when by the greatest effort he succeeds in clearing the stick at his approximately greatest height, he will put it still an inch higher — at a point where he must of necessity fail. For a long time he will struggle under conditions where failure is almost inevitable. This excess of effort always means the use of unnecessary muscles and combination of muscles in the endeavor to find some better way to jump. That disturbs that precision of movement which is essential to any first-class athletic performer. It is known as 'form.' The result is that through his excess of effort he never learns to jump as well as does a boy who most of the time jumps within his ability and who thus acquires perfect form, perfect control. This is not to say that a good jumper never tests himself; he does. But the bulk of his work is done under conditions where he can succeed, where he can carry his body in the most perfect form." [1]

[1] *Mind and Work*, by Luther H. Gulick, Doubleday, Page & Co., 1908, p. 8.

discontent. We try to make good citizens by giving formal lessons in civics. But a knowledge of the institutions of the country and of the rights and duties of the citizens does not in itself suffice to make a citizen. "A man may even be an admirable teacher of civic science and a first-class villain at the same time." [1] But skill in some art which he delights to practice, and on which he can rely for the means of livelihood, results in the formation of those physical, moral, and intellectual habits which constitute the texture of noble manhood.

Speaking of the perfection of workmanship in the arts and crafts of the thirteenth and fourteenth centuries, Dr. James J. Walsh says: —

"The supremely interesting feature of this popular education was its effect upon the lives, and minds, and happiness of the workmen. Men got up to their work in the morning not as a routine occupation in which they did the same things over and over again, until they could scarcely do them any more, and then came home to rest from fatigue in weariness of mind and body. . . . They came to their work with an artist's spirit, hopeful that they would be able to express in the material what they saw so clearly with their mind's eye. It was tiresome working, but the hours were not long, and always there was the thought of accomplishment worthy of the

[1] Kerschensteiner, *op. cit.*, p. 14.

commercial nations of the world have already entered upon extensive schemes of practical education. Germany boasts that within ten years there will be no such thing as an untrained workman, from chimney sweep to high-grade artisan, in the empire. Of the 20,000,000 workers in the United States, it is safe to say that not 25,000 have any opportunity to secure proper education of the kind that Germany gives for their callings. We have practically no schools to meet their needs. It has been truly said that, in most of the states of the Union at least, the only way in which a boy or girl can secure an industrial training is to be born feeble-minded or commit a crime!"

IV. **The Industrial Revolution.** — Two factors have operated to modify, practically to revolutionize, the economic status of the wage earner within the last sixty years. These factors are (*a*) the substitution of machinery for hand labor, and (*b*) the aggregation of capital and the subsequent concentration of manufacturing into enormous establishments and centers of production. From the colonial days down to within our own time, farming was the most important industry in our nation, and the farmer's boy generally expected to remain on the farm and was satisfied to do so. Many of the manufacturing industries were established on the farm and were thus widely distributed. The author recalls, for instance, the fol-

was completed in a single afternoon and ended with a feast and dance, to which the husbands and swains were admitted.

Now contrast present conditions with the picture just presented. Cities have multiplied and increased in population, so that now thirty-two per cent of all the children enrolled in our public day schools live in cities of four thousand inhabitants or more. At least half the population lives in villages or cities. The city has become the manufacturing and distributing center. The farmer shoemaker has disappeared, and the farmer's shoes are made in Massachusetts. The handloom and the spinning wheel have been sent to the museum. The farmer's cloth is woven in New England, and his clothes are made in New York by people who come from Russia. His wagon comes from South Bend, Indiana; his furniture from Michigan; his carpet from Philadelphia; his lumber from Oregon; his flour from Minneapolis. Instead of hiring a dozen neighbors to cut his grass and cradle his grain, he drives a self-binder through his field which drops the sheaf ready to be stacked and garnered. If he be one of those prairie farmers of the West, he drives twenty horses attached to a monster

work before they have graduated from the elementary school. They have very little knowledge of books, and they do not know how to do anything with their hands. The boy becomes a messenger, office boy, grocery boy, or butcher's boy; the girl goes to some mercantile or manufacturing establishment to begin a dreary life as a wage earner in an ill-ventilated and ill-lighted shop or store.[1]

The wages they receive at first hardly suffice to pay the car fare. If they go to a factory, they learn to operate a single machine; but they get no comprehensive insight into the manufacturing process as a whole. As Emerson says: "Man is thus metamorphosed into a thing, into many things. The planter, who is Man sent out into the field to gather food, is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer, instead of Man on the farm.

[1] Miss Alice P. Barrows in *New York Times*, March 2, 1913, reports as follows:—

"Of the 302 children studied, twenty-four were still in school, thirty-nine had not gone to work. They had either stayed at home or gone to business or trade school. Two hundred and thirty-nine had gone to work. They had entered 406 jobs. Of these jobs, ninety-four were 'outside' errands; nineteen were 'on wagons'; sixteen at newsstands; twenty-nine were in department stores; twenty-seven in office work; forty-four in miscellaneous inside work, and 177 in manufacturing."

CHAPTER II

INDUSTRIAL EDUCATION IN EUROPE

I. England

1. *The Beginnings.* — In England there was no national system of public education until 1870, when Parliament enacted a law which insured elementary education to all the children in the land. In 1770 Burke deplored the tendency shown by Parliament to exercise control upon the people, whereas "it was designed as a control for the people." This remark of Burke's reflects the attitude of the rising democracy of England at the time. During the following century the democratic forces assumed an aggressive attitude and finally triumphed in the Act of 1867, which decided once for all that the British government, though monarchical in form, should in reality be democratic. Then followed the usual corollary, that if the people are to rule they must be educated; hence three years later Parliament established a national system of schools.

"A Study in Action"—Forge Practice, Vocational School for Boys, New York.

out of the public treasury for the establishment of a central Government School of Design, and in 1841 several provincial schools of design were organized with the aid of government grants. But the efforts of the national government in this field were desultory and insignificant until 1851. In that year an International Exhibition was held in Hyde Park. The comparison of products there shown proved England to be sadly deficient in manufactures; and therefore the profits of that exhibition were devoted to the purchase of land at South Kensington and the opening in 1853 of the "science and art department" of the now famous South Kensington Museum. The department was created to control and organize industrial education. In the absence of a system of secondary schools, it was necessary to make elementary education the foundation of industrial training. But at this time all the elementary schools were still provided through voluntary effort, and so inadequate was the provision made for the education of the people, that even in 1870, in the city of London itself, scarcely more than fifty per cent of the school population found accommodations in the schools. In 1856 the Education Department was created,

the regulations of the Science and Art Department. But this Department was only permitted by law to aid technical education; consequently it could only give assistance to day schools in consideration of the technical education they provided. Special programs were promulgated giving definite plans for vocational studies in the upper grades of the elementary schools.

In 1890 an act was passed giving County Councils authority to aid industrial education in elementary and secondary schools by local taxation. The work is always referred to as "science and art," by which is meant the industrial bearing of drawing and science. The impetus given in this way to industrial drawing, industrial design, and industrial physics and chemistry has meant much to England in her development of manufacturing industries during the last quarter of a century.

(1) *Organization.*—Since the Education Act of 1902[1] a system of industrial training adapted to the needs of all the children has been gradually developed. In most of the English cities handi-

[1] See *Teachers College Record*, Vol. 12, Columbia University, 1911, p. 33.

basis.[1] Children in grades lower than the fifth have the sort of manual training with which American teachers are familiar; namely, paper folding, cardboard construction, wire work, cord work, modeling, and sewing.

Most of the well-known secondary schools, like Eton and Rugby, have retained their distinctly classical character. St. Albans is a notable exception, having been "modernized" by the introduction of science, practical mathematics, and industrial arts. In 1881 the government stimulated local initiative by offering grants for the organization of science schools of secondary rank. In 1889 authority was given to County Councils to assist vocational education of all grades by local taxation; and in 1890 Parliament supplemented the efforts of local authorities by offering a government grant. As a result of this legislation many high schools are now offering strong courses in science, drawing, and shopwork. Many schools of a distinctly industrial type, such as the Central School of Arts and Crafts in London, have also been established.

Finally, there are numerous continuation schools open chiefly in the evening. London has a total

[1] *Vocational Education*, Vol. 1, p. 176.

for 1911–1912, District Superintendent Shiels, in charge of evening schools, after a thorough investigation, recommends "legislation that will permit . . . the Board of Education to require fees for attendance." Philadelphia charges a fee of fifty cents for elementary schools and one dollar for evening high and trade schools. This fee is returnable if the pupil attends two thirds of the sessions. St. Louis charges one dollar per term of twenty weeks for all pupils. Boston follows the plan of Philadelphia, but collects no fee from compulsory pupils. Cleveland collects one dollar for high schools, returnable after an attendance of 75% of sessions, and five dollars for technical schools, returnable after an attendance of 85% of sessions. Buffalo follows the system of Philadelphia, but requires an attendance of 75% of the sessions before the fee is returned. Many cities charge a fee for supplies or a deposit to insure against damage of equipment. Such is the practice in Philadelphia, Buffalo, Cincinnati, Detroit, Milwaukee, Newark, Minneapolis, Seattle, and Tacoma.

(4) That employers must report to the school board at specified times, stating particulars as to the hours during which young persons are employed.

(5) That employers must provide time for attendance of young persons at the continuation school, and must count the hours spent in such classes in computing the hours of employment of such young persons.

(6) That parents must coöperate with the school board in carrying out the law.

The Scotch Education Department is at present engaged in organizing vocational schools under the terms of this act. Several features of the law are especially significant. It will be noticed, in the first place, that continuation schools are in charge of the regular school board, and not of any special body, as is usually the case in Germany and as is provided by the laws of Wisconsin. While the act does not make attendance compulsory, it authorizes compulsion through the school boards. Both the employer and the parent are required to coöperate in the enforcement of the law. It does not provide for day instruction; but the tendency will be to promote this most important phase of

division, in order to be recognized, must extend over three or more years. The subjects of instruction are designed to fit the pupil for the intelligent practice of crafts, industries, or occupations. The course includes commercial subjects, art and art crafts, engineering of various kinds, naval architecture, navigation, building trades, textile industries, chemical industries, printing, women's industries, agriculture.

Division IV. — Consists of "auxiliary classes," including physical culture, military drill, vocal music, woodcarving, fancy needlework, elocution. These courses are open to all students not included under the compulsory provisions of the law.

Edinburgh has twenty-five of these evening continuation schools, six of which are for girls and young women, six for boys and young men, ten for both sexes, and three for adults over twenty. There are 421 teachers, 122 of whom have regular teachers' certificates. For the remaining teachers the Board of Education provides lectures on the art of teaching with demonstration lessons. The schools are in session for a period of twenty-six weeks from September to March.

In all the schools except those for adults, a fee

This was the stimulus that started a systematic campaign in the twenty-six German states for technical education. The results, after forty years of experiment, are the wonder of the world.

1. *Organization.* — With respect to grades, vocational education of Germany is classified as higher, middle, and lower. In the class termed higher are 21 universities with their professional departments; 11 technical high schools; and 5 commercial high schools. Of the middle technical schools there is a great variety, some of which are enumerated in the following list: —

Agriculture	11	Mining and Metal (Prussia)	10
Art Industries	34	Naval Architecture and Engineering	12
Building and Engineering Trades	52	Navigation	19
Ceramic Industries	4	Ship Engineers	8
Commerce	429	Textile Industries	103
Forestry	5	Woodworking Industries	12
Metal Industries	12		

The object of all these middle schools is to train experts, foremen, superintendents, owners, managers, salesmen, etc.

Below the middle schools are the lower schools, designed to train apprentices, artisans, operatives, and to extend the technical knowledge and skill of

all male workers under eighteen. In South Germany there is no city or town, however small, without one such school, at least for boys. In North Germany, Essen is the only larger town in which such a school is wanting. In Bavaria, Wurttemberg, Saxony, Baden, and Hesse, attendance at a continuation school is compulsory for all youths up to the age of sixteen, seventeen, or eighteen.

Dr. Kerschensteiner expresses the opinion that a properly organized continuation school "must extend to the eighteenth year of every boy or girl who is not being educated in a higher school."[1] The reason he gives for holding such an opinion is based on the public good. "It is of no advantage," he says, "to a constitutional State to make its opportunities of culture accessible to only a small percentage." Mr. John M. Shrigley, Principal of the Williamson Free School, agrees with Dr. Kerschensteiner, as to the need of keeping the pupil until he is eighteen, but for a different reason. He says: "If a school proposes to graduate journeymen, the pupils must be sufficiently matured physically and mentally on graduation to do men's work. They

[1] *Three Lectures on Vocational Training*, by Dr. Georg Kerschensteiner, The Commercial Club of Chicago, 1911, p. 17.

of Public Instruction, but under the Minister of Commerce and Public Works. They are not an organic part of the state system of public education. They admit pupils only after the age of fourteen. The continuation schools are day, evening, or Sunday schools. The course of study is not uniform throughout the empire or even throughout a State, but is left to the option of the local community. The schools are not subject to uniform regulation. When a community has established a school of this kind and can show that it meets a local need, the central government is asked for a subsidy, which is rarely denied. Industrial schools of secondary grade are all day and evening schools and are located chiefly in centers of industry.

3. *The Continuation Schools of Munich.* — Munich supplies an example of the most successful and complete system of vocational training to be found even in Germany. A study of the organization and management of these schools is therefore one of the necessary steps to a proper understanding of this form of education. The origin of the continuation schools in Munich dates back to 1875, when two of them were founded, one for apprentices and one for journeymen. The former was made compulsory

gives twelve hours of instruction weekly. The attendance of the several kinds of schools in 1910 was as follows: —

Compulsory continuation schools for boys	9400
Compulsory continuation schools for girls	7500
Voluntary continuation schools for young men . . .	2600
Voluntary continuation schools for young women . .	3700

Munich has about one eighth of the population of New York City. If, therefore, New York made the same provision for the training of her young people that Munich has made, we should have in our several day and evening vocational schools 75,200 boys between the ages of fourteen and eighteen; 60,000 girls between the ages of thirteen and sixteen; 20,800 young men over eighteen; and 29,600 young women over sixteen; or a total of 185,600 persons. What New York is actually doing at public expense is shown by the following table of registers of the several day and evening schools in which vocational instruction is given: —

Mentally Defective and Cripples (1913)	3,000
Vocational Day Schools (1913)	2,096
Day High Schools (1913)	18,488
Evening Elementary Schools (1913)	10,879
Evening High and Trade Schools (1913)	13,989
	48,452

A Class in Modeling and Sculpture, New York Evening School of Industrial Art.

(8) Hebrew Technical School for Girls.

(9) Henrietta Trade School (Negro).

(10) Italian Evening Trade School.

(11) Mechanics' Institute (evening industrial).

(12) New York Industrial Evening School (Negro).

(13) New York Trade School.

(14) Pascal Institute (Girls).

(15) Preparatory Trade School.

(16) R. H. Hoe & Co. Apprenticeship School.

(17) St. George's Evening Trade School.

(18) New York University School of Accounts and Finance.

(19) Young Men's Hebrew Association.

(20) Brooklyn Evening Technical and Trade School.

From the above list it is apparent that private initiative has supplied a part of the need for special education. But putting together all that is now done through both public and private agencies, it is doubtful whether New York offers more than half of the opportunity for vocational education that is found in many a European city.

(1) *Supervision.* — A trade school is established in Munich for every trade that has twenty-five or more apprentices. At present fifty-two trades are

(*c*) *Cost of Continuation Schools.* — The annual expenditure for the maintenance of trade schools for boys and men, aside from building expenses, is $225,000, or about $19 per pupil; whereas the cost of day elementary education is $23 per pupil, and of secondary education, $50 per pupil. The elementary school is supported by the town; the secondary school is supported chiefly by the State; and the continuation school is supported by the town and State together. The entire cost of the continuation schools for girls and women, amounting to $100,000 per annum, is borne by the town alone.

A comparison at this point is interesting. Munich pays $19 per pupil to educate men and boys in their trades; New York pays $180.45 per pupil to train a pupil in its Vocational School for Boys. Munich pays $9 per pupil to educate girls in their vocations; New York pays $75.65 to train a pupil in the Manhattan Trade School for Girls. Munich pays $23 per pupil for elementary education; New York pays $34.78. Munich pays $50 per year for a secondary pupil; New York pays $92.85. A thorough investigation of the cost of industrial education in the United States by H. C. Brandon

and organized a public instruction, common to all citizens, gratuitous as regards those parts of education indispensable to all men." But nothing more was done at the time. The First Republic was so busy fighting for its life that there was no time left for organizing schools.

In 1808 Napoleon founded his Imperial University, a body charged with all the public education of the Empire. In 1815 Napoleon was overthrown, but his system of education was continued. Little was, however, accomplished except that religious organizations were authorized to supply teachers for elementary schools.

With the accession of Louis-Philippe in 1830 the real work of education may be said to have begun. This monarchy depended upon the support of the middle classes, and consequently elementary schools were increased so that in eighteen years, from 1832 to 1850, the registration rose from about two million to nearly three and a half million, and illiteracy was reduced from forty-seven per cent to thirty-five per cent.

2. *Organization of Public Instruction.* — In France, education is divided into four grades, as follows: —

In the larger cities workshops are provided in which boys have exercises in wood and metal work. The girls have sewing, lace making, millinery, garment making, cookery, and sometimes silk culture. In other parts of the country constructive work is given in the ordinary classroom. It consists of concrete geometry in connection with arithmetic, clay work, paper folding, cardboard construction, etc. This is just about the sort of construction we have been familiar with in the schools of America during the past decade. In Paris the work in industrial arts is much above the average of the rest of the country. There are in the capital about two hundred shops for wood-work and some sixty for metal work. The theoretical part of this work is taught by regular teachers; but the practice is taught by craftsmen who go from school to school. The exercises are formal, consisting of prescribed models given in logical order for the purpose of teaching sequence of tool processes and manual skills. The ideal is that of formal discipline, which controls also our own scheme of manual training as found in the schools to-day. The teaching of the industrial arts as a preparation for the vocation of the pupil is still unrealized in these schools.

vocational character. In addition to handwork the boys learned drawing, geometry, mechanics, French, history, geography, biology, physics, chemistry, arithmetic, accounts. The girls had the same academic studies, plus domestic economy, sewing, cutting, and fitting.

In 1892 an important departure was taken, when these advanced primary schools were detached from the department of education and placed under the authority of the Minister of Commerce and Industry. Since then the schools have been known as "practical schools of commerce and industry." In taking this step France has followed the well-nigh universal practice of placing vocational schools in charge of separate governing bodies. The most important feature of vocational education is its close relation to industrial needs and standards. The educational authorities in charge of cultural schools are not sufficiently familiar with trade conditions to make vocational schools practical; hence it has been found necessary to provide separate agencies for the control of trade education.

(3) *National Secondary Schools of Arts and Trades.* — Above the Practical Schools of Commerce and Industry are a class of technical high schools known

(5) *Summary.* — From this brief account we see that France has a vast system of elementary education ending at the age of sixteen, which is complete in itself and does not lead to any higher grade of school. The test of its success, according to French ideals, is that it tends to keep children in the professions or occupations of their parents. The object of the educational policy is to " catch those who are inclined to pursue ambitions which they have little chance of satisfying, and put them on the path which leads to contentment. This was most easily achieved by spreading the net of technical education over the primary school." [1] Whatever we may think of the wisdom of this procedure as applicable to white children in our own country, its application to negro education in the South would go far to solve one of the most perplexing of our problems.

[1] Ware, *Educational Foundations of Trade and Industry*, Appleton, 1901, p. 224.

American people. As practiced heretofore, handwork was employed and justified as a means of manumental training, — the development of the mind through motor processes. It was supposed to give a child the use of his hands, to nourish the brain by increasing the circulation in the motor area, to beget reverence for manual industry, and cultivate the moral sense by the habit of accuracy and attention to details. In short, manual training rests upon the theory of formal or general discipline and the personal culture ideal of the great educational reformers, Rousseau, Pestalozzi, Herbart, and Froebel. This theory has recently been sharply questioned, with the result that the superstructure of educational architecture is beginning to totter for want of a firm foundation. The ideal of personal culture is giving way to the demand for efficiency. The difference in point of view is like the ancient controversy between the theologies of St. Paul and St. James. St. Paul's position is that we are justified by faith and saved by grace; but St. James says: "Shew me thy faith without works, and I will shew thee my faith by my works." The manual training advocate is now being challenged to prove his faith by his works. For thirty years he has been taken at

2. Play utility is the dominant interest at all the ages tested; namely, from eight to fourteen.

3. Nearly half of a boy's voluntary construction are things used in his play; and one third of such playthings are boats.

4. The doll is the center of practically all of a girl's play construction.

5. The toy is the boy's leading product and the useful gift that of a girl.

6. We have no positive evidence that the school handwork affects a child's general motor control seriously, or even appreciatively.

7. No one has taken the trouble to ascertain whether the best student excels in handwork, or the pupil who is slow at his books.

8. We do not know the economic value of manual work; that is, we do not know whether the adult efficiency of men in any walk of life is affected appreciably by the handwork now found in the schools.

From all this we are obliged to admit that in the matter of manual training we have hitherto walked by faith and not by sight. In the face of the demand for specific vocational training we shall be unable much longer to hold the ground for manual training of the old type.

curred in the manual work of girls. Sewing began as an exercise in learning certain stitches for patching and garment making. The material employed consisted of remnants only. At present our girls make real garments, first for dolls, later for themselves. Thirty thousand dresses were made last year by the girls in the New York public schools. Cooking has always been more practical than other manual work of the schools. The change in this case is from the mere laboratory demonstration by the teacher to individual equipment and cooking by the girl herself. Numerous activities involved in housekeeping and home making have been added to the course, so that we no longer speak of the activities of the school kitchen as mere cooking, but call it domestic science, domestic art, or household arts. Similar modifications have been made in oak-tag construction, raffia, and cord work. The value of manual work in paper has always been, in my judgment, doubtful. It involves fine measurements, which are difficult for small children; it consumes a great deal of time; it fails to exercise the inventive faculty; and it results in a product that has only play utility at best, and little of that, on account of the long and painful process of construction. But with all these

evolved out of constructive processes. From this point of view manual work is not a subject, but is the very core of the curriculum, giving life and value to all subjects. It has further significance as an application of the principle that learning should be by doing, and as an application of what is learned to life situations. Speaking of the two famous pillars in the Piazzetta of Venice, Ruskin says: "You must find time for a little practical cutting of capitals yourself, before you will discern the beauty of these. There is nothing like a little work with the fingers for teaching the eyes."[1] The late Colonel Parker classified all educative activities as *attention*, *judgment*, and *expression*. Construction he treated as one of the nine modes of expression.

The same analysis that has been made of the psychological need for constructive work applies to the study of industry. Industries represent that phase of life in which construction finds its principal use. The committee hopes that constructive work and the study of industry in the elementary school will in future be of such a character as to enable the pupil to make a wise choice of a vocation. At its meeting in Chicago in 1912, the National Education

[1] *St. Mark's Rest*, by John Ruskin, Merrill and Batzer, New York, p. 15.

Bookbinding Shop of the Printing Department, Vocational School for Boys, New York.

in a given community will depend upon the prevailing occupations of the place. Some of the concrete suggestions of the committee are given below: —

(1) An example of the study of the textile industry, second year, Horace Mann School, New York.

(2) An example of candle making, third year, Francis W. Parker School, Chicago.

(3) Study of a local dairy, fourth grade; lumber industry, fifth grade; Teachers College, University of Missouri.

(4) Garden work, Francis W. Parker School, Chicago, first three years.

(5) Study of transportation, third grade, Francis W. Parker School, Chicago.

(2) *The Grammar Grades.* — Among the suggestions offered by the committee are these: —

(*a*) Study of ceramic industries, from a course of study in Manual Training, by C. L. Boone, *Manual Training Magazine*, December, 1908, and February, 1909.

(*b*) Study of a machine shop, sixth grade, Horace Mann School, New York.

(*c*) Study of printing, from "A School Print Shop," by L. W. Wahlstrom, *Manual Training Magazine*, December, 1908.

out losing academic rank. The classes are general industrial or work classes. The product which they turn out is such as can be utilized by the school supply department.

There are also classes made up of boys and girls fourteen years of age or over, selected from the lower grades. These have drawing and construction work for periods varying from ten to twenty hours a week, plus arithmetic, language, and other academic work. The manual exercises consist of wood-working, cabinet-making, metal-work, sheet-metal work, book-binding, and printing.

There are classes open to graduates of the elementary school similar to those just described.

Finally, there are classes in high schools where pupils take academic studies along with an intensive study of some industry, like jewelry.

(4) *A Study of Elimination.* — Professor Edward L. Thorndike has made a study of pupil elimination in twenty-three cities and thirty-four colleges which shows some startling results.[1] From this investigation it appears that of 100 pupils who enter an elementary school, 4 leave before reaching the fourth grade; 9 leave in the fourth grade; 13 leave in the

[1] *Bulletin No. 4*, 1907, U. S. Bureau of Education.

straight line, allowing one foot of space for each child, the line would stretch from the upper end of Maine across the continent to the lower end of California. If those leaving school at or about the age of fourteen — nearly all of them to become bread-winners — were taken from the line, only that portion extending across the state of California would remain."[1]

Up to the age of thirteen, the amount of elimination in the United States is about the same as in Germany, France, and England; but the United States is far more successful than the other countries named in retaining children after thirteen for a much longer and more extensive schooling.

There is great variability among cities in the amount of elimination. The percentage of children entering school who continue to the eighth grade ranges from 14.4 in Baltimore to 72 in Worcester. New York's percentage in Thorndike's table is 33.7; Malden's, 76.5; Springfield's, 53.4; Newark's, 25. The range of children who remain to graduate from the high school is from 2.3 % in Baltimore to 26.4 % in Worcester. Thorndike is of the opinion that the

[1] Professor Herman Schneider in *The Annals of the American Academy of Political and Social Science*, Philadelphia, Vol. 33, No. 1, p. 50.

CHAPTER IV

THE INTERMEDIATE SCHOOL

I. Differentiated Programs of Study for the Last Two Years of the Elementary School. — The wisdom of giving all children in the elementary school the same training for the entire eight years of the course is now being questioned. Equal opportunity for all does not necessarily mean the same form of education for all. The European practice of promoting class distinctions by a system of fees and a sharp differentiation of curricula at the end of the fourth school year, is manifestly not in conformity with the expressed principles of American democracy. But a choice of courses at the end of the sixth school year, free to all alike, is not a denial of equal educational opportunity. On the contrary, it is creating a diversity of opportunity, whereby different types and degrees of talent may find fitting modes of expression and development, instead of being confined to a single form of training. In order to bring about the proposed reform it would

The course of study of the intermediate school might contain four groups of options, as follows:[1] —

1. *The Commercial Course* for those who expect to take the commercial course in the high school or who intend to go to work in business houses: —

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 5 hours to bookkeeping, business forms and procedure, business arithmetic, and related design.

(*d*) 5 hours to typewriting and hand-work.

(*e*) Total, 30 hours per week.

2. *The Literary Course* for those who intend to go through the high school and to college: —

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 5 hours to a modern language.

(*d*) 5 hours to drawing, designing, making, and repairing.

[1] See article by David Snedden, *Educational Review*, Vol. 44, p. 134.

attended by about one-third of the seventh and eighth grade pupils in the city. Some of the forms of handwork for boys undertaken in the Fitchburg school under course (3) are as follows: [1] —

(*a*) In the line of repairs: repacking faucets in the building, scraping and refinishing desks, setting glass, care of lawn-mowers, painting window screens, relaying decayed basement floors, repairing broken furniture, reseating chairs, rearranging rubber stair pads.

(*b*) In the line of woodwork: constructing work-benches, assisting in making kitchen tables, making teachers' desks for the entire building, building partitions and lockers.

(*c*) In the painting line: bronzing steam pipes, oiling floors, finishing and seating chairs bought in unfinished wood, painting kitchen, dining-room, wood-working room, and locker rooms, finishing work-benches and teachers' desks, painting and papering library.

(*d*) Work was begun in grading and the laying of concrete and granolithic walks.

In all the above lines of work the pupils are directed not only by the teachers, but by skilled

[1] *Vocational Education*, Vol. 2, p. 63.

so he "goes on the hook." Then he becomes a conscious lawbreaker; consorts with evil companions who are older and sometimes skilled in crime; and frequently lands in the Children's Court charged with larceny or other juvenile delinquency. Unquestionably these older children should be segregated and given work to do that is worth while from their own point of view. The intermediate school with an optional program is the very place for a misfit boy. Handwork is always attractive to children who hate books; and the muscular exercise required for handwork absorbs energy that is now expended in vagrancy.

2. *The Cleveland School.* — Fitchburg is not the only place that possesses an intermediate school. The Elementary Industrial School at Cleveland is another example. The requirements for admission to this school are that pupils "shall be at least two years behind grade, that they should either have finished the sixth grade or have failed to finish it and would therefore become 'repeaters.'" The academic instruction includes English, arithmetic, geography, history, and hygiene, all taught in such a way that through narrowing the field and intensifying instruction the pupils may "secure insight

from fourteen years of age who were in the sixth, seventh, and eighth grades, and who were manifestly of a mechanical turn of mind. . . . The weekly program is evenly divided between shop and academic work, ... but almost all the academic work is based on industrial conditions or needs." The curriculum of the school covers elementary and advanced woodworking and elementary and advanced machine and electrical work.[1]

4. *Other Similar Schools* already in existence may be enumerated as follows: —

(*a*) The Hebrew Technical Institute, New York.

(*b*) The Manhattan Trade School for Girls, New York.

(*c*) The Vocational School for Boys, New York.

(*d*) Industrial School, New Bedford, Massachusetts.

The National Society for the Promotion of Industrial Education has published a descriptive list of 159 trade and industrial schools in the United States.[2] Many of these are properly intermediate

[1] *Proceedings*, N. E. A., 1910, p. 730.

[2] *Bulletin No. 11*, by Edward H. Reisner, National Society for the Promotion of Industrial Education, 140 West 42d St., New York.

schools, representing nearly all the States, in which manual or technical training is given to 27,178 boys, 15,948 girls, — a total of 43,126 students. He reports also 287 manual, industrial, and technical schools, in which 17,907 pupils receive instruction in elementary academic studies, 61,296 pupils receive instruction in ordinary high school studies, and 108,209 pupils receive manual and industrial training. The typical manual training high school is a school of secondary grade in which a greater or less amount of handwork is included in the curriculum and in which the greater part of the academic instruction is similar to that found in other high schools. Neither the manual nor the academic instruction is especially planned to be of direct vocational service. The *technical high school* is a school of secondary grade having the distinct purpose of preparing its pupils for industrial leadership. In such schools the instruction deals not only with the important manual operations, but also with those principles of science and mathematics, and their direct applications to industrial work, which will prepare the student for mastering the fundamental processes and problems of the industries. In secondary, as well as in elementary, education, manual

"As for a manual-training high school, which differs only from the literary commercial high schools in that it has somewhat more shopwork and perhaps more mechanical drawing and a literary course less extensive than the first, and perhaps a less specialized literary course than the second, I confess I see no use for it in the future. It has no distinctive aim and character. In such a school there is so great a lack of correlation between the academic studies and the shopwork that boys and girls recite together in their academic work and separately only in their strictly technical work. Such a school is simply a literary high school with a somewhat narrow academic course and with a little more shopwork. The problem before us is to transform all such manual-training high schools into technical high schools. The manual training of a technical high school is likely to be fully as good, and I should say, better, than the manual training in a so-called manual-training high school of the type here described. Manual training does not lose its general educational value, but distinctly gains by being given a more definite industrial bent than it has had in the past." [1]

In New York City thirty-seven per cent of the population are engaged in industrial and mechanical work; thirty-seven per cent in business; nineteen per cent in domestic service; and five per cent in the learned professions. We have many schools to prepare for the professions, but we have, aside from engineering schools of college grade, only a few

[1] *The Place of Industries in Public Education*, N. E. A., 1910, p. 92.

Beginners' Class in Electric Wiring, Vocational School for Boys, New York.

ment of compulsory laws are the pressing need of the hour.

1. *Adjustment of the High School to the Needs of the Community.* — What can be done in the direction of making the high school useful to the community which supports it may be shown by citing a concrete example. Colebrook Academy [1] is located in the Connecticut Valley in the northern part of New Hampshire. The population of the town is 1200, and the surrounding country is a fine agricultural district. This Academy was once a private school. While retaining its original name, it is really a public high school. In an effort to relate the school program as closely as possible to the life and industries of the community, four distinct lines of work are offered; namely: —

(*a*) The ordinary literary course leading to the college.

(*b*) A course in agriculture.

(*c*) A course in home making.

(*d*) A commercial course.

The faculty consists of a superintendent, who supervises the district and does no teaching; the

[1] *The Readjustment of a Rural High School to the Needs of the Community*, by H. A. Brown, *Bulletin No. 20*, 1912, U. S. Bureau of Education.

COURSE OF STUDY OF A RURAL HIGH SCHOOL, COLEBROOK, N.H.
(Continued)

YEAR	SUBJECTS	PERIODS PER WEEK	EXT. IN YEARS
	Chemistry	4	1
	Rural economy and farm management	4	1
	Physiography: Geology and mineralogy	4	1
	Domestic Arts Course		
I	English	5	1
	Advanced arithmetic	5	1
	Elementary sewing	10	½
	Elementary cooking	10	½
	Ancient history	5	1
II	English	5	1
	Dressmaking, millinery, and designing	10	1
	Biology	5	1
	French	5	1
III	English	5	1
	Household design and decoration	5	½
	Household mechanical appliances	5	¼
	Household sanitation and hygiene	5	¼
	Physics	5	1
	French	5	1
IV	English	4	1
	American constitutional history	4	1
	Chemistry	4	1
	Advanced cooking and dietaries	4	½
	Advanced physiology and hygiene and the elements of nursing	4	¼
	Household economics	4	¼
	French	4	1
	Commercial Course		
I	English	5	1
	Commercial arithmetic	5	1
	Stenography	5	1
	Typewriting	5	1
	Ancient history	5	1
II	English	5	1
	Stenography	5	1
	Typewriting	5	1
	Commercial geography	5	½
	History of commerce	5	½
	French	5	1

CHAPTER V

CONTINUATION SCHOOLS

I. The Shop *vs.* the Trade School. — Whether the trade school or the shop is the best place to learn a trade is an open question. We have the word of Dr. Kerschensteiner that "a shop or factory cannot produce a good mechanic. Nearly all of them lack sufficient variety in scope or range and quality of work to enable them to do so. Furthermore, many of them are not prepared to impart to their apprentices what they know themselves." [1] A similar opinion is expressed by Mr. Alexander, of the General Electric Company, West Lynn, Massachusetts. Speaking of the apprenticeship system in connection with so-called "corporation schools," he says: "We should welcome the development of this phase of industrial education, but with a jealous eye should watch its progress, and courageously voice our protest, if it tends to gravitate toward narrow

[1] *The Organization and Management of Trade Schools*, by John M. Shrigley, National Society for the Promotion of Industrial Education, 1908.

shop and competing with the average mechanic; while they may be taught considerable 'book-learning,' their practical instruction must of necessity be limited. There is nothing that will take the place of practical experience."[1] That there is truth in this statement is obvious when you apply it to the teaching profession. The normal school and the training school are very useful in their way, but they cannot produce the finished teacher. They have their model and observation schools, where the candidate tries his hand at teaching. But conditions under which he works are artificial and not at all like those of a real school. The very best graduates of a training school are not able in the beginning to compete on equal terms with the experienced members of their profession. They begin with the lowest salary and require much assistance from the principal. Not until they have had five or six years of experience can they hope to become artists.

II. **The Continuation School.** — Since then the corporation or shop is not equipped for teaching and has more interest in the welfare of the business

[1] *Bulletin No. 13, Part II*, National Society for the Promotion of Industrial Education, 1911, p. 67.

supplementary to such employment. In this country we find three types of this institution: —

1. Schools for profit, examples of which are correspondence schools, commercial schools, and some trade schools.

2. Endowed schools, examples of which are Cooper Union, the Ohio Mechanics' Institute, Pratt Institute, the Ranken School of Mechanical Trades in St. Louis, and the Williamson School in Pennsylvania.

3. Public schools.

III. **The Part-time System in Cincinnati.** —

1. *The Engineering College.*[1] — In 1906 Professor Herman Schneider, Dean of the College of Engineering, University of Cincinnati, introduced his well-known plan of coöperative education. The University belongs to the city and is entirely supported by taxation. The course of study is so devised that the student works alternate weeks in the college and at the manufacturing shops of the city. The classes are divided into two sections, so that when one section is at the shop, the other is at the university. The length of the course is six years. During the summer

[1] *Annals of the American Academy of Political and Social Science*, Vol. 33, p. 50.

pupil requires it, his schooling may be limited to half a day per week. In the first school year the boy gives three or four hours a day to wood work. In the second year he gives the same time to mental work. At the beginning of the third year he selects his vocation and enters a shop on the wages of a third-year apprentice. The school is open at night for adult workers. In 1911 the evening classes enrolled 2400 pupils.

3. *The Continuation School for Apprentices.* — The school authorities invited the apprentices in the shops to continue their education in the evening classes of the high schools. But it was soon discovered that the training of the apprentice is distinctly a daytime proposition. A boy who has concentrated his attention upon a machine or process for ten hours during the day has little energy left for serious work at night. Hence his education must be given, not in addition to his work, but in lieu of a part of his work. The Board of Education therefore opened a Continuation School for apprentices in 1909. It runs forty-eight weeks a year, eight hours a day, four and a half days a week. The teachers spend two half days a week studying the conditions under which their pupils work, con-

"The manner in which the attitude of the apprentice has been influenced and his intelligence increased, so that there has been no loss charged up to the shorter week, is most interesting and is the subject of comment in labor circles as well as educational and commercial organizations.

"The first thing an apprentice is taught is the difference between knowledge and skill. The average school lad has been led along the paths of knowledge until he has begun to believe that knowledge is money. He must be taught that few, if any, persons are able to derive an income from the sale of their knowledge and that knowledge is only saleable when it has been worked into skill. Knowledge is knowing how to do a thing. Skill is ability to do it with such a quality and in such a quantity that it is marketable. The purpose of manufacture is not to make things, but to make things that will sell and to make them for considerably less than they will sell for. The apprentice is usually offended at this commercialism, and it takes him some time to enter into the spirit of modern production. He wishes to learn how to do a multitude of things, but he scorns the drudgery of repeating any one thing until he has mastered it. The most vital part of apprenticeship is lost to the boy if he finishes his time with barrels of knowledge but without the skill to produce a day's work." [1]

As a result of the success of the school, the Ohio Legislature passed a law in 1910 authorizing boards of education to establish continuation schools, and

[1] J. Howard Renshaw, Principal of the Continuation School, Cincinnati, *Bulletin No. 15*, National Society for the Promotion of Industrial Education, 1911, p. 82.

twenty-two from the eighth grade. It appears from the previous education of these boys that many of them were " retarded " in the regular school. They evidently had no taste for the kind of instruction that is given by the traditional public school. For this reason the Massachusetts law requires that all-day vocational schools shall be " separate," shall be free from the domination of cultural ideals, and governed definitely by the vocational interests of the pupils. The Newton School emphasizes the idea of separateness by calling itself an Independent Industrial School. It is independent of the regular elementary school and all its ways and works. But in the opinion of those best qualified to judge, this feature of the Massachusetts law is an error. There is no valid reason why a child who dislikes books should be compelled to defer his vocational training until he is fourteen. Nor is there any good reason why the public school should refuse to provide vocational training for those of its pupils who desire it and at the same time keep open the way to the high school for those who are headed that way. Reform schools, organized on a vocational plan, often receive boys only ten years of age, and succeed where the public school has failed. The Newton

the second type of schools authorized by the Massachusetts law. The pupils give half the time to work for wages in the industrial shops of the city, and half to school work. The classroom instruction articulates with the grammar school below and the college or technical school above. The regular high school building is used for this part of the course. The first year the boy devotes his entire time to school. The next three years equal groups of boys alternate between shop and school, so that half the pupils are always at work in the shop and half in school. Boys are paid for work done in the shops at the rate of ten cents an hour for the first year, eleven cents for the second year, and twelve and a half cents for the third year. This makes a total income of $552.75 for three years.

3. *The Springfield Evening School for Trades* illustrates the third type of schools contemplated by the Massachusetts law. It is the outcome of the Mechanic Arts High School, established in 1898, under the superintendency of Thomas M. Balliet, which was the first trade school in the United States supported at public expense.[1] The general aim of the

[1] Chas. F. Warner: *The Annals of the American Academy of Political and Social Science*, Vol. 33, p. 56.

CHAPTER VI

THE TRAINING OF VOCATIONAL TEACHERS[1]

I. The Prussian Plan. — We have now been agitating the question of vocational education for a number of years and have here and there organized schools of the vocational type; but we have scarcely begun to think of the most important desideratum in connection with this new movement; namely, the training of vocational teachers. Educational reform which overlooks the teacher is but a dream. Before we can successfully introduce new subjects into the curriculum we must have qualified persons to teach them. What is meant by these statements will become clear after a brief consideration of the training of teachers for vocational schools in Germany. In 1885 the salaries of such teachers in Prussia were smaller than those of the State schools and were paid by the local authorities. The teachers occupied a lower social rank than regular teachers,

[1] The facts concerning Germany are drawn chiefly from an article in the *Report of the U. S. Commissioner of Education* for 1911, on "Training of Vocational Teachers in Germany," by Edwin G. Cooley.

GAINING PRACTICAL EXPERIENCE. PUPILS MAKING STRUCTURAL CHANGES IN THE BUILDING OF THE VOCATIONAL SCHOOL FOR BOYS, NEW YORK.

2. *Industrial Arts.* — During the last few years courses of study have been arranged for the training of teachers in the industrial arts. For instance, Architect Riemerschmidt, of Munich, gives a course in furniture design and interior architecture. The Trade School of Magdeburg has a course in flat ornamentation. Professor Behrens, of Düsseldorf, has a course in lettering. Mural painting and decoration are taught by Professor Mahrbutter at Charlottenburg. Teachers are assisted by grants from the State or municipality to journey to these several places for the purpose of study. Teachers of the textile branches enjoy similar advantages.

3. *Continuation Schools.* — At first these schools were taught by elementary school teachers, who seldom possessed the necessary skill. Consequently these teachers at present all receive special training in art, commercial subjects, language, and arithmetic. In 1909 the sum of $47,600 was expended in training continuation teachers. The number of such instructors is about 12,000, of whom some 550 are employed in the daytime, and the remainder at night. Those who have investigated the subject tell us that much remains to be done in the proper training of this class of teachers.

Handiwork

Subjects	Weekly Hours First Semester	Second Semester	Entire Number of Hours
Handiwork	9	12	420
Machine sewing, etc.	8	6	280
Study of materials	1	1	40
Drawing	4	2	120
Pedagogy	2	1	60
Practice teaching and method	2	5	140
Hygiene	1	1	40
German and civics	2	2	80
Arithmetic	1	—	20
Singing and gymnastics	4	4	160
Total	34	34	1360

Household Arts

Subjects	Weekly Hours First Semester	Second Semester	Entire Number of Hours
Cooking	10	10	400
Handiwork	3	—	180
Housework, including washing and ironing	6	3	60
Natural science, including knowledge of food	3	3	120
Domestic economy, including household accounts	—	1	20
Pedagogy	2	1	60
Practice teaching and method	—	7	140
Hygiene	1	1	40
German and civics	2	2	80
Arithmetic	1	—	20
Drawing	2	2	80
Singing and gymnastics	4	4	160
Total	34	34	1360

III. **The Wurttemberg Plan.** — The vocational schools of this Kingdom are probably the most efficient in the world. They fall into four general groups: (1) the machine trades; (2) the building trades; (3) the industrial arts; (4) the commercial group. In the smaller places a teacher must be skilled in the leading industry of the place, and must know something of other branches of trade. Only in the largest schools is it possible to employ teachers who can qualify in only one of the four groups of industries.

Teachers of the building trades are at present sent to Karlsruhe in Baden to be trained. This school has the reputation of being the best of its kind in Germany. Here the student takes a course of three and a half years. The applicants are selected from the experienced and efficient elementary and secondary teachers, who already possess thorough pedagogical training. They have been passed through at least six years of a secondary school and so are well grounded in cultural studies. Wurttemberg grants them an allowance of $240 per year while they are at Karlsruhe. After completing the course they must spend from six months to a year in actual shop practice in the industries.

Teachers of the commercial continuation schools

seventh secondary school year. The instruction covers these twelve subjects: (1) German composition; (2) German business correspondence; (3) commercial mathematics; (4) bookkeeping; (5) foreign languages; (6) stenography; (7) typewriting; (8) general economic geography; (9) political economy and science of finance; (10) legal principles; (11) history of commerce; (12) lectures on teaching and theory of method.

For admission to the industrial division of the Karlsruhe school the applicant must be (1) a citizen of Baden; (2) must have passed through the seventh year of a secondary school or possess a license to teach in an elementary school; (3) must have attended the first three classes of the Building Trades School in Karlsruhe. The examination is divided into a preliminary and principal test. The preliminary includes (1) teaching ability; (2) German composition; (3) mathematics; (4) descriptive geometry; (5) physics; (6) chemistry; (7) elements of mechanics; (8) free-hand drawing and painting.

The principal examination covers the following:—

For the building trades: (1) Theory and design of building construction in stone, wood, and iron; (2) elements of the theory of mechanics.

In the same State the vocational teachers for girls' schools must not only be trained in special schools, but must serve half a year in the industry which they are to teach. In Munich the teachers are drawn entirely from the industries and are trained in pedagogy. They are successful artificers who take up teaching. In Wurttemberg experienced teachers of cultural subjects are trained in the technique of a vocation. But before they are permitted to teach in a vocational school they must spend from six months to a year in the industry. In Baden candidates for vocational schools are experienced teachers or persons who possess an academic culture represented approximately by a graduate of an American high school. These candidates may not teach vocational subjects until they have completed the training school course and served a year or two years in the industry.

VI. **Plans in the United States.** — Contrast these methods with our own, as illustrated by the following example: —

A farmer friend of mine recently employed a young graduate of the Cornell School of Agriculture as a farm hand. This boy was city-bred and had never worked on a farm; but he has a degree in agriculture

students, Hampton Institute, Virginia, is the only one that prepares teachers of agriculture. As there is only a nominal government control of these schools and colleges, there is no uniformity in the courses of study and method of training teachers. That such training is often theoretical in character and not very thorough, as compared with German standards, may be inferred from one or two quotations from the U. S. Commissioner's Report: —

"*University of Idaho.* — The department of agricultural education offers 5 courses: Development of agricultural education (2 hours); methods of teaching agriculture (2 hours); rural sociology (3 hours); agricultural economics (3 hours); and methods in agricultural extension (3 hours). Agricultural students may elect 10 hours' work in general education."

"*Massachusetts Agricultural College.* — The department of agricultural education established by provision of the State legislature in 1907, offers 5 courses: Meaning of education (3 hours); history and theory of vocational education (3 hours); methods in agricultural education (3 hours); teachers' agriculture, a selection and review of the agricultural sciences adapted to school work (3 hours); seminar in education with special reference to agriculture (3 hours). Seniors preparing for teaching have practical work with children in the college school gardens. Summer school courses are given in elementary agriculture, and in agricultural pedagogy. Correspondence courses are offered in agriculture, the prin-

brought up on the farm, trained in agricultural schools, and experienced as teachers. With state aid sufficient to encourage the payment of adequate salaries for efficient workers, these schools would reach 300,000 young people annually, and come in close personal contact with not less than 50,000 farmers, or one fourth the entire number of the state.

"Fully one half of the pupils in these schools are girls, and their needs should be supplied by providing instruction in domestic science as effective as that asked for agriculture."

2. *The Cincinnati Plan.* — Cincinnati has found it desirable to imitate the Munich plan. Here the chief difficulty has been, says Frank B. Dyer, formerly Superintendent of Schools, not in securing the interest of employers, or the approval of labor organizations, or the willingness of the boys, or the funds from the Board of Education, but in securing properly qualified teachers. The teacher of a part-time school must know the technique of trade to command the respect of employers and foremen. He must at the same time have skill in the technique of teaching sufficient to interest the pupil. And, lastly, he must meet the demands of the school board as to character and scholarship. This is a rare combination of skills. After corresponding with technical schools all over the country and finding no suitable person, Superintendent Dyer finally

This school was established in 1903. Its president is Mr. L. D. Harvey. No detail as to course of study or number of students is furnished; but so far as one is able to infer from the facts submitted, the institution resembles the Columbia School of Practical Arts, though it is much narrower in scope, being limited in purpose to the preparation of teachers of household arts. Pratt Institute in New York, State Normal College at Albany, State Normal School at Buffalo, Carnegie Institute at Pittsburg, Simmons College at Boston, and scores of other colleges, universities, and normal schools are to-day giving some sort of training to teachers for industrial schools and courses.

4. *A Study of American Conditions.* — The National Society for the Promotion of Industrial Education published recently, through a special committee, a preliminary survey of the problem of training teachers of industries.[1]

(1) *Certification.* — The Committee finds that "the State should be the sole certifying authority." The study is limited to the consideration of state-aided vocational schools. The financial authority

[1] *Bulletin No. 19, The Selection and Training of Teachers for State-Aided Industrial Schools* for *Boys and Men*, 1914. National Society for the Promotion of Industrial Education.

for vocations differing widely from that of shop instructor in an industrial school. The graduates usually have no trade experience, and they are not trained to teach. Furthermore, they command better pay than that received by a shop teacher. Normal schools represent the final stage of a continuous process of education beginning in childhood. They do not, therefore, have trade-trained students, nor can they themselves furnish the trade training. The conclusion is that the *chief source of supply must be the trades*.

For the supply of teachers of related subjects four sources are suggested: (*a*) the industry; (*b*) engineering schools of college grade; (*c*) the intermediate technical school; (*d*) the normal school. The trade furnishes men with trade experience who lack technical knowledge. The engineering school supplies the technical knowledge, but cannot give practical contact with trade. The intermediate technical school, such as Pratt Institute or the Department of Applied Industries of Carnegie Institute of Technology, *promises to be the most satisfactory source of supply*. Preparatory schools for teachers, like normal schools and educational departments of colleges, give the student

additional expense a normal department could be organized, and then New York would have a first-class training school for vocational teachers.

(*c*) *Special Day Course in an Intermediate Technical School.* — The objection to this plan is the economic difficulty involved in the loss of wages. The objection is met by the scholarship plan.

(*d*) *Special Evening Course in Some Technical School or College.* — One objection to an evening school course is the limited number of hours available for schooling. Another is that the student is not in good condition after a hard day's labor to engage in severe mental effort. The advantages are (*a*) that the student suffers no loss of wages; (*b*) the sacrifice involved is in itself an effective method of selecting promising material; (*c*) practice teaching can be had in the evening school; (*d*) and the plan opens an abundant source of supply for trade-trained teachers.

5. *Conclusion.* — It will be seen from this brief abstract of the committee's proposals, that practically every one of its schemes has been anticipated by European experience. The committee believes that the trades must be the chief source of supply for shop teachers. Munich came to the same con-

A Class in Jewelry Design, New York Evening School of Industrial Art.

teach. By prolonging the period of apprenticeship it will be possible, in a combination trade-and-normal school, to teach both arts at once or in the same institution. If the candidate is already expert in one art, the State has to pay for the experience in the form of a subsidy. If the pupil has no skill in either art, added expense is entailed by prolonging the period of training. In either case the State must pay for skill in two arts.

In general terms vocational guidance includes the study of the child; the preparation of the child for a specific calling; the study of industries; and the placing of the child into a position with a future, which he can fill with profit to himself and his employer. The chief end of the business is not, as many suppose, finding a job. Securing work is usually carried on in connection with vocational guidance, but it is only a small part of the field covered. The movement has already made large progress in New York, Boston, Chicago, Cleveland, Philadelphia, Pittsburg, St. Louis, and other cities.

A study in detail of the work in New York and Boston will show us what vocational guidance has come to mean.

II. **Vocational Guidance in New York City.** — The following facts are taken chiefly from the *Tenth Annual Report of the Commissioner of Labor*,[1] which is wholly devoted to industrial education.

In New York the father of vocational guidance is Mr. Eli W. Weaver,[2] a teacher in the Boys' High School of Brooklyn. With the enthusiasm of Pes-

[1] Washington, D.C., 1910.

[2] Of conditions in New York, the author is in a position to speak somewhat from personal knowledge.

by Mr. Weaver in Boys' High School. The object of the aid committee at this time was stated as follows: —

(*a*) To gather information as to the qualifications necessary for entering the skilled trades and professions.

(*b*) To secure information as to the opportunities the city offers to young people who wish to prepare for such trades and professions, and as to the time required, and expense involved.

(*c*) To ascertain what restrictions are placed by labor unions and professional bodies upon candidates who desire to enter trades and professions.

(*d*) To ascertain the average remuneration and relative permanency of trades, commercial pursuits, and professions.

Here is a specimen of the kind of information that was thus made available to young people seeking employment: —

(1) "The average annual earnings of women over sixteen years of age in the shirt factories of New York is $327; the average earnings of over three hundred stenographers employed in the several departments of the city governments of which the pay rolls were examined was $954. These women secured their appointments because of their special training. Their income from their work is over $600 a year more than

and contributors, together with school authorities under the direction of the City Superintendent.

(1) *Functions.* — The functions of this bureau as formulated by the committee are as follows: —

(*a*) To offer advice and direction to young people of exceptional abilities who cannot receive the necessary assistance from the vocational teachers of their respective schools.

(*b*) To serve as a means of communication between employers and the employment agencies or vocation teachers of the several schools and colleges from which students go out to work.

(*c*) To collect information in regard to the opportunities for workers of ordinary ability and others of exceptional training; information concerning the personal and educational qualifications required for admission into different lines of work, and concerning the tests of efficiency which are set for promotion into the different grades of the same lines of work; and information regarding legal enactments and labor-union restrictions, this information to be gathered from: —

1. Associations of employers,
2. Individual employers,
3. Statistical publications and government reports,

2. Through part-time employment,

3. Through vacation employment.

III. **Vocational Guidance in Boston.** — In Boston a number of organizations have assumed the functions of vocational guidance. At the head of these is the Vocation Bureau. Other bodies working in harmony with the Bureau are the committee on vocational direction of the School Board, the Home and School Association, the Girls' Trade Education League, and the Women's Municipal League. The School Board's committee was formed for the express purpose of beginning the work of guidance within the schools before the pupils leave the elementary grades. The three independent organizations appoint delegates to sit with the executive board of the Vocation Bureau. This arrangement assures the closest possible coöperation of all concerned and avoids duplication and waste of effort.

The Vocation Bureau was organized in 1909 by public-spirited men and women in the fields of labor, education, commerce, manufacture, and social work. Its work is carried on by a director and an executive board of thirteen members. There is no charge of any kind for its services. The Bureau is not primarily an employment office, nor does it

basis for vocational counsel. Here is a brief abstract of a study of

The Machinist

"A machinist is a constructor of machines and engines, or one versed in the principles of machines; in the general sense, one who invents or constructs mechanical devices of any kind. The two grand divisions of the occupation are general machine work and tool making. The pattern maker is a woodworker. The four divisions of people receiving wages are the apprentice boy, the journeyman, the foreman, and the superintendent. The chief danger of the occupation is from dust in cutting and grinding metals, especially in brass working. There is an ever-widening field for the expert machinist, and the future of the industry will be good in all lines.

"Pay in the beginning ranges from $3 to $8 a week, according to age, conditions of apprenticeship, or shop entered. Boys do errands, act as messengers to machinists, do drilling, milling, lathe work, planing, shaping, and run light machines. A young man, after a period of learning such processes, earns from $12 to $15 a week. A journeyman earns $2.50 or $2.75 a day. A foreman earns from $21 to $25 a week. The salary of the superintendent ranges from several hundred to many thousand dollars a year.

"In this occupation a boy is rarely taken under fifteen years of age. He should have a grammar-school education. There are found many graduates of high and technical schools. These generally become foremen or superintendents. A boy should have natural mechanical skill and should be strong and in good health."

changes of vocation. Parents come regularly to consult about the welfare of their children. Employers seek the advice of the bureau on various matters.

IV. **Summary.** — From this sketch of the work of vocational guidance in New York and Boston, it is evident that the employment bureau is an insignificant feature of a very large enterprise. Lack of self-knowledge is the cause of many tragedies. "Know thyself," is the first exhortation of the Vocation Bureau to youth. But it does not stop with advice. It supplies the facilities and material for self-study. Secondly, the Bureau makes a survey of the field of human industry and offers to the youth accurate information concerning the conditions, qualifications, dangers, rewards, and prospects of the various kinds of employment. Having set youth to the study of self and the study of industry with a view to a wise choice of an occupation, the Bureau finally exerts its inspirational offices to induce the young to make thorough preparation for the chosen vocation; and offers such assistance in this preparation as may be desired or required. An employment bureau in itself is of small value to an immature child. There is no

CHAPTER VIII

APPRENTICESHIP AND COMPULSORY EDUCATION

I. **European Experience.** — In the days of old all arts and crafts were learned from masters by a system of apprenticeship. (The vocational school is a modern substitute or supplement of apprenticeship.) Therefore no account of vocational education is complete which fails to take note of the relation of the apprentice to the industry, the school, and the State.

1. *Switzerland.*[1] — There is in this country a State apprenticeship system supervised by a central committee of the Swiss Union of Arts and Trades in coöperation with the National Department of Industries and the Cantonal and Communal labor organizations. The apprentice enters into a formal contract with his employer which defines the rights and duties of both parties. It specifies the length of term, the hours of labor, and the time when the

[1] See *Bulletin No. 19*, 1913, U. S. Commissioner of Education, p. 64.

tives; for on this distinction depends not only the individual development and well-being of the worker, but welfare of the State as well, since the youth of to-day is the citizen of to-morrow.

(1) *The Imperial Industrial Law.* — Apprenticeship in Germany is minutely regulated by a national law. Only citizens may employ apprentices. For handwork, the employer must be at least twenty-four years of age and have passed the examination of a master workman. He has authority to teach not only his own trade, but also a related industry.

Children may leave school at the age of fourteen and go to work. They have the option of entering upon skilled or unskilled work. The temptation is to choose the latter on account of the immediate prospect of wages. Consequently, many children, whose parents are oppressed by poverty or handicapped by lack of foresight, become *ungelehrte Arbeiter*, receiving wages that range from $1.92 to $2.40 per week the first year, and from $3.60 to $4.80 the fourth year.

Some of the more fortunate parents keep their children in a secondary school until the age of sixteen. At this age the boy receives a one-year military service certificate, and he is much more desir-

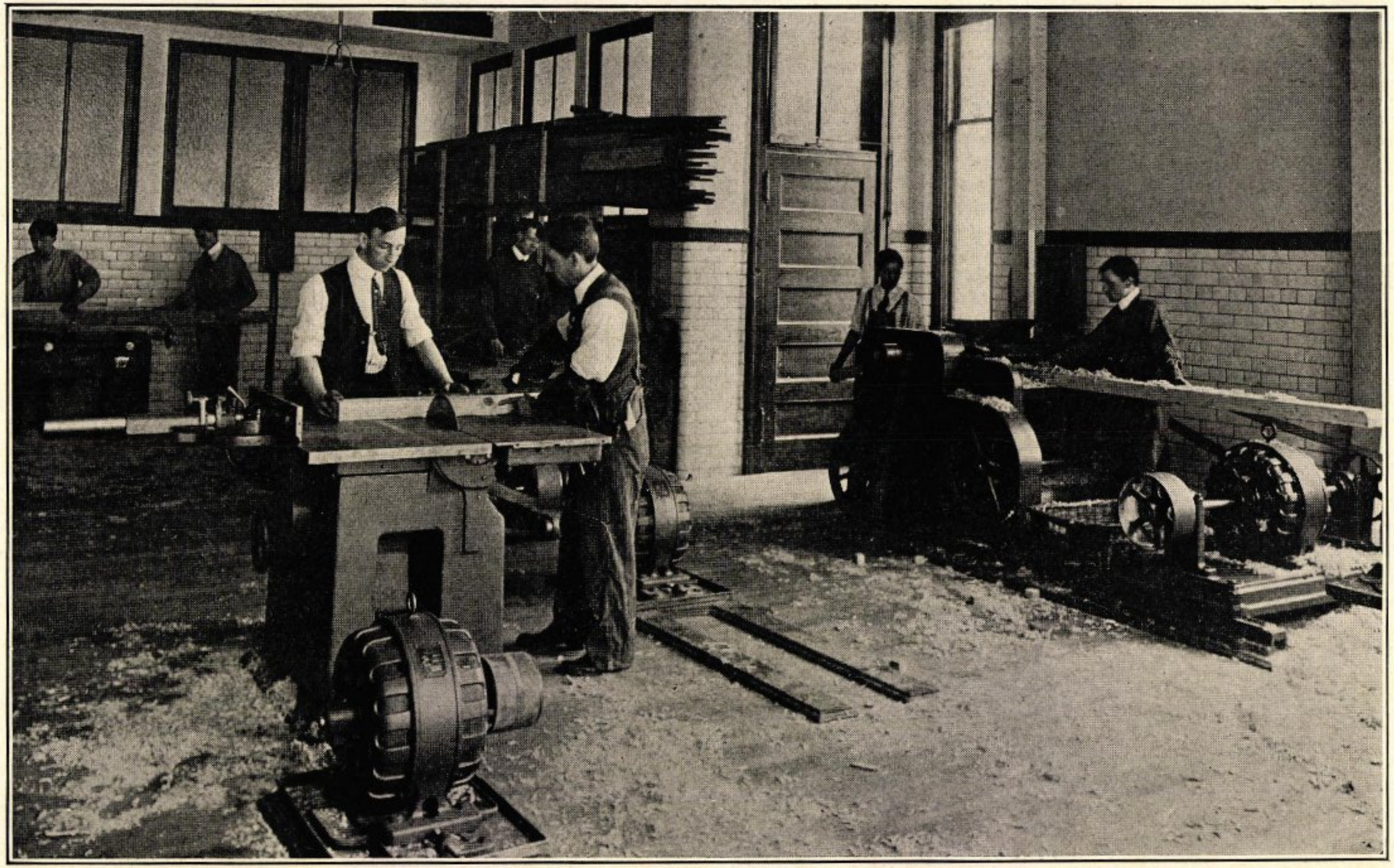
(*f*) Time and opportunity to make a "masterpiece"; and

(*g*) Specifications as to who shall pay for the material of the masterpiece and who shall finally own it.

The master must teach the whole trade, or at least all kinds of work occurring in his business. His instruction is all practical, and need not cover the theoretical phase. He must himself train the apprentice or assign a properly qualified assistant to do the work. He is further obliged to look after the conduct and morals of the apprentice.

For a violation of the contract the employer is liable to a fine of not more than 150 marks or to imprisonment for not more than four weeks.

(*a*) *Mutual Services.* — The services required of the apprentice include: obedience, truth, industry, and probity; the performance of mechanical duties other than those of his trade; the proper care of tools intrusted to him; attendance at an improvement school. He may be discharged for stealing; deception; disobedience; carelessness about fire; the commitment of grave offenses against the master or members of his family; harming goods of the employer or a fellow workman; immoral conduct in the master's family; neglect of duties in the shop;



The Wood-working Department, Vocational School for Boys, New York.

origin in the medieval handicraft work. The training of the people in those days was in the hands of the gilds, of which, at the end of the fifteenth century, there were thirty thousand in England alone. There were gilds for most of the breadwinning arts in which men engaged — craft gilds, art gilds, merchant gilds, trade gilds.[1] Boys were apprenticed to men following an occupation such as the youth or his parents preferred, and then began the training. The period of tutelage was fixed in most cases at seven years. The apprentice usually lived in the house of his master, who provided him with board and clothes and taught him the art and mysteries of his trade. The master and the pupil were in a sense on a plane of equality, inasmuch as both came from the same social class, and the pupil looked forward to the time when he himself would be a master. At the conclusion of the term of service the young man became a journeyman workman. He usually wandered away from his native town, sometimes going over seas to learn the foreign secrets of his craft. After three years of such experience, he presented evidence of his accomplishments. "If

[1] Note, for example, Rembrandt's famous painting in the Royal Museum at Amsterdam, entitled *Syndics of the Cloth Merchants' Gild.*

his medieval predecessor, and like him he did odd jobs by which he learned nothing and by which his apprenticeship was unduly prolonged.

The industrial revolution discussed above and the expanding ideas of personal liberty caused the indenture gradually to grow into disfavor, and by 1860 it had so far declined that it was the exception rather than the rule. The effect of the discontinuance of a legal contract is illustrated by an incident within the personal knowledge of the author: —

(1) *A Concrete Case.* — A certain boy named Joe was apprenticed in the year 1870 to a manufacturer to learn the trade of carriage painting. There was only a verbal contract, by the terms of which Joe was bound for two and a half years to do such work in the shop as the employer might direct. He was required in addition to perform household drudgery in the employer's family, such as running errands, setting the table, washing dishes, and cleaning house. The employer on his part agreed to teach the boy the trade of painting and trimming carriages. There were at that time only four trades involved in building a carriage; namely, those of the wheelwright, the blacksmith, the painter, and the trimmer. The boy was therefore to be taught

2. *The Entrepreneur.* — The next stage of the revolution brings us to the modern era of great industrial enterprises and extreme specialization in production, caused chiefly by the substitution of the machine for hand labor. The "master" of medieval and early United States craftsmanship now becomes the "captain of industry," or what the French call the *entrepreneur*. He no longer trains the apprentice himself, but delegates this duty to subordinates. He no longer knows the apprentice, he does not work with him. He cares little for his personal welfare. The industry is so organized that it is unprofitable to the business to teach the boy the whole trade. It pays better to make him expert in some one process and keep him at that. The manager can get journeymen trained elsewhere, especially in Europe, so he is not interested in the production of skilled workmen.

3. *The Trade-union and Apprenticeship.*—The apprenticeship system has been revived, however, in a new form. The Bureau of Statistics of Labor in Massachusetts ascertained in 1906 that out of fifty-eight employers, thirty-one had a system of apprenticeship. Of one hundred four officers of trade-unions, fifty-five represent trades where apprenticeships

that is, about 70 of the 120 affiliated in 1904 with the American Federation of Labor, with a membership of 900,000, together with some half dozen unaffiliated national unions, attempt more or less successfully to enforce apprenticeship regulations."

The attempt of the union to control apprenticeships after the manner of the ancient gilds by insisting upon journeymen's ability as a condition of membership is a failure. "Apprentices, after obtaining a smattering of a trade or becoming half trained, frequently run away and take up work elsewhere as journeymen." [1]

It is evident that one of the pressing needs of the hour is a series of new laws for the States governing apprenticeship.

One of the most advanced of such laws in the United States is the Wisconsin Apprentice Law of 1911. (See Appendix VII.)

III. **Compulsory Education.**[2]—There is a tendency everywhere to couple child-labor and compulsory education laws. In the evolution of society child-labor regulation appears first. As a community

[1] Beckwith: *op. cit.*, p. 15.

[2] The facts submitted in the section on compulsory education have been drawn largely from U. S. Bureau of Education, *Bulletin No. 2*, 1914, *Compulsory School Attendance.*

Child-labor legislation is invariably followed by compulsory education. The sequence is being illustrated at this moment by the States of southern Europe, by Russia, and by some of the States of the American Union.

1. *Germany*. — The compulsory attendance service of Germany has long been the envy of the rest of the world. Out of a school population of 5,754,728 in Prussia, only 548 children escaped the law in 1901. The results of the strict enforcement of compulsory education laws are seen in the almost total abolition of illiteracy, the high general average of education, and the industrial efficiency of the nation. Compared with conditions in our own country, where on an average, according to Professor Thorndike's findings, only about one-third of the children graduate from an elementary school, the following percentages of elementary graduation in certain German cities are illuminating: Bremen, 98.6; Frankfort on the Main, 99.2; Wiesbaden, 99.4; Leipzig, 99.5; Dresden, 99.6.

The Imperial Child-labor Law forbids, without exception, the employment of children under twelve. A thorough system of inspection by church and civil authorities and the registration of children at a

powered the Education Department to fix these limits in case the local authority failed to act. The act of 1900 empowers school attendance officers to make fourteen years the upper compulsory limit, and provides a penalty of twenty shillings for the violation of the law. A child may be exempted at the age of thirteen provided he is credited with 350 " attendances " for each of the preceding five years. Children between twelve and fourteen may have partial exemption by having credit for 300 " attendances " during each of the preceding five years.

The results of this legislation to date are as follows:

Seven of the local authorities have fixed the compulsory age from five to thirteen. All the rest (327) have made the period from five to fourteen.

The enforcement of the law is primarily in the hands of teachers and school officers. When they fail the case is turned over to a magistrate. Teachers complain that magistrates are too lenient; they recommend that the enforcement of the law be intrusted to the educational authorities. In proof of the alleged laxity of the courts the federation of education committees, at their annual meeting in 1912, cited the fact that 720,000 children in England and Wales were daily absent from school. They

abstract of the school register, with the number of absences and the reasons therefor. The school committee may summon parents for warning and censure. In case of renewed violations the responsible parties are brought before a magistrate for fine or imprisonment.

This system has not been satisfactory in practice. A bill pending in the Chamber of Deputies abolishes the communal school committee and transfers their duties to the justice of the peace.

6. *Switzerland.* — The Federal constitution requires the Cantons to provide sufficient elementary education free to all children "without prejudice to freedom of faith and conscience." In fulfillment of this obligation every Canton has passed a compulsory education law, and in seventeen Cantons compulsion applies to continuation schools. The compulsory period varies in length in the several Cantons from six to nine years.

7. *The United States.*[1] — All the States of our Union have compulsory education laws except Alabama, Florida, Georgia, Mississippi, South Carolina, and Texas. In Maryland, Louisiana, Virginia,

[1] In the United States we have 5,500,000 illiterates. It has been estimated that the annual cost of this illiteracy in underproduction is $500,000,000.

masters thereof being able to instruct youths so far as they may bee fitted for the University; and if any town neglect the performance hereof above one yeare, then every such towne shall pay five pounds per annum to the next such schoole, till they shall perform this order." [1]

Concerning this act of the General Court, James Russell Lowell has written: "It was in making education not only common to all, but in some sense compulsory on all, that the destiny of the free republics of America was practically settled." [2] It is true that two hundred sixty-seven years after the passage of the law we still find half a dozen States without compulsion, but we are marching on, and a few years more will make the vote unanimous in favor of compulsory education. It is also true that the laws we have are ineffective in many cases; but we are improving rapidly. Each year sees some progress. In good time the laws will be perfected and public opinion will insist upon their better enforcement.

(1) *The School Census.* — One of the indispensable conditions of a successful compulsory education law is an accurate enrollment of the children of school age. The school furnishes the names and addresses

[1] *Records of the Massachusetts Colony*, Vol. 2, p. 203.
[2] *New England Two Centuries Ago.*

Federal agents. The local authorities failed to report more than a third of a million children of school age, the error in some cases being as high as 25 per cent. In 17 States the local agents reported a quarter of a million children more than there actually were, the error of overstatement running as high as 15 per cent." [1]

Further improvement was made in the New York City Census in 1914 by a consolidation of the Permanent Census Bureau and the Department of Compulsory Education into a new Bureau of Compulsory Education, School Census, and Child Welfare. The difficulty of keeping track of all the children in a city of the size of New York may be imagined when one considers the constant stream of foreign and native immigration, coupled with the frequent changes of address on the part of citizens. The writer has single schools in which more than two thousand changes of registration occur in the course of a year. Several of his schools admit during September and October some eight hundred children and discharge three or four hundred on transfers. The record card of a certain boy recently inspected by me showed that the child had been in eight different schools in a single year. No wonder the legend has arisen that

[1] *Bulletin No. 2*, 1914, p. 13, U. S. Bureau of Education.

would mean the elimination of that child before the eighth grade was reached. If 180 days are necessary to complete a grade, a child attending 111.8 days each year would be 12.9 years completing eight grades." [1] Poor attendance accounts for the fact that only about one third of the children in certain typical American cities complete the eighth grade before leaving the school.[2] Definite information on this relation of absence to promotion is contained in the following table from the Report of the New York School Inquiry: —

Attendance and Promotion [3]

	Absent 10 Da. or Less	Absent 11 to 20 Da.	Absent 21 to 30 Da.	Absent 31 to 40 Da.	Absent 41 or more Da.
Number (1A)	17215	8708	5010	3188	8891
Per Cent of Total Register	40.02	20.25	11.65	7.41	20.67
Per Cent Promoted . .	89.47	85.75	79.02	71.01	40.56
Per Cent not Promoted .	10.53	14.25	20.98	28.99	59.44

Non-attendance, so far as it is due to delinquency, is more the fault of parents than of children. The number of truants is relatively small. Of 56,450

[1] W. S. Deffenbaugh, in U. S. Commissioner of Education's *Bulletin No. 2*, 1914, p. 17.

[2] See p. 62. Compare with European condition, p. 147.

[3] *Report of Committee on School Inquiry*, Board of Estimate, Vol. 1, p. 566.

THE CLASS IN MURAL DECORATION, NEW YORK EVENING SCHOOL OF INDUSTRIAL ART.

(*a*) His own efficiency.

(*b*) The promptness with which absences are reported to him.

(*c*) The extent to which his measures for enforcement are backed by school authorities and courts.

In rural districts the attendance officer is frequently employed at some gainful occupation as his regular work, while his services as an officer of the law are performed incidentally. Insufficient salaries are the chief cause of low-grade service. A good attendance officer is a man (or woman) of considerable education, good character, pleasing dress and address, firm will, some knowledge of law, and self-possession sufficient to prosecute parents and children in a court. Such a person is worth from a thousand to two thousand dollars a year, according to length of service and ability.

The information concerning non-attendance is supplied to the attendance officer by the school or by the census bureau. The effectiveness of enforcement depends, therefore, largely upon the promptness with which absences are reported. Some laws are so poor that no provision whatever is made for reporting absences. Some states require teachers to report once a month, some only once or twice a

indicate how discouraging is the endeavor to teach parents respect for the law.

(3) *The School Visitor.* — Within recent years the " school visitor " or " visiting teacher " has been employed as an efficient means of adjusting the school to the home or the child to the school. One of the most important qualities of a good teacher is sympathy, — the ability to " rejoice with them that do rejoice, and weep with them that weep." That sort of sympathy is born of knowledge. In order really to enter into the lives of the children one must know their home conditions. Such information can be gained most effectively by visiting the home. But the average teacher does not find time to make visits and does not regard such activities as among her legitimate duties. Each child therefore remains a sort of unknown quantity in the teacher's problem; and we know that a problem in algebra with even two unknown quantities is apt to be difficult. Very many of the problem cases in school are the result of ignorance and consequent lack of sympathy on the part of the teacher. Teacher gets cross because Mary doesn't understand her " examples." The real trouble may be that Teacher doesn't understand Mary. The child may live in a cellar or in a single

the sort of work she is doing. The school to which she is attached has a register at present of 3716. It is located in a congested portion of The Bronx. This visitor is paid out of private funds contributed by friends of the school.

quent teacher, magnified out of proportion, while the really important things are ignored.

Even persons who pose as educators are often woefully ignorant of the actual state of affairs in education. On November 23, 1912, a New York daily paper published an article from the pen of a certain Professor in Princeton University, from which the following is quoted: —

"I believe our school system is feeble and foolish. We are not getting half the results we have a right to expect from our schools. With a reasonably efficient organization we should be able to get for half the cost more than all the advantages and less than all the disadvantages we now obtain from our schools. . . . The schools to-day are mostly occupied imparting stereotyped information and incidentally promoting democracy — democracy in ideas and ideals, in morals, and manners, in contagious diseases and even more contagious immorality. Bullying, . . . diphtheria, lying, scarlet fever, cheating in class and examination, whooping cough, profanity, measles, all-round cultivated incompetence, tuberculosis, weakened eyes, . . . are some of the more objectionable of the miscellaneous evils disseminated, though not invented by our school system.

"But our schools are open to a still severer indictment. They have no vital connection with the life of the community from which they draw their pupils and their funds. They fail to prepare pupils to do anything."

of life." The prosaic " man has no notion that two and two make five, which is the problem the poet often has to solve." The fact that elementary schools have taught no vocational subjects in the past is no good reason why in future they should teach nothing but vocational subjects. All the children who can afford to take culture courses and are qualified for such work should be given the opportunity. The free passage from the kindergarten to the university must not be abolished. But, on the other hand, the schools are to do a great deal more in the future than they have done in the past for the ninety-five per cent who never reach the university, for the ninety per cent who do not go through a high school, and for the sixty-six per cent who do not even graduate from the elementary school.

III. **The Remedy.** — Our school system is not perfect; but neither is it as feeble and foolish as the Professor would have us believe. His assertion, without proof, that we should be able to get all the good we now have out of the public schools for half the cost, does not sound like the utterance of a man with the scientific habit of mind. That sort of exaggeration may arrest the attention of thought-

"Washing Up"—Quitting Time at the Vocational School for Boys, New York.

eight years of the school. If European experience counts for anything, vocational subjects will be taken up by the pupil after the completion of his thirteenth or fourteenth year. Some pre-vocational instruction may be offered by the regular school; but actual vocational training for young people already employed, will be offered in separate day or evening schools.

President Gompers, of the American Federation of Labor, in the following extract from a report of his, shows himself wiser than the Princeton Professor: —

"Our movement in advocating industrial education protests most emphatically against the elimination from our public-school system of any line of learning now taught. Education, technically or industrially, must be supplementary to and in connection with our modern school system."

IV. **National Aid.** — There was pending for several years in Congress a bill introduced by Senator Carroll S. Page, of Vermont, which, if passed, would have provided national coöperation with the several states in encouraging instruction in agriculture, the trades, industries, and home economics in high schools. It also offered national grants for the teaching of these subjects in State Normal

a fair statement in concise form of the problem of vocational education in the United States:—

1. "Continuation Schools for that half of the children who leave school at fourteen years of age, and mostly in the fifth and sixth grades, these continuation schools to be liberally cultural and at the same time to be extremely practical and related as directly as possible to the occupations in which the several students are engaged.

2. "The development of a modern apprenticeship system wherein by contract the respective and equal rights of employer and employee are fully recognized, the entire trade is taught, together with such other subjects as are essential to good citizenship.

3. "The development of secondary continuation or trade schools, by which the more efficient of the great army of boys and girls who will enter the continuation schools may progress from these lower continuation schools, as in some other countries, to the foremost places in industry and commerce.

4. "Compulsory education through adolescence, being until the seventeenth or eighteenth year, attendance being in the all-day school until the fourteenth year, and thereafter in either the all-day schools or in the continuation schools for not less than one-half day per week, without loss of wages for hours in school.

5. "The strengthening of all truancy laws and the development of public sentiment in support thereof.

6. "The training of teachers in thoroughgoing methods of industrial practice, including as part of such training extended experience in actual shop work.

7. "The establishment of independent State and local

CHAPTER X

TOPICS FOR DISCUSSION AND INVESTIGATION

1. WHAT are the arguments in favor of universal popular education at public expense?

2. Would it be desirable, if it were possible, to have all children receive the benefit of a secondary education?

3. What is a good citizen? Show the relation of profitable and congenial employment to good citizenship.

4. Show the relation of the "habit of success" to physical and mental hygiene.

5. What percentage of our exports are raw material or partially manufactured products?

6. Briefly sketch the industrial and economic revolution of the civilized world that has occurred within the last century.

7. Sketch briefly, giving approximate dates, the beginnings of popular elementary schools under state control, in Germany, England, Scotland, and America.

13. "It is due to a prejudice, inherited from antiquity, against these arts (*i.e.* the material or manual arts) that their great educational value has not been seen. This value is three-fold." — *Thomas Davidson.*

(*a*) Discuss the view presented in the first sentence of the quotation.

(*b*) What do you understand to be the threefold educational value of these arts?

(*c*) State concisely reasons for and against the introduction of these arts into the elementary course of study.

14. Should vocational education be a part of the elementary school or should it be supplementary to the elementary school?

Give reasons, mentioning a European nation that makes it a part of the elementary school and another that makes it a supplement of elementary education.

15. Explain somewhat in detail what is meant by "vocational guidance."

16. "I think I am not stating the case too broadly when I say that the great improvement and the great change in our system of higher education which marks it off to-day in such a clear way from what it was before 1870 may be traced directly and imme-

19. "It used to be that a boy wishing to learn a trade was bound out or apprenticed to a master for a term of years. He became a member of the master's household, lived under his master's eye, very much in the manner of an adopted son, and learned his trade under the master's direct supervision and tutelage. This way of learning was possible in the day of small industries when each manufacturer or tradesman performed the full round of his trade's activities in the one shop and there was time for hand-work because machine-work did not exist. Now that method is no longer possible." — *Lewis Gustafson.*

(*a*) Discuss the last sentence.

(*b*) Sketch in outline the provisions of a desirable state or federal law governing apprenticeships.

20. To what extent and in what ways can day vocational education and liberal education be carried on together or in close connection?

21. For what callings is vocational education under school conditions possible?

22. What can be done for purpose of vocational education in the case of both boys and girls from fourteen to sixteen years of age?

23. How far, in the successive stages of day voca-

to develop continuation instruction when they cannot properly support their present education?"—*Annual Report*, Commissioner of Education, Albany, New York, 1914.

30. "What kind of school training will meet the permanent requirement of industry and the permanent requirement of citizenship?" — New York Commissioner of Education, *op. cit.*

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18. ——— *Report of the Committee on the Place of Industries in Public Education*, 1910.
19. NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL TRAINING, *The Organization and Management of Trade Schools*, 1908, New York.
20. ——— *Bulletin No. 11*, by Edward Reimer.
21. ——— *Bulletin No. 13, Part II*, 1911.
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23. ——— *Bulletin No. 19*, 1914.
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28. SCHNEIDER, HERMAN, in *The Annals of the American Academy of Political and Social Science*, Vol. 33, Philadelphia.
29. SNEDDEN, DAVID, in *Educational Review*, Vol. 44.
30. TEACHERS COLLEGE RECORD, Vol. 12, Columbia University, 1911; also Vol. 8, on *Wurttemberg Vocational Schools*.

CHAPTER XII

APPENDIX I

The New York Law relative to Vocational Instruction

Article 22 of the Education Law of 1910, as amended by Laws of 1913, chapter 747

Section 600. **General industrial schools, trade schools and schools of agriculture, mechanic arts and homemaking, may be established in cities.** The board of education of any city, and in a city not having a board of education the officer having the management and supervision of the public school system, may establish, acquire, conduct and maintain as a part of the public school system of such city the following: —

1. General industrial schools open to pupils who have completed the elementary school course or who have attained the age of fourteen years, and

2. Trade schools open to pupils who have attained the age of sixteen years and have completed either the elementary school course or a course in the above mentioned general industrial school or who have met such other requirements as the local school authorities may have prescribed; and

3. Schools of agriculture, mechanic arts and homemaking, open to pupils who have completed the elementary school course or who have attained the age of fourteen, or who have met such other requirements as the local school authorities may have prescribed; and

and supervision of the public school system in a city not having a board of education shall appoint an advisory board of five members representing the local trades, industries, and occupations. In the first instance two of such members shall be appointed for a term of one year and three of such members shall be appointed for a term of two years. Thereafter as the terms of such members shall expire the vacancies caused thereby shall be filled for a full term of two years. Any other vacancy occurring on such board shall be filled by the appointing power named in this section for the remainder of the unexpired term.

SEC. 603. **Authority of the board of education over such schools.** The board of education in a city and the officer having the management and supervision of the public school system in a city not having a board of education and the board of education in a union free school district in which city or district a general industrial school, a trade school, a school of agriculture, mechanic arts and homemaking, or a part-time or continuation school, or an evening vocational school is established as provided in this article, is vested with the same power and authority over the management, supervision and control of such school and the teachers or instructors employed therein as such board or officer now has over the schools and teachers under their charge. Such boards of education or such officer shall also have full power and authority:

1. To employ competent teachers or instructors.

2. To provide proper courses of study.

3. To purchase or acquire sites and grounds and to purchase, acquire, lease or construct and to repair suitable shops or buildings and to properly equip the same.

a teacher for the entire year and such teacher is employed for such period, as herein provided, the Commissioner of Education shall make an additional apportionment to such city or district of the sum of two hundred dollars. But the total amount apportioned in each year on account of such teacher shall not exceed one thousand dollars.

3. The Commissioner of Education shall also make an additional apportionment to each city and union free school district for each additional teacher employed exclusively in the schools mentioned in the preceding subdivisions of this section for thirty-six weeks during the school year, a sum equal to one-third of the salary paid to each such additional teacher, but not exceeding one thousand dollars for each teacher.

4. The Commissioner of Education, in his discretion, may apportion to a district or city maintaining such schools or employing such teachers for a shorter time than thirty-six weeks, or for a less time than a regular school day, an amount pro rata to the time such schools are maintained or such teachers are employed. This section shall not be construed to entitle manual training high schools or other secondary schools maintaining manual training departments, to an apportionment of funds herein provided for.

Any person employed as teacher as provided herein may serve as principal of the school in which the said industrial or trade school or course, or school or course of agriculture, mechanic arts and homemaking, is maintained. [*As amended by Laws of 1913, chapter 747.*]

SEC. 605. **Application of such moneys.** All moneys apportioned by the Commissioner of Education for schools under this article shall be used exclusively for the payment of the

provisions of sections 323 and 327 of this chapter the amount that will be required to maintain such schools after applying toward the maintenance thereof the amount apportioned therefor by the Commissioner of Education. Such amount shall thereafter be levied, assessed and raised by tax upon the taxable property of the district at the time and in the manner that other taxes for school purposes are raised in such district. [*As amended by Laws of 1913, chapter 747.*]

SEC. 607. **Courses in schools of agriculture for training of teachers.** The State schools of agriculture at St. Lawrence University, at Alfred University and at Morrisville may give courses for the training of teachers in agriculture, mechanic arts, domestic science or homemaking, approved by the Commissioner of Education. Such schools shall be entitled to an apportionment of money as provided in section 604 of this chapter for schools established in union free school districts. Graduates from such approved courses may receive licenses to teach agriculture, mechanic arts and homemaking in the public schools of the State, subject to such rules and regulations as the Commissioner of Education may prescribe.

EIGHTH YEAR

Subjects	*Periods a week*	*Subjects*	*Periods a week*
Applied arithmetic	5	Bookkeeping	5
English	5	English	5
History	4	History	4
Spelling and writing	1	Spelling and writing	1
Home furnishing and decoration	2	Home furnishing and decoration	2
Costume design	2	Millinery design	2
Music	1	Music	1
Physical training	1	Physical training	1
Home nursing	1	Household economics	1
Household science	2	Household science	2
Dressmaking	8	Millinery	8
Cooking	8	Cooking	8
	40		40

APPENDIX III

AN UNDEMOCRATIC PROPOSAL

JOHN DEWEY

PROFESSOR OF PHILOSOPHY, COLUMBIA UNIVERSITY

No question at present under discussion in education is so fraught with consequences for the future of democracy as the question of industrial education. Its right development will do more to make public education truly democratic than any other one agency now under consideration. Its wrong treatment will as surely accentuate all undemocratic tendencies in our present situation, by fostering and strengthening class divisions in school and out. It is better to suffer a while longer from the ills of our present lack of system till

ments now operating for the improvement of existing general education. The old time general, academic education is beginning to be vitalized by the introduction of manual, industrial and social activities; it is beginning to recognize its responsibility to train all the youth for useful citizenship, including a calling in which each may render useful service to society and make an honest and decent living. Everywhere the existing school system is beginning to be alive to the need of supplementary agencies to help it fulfill this purpose, and is taking tentative but positive and continuous steps toward it. The City of Chicago in this same State of Illinois probably ranks behind no other city of the country in the extent and wisdom of the steps already taken, steps which will of necessity be followed by others just as fast as those already taken demonstrate their efficiency.

These two movements within the established American public school system, the proposed scheme, if adopted, will surely arrest. General education will be left with all its academic vices and its remoteness from the urgent realities of contemporary life untouched, and with the chief forces working for reform removed. Increasing recognition of its public and social responsibilities will be blasted. It is inconceivable that those who have loved and served our American common school system will, whatever the defects of this system, stand idly by and see such a blow aimed at it. Were anything needed to increase the force of the blow, it is the fact that the bill provides that all funds for industrial education raised by the local community be duplicated by the state, although the funds contributed by the state for general school purposes are hardly more than five per cent of the amount raised by local taxation.

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a definitely progressive turn, such a reactionary measure as the institution of trade and commercial schools under separate auspices should be proposed. It is not necessary to argue concerning the personal motives of the bankers and manufacturers who have been drawn into the support of the measure. Doubtless many of them have the most public spirited of intentions. But no one experienced in education can doubt what would be the actual effect of a system of schools conducted wholly separate from the regular public schools, with a totally different curriculum, and with teachers and pupils responsible to a totally independent and separate school administration. Whatever were the original motives and intentions, such schools would not and could not give their pupil a knowledge of industry or any particular occupation in relation to "science, art and society in general." To attempt this would involve duplicating existing schools, in addition to providing proper industrial training. And it is self-evident that the economical and effective way to accomplish this move is to expand and supplement the present school system. Not being able to effect this complete duplication, these new schools would simply aim at increased efficiency in certain narrow lines. Those who believe in the continued separate existence of what they are pleased to call the "lower classes" or the "laboring classes" would naturally rejoice to have schools in which these "classes" would be segregated. And some employers of labor would doubtless rejoice to have schools supported by public taxation supply them with additional food for their mills. All others should be united against every proposition, in whatever form advanced, to separate training of employees from training for citizenship, training of intelligence and character from train-

f. Poor health conditions

Eyes	3
Adenoids	1
Paralysis	1
Teeth	2
General health	2
	9
g. Special cases	3
h. Number of visits made to mothers in connection with preventive work (Monday night club)	10
Total	65

III. Constructive or preventive agencies (referred to or evidence of):

Mothers' Club of P. S. No. 4	3
New York Child Labor Committee	2
Board of Health	3
Grace Church Chapel	2
Bronx House Clubs	2
Society for the Prevention of Cruelty to Children	1
Bronx Hospital Dispensary	1
United Hebrew Charities of The Bronx	2

Bronx House Club Leaders' Organization
Association of Neighborhood Workers
Tenement House Department
Owners of tenement houses
Owners of moving picture theaters.

IV. Comments:

1. The dulling effect of the home drudgery of the foreign mother was mentioned in our report of last month. Time and again we have come across mothers who might be willing to help in school problems affecting their children, but who seemed

were placed in the halls, refuse was removed from halls, and the halls put into better condition.

4. Three moving picture theaters were found to be admitting children without guardian and under sixteen in defiance of the law. They were warned. Also certain candy stores in the neighborhood used as hangouts for children during school hours were warned. This will be followed up in the case of the theaters.

V. Three typical cases:

Case 89: Case of continued truancy. Yetta is a girl of fifteen. Upon investigation it was found that Yetta's mother died a year ago in Russia. Yetta's married sister, who lives in this city, sent for her with the intention of giving her a good education and taking good care of her. The sister's husband, a car conductor, pretty soon discovered that his earnings were not sufficient to enable him to keep Yetta at school, and he wanted Yetta to go to work. Yetta was not ready for her employment certificate. Consequently they kept her at home to enable her married sister to go to work. They explained to the school authorities that Yetta must begin to earn or they would have her deported.

The case was immediately referred to the U. H. C. Yetta was placed in a special class and we expect her to be ready for her working papers by June. Her sister, after consultation, saw things in a reasonable light and she was persuaded to coöperate.

Case No. 105: Two children of the same family were reported by their teachers as deficient in their work,

impudence and shrieking disorder. The mother, who had been used to her son's troubles at school, was antagonistic, and the case had all the earmarks of a hardened discipline case with very discouraging home surroundings. The boy was put back to a lower grade; and the case was put in the hands of the school visitor. After friendly relations were established between the school visitor and the boy, a compact was formed between them. He promised to make the effort of his life, and now after almost a month he has been placed in his proper class again and is living up to the terms of the compact faithfully.

VI. Conferences:

Visitor had conferences during the month at the Public Education Association, Bronx House and with the Mothers' Club of P. S. 4.

A conference was held at the Bronx office of the United Hebrew Charities, Mr. Henry J. Eckstein, presiding. Mr. Eckstein is also a member of the Board of Directors of Bronx House. Representing the school were Mr. Hirsdansky (also on the Board of Directors of Bronx House), Miss Lambert and Miss Bildersee, Assistants to Principal, Miss Feitzinger, school nurse, and Miss Manheim, visiting teacher. Such cases as the school authorities knew to be U. H. C. cases were gone over in detail and the method of treatment discussed. A detailed report of the conference is hardly called for here, excepting that it shows the way for coöperation with other agencies. We wish to point out

TRADE GROUPS

I	II	III	IV	V
Woodwork	*Metal Work*	*Electrical Work*	*Draughting*	*Advertising*
1. Joinery.	Plumbing and Gas Fitting.	1. Electric Wiring and Installation.	1. Mechanical Drawing. *a*) Freeh'd Sketching (working drawings). *b*) Finished Working Drawings. *c*) Elementary Perspective.	1. Sign Painting.
2. Cabinet Making and Finishing.		2. Instrument Making.	2. Architectural Drawing.	2. Display and Show Cards.
3. House-Carpentry.		3. Electric Signs.	3. Making and Reading Blue Prints.	
		4. Electro-plating.		

NOTE: Courses in Machine Shop Practice, Printing, Bookbinding, etc., will be offered as soon as the equipment has been installed.

APPENDIX VI

SIXTY-THIRD CONGRESS, SECOND SESSION

H. R. 7951

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 12, 1914

Ordered to be printed with the amendments of the Senate.

An Act

To provide for coöperative agricultural extension work between the agricultural colleges in the several States receiving the benefits of an Act of Congress approved July second, eighteen hundred and sixty-two, and of Acts supplementary thereto, and the United States Department of Agriculture.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on without discrimination as to race in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges receiving the benefits of this Act.

SEC. 3. That for the purpose of paying the expenses of said coöperative agricultural extension work and the necessary printing and distributing of information in connection with the same, there is permanently appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $490,000 for each year, $10,000 of which shall be paid annually, in the manner hereinafter provided, to each State which shall by action of its legislature assent to the provisions of this Act: Provided, That payment of such installments of the appropriation hereinbefore made as shall become due to any State before the adjournment of the regular session of the legislature meeting next after the passage of this Act may, in the absence of prior legislative assent, be made upon the assent of the governor thereof, duly certified to the Secretary of the Treasury: Provided further, That there is also appropriated an additional sum of $600,000 for the fiscal year following that in which the foregoing appropriation first becomes available, and for each year thereafter for seven years a sum exceeding by $600,000 the sum appropriated for each preceding year, and for each year thereafter there is permanently appropriated for each year the sum of $4,800,000 in addition to the sum of $490,000 hereinbefore provided: Provided further, That before the funds herein

maintenance of coöperative agricultural extension work, as provided in this Act, shall by any action or contingency be diminished or lost, or be misapplied, it shall be replaced by said State to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to said State, and no portion of said moneys shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings, or the purchase or rental of land, or in college-course teaching, lectures in colleges, promoting agricultural trains, or any other purpose not specified in this Act, and not more than five per centum of each annual appropriation shall be applied to the printing and distribution of publications. It shall be the duty of each of said colleges annually, on or before the first day of January, to make to the governor of the State in which it is located a full and detailed report of its operations in the direction of extension work as defined in this Act, including a detailed statement of receipts and expenditures from all sources for this purpose, a copy of which report shall be sent to the Secretary of Agriculture and to the Secretary of the Treasury of the United States.

SEC. 6. That on or before the first day of July in each year after the passage of this Act the Secretary of Agriculture shall ascertain and certify to the Secretary of the Treasury as to each State whether it is entitled to receive its share of the annual appropriation for coöperative agricultural extension work under this Act, and the amount which it is entitled to receive. If the Secretary of Agriculture shall withhold a certificate from any State of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in

APPENDIX VII

THE WISCONSIN APPRENTICE LAW OF 1911 [1]

SECTION 2377. Every contract or agreement entered into between a minor and employer by which the minor is to learn a trade shall be known as an indenture, and shall comply with the provisions of sections 2378 to 2386, inclusive, of the statutes. Every minor entering into such a contract shall be known as an apprentice.

SEC. 2378. Any minor may, by the execution of an indenture, bind himself as hereinafter provided, and such indenture may provide that the length of the term of the apprentice shall depend on the degree of the efficiency reached in the work assigned, but no indenture shall be made for less than one year, and if the minor is less than eighteen years of age the indenture shall in no case be for a period of less than two years.

SEC. 2379. Any person or persons apprenticing a minor or forming any contractual relation in the nature of an apprenticeship without complying with the provisions of sections 2377 to 2387, inclusive, of the statutes, shall, upon conviction thereof, be punished by a fine of not less than fifty nor more than one hundred dollars.

SEC. 2380. It shall be the duty of the commissioner of labor, the factory inspector, or assistant factory inspectors to enforce the provisions of this act and to prosecute viola-

[1] Laws of Wisconsin relating to employment of women and children, industrial education and truancy. Wisconsin State Bd. of Indus. Educ., *Bulletin No. 1*, pp. 24–26.

business practice, physiology, hygiene, and the use of safety devices.

(*b*) Such other branches as may be approved by the State board of industrial education.

(7) A statement of the compensation to be paid the apprentice.

SEC. 2383. The instruction specified in section 2382 may be given in a public school, or in such other manner as may be approved by the local board of industrial education; and if there be no local board, subject to the approval of the State board of industrial education. Attendance at the public school, if any, shall be certified to by the teachers in charge of the courses, and failure to attend shall subject the apprentice to the penalty of a loss of compensation for three hours for every hour he shall be absent without good cause. It shall be the duty of the school officials to coöperate for the enforcement of this law.

SEC. 2384. It shall be lawful to include in the indenture or agreement an article stipulating that during such period of the year as the public schools shall not be in session the employer and the apprentice may be released from those portions of the indenture which affect the instruction to be given.

SEC. 2385. If either party to an indenture shall fail to perform any of the stipulations, he shall forfeit not less than ten nor more than fifty dollars on complaint, the collection of which may be made by the commissioner of labor, factory inspector, or assistant factory inspectors in any court of competent jurisdiction in this State. Any court of competent jurisdiction may, in its discretion, also annul the indenture. Nothing herein prescribed shall deprive the employer of the right to dismiss any apprentice who has will-

APPENDIX VIII

A GERMAN APPRENTICE CONTRACT[1]

The following apprentice contract is executed between the firm of Friedrich Krupp, share company in Essen on the Ruhr, and (apprentice's name), born at (place of birth), to (name of parents), accompanied by his (parent or guardian, and name), as his legal representative.

SECTION 1. The firm accepts (apprentice's name) as apprentice for their cast-steel factory and obligates themselves to have him trained as a (trade or branch in which apprenticed) under the direction of a suitable representative. The apprentice is thrown under the fatherly authority of the representative.

SEC. 2. The apprentice is obligated to obedience and truth, to industry and proper conduct.

He must regularly attend, under the direction of the firm, an improvement school, and present the certificate there obtained, immediately on its receipt, to the official set over him.

SEC. 3. The apprentice is responsible for his support and for all other things necessary, with the exception of the tools necessary to his work.

He shall receive from the day of his entrance on apprenticeship pay for each working day, which shall depend on his conduct, ability, and efficiency, according to the following scheme:

[1] *Bulletin No. 19*, 1913, U. S. Commissioner of Education.

SEC. 6. On the part of the apprentice, the apprenticeship may be ended in the cases of section 124, numbers 1, 3, 4, and 5 of the National Industrial Law (see supplement), and also if the firm neglects their legal duties toward the apprentice in a manner dangerous to his health, his morals, or his training, or misuses the right of fatherly authority, or becomes unable to fulfill their contractual duties.

SEC. 7. On the close of the apprenticeship a certificate shall be given to the apprentice concerning the length of the apprenticeship and the knowledge and skill acquired during it, as well as concerning his conduct. An apprentice letter (Lehrbrief) shall be given only when the contractual period of apprenticeship has been completed or shortened with approval of the firm.

SEC. 8. The firm reserves to itself the payment to the apprentice on regular completion of apprenticeship, when his conduct and efficiency was, according to the decision of the official in charge, good, of a reward not to exceed 150 marks.

The firm decides according to its free judgment whether the payment is to be refused wholly or in part, and whether it is to be made to the apprentice himself or to his legal representative.

SEC. 9. Subject to the provisions of this contract, the apprentice is subject to all regulations for the workers of the cast-steel factory, especially the work regulations.

For other matters, so far as there are no regulations in the present contract, the provisions of the National Industrial Law apply.

SEC. 10. Apprentices who remain at the steel factory after the close of their apprenticeship shall, on continued good

With the old it is already too late. No one wants them, no one can use them. The unskilled person has nothing to market but brute strength. When that is gone, he has lost all the economic value he ever had.

But what to do with the young? That is the great problem. They know nothing, they wish to know nothing. They drift along from job to job, from worse to better, and back again to worse. A fifty-cent piece looks bigger than the prospect of learning a trade. Just to-day I had a call from a large meter works for a boy. He was to get $6.50 as a beginner. It was not much, of course, but the boy would be taught a good trade, the mechanics' and pipe-fitters'. At either of these trades he would in time be in a position to command a higher wage than his unskilled father had ever thought of. But not a boy would take the place. Boys living at home and whose earnings are only spending money laughed at it. They wanted nine or ten dollars, not caring about a trade.

In the Spirit of Youth and the City Streets Jane Addams sums up the situation far better than I could. But as manager of an employment agency in one of the largest factory centers of the world, I have been struck by the facts as never before. Hundreds of people come into my office every week, yet for the great majority of them I have no position. They are unskilled. The call is for skilled people, those who know some one thing. These are always in demand. They receive fairly good wages. But the unskilled — they are a drug on the market. As the foreman in one of the factories here remarked, they know nothing and they want to be paid for it.

Here are a few examples of places open to the unskilled.

APPENDIX X

VOCATIONAL SCHOOL FOR BOYS (PUBLIC), NEW YORK

EXTRACTS FROM THE ANNUAL REPORT[1] OF THE PRINCIPAL, DR. CHARLES J. PICKETT

Statistics

The average daily attendance for September, 1912, was 334; for July, 1913, it was 444. The average for the year was 427. During the year, 892 different pupils received instruction.

In February, there were 28 graduates from the two-year course; in July, there were 48; a total of 76, distributed as follows:

Architectural and Mechanical Drawing	17
Commercial Design	1
Electric Wiring and Installation	35
Machine Shop and Forge Practice	13
Pattern Making	3
Plumbing	1
Printing	2
Woodworking	4
Total	76

Carpentry Department

No. of graduates from July, 1911, to February, 1913	9
No. of graduates located and reported on	9
No. of graduates employed in trade work	7
No. of graduates employed in clerical work	1
No. of graduates employed in unskilled work	1
Average present wage of class of July, 1911	No graduates
Average present wage of class of February, 1912	$11.25
Average present wage of class of July, 1912	$8.50
Average present wage of class of February, 1913	$6.00
Average wage of 37 non-graduates of this department	$4.74

[1] School year, 1912–1913.

4. Advanced Drawing from Cast and Model.
5. Interior Decoration.
6. Jewelry Design.
7. Modeling and Sculpture.
8. Mural Decoration.
9. Poster and Advertising Design.
10. Stained Glass Design.
11. Textile Design.

NOTES: Views of several of the classes are shown in the illustrations.

INDEX

THE following pages contain advertisements of a few of the Macmillan books on kindred subjects

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Published Recently by The Macmillan Company

BAGLEY, WILLIAM CHANDLER, Director of School of Education, University of Illinois. **Classroom Management: Its Principles and Technique.** Cloth, 12mo, xvii + 352 pages . . . $1.25

—**Craftsmanship in Teaching.** Cloth, 12mo, ix + 247 pages . . $1.10

—**Educational Values.** Cloth, 12mo, xx + 267 pages $1.10

—**The Educative Process.** Cloth, 12mo, xix + 358 pages . . . $1.25

BANCROFT, JESSIE H., Assistant Director Physical Training, Public Schools, New York City. **The Posture of School Children with Its Home Hygiene and New Efficiency Methods for School Training.** Cloth, 8vo, illustrated, xii + 327 pages . . $1.50

BROWN, JOHN FRANKLIN, Ph.D., formerly Professor in Education and Inspector of High Schools for the State University of Iowa. **The American High School.** Cloth, 12mo, xii + 498 $1.40

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Vol. I, Studies. Cloth, 12mo, xii + 299 pages $1.25

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