

Need of Industrial Training.

Inez Palmer.

1896.

Outline.

Introduction.

- I Present state of our Industries.
- II. Why our workers need Training.
 - A. For their Individual growth.
 - B. For the Nations Advancement.
 - C. For the Nations Safety.
- III. How to Secure this Training.
 - A. Create a Public Sentiment.
 - B. By Legislation.

Books Consulted.

- National Educational Association 1882.
 Inland Architect. Vol 15.
 National Educational Association 1891.
 Articles by E. E. White.
 Geo. F. Fairchild.
 C. M. Woodward.
 Richard Dierkes.
 B. F. Hood.

Introduction.

It is manifest that labor is necessary to the production of wealth, and to the existence of a civilized society. The decree has gone forth "In the sweat of thy face shalt thou eat bread till thou return unto the ground." Man is endowed with powers which when cultivated make him monarch over matter. Nature supplies the materials but his labor fashions them for use.

It is evidenced in many ways that man should be a force in the world promoting its advancement, and his advance in civilization and intelligence has required a similar advance in genius and skill.

A nation is judged by the evidences of skill it has or those evidences left behind it. The initial thing of its kind is always rude, but by repeated application of skill it is brought to perfection.

While we are free to advance in all respects (with exceptions which will be given under another head) our industrial system has not kept pace with the other lines of work. Our need of trained laborers has advanced but they are not yet up to the required standard.

I. Present state of Industries.

The native born population are more or less destined to perform our manual labor. In accepting the refuse population of other countries we have the bone and muscle without even the asking. But since the agricultural, horticultural and manufacturing industries of our country are now advanced in a degree to fine arts they are of less use to us in these lines than they were formerly.

Most commodities before they can be used by man pass through complicated processes where many laborers are required. If we trace the cotton seed sown in the swamp of Georgia till it reaches the looms of Manchester, thence on its way to the Far East where it may clothe a Hindoo or a Japanese, we are overwhelmed with the army of workmen necessarily employed, from the colliers to the skilled and thinking mechanician.

Owing to the introduction of machinery there will be needed hereafter a higher standard of intelligence, combined with education, for brute power will play a less important part.

The idea that labor is degrading and fit only for the lower classes, is one that is rapidly dying out, and we hail the day when our system of industries shall have made labor combined with intelligence the highest pursuit of man.

II. Why our workers need Training.

It should be our highest ambition to develop our resources, encourage our already advanced mechanical skill, and perpetuate our free institutions. Any attempt to restrict our citizens in their industrial development means to strike a direct blow at our prosperity and our very life.

With our immense population of 65,000,000 there are fewer persons learning trades to-day than there were twenty-five years ago.

Foreign mechanics are taking the places which our American citizens should fill, if they were properly trained. To prove this statement we give the following which is taken from the Inland Architect: In 1889 the Stonecutters Union passed a resolution shutting out foreigners who came here to work during the busy season of the year, then returned Europe with

their gathered wealth. This was repeated each year. But this resolution disclosed the fact that there were not enough native stone-cutters to supply their places, so the progress of the buildings in large cities was delayed.

In 1851 at the World's Fair in London the jurors appointed to examine and compare the articles, awarded Great Britain the palm of excellence, and England rejoiced in that she was the mistress of the industrial world.

In 1867 Napoleon III invited all the nations of the world to send the richest products of their industrial skill to Paris but Great Britain excelled her competitors in but ten of the more than ninety departments. She had been defeated by several nations, the United States included.

In the midst of this awakening in Europe the industrial needs of the United States demanded the attention of Congress and July 2, 1862 an act was passed donating public lands to endow colleges "for the benefit of agriculture and the mechanic arts." By this act over eleven millions of acres of the public domain were set apart and consecrated to industrial education.

The one central purpose of the grant was to found colleges of science and industry to meet the industrial needs of the country. It is now thirty-four years since these colleges were founded and the results are now tolerably well established.

II. a. For individual growth.

A great majority of our young people must enter industrial fields, while but few of them are privileged to study for a profession. 97% of the masses pursue industrial occupations but how few are trained for them as are the remaining 3% for the professions. We must not forget or ignore the majority by shaping our public school system for the merest fraction.

Several hundred years ago to be educated the student must be able to read and write in Latin and Greek, but his own language was of little importance, and to-day we are in danger of being governed by tradition instead of common sense in educational matters. Books are but the tools of the scholar as the saw and plane are to the carpenter.

Our free schools are for the masses and not for the exceptional classes whose

tastes lead them away from industrial lines, but they should do still more for the boys and girls of the land by teaching them the practical arts. The acquiring of extravagant tastes and habits unfits the student for practical pursuits and is certainly not in harmony with those who intend following industrial pursuits.

In the older colleges the expenses have greatly increased in the past few years, not because of increased rates of board, and tuition, but for the extra expense of societies, social amusements, etc. This unnecessary extravagance either bears heavily upon the parents or leaves the young graduate in debt. Such extravagance in an industrial school is certainly subversive to its chief interests, but this tendency is present even in these schools.

It is a mistaken kindness when parents have their children excused from industrial drill, even though they do not wish them to pursue the trades taught. Habits of industry are valuable and should be pursued at the formative period of life. With industrial habits, a trained hand

eye and brain it is a comparatively easy task to change from one occupation to another, should a surplus of laborers in one line occur.

II- b. For the Advancement of the Nation.

There is no remedy for low wages effectual unless the efficiency of the laborer is increased and he is improved socially and morally. There is scarcely an industrial process which does not require some mental as well as physical effort. The trained laborer has increased dexterity, greater power of concentration, more trustworthiness and ability to operate new and complicated machinery.

Many workmen are unable to read and write, not because there are no free schools, but because the parents through ignorance, selfishness or poverty, put them out to manual labor while they were very young. They are thus made prematurely old by a life of hard toil with no corresponding mental labor. Their physical vigor is diminished or gone while they should still be in the prime of life, their labor has been unproductive, or they have made a scanty living so that at last they have to be maintained

by parochial relief, while yet they should be productive laborers. This process cannot but be detrimental to the nations advancement and also its welfare by increasing local taxes.

A drawback to our present industrial system is that the industrial training is kept within too narrow limits. Our workmen should be practiced in more than one line of work, for fear of an overplus of laborers. One hundred years ago our cities contained only one-thirtieth of the entire population, but now they contain one-fifth, so we see the growth of our cities has been too rapid for the national health, and people must go back to the farms or starve.

It is not many years since the uneducated laborer was considered as efficient as the educated, and employers regretted that there were schools to corrupt the industrial virtues of the workmen. But now even the manual laborers must have a properly developed mind as well as a well developed body. Of course in the training a certain amount must be spent, but the difference in the wages of the skilled and the unskilled represents

a large return to the capital which has been spent in his education.

II. c. For the Nations Safety.

Every intelligent person believes that all should be taught to read and write for good American citizenship, but it is equally important that the state or nation should look after the industrial education of its people upon which so much depends.

If all were scholars where would the nation be? It is truly dangerous for even our educated people to have no vocation.

Charles Sumner said: "Education without occupation is peril, education with occupation is power." Its object is usefulness. To be self-respecting, is to be self-supporting.

At present there is too much learning of names and not enough knowledge of things. How useless it would be if we should spend years in learning the names of cards and then never play a game.

Carlyle said: "Tools are the connecting link between barbarism and civilization." If youths would be allowed to go to work in the shop after their technical training we would have greatly improved mechanics.

Prison statistics show that only 5% of its inmates are mechanics, and of those who are taught trades during their imprisonment but few are ever committed a second time.

Training along the lines of industry develops a side of the individual which our present system wholly neglects, it gives him his true place in the world's activity, it is actual life itself.

The youth who constructs a tool or a machine, though but rudely, has a better knowledge of it and its use, than if he has simply studied from a perfect model. The training school does not have for its object to put upon the market perfected tools, but educated, intelligent men.

We often hear it asked: Will you be a musician, an artist, a dress-maker, typesetter or what, when you have finished your course? Now this question applies more exclusively to training schools where the industrial arts are given a higher place than the sciences, else it is clearly a fallacy of many questions, implying that colleges turn out specialists in industrial art.

Let us see if those who question the

practical value of education are in some degree right in so doing. We spend eight years in the public school, from one to three in high school, four in college, or fourteen years in school. What are the results or how does the time and labor spent compare with the results? Without venturing an answer we are safe in saying that far more valuable results might be gained by having more practical training, more modern and less ancient lore. With this equipment in our schools, we could touch more lives, benefit more homes, save more men from the penitentiary, and in a measure bridge over the great gulf fixed between the professional classes and the laborers.

III. How to train our Workers.

Industrial colleges and schools are now solving the problem of combining trained intelligence with practical skill, a much needed union. Our new schools for technical training have naturally adopted methods that place a dexterous use of tools before any distinct line of training to perfect execution.

When we have more specialized workmen the trades union will be less powerful for

evil, and productive of more good.

Civilization is dependent upon division of labor and yet is endangered by it. The workmen having the same simple task day after day, and year after year, grows weary of it and his mind weakens. He must have some general elevation of his physical and intellectual nature by some wholesome motive. It is hoped that machinery will, in the near future do this mechanical drudgery.

We cannot expect a sound intellect from a special line of study, any more than we can expect a sound body from the exercise of a single limb. So the industrial student should have a broad experience in early life, the discipline of books, and then he is ready for life's work.

III- a. Create a public Sentiment.

One result to be gained and one much desired in wider training in industrial lines is to remove the contempt in which manual labor has been held. If the public school pupil becomes familiarized to the tool before popular prejudice has its influence upon him, this task is practically accomplished.

A great many industrial and trade schools have been and are being established where every scholar is compelled to learn one good mechanical trade. The trades taught are those of a baker, blacksmith, bricklayer, car-builder, butcher, carpenter, copper-smith, carriage maker, besides many crafts. Habits of frugality, industry, and economy are also inculcated, because it requires more than a trade to succeed.

Industrial training is usually given to the deaf, dumb, and blind, in accordance with their physical conditions, and the habits of industry which the pupil acquires clings to him as he goes forth in life. Shall we do less for those physically perfect, and hence capable of more accuracy and skill?

Seeing that the wealth of the world is so unequally divided, the fair thing would be for the moneyed class to give to the support of industrial schools for the benefit of all. The principal education for life begins at the termination of school days or at Commencement. This is often repeated yet few see the meaning in its fullest sense.

The industrial needs of the country are calling for men of science and technical skill, and the duty of training such men has been committed to the national industrial colleges. Their mission is definite and their possibilities great.

The public recognizes that the source of so much of the crime in the nation is ignorance so they are doing all this to blot it out. The mind not trained to rational pleasures will seek a change in squandering money, time, and strength in intemperance and crime.

III. b. Legislation.

The lack of skilled artisans was the one weakness of the Jewish nation. A nation to be strong must have diversity of pursuits, all cannot be farmers, neither can a majority be professional, but in its industrial economy each has a place to fill which should be protected by the might of its people.

It is a recognized right of the state to seize and hold youths offending against the laws of the land, but they not return them to society without an occupation.

The recent French legislation proposed a system of manual or industrial education to begin at the kindergarten and extend on up through the high school, so that every child of whatever inclination should have its hand and mind trained in industrial operations. This is a movement in the right direction, as the public schools are organizations in which industrial training can be easily grafted.

We shall still go on improving, but in the future ingenuity will have a narrower range to work in. We shall perfect the present machinery but will invent fewer. Instead of a society where laborers are unskilled and wretched and human strength is so much depended on, our work will be better done by steam and electricity, the laborers will be many and each lightly taxed. They will have leisure for improvement exerting their power in the noblest way that of directing the powers of nature.

Then will our nation increase in productions we will have luxury at the cheapest cost and man will use his greatest of powers, his reason.