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A PRESENT DEMAND  
OF  
OUR EDUCATIONAL SYSTEM

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**Table of contents.**

**Introduction.**

**Defects of old system of education.**

**System of education an expression of political,  
social and economic conditions.**

**Three lines of argument in favor industrial training:**

**Practical or utilitarian.**

**Sociological and economic.**

**Pedagogical or psychological.**

**Suggestions for improvement of present system.**

**Objections to the new Education.**

**Conclusion.**

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To one who has been identified with or interested in the progress of our public school system during the past twenty five years will have come the realization that the standard by which the system was measured fifty years ago is not adequate to the present day and age. Within the past few years the most radical changes have taken place and have threatened a complete overthrow of our scholastic precedents.

The conviction has gradually gained ground in the public mind that the educational system as it exists to-day does not meet modern requirements, that it is out of harmony with the spirit and tendencies of the present age. The activities of fifty or a hundred years ago have advanced and new activities have been created, and these activities are intensely industrial and commercial.

Herbert Spencer declares that "the function which education has to discharge is to prepare us for a complete living." Lord Bacon long ago stated the object of education to be "the cultivation of a just and legitimate familiarity betwixt the mind and things."

A perfect and complete education is directed to every human faculty and power. Its supreme end is the harmonious development of all these powers and a preparation of man for all the duties and exigencies of life.

That the old system does not in the fullest sense accomplish these ends or realize these ideals is made apparent by a cursory glance at its limitations and defects.

The old system is too one sided. Mental training alone stops far short of the objective point in education. Ideas are mere speculations until they are embodied in things and it follows that any education which neglects either the one or the other is radically defective. Exclusively mental training does not produce a symmetrical character because it merely teaches the pupil how to think. The result of thinking should be acting. The force of character of man is measured entirely by his powers of expression -- what he is able to do. A prime criticism of our scheme of public education is that it is not broad enough to make adequate provision for the development of the powers of expression.

Our system is not practical. Public education should touch practical life at many points. It should better fit all for the place in life which they are to find highest usefulness and well being. If an education is not practical there is no room for it in this busy world of ours. An education which leads to no practical results, provided for at public expense, may justly be condemned by the public. Here with full right the public may require manifest and wholesome

results at not too great a distance of time. Any institution founded and maintained by the state must devote itself to the departments of education in which the public has a direct and lively interest or it forfeits its right to exist.

Do our secondary schools prepare pupils for active life? One of the leading criticisms is that graduates of our High Schools, the proper poor man's colleges, are utterly helpless in the majority of cases. If clerkships can be found there is a small beginning for them, but the busy world needs more artisans and mechanics than clerks. The young man just out of High School usually considers himself too old to learn a trade. Not finding the work he can do, he regrets the time spent in the High School. This has brought the High School into disrepute and many boys see so little practical advantage in the training it gives that, at the end of the seventh or eighth year of school, they withdraw. They swell the ranks of those children who spend from two to four years, most precious and expensive years, in unskilled labor for wages so small as to be utterly beneath consideration when compared to loss of opportunity, physical, mental and moral detriment -- which they often suffer. There is something radically wrong with a system which permits five million of the twenty million pupils enrolled in the schools of the United States during the last school year to drop

out before the elementary course is completed, chiefly because the schools, generally speaking, do not offer enough of the right kind of training which has an evident practical value. We must extend and enlarge our American institutions of learning so as to meet the practical needs of a larger number of children. Society and the individual demand that the first aim shall be a system that shall furnish that initial preparation necessary for the earning of a living, since the making of a living is the first essential in the making of a worthy life.

The years of adolescence, are considered by psychologists and educators to be the most formative period in the life of the child. They may be spent in work, for work may be made of profitable value but for the majority of children employed in the shops, factories, and department stores, there is no development of knowledge or skill as a future asset, no enlargement or extension of the outlook on life. It is a waste of precious energy for a mere existence.

A brief survey of the history of education and instruction among different nations through different periods of time will convince us that they, as well as art and literature are the expression of existing political, social and economic conditions.

The system of education in the ancient states was the expression



of a society based upon force and repacity above, and chains and slavery below. This education had but a single aim — to strengthen the governing classes and enlarge and fortify their superiority. Here we need only to recall the Spartan system of education.

It is said that metaphysics and rhetoric ruined Greece. Greek education was confined to a contemplation of the relation and nature of abstract ideas, while the nature and relation of things was wholly neglected. To scorn things is to disregard facts, and this is to disregard truth. The end of this education was selfishness, ambition, greed, treachery and dishonesty, finally anarchy.

In the middle ages education of classes prevailed. The priest and the knight were given an education, while the burgher class was wholly neglected because it was in the minority. Yet we notice what a different education was given these. To the priest Latin appeared to be the principal means of education, as well as the end and aim of all learning. But for the knight gymnastics, the use of arms, and court customs were the aim of instruction, because to him, as Latin to the priest, they were the source of power.

From the sixteenth century forward citizen education and training became predominant, because this class had become the

powerful factor in society, while the clergy and nobility declined in importance. General education became a practical necessity from this time as opposed to class education. It was thus that our idea of a general education was established, but we must call attention to some of the influences that have determined the character of modern educational methods in the United States and causes that have created new educational demands which as yet are only partially met.

We have handed down to us educational traditions derived from problems and ideals which inspired the founders of public education in early New England history. These ideals will never fully lose their hold on the American public school, because of their character and force, which make for training of good citizens.

The chief object the founders of New England education had in view was to fit the youth of the commonwealth through such learning as the school could afford to be intelligent citizens prepared to become leaders in a new state. How better could the principles of self government be instilled than by the study of history and literature. These studies open up the minds of the students to an understanding of the thoughts, aspirations and experiences of other leaders of other times. The reasons for their successes and fail-

ures, can be better understood, are more apparent, to after generations than to contemporaries.

Classic languages and mathematics were thought to be well suited to the development of minds capable of sustained thought, and clear and logical reasoning, and good judgment. It was a liberal education as a basis for good citizenship that our forefathers had in view and it was wholly mental. The same purpose to a certain extent has shaped the policy of our common schools. But there were other forces at work which supplemented the education of the common schools. One institution which provided special training for the vocations, was in existence in those early times. This was the system of apprenticeship and it included both the trades and the professions. The young lawyer and doctor learned the principles of their profession by becoming indentured to a lawyer or physician of experience and standing, just as the young mechanic learned his trade by working in a shop under contract, which bound his master to teach him the rudiments of his trade, and send him to school in return for service for a term of years. These were the two main elements in the original educational system. The fact that the population was rural also had its effect. In rural districts of today our educational system

is far more effective and meets conditions far more fully than in the city, for there the practical element is always present.

These forces worked side by side without conflict. Intellectual and general training was given in the schools, industrial and professional training by the system of apprenticeship, in the shop, on the farm or in the home.

But following the development of free institutions in the eighteenth century, came the advancement in every avenue of knowledge, of science and invention in the next and the equilibrium of the old order was disturbed.

The machine operated by one man replaced the labor of a hundred or a thousand hands; the principle of division of labor was originated and extended, production was increased in every possible direction, while the man behind the machine might have been a part of it, as he was wholly neglected as far as his intellectual, moral or social well being was concerned.

The apprenticeship system was eliminated, while on the other hand the schools assumed a new importance, as a result of the opening up of new fields of knowledge, the increase of wealth, the growth of cities, and the increased demand for educated men and women.

Law and medicine were now studied in special schools. Teachers were prepared for their work in training schools and schools for the training of engineers were established. Even the common schools claimed more time, compulsory educational laws were passed, and the state assumed a larger control over the system. So the system exists today, strong in literary and scientific elements but weak in practical and vocational results.

For some years it has been recognized by men of foresight, that the public schools were not meeting the changing conditions of our country and the necessity for some modification in the instruction and training given that should bring them into harmony with existing social and economic conditions has been generally admitted, and this demand points to the direction of rendering the schools more practical in the highest and best sense of the word.

As a remedy for the inefficiency of the present system the question of industrial education has been brought forward. Though this has been discussed for several years it is still the leading educational question of our time. In teachers meetings, boards of education, educational journals, the daily papers, as well as in manufacturers conventions and labor organizations it is being

more discussed than any other school question.

It has been our custom to speak of industrial education as an innovation, yet the principle of manual training exists in the kindergarten and for this principle we are directly indebted to Froebel, indirectly it dates back to the days of Rousseau, Bacon, Comenius, and Pestalozzi. The kindergarten comes first in the order of development and leads logically to manual training and industrial school. In both we seek to develop power by dealing with things in connection with ideas, both have common methods of instruction and they should be adapted to the whole period of school life, and applied to all schools. Though for nearly three hundred years educational reformers have been trying to teach us to deal with things instead of mere words or ideas we have been slow to adopt this principle.

The first steps in this direction of objective teaching were the introduction of science and nature lessons, object lessons, drawing and commercial studies. Manual training then appeared as a step nearer the ideal, but now nothing short of an auxiliary system leading through grades to a thoroughly practical industrial training for every student is demanded.

Industrial training has had a hard struggle to get into the

schools, as did drawing and science. It has taken years of practical demonstration on the part of leading educators and a few cities, to bring about the present attitude. We are hopelessly behind the European nations, especially Germany, which is the home of the technical school, and are scarcely in the race at all with England and France.

Though we have watched the movement toward industrial education abroad it seems to have been the opinion that the superior genius and remarkable adaptiveness of the American workmen were sufficient to maintain the supremacy of American products in the world's markets, but as we have come to realize more and more the advancement Germany, England and France are making, our complacency has been disturbed. Our manufactures are now importing skilled mechanics and workmen from these countries in order to compete with them. This is not as it should be for, given the proper education, a manual and industrial one, correlated with a thoroughly practical academic course, we can equip the American boy to do this skilled and high priced work better than the average foreigner can do it. He has these supreme advantages: He knows the language, he inherits American tastes and traditions, he can quickly be taught to use American tools and

meet American demands in the industries in any shape in which they can present themselves.

We must defend our industrial and commercial supremacy by providing a system of education which will furnish workmen capable of the most efficient performance of the tasks involved in modern production, not allowing foreign nations to lead us in this respect, for our natural resources, alone considered, would place us at the head of industrial nations.

There are three lines of argument in favor of the introduction of manual and industrial training into our system of education. They are the practical or utilitarian, the sociological and economic and the pedagogical or psychological.

Of the practical we have had much to say but there are a few points which may still be enumerated. Not the least of these is the increased confidence and support which would be given by the general public. The people would be quick to see the advantage of giving their children more education if that education was such as would fit them for better positions or higher wages after leaving school.

The increase in national wealth, industrial activity and power, greater prosperity brings with it better education both of rich and poor.



But we would not be understood as arguing for a practical education simply as such. We are not training mere bread winners. But we must see to it that they have the power to hold their own in the struggle for existence.

From a sociological point of view the new education has been looked upon with favor both by the student of sociology and the laboring classes. The students of sociology claim that it promotes the growth of the child in the direction of social capacity and service and stimulates individual growth.

The tendency of the modern High School is to give the false notion that labor of all sorts is to be left to those who can do nothing higher. In this it reflects the attitude of society. Few High School graduates take up a trade or return to the farm. They <sup>prepare to</sup> enter the professions regardless of their fitness for such a calling. If we give industrial work its place in the school curriculum and divert attention in this direction where skilled hand and intelligent mind may cooperate, skill and the skilled mechanic will receive their just appreciation from society and cast prejudice be leveled. This work should include the training of girls as well as boys and household economy, cooking and sewing should form the basis of their training.

The class most directly interested in the New Education is the class which depends for its support on the occupations included in the industries. The class between the day laborer and the professional and mercantile element. To this great section of our people the acquiring of skill means not only a living but the pleasure and contentment which comes from the mastery of one's life work. The laboring man has discovered that it means the proper appreciation of the importance of the place occupied by the productive laborer in the world's work by those engaged in professional life, and with this appreciation will come a better recognition of the needs of those so employed in the way of efficient compensation and shorter hours, to allow him leisure to be a good citizen.

One problem of every civilized nation today is that of labor and capital. The working man is seeking a larger participation in the profits of his industry. There will be no peace between the two until labor is educated enough to recognize the necessity for intelligence, and capital recognizes the just rights of labor elevated and ennobled by knowledge.

The utilitarian and sociological benefits of education of this type were the earliest reasons advanced for its establishment, but

it remained for the psychologists and school men to advance the strongest arguments, for these are unchangeable.

Educators from the time of Rousseau and Pestalozzi have argued for the benefits of hand labor in a school curriculum, for its educational and moralizing value, never from a utilitarian standpoint.

As we have said the principle is that advanced by Froebel in the kindergarten. To his followers the skilled hand and trained eye, the development of the senses, are aims, but secondary ones; The self activity encouraged by the new education being to them the prime consideration.

The followers of Herbart have accented it as a means of general culture as all true education is culture.

Pestalozzi lays more stress upon the moralizing influence. To quote from him on this subject. "With every day it became clearer to him, that industry, the physical activity of our race, is the true, sacred and eternal means for the union of the whole circuit of our powers into a single, common force, the force of humanity. Every day he saw more how industry trains the understanding and gives force to the feelings of the heart, how it guards the powers and purity of life from the deadly wasting of the senses, closes the

gates of the imagination, against error, blunts the loquacious point of the idle tongue, preserves the sense of duty in our nature from its rush, leads away from foibles, preserves us from regarding our flippant chatter about the deed as the deed itself and our gabble over heroism as heroic greatness, and our useless empty dreams about divine forces of faith and love as these forces themselves." What stronger argument could be made?

The instincts of construction and production are laid hold of and trained in a social direction for the betterment of mankind. The child who makes a plaything for himself has a world of interest opened up to him which the most mechanically perfect toy could not awaken.

Manual training develops perception. It cultivates the faculties of judgment and reason. The cooperation of mind, hand and eye all lead to a broader mental culture than can be gotten from many of the studies now in the curriculum. It stimulates general intelligence so that work in other subjects is often improved by it. It nourishes thought and will, forces the child to concentration, attention, perseverance and exactness. It teaches the child to value, observe, investigate, compare and invent, and exercises the senses, hands and members, and makes them skillful.

The tendency to drop out of school before the end of the course has been decidedly checked where the new education has been tried. The establishment of preparatory vocational schools in cities will do much for pupils who are duller than the rest and who usually constitute the truant class, and for his brighter mates who must leave school at fourteen to enter some trade.

These courses should consist in a limited amount of work in mathematics and language, handwork and shopwork, for free hand drawing, mechanical drawing and reading of plans. Geography, history, physics and commercial law should be related to the practical work and these should prepare for no special trade, but should teach the elements of industrial work.

In Negro and Indian education these methods have proved exceptionally successful and have produced not only carpenters, blacksmiths, architects, seamstresses and cooks but men and women of greater ability in every direction.

After all arguments in favor of the establishment of a nationally coordinated and adequate system of industrial training we turn to the work which has already been accomplished in this direction and find that the industrial school is its own best defence, and that its complete incorporation into our public school system is

only a question of time.

It is noticeable that, in the establishment of technical schools abroad the government has taken the initiative while in the United States such schools have been established almost wholly by private citizens or corporations.

The manufacturers in some Eastern cities have established their own training schools, training therein for their special lines of work. This has proved successful and in the end profitable to the founders, but is not the sort of <sup>it would</sup> a system we are advocating. This would mean the establishment of an up-to-date apprenticeship system, which would train the eye and hand without reference to the mind, and for purely selfish motives. We want something broader than that.

Some of the larger cities have established industrial schools. Of these that of Philadelphia may be mentioned as the first and very successful, Chicago, St. Louis, Boston and Indianapolis are among the cities which have flourishing industrial schools, but these are mostly of the academic and collegiate grades and their graduates enter the technical professions. The ordinary mechanical trades receive very few of the pupils of the manual training school of the present day.

These schools meet only a small part of the demand for in-

dustrial education. They are not for the ordinary mechanic, they nearly all charge tuition and are thus out of reach of the children of the poor, who need industrial training.

The agricultural schools established in nearly all the states have been a great success. They have enlarged their courses to include other branches than those concerned with agriculture proper, and the tendency is to broaden them still more.

Laws have been passed requiring drawing and manual training in some states and scholl programs have been extended to cover vocational lines. Where ever manual and industrial training have been tried they have proved beneficial and now that their need and practicability have been established it remains to discover how the need may be met without disturbed the system now in vogue any more than is necessary.

Evening schools of trades have been tried in some localities and may be a partial solution of the problem as it furnishes enlarged opportunities for those already employed. But evening trade schools cannot fully supply what is lacking in the public schools system. An extension of our system along these several lines would appear to meet this need most fully.

First: There should be introduced into our school from the

kindergarten to the High School, as large an amount of practical work as is consistent with the general training. In many cases the industrial bent must be given indirectly and suggestively, but as many of the activities of the children as possible should be linked with the life outside of the school. Hand work of the elementary constructive type, weaving, simple basketry, clay modeling, paper cutting, etc, in the primary grades, more advanced work along the same lines in the intermediate grades, with very elementary wood work and sewing in the fifth and sixth grades.

The Grammar grades will be able to do more difficult wood work and sewing, while free hand drawing should be taught in all the grades and the making and reading of plans, mechanical drawing can be carried in the higher grades.

There are many ways in which the work of the elementary schools may be related to actual life of a community and these should never be lost sight of.

Second: High schools of the manual training type should be enlarged and multiplied and generously supported. These should be technical schools, worthy the name, and for girls as well as boys. They will meet the need of those who are looking toward the higher mechanics.



Drawing, free hand and mechanical, design and shop work, household arts and economics, the chemistry of food should be taught in the most up-to-date and effective fashion.

All this should be done with no loss of strength to academic studies. Correlation between various studies should be emphasized to the utmost. The work in mathematics and science, even history and language should be practical and not considered wholly separate from drawing, forge and lathe. The work thus correlated will contribute a certain definite result and the school will not be separated from life, but become and remain a vital part of it.

Third: Evening trade schools should be established and maintained at every industrial center, for the instruction of men and women already employed in trades. Where well equipped industrial High Schools are found this will be an easy matter, so far as the fundamental mechanical trades are concerned. They should be made to include the building and factory industries.

Here may be studied science and mathematics as applied to their special lines, sources of materials, principles of design and construction, or they may be made practice schools where the fundamental operations of modern industry may be learned.

Fourth: The Higher technical schools must be open to all

graduates of the Industrial High School and must be free to all as they are.

There are objections to this system and they come from various sources, from the old school educators, from the labor organizations and from the tax payers, but we have faith to believe that the whole effect would be so beneficial that in the course of a few years these objections would be answered in a thoroughly practical way as they now are theoretically.

There is a widespread interest in this movement throughout our country. This interest is keener, more intelligent and general than ever before. Manufacturers are active in their own interests looking at the matter from their point of view. The labor organizations are concerned with different point of view, but the interests of the people at large claim the greatest consideration and it is to them we owe a proper solution of the problem.

One may well ask "Why trouble the government; either the State or Federal, with this problem? Why not leave it to the manufacturers to train their recruits, or to philanthropic men to endow such schools?" We believe that industrial training is rather the work of the school than of factories, that it is a

public rather than a private enterprise, and it must reach the majority of children rather than the few and much more effectively than our modern scheme of education can do. The industries need their skillful hands, and trained intelligence, the state need to develop the latent powers which her children represent. The nation needs their loyalty and contentment, while most important of all, the child needs the self realization, independence, and sturdiness that comes with an all round education and a consciousness of their ability to make a place in the world for themselves.

On democratic America we are educating not only boys and girls but as truly as in aristocratic nations, we are educating royalty,—the kings and princes of industry, the queens of our homes and social organizations, of a generation hence are among these boys and girls. Is it not of great moment to the nations at large what ideals shall actuate them?

Such problem, the incorporation of an adequate industrial system into our scheme of education, a problem, universal as it must, in its very nature, be, so fundamentally democratic, should be left to the most democratic institutions we have -- the public school, and kept under state and Federal control. Thus organized

we believe that our schools will rise to a new extension of service and meet the peculiar demands of this intensely practical age. □

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