

**INDUSTRIAL EDUCATION A
NECESSARY PART OF PUBLIC
EDUCATION; MANUAL
EDUCATION, A FEATURE IN
PUBLIC EDUCATION**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649341689

Industrial Education a Necessary Part of Public Education; Manual Education, a Feature in Public Education by John S. Clark & C. M. Woodward

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

JOHN S. CLARK & C. M. WOODWARD

**INDUSTRIAL EDUCATION A
NECESSARY PART OF PUBLIC
EDUCATION; MANUAL
EDUCATION, A FEATURE IN
PUBLIC EDUCATION**

Cover

Industrial Education

A NECESSARY PART OF
PUBLIC EDUCATION.

A PAPER READ BEFORE THE AMERICAN INSTITUTE OF INSTRUCTION,
SARATOGA, JULY 13, 1882.

BY JOHN S. CLARK.

Manual Education

A PART OF
PUBLIC EDUCATION.

A PAPER READ BEFORE THE NATIONAL TEACHERS' ASSOCIATION,
SARATOGA, JULY 13, 1882.

BY PROF. C. M. WOODWARD, PH. D.,
Washington University, St. Louis.



BOSTON:
THE PRANG EDUCATIONAL COMPANY.
1883.

AMERICAN INSTITUTE OF INSTRUCTION.

COMMITTEE ON INDUSTRIAL EDUCATION.

FRANCIS A. WALKER, Boston, CHAIRMAN,

President Mass. Inst. of Technology.

M. C. FERNALD, OROBO, N. H.,
*President Maine College of Agriculture
and Mechanic Arts.*

J. W. PATTERSON, CONCORD, N. H.,
Superintendent Public Instruction, N. H.

M. H. BUCKHAM, BURLINGTON, Vt.,
President University of Vt.

Prof. WM. H. BREWER, New Haven, Conn.,
Sheffield Scientific School, Yale College.

WM. B. WESDEN, Providence, R. I.

JOHN S. CLARK, Boston.

REPORT OF THE COMMITTEE ON INDUSTRIAL EDUCATION

*Presented at the joint meeting of the National Teachers' Association and the
American Institute of Instruction, held at Saratoga, July 13, 1882.*

To the American Institute of Instruction:

Your committee chosen to investigate the subject of Industrial Education, and to report thereon to your Association, beg to submit the following as their conclusions and recommendations:—

Your committee are of opinion that there should be incorporated in the present scheme of public education broader provisions than now exist for imparting to our youth the elements of knowledge and skill required in the industrial arts: not alone for the development of those arts, but also as a part of the general system of public education, having for its object training for citizenship through the normal development of individual power.

To this end they would recommend:—

First, The introduction into public schools of proper appliances for the development of the sense-perception of pupils in regard to color, form, proportion, etc., by contact with models and with natural objects.

Second, The introduction into grammar schools of simple physical and chemical experiments, for the purpose of acquainting pupils, through original observation, with the elements of chemical and physical science and their common applications in the arts.

Third, The teaching of drawing, not as an accomplishment, but as a language for the graphic presentation of the facts of form and of matter; for

4 REPORT OF COMMITTEE ON INDUSTRIAL EDUCATION.

the representation of the appearance of objects; and also as a means of developing taste in industrial design.

Fourth, The introduction into grammar and high schools of instruction in the use of tools; not for their application in any particular trade or trades, but for developing skill of hand in the fundamental manipulations connected with the industrial arts, and also as a means of mental development.

In view of the fact that much misconception exists in regard to giving instruction in the several features recommended, and of the desirability of more information in regard to their practical introduction into the schools, your committee suggest a further examination into the general subject of Industrial Education and its relation to public education.

FRANCIS A. WALKER.
M. C. FERNALD.
J. W. PATTERSON.
M. H. BUCKHAM.
WILLIAM B. WEEDEN.
WILLIAM H. BREWER.
JOHN S. CLARK.

The above report was presented by Mr. John S. Clark, the Secretary of the Committee; and in support of the recommendations therein contained he read the following paper on "Industrial Education a Necessary Part of Public Education."

INDUSTRIAL EDUCATION

A NECESSARY PART OF
PUBLIC EDUCATION.

By JOHN S. CLARK.

WHAT education is, and how education should be applied, are questions by no means new. They appear with more or less distinctness in all forms of social organization. The training of youth is one of the primal considerations forced upon man in a primitive stage of development, it grows in complexity and importance with every step in his progress in civilization, until in the higher forms of social order it becomes of fundamental, if not of paramount importance.

Setting aside for the time being the idea of education prevailing among schoolmen, let us consider it briefly as a functional feature in the social organism.

Man does not live by himself, or for himself alone. Collaterally with the development of his individual freedom, there has been developed a constantly increasing dependence upon his brother man. He is ushered into the world under conditions which enslave him to the social needs of his time; he cannot emancipate himself from the demands of his social environment. While he is born an heir to the accumulated results of his progenitors, he is free only as he adds something to those results as the sum of his own life. His failure to make such addition brings loss of personal freedom; his refusal to do so entails social disabilities; his persistent refusal, social disgrace. No individual is born with an instinctive knowledge of the social acquirements, or of the social needs. While his share in the world's patrimony is undoubted, and while it will be meted out to him according to the prevailing laws of social exchange; he is yet born to his inheritance and his opportunities, utterly ignorant of the knowledge which enables him to appreciate the former, and utterly deficient in the power which enables him to command the latter.

The helplessness of infancy, and the long period of adolescence, have been among the main conditions which have made possible man's continued progress in civilization. Accordingly, the training of youth has not only been an important matter of public concern in nearly all forms of social aggregation, but the aims and methods of such training also reflect, more truly perhaps than any other one feature, the civilized status of the

tribe, community, or state. A brief examination of the methods of training youth among primitive races, of the educational ideas which were developed in ancient Greece and Rome, which prevailed during the Middle Ages, and which exist at the present time, would not only show that the conditions of social development in these respective periods are mirrored in their educational provisions, but would also bring into clear light the fact that by the training given to youth, more than by any other cause, is civilization developed and perpetuated, or hindered and destroyed.*

Education therefore, considered from the social standpoint, may be regarded as the reproductive function in the social organism; and the educational needs of any period or people should be considered with reference to the nature of the social organism to be perpetuated and developed.

With this general underlying idea of education as our starting-point, let us now consider for a moment the nature, or the type of social organization which it is our duty to perpetuate and develop to-day.

The basis of the present type of social order is individualism, — the freedom of each individual, — and the general tendency of social development is in this direction; so much so that in America and in some of the European states, social order is developing through the giving to each individual, freedom to think, freedom to labor, and freedom to exchange labor. The contrast between this type of social order and the militant type which preceded it can only be noted; the manner, however, in which individuals are ranging themselves in the fundamental social employments under the new conditions is a matter which should be of great interest to the educator, as well as to the student of social science.

Classifying these employments somewhat in the order of their functional activity, they present the following grouping: —

EMPLOYMENTS AT THE PRESENT TIME

Productive.	{ Those which contribute to individual and social necessities in the production of food, minerals, raw materials, building and machinery construction, industrial articles.
Distributive.	{ Those which contribute to individual and social needs by distributing the products of the productive employments, — trade and transportation, banks, bankers, etc.

* "We must settle what we want to make of the pupils, or everything will go at random. In every country of the world there is some sort of general notion of what the men and women in it ought to be; and the men and women turn out accordingly; and the more certainly, the more clear the notion is." *Miss Martineau, Household Education*. The author then points out the patriarch's idea of training youth some thousands of years ago; how the Spartan educated his child to become a perfect soldier of the state; a Jew, to obey the letter of the law; an Arab, to become a perfect horseman; an Indian, an independent warrior, etc.

Governmental.	{	Those connected with legislation, administration, and protection.
Professional.	{	Those connected with individual well-being, and the applications of literature, science and art, — education, law, medicine, divinity, journalism, designing.
Culture.	{	Those connected with the pursuit of science, philosophy, sociology, literature, art, — employments which tend to stimulate and enrich the whole organism.
Unclassified.	{	Domestic servants, unskilled laborers.

A comprehensive view of these activities shows that human thought is a vital force in them all, and that it is manifesting itself mainly in the subjection of the material world to the higher interests of man. It should be noted, further, that the productive and the distributive employments are the primal ones, that they minister most directly to the necessities of the organism, and that only through their broad and harmonious development the highest good of the organism arises.*

* The employment of the people of Massachusetts, as shown in the carefully prepared statistics of the recent census, present some significant facts in regard to the tendency of modern social development. This State has an employed population of about 720,775, which may be classified broadly according to occupations as follows:—

Productive.	{	Agriculture	68,798
	{	Fisheries	6,103
	{	Manufacturing	344,686
Distributive.	{	Trade and Transportation	113,528
	{	Bankers, Brokers, Agents	4,857
Professional.	{	Teachers	12,129
	{	Lawyers	1,984
	{	Physicians	3,661
	{	Clergymen	2,434
	{	Designers	2,777
	{	Journalists	698
Governmental.	{	Litterateurs	1,582
	{	National, State, City, and Town Officials	6,274
Culture.	{	Educators	250
	{	Scientists	150
	{	Authors	136
	{	Artists	689
Unclassified.	{	Domestic Servants	74,354
	{	Unskilled Laborers	75,229

These figures show that nearly one half the employed population are in the industrial employments. The statistics of the employed capital and of the products of the State would make it clear that these are the really vital employments. The

In education, as in sociology, it is important that the reciprocal relation of these two primal groups should be clearly comprehended; and it should also be seen how differently thought manifests itself in them. Thought in the productive group creates values, mainly by the concrete work of the hand; thought in the distributive group is devoted to exchanging these values, mainly by the use of language. In the former, thought is expended in doing, in creating; in the latter, in describing and exchanging the things created. While each group is necessary to the other, the activity which benefits both is mainly generated in the productive group; on the other hand, the activity generated in the distributive group often proves fatal to both.*

Examining the productive group a little closer, we observe two main lines of activity in the creation of values: —

First, those connected with the gathering of food and raw materials.

Second, those connected with the fabrication of raw materials into articles for social needs; in other words, the industrial employments.

In both these divisions the individual is brought into direct contact with the material world; and in the industrial employments particularly, nature and nature's forces are converted by human thought into numberless products adapted to the necessities and the well-being of mankind.

A brief study of our present social development would show that its main activities are generated in the industrial portion of the productive group, that individuals are ranging themselves in these activities in a far greater proportion than ever before; and by subjecting nature and nature's forces to social needs, they have not only given increased activity to all the employments below them in the productive group, but they have pushed forward enormously the distributive employments above them, as well as laid under fresh contributions those higher activities connected with culture and individual well-being which minister to the best interests of the whole organism; so that, collaterally with this industrial development, we see men's thoughts expanding in every direction, resulting in greater achievements in science, the development of higher standards of public taste, of purer ideas in regard to morals and religious beliefs, and better types of political organization.

It is not necessary to catalogue the benefits, spiritual as well as material, which have come to the race as the result of this new social develop-

political canvass which took place in the State as this pamphlet was passing through the press indicates something of the social dangers to be apprehended from so large a development of the industrial employments without a proper educational training back of them. The workers in these industries now hold the balance of political power in the State; and they made their power manifest in the election of Gen. B. F. Butler, governor.

* It would not be difficult to show that nearly all recent financial disturbances have arisen from an undue expansion of the distributive employments.