

make this beautiful thought a practical verity is to train all children, rich and poor alike, to be able to work with their hands. This will not by any means make all of them mechanics.

II. What should be done in connection with school work to train the hand, and fit pupils for achieving greater success in industrial pursuits? Before answering this question in detail, I will lay down some general principles which I think should be carried out. 1. No attempt should be made to teach any specific trade. 2. There should be some work in each of the classes in public schools intended to develop hand skill. 3. Boys, as well as girls, should receive industrial training. 4. The work done should be of such a character that all the pupils in a class may engage in it. 5. Below the fourth-book classes boys and girls should do the same work; above this grade the programme may differ, so that the sexes may engage in the work best adapted to qualify them for their future occupations. 6. The materials used, and the apparatus required, must be inexpensive. 7. The products of the work should be suited for practical use. 8. The work done in public and high schools should be supplemented by a few technical schools, and by evening industrial schools. I recommend the following course of industrial work for the various grades in public schools, 1. Industrial drawing should be taught in all the classes. The Kindergarten system of drawing is, in my opinion, best for first-book classes, and the "Walter Smith" system, approved by our Educational Department, is the best for the other classes. In this subject Ontario is making rapid strides. The thanks of the teaching profession are due to the Honorable Minister of Education for the progressive and liberal course he has recently adopted in providing, free of charge, for the teachers of Ontario the means of learning how to teach this important subject, by establishing vacation drawing classes in charge of competent and experienced masters. One of the great hindrances to the successful introduction of drawing into public schools everywhere has been the generally received opinion that "artists alone could teach drawing." This is a great mistake. Teaching and painting are both arts. It would be folly to conclude that because a man is a great teacher, therefore he can paint; it is nearly as fallacious to conclude that because a man is a great artist, therefore he can teach. A good teacher with a fair knowledge of the principles of industrial drawing will be more successful in teaching drawing than an artist who has had no training in the art of teaching. It is full of promise for the future to see earnest teachers coming from all parts of the province during their vacation to qualify themselves for teaching drawing in an efficient manner. 2. The "occupations" of the Kindergarten form the best basis for industrial training, and are perfectly adapted for introduction into the first-book classes in graded schools. They may also be used to a considerable extent in ungraded schools, as the junior pupils may be profitably occupied with some of them, without the direct supervision of the teacher, while not engaged in class recitation. These occupations were designed by Froebel to occupy a part of the child's time during each day in the Kindergarten; and are intended to continue in a more extended and more definite form under the guidance of the teacher, the same course of "learning by doing" practised by the child before coming to school. The more thoroughly one investigates his system of "Gifts and Occupations" the more clearly he becomes convinced of their adaptation to the nature of children from five to seven years of age, and of their power to attract attention and develop both the intellectual and the industrial abilities of the little ones. Many of Froebel's beautiful Kindergarten songs are also specially designed to cultivate the flexibility and the power of the fingers. His gesture songs, and some of the most appropriate occupations, can be taught in the Normal schools; and by means of vacation classes one lady from each county model school could be trained in them. In this way all teachers coming into the profession would gain a sufficient practical knowledge of these songs and occupations to enable them to introduce them into their schools. One of the most important results of such a course would be, that young teachers might learn that yawning and droning before a reading tablet is not the most effectual means of developing a child's intellect.

The Kindergarten occupations which I think might be satisfactorily introduced by teachers, without requiring to have an intimate acquaintance with the principles and practice of the Kindergarten itself, are paper pasting, paper folding, sewing on cardboard, stick laying, mat weaving, modelling in clay, peas work, and drawing. It must be carefully borne in mind that these form but one department, and a comparatively minor one, of the Kindergarten. 3. For the second and third book classes I recommend,

for both boys and girls, plain needle work, especially knitting. We have experimented to a considerable extent in Toronto with a view of finding the most suitable occupation for the pupils in these classes, and can find no other that so satisfactorily fulfils the essential conditions as knitting. All can work at it, and do the same kind of work at the same time; the process of learning it is progressive and can be illustrated by the teacher on the blackboard, or with twine and large wooden needles (pointers suit admirably); the material used is inexpensive; the products are useful articles, and the finger cultivation is excellent. Practically it answers every test. The only objection I have ever heard raised to it was a simple sneer by a newspaper correspondent to the effect that "it would make the boys girlish." Personally I have little sympathy with the customs of society which draw a sharp line between the habits of boys and girls up to the age of twelve. Boys would be improved by being in some respects more like girls, and girls would be much better if they were allowed to indulge in many of the exercises which boys alone are now permitted to enjoy. Boys have no right to a monopoly of the health-giving games, and swimming, rowing, etc., nor should girls alone receive a training of their hands. It is somewhat unreasonable that the girls, whose fingers are cultivated at home by various kinds of needle work, household occupations, piano playing, etc., should be the only pupils for whose finger-training the schools generally make any provision. The poor boys whose "fingers are all thumbs" for lack of exercise, and who require to have more skilful hands than the girls, have too long been neglected by the educators. As most educational reformers have been men, it may have been their gallantry which led them to devote so much attention to the hands of the opposite sex. But, independently of this consideration, the answer to this objection to knitting in schools is easily found. There is nothing inherent in knitting which makes it essentially the work of women only. It would be a poor definition of a man to classify him as "the animal that does not knit." Willingness to work, habits of industry, and trained fingers neither degrade a man or render him effeminate. Quite the contrary! The knitting of the future will not be done to a large extent either by men or women, but by machines, so that the objection raised will soon have less of apparent force than it has now. Do boys dislike knitting? Decidedly not. They take a great interest in it, when it is fairly presented to them. Some even of our fourth-book classes in Toronto have done exceedingly well in knitting, and have entered with much spirit upon the work of making their own comforters, muffetees, etc. For rural schools where straw can be obtained easily, I recommend the plaiting of straw braids for summer hats in addition to needle work. It must be borne in mind that these occupations are recommended not on account of the practical use that may be made of them, but as means for training the hand, and incidentally to cultivate the mind. 4. For the higher classes, especially in cities and towns I recommend the establishment of workshop schools, not as I have already stated for the purpose of teaching any particular trade, but to accustom boys to handle a few tools in common use.

The ability to use a saw, plane, hammer, chisel and square well, will be of service to a boy in any walk of life; and in acquiring this ability he must necessarily obtain practical experience and general ideas concerning the use of tools, which will qualify him better for learning any trade or mechanical occupation.

Work-shop schools have already been introduced very successfully into Boston and Gloucester, Mass., in connection with the public schools. They have long been conducted in England and European countries as special schools, and as evening schools. Superintendent Marvel, of Gloucester, reports concerning them as follows: "The class was first opened as a Saturday class, but, as was expected, comparatively few boys were willing to give their holiday time to shop work. In October, 1880, arrangements were made to accommodate pupils in the carpentry class one-half of each afternoon session on Monday, Tuesday, Thursday and Friday of every week (two classes each session). By this change regularity and punctuality in attendance have been secured; and from a membership of thirty pupils, in three classes there was an immediate advance to a membership of ninety-six in eight classes, each receiving one hour per week. A few girls (six) were permitted to join one of the classes in 1878. There are now two full classes of girls, and there is one class composed partly of each sex. The work of the girls is equally as good as that of the boys, and they seem to enjoy it heartily. The attendance is entirely optional, nearly one-half the pupils in