

a good technical school. The course could be shortened by that much, or, better yet, the standard of instruction could be raised.

When the public schools do their duty by drawing, this advance on the part of the technical schools can be readily made; for then their students will come to them well-grounded in all the elements of drawing. They will have their eyes trained to quick and accurate perception, and their hands to quick and accurate execution with or without instruments. They will possess no mean knowledge of the true nature of design and decoration. With the universal principles to be observed, when one represents objects in chiaroscuro, they will be familiar; and also with those general principles and methods of representing the three dimensions orthographically which are employed in every variety of mechanical instruction. From all this there will come, in addition to the definite knowledge and manual skill, much culture of the taste, imagination, and inventive faculties. It should be remembered that drawing is *more a matter of knowledge than a mere manipulative dexterity*, and that an exhibition of drawings is to be judged more by the knowledge it displays than by fineness of execution.

#### GENERAL CULTURE.

General culture and general utility afford ample justification for teaching in the public schools all that has just been enumerated. This forms the soil from which technical instruction springs, but is not technical instruction itself, as it does not embrace specific applications in the different industries. It is for common service; and as the pupils in the public schools study language in some form, and mathematics in some form from the beginning to the end of their course, so should they, in the same continuous manner, study drawing and art. That this may be done, without diminishing the proficiency of the learner in the old school studies has been abundantly proven by experience.

#### COURSE OF INSTRUCTION.

As to the details of a suitable course of instruction in drawing, either for public schools or technical schools, nothing will be said here. Those who wish to know these details should visit and study the Centennial Exposition. Nearly all the products there shown illustrate in one way or another, the practical application of drawing. Let these products be studied until one realizes how much a knowledge of drawing must have contributed to the result. Then let the education curriculums shown in the Exposition be carefully examined. Finally, let the products and the curriculums be compared. This curriculum provides for such instruction in drawing. Is it sufficient to yield the products displayed in the exposition? No. Then it is not sufficient for public and technical schools, since it is not a measure of the Exposition. But another curriculum provides for such instruction in drawing. This is equal to the requirements of the Exposition, is a measure of the Exposition, and so is equal to the requirements of the school. Nothing less will fill the bill.

A study of the Exposition will show that Russia probably exhibits a better system of technical instruction than does any other country. She has not yet results sufficient to illustrate it. But the system is a full measure of the Exposition. The exhibit made by Massachusetts, of work actually done in her public and technical schools, is unequalled by any other exhibit. For every feature of the Exposition, industrial or purely aesthetic, her educational display shows a corresponding

feature. Especially does she deserve the palm for what she has achieved in the way of drawing in her public schools, during the last four years. And let it be observed that what she has done, not only for drawing but for music also, in the public schools, has not been at the expense of other branches, as the results show. The educational exhibits made by Sweden, Belgium, the Normal Art School of South-Kensington, by Switzerland, Holland, and some others, will well repay him who is in search of light on the subject of technical or advanced industrial instruction.

Materials, as well as plans and results, should be carefully examined. Much the most extensive and meritorious display of materials for instruction in drawing is made by L. Prang & Co., of Boston. They exhibit materials for all grades of pupils, from the lowest primary to normal art and technical schools. These materials consist of flat copies, manuals, models, casts, etc., to be drawn in line, in light and shade, and in colors, and all systematically graded. European government regard good drawing materials as of so great consequence that they make it a part of their official business to see that the very best are provided for the use of schools. But such a thing cannot be in this country. How fortunate, therefore, are we, in finding a business house, like that of Prang & Co., with sufficient means, enterprise and intelligence to provide for American schools drawing materials so excellent as to command the approval of European experts.

The necessity of drawing as an element of advanced industrial education has now been described in general terms; and a sketch has been given of the leading features by which all sound instruction in drawing must be characterized. This instruction should begin in the public schools, with those elements which are of universal utility, and be completed in technical schools, with those special applications required by the different industries. When drawing receives, as it must ere long, its due consideration in this country, it will work a great and beneficial revolution,—much greater than appears upon the surface,—in public instruction and in the condition of labor.—*New England Journal of Education.*

#### The Limitations of Education.

According to the highest views of education, but few are educated. Alas! such is the truth—the melancholy, incontestable truth. The past history and present condition of the world,—intemperance, war, slavery, bigotry, pride, uncharitableness, self-seeking,—prove it to be true. But what is the moral conclusion from these admitted premises? Surely not that we should despair, but that we should labor, that we should agonize with laboring. The present condition of the race is as much below attainable perfection as it is above possible abasement. The empyrean above is as much without a dome that shall forbid our ascent, as the abyss below is without a bottom that shall arrest our fall. In mid-space we stand. Ascent and descent are equally open to us.—*Norace Mann.*

#### Chinese Schools and Education.

By the Rev. E. R. BARNETT, B. A.

In the *Pekin Gazette* for January 8th, 1876, as translated in the *North China Daily News*, an edict appears from the Empresses to the following effect: "The