

4. *State Institution of Technical Education under the direction of the Science and Art Department.*

1. The Royal College of Science at South Kensington: One of the effects of the Great Exhibition of 1851 was the awakening of a desire for the development of technical education. In 1853 the new Department of Science and Art endeavoured to satisfy this desire by improving the School of Mines and Chemical Manufactures, which had been established in 1851. The improvement consisted in giving at the School of Mines more advanced instruction in chemistry as applied to arts and manufactures. The Royal College of Science had its origin in this School of Mines, to which was added in 1880 a normal school for science-teachers. The title was changed in 1890 from "Normal School of Science" to "Royal College of Science," and with this college the School of Mines was incorporated.

The college is now a complete faculty of sciences. It has laboratories and collections of botany, biology, mineralogy, chemistry, physiography, &c.; and attached to it are the magnificent collections of the South Kensington Museum, where some of the courses of instruction are given. Free students can choose the courses they will follow, but candidates for the associateship must take up the subjects of their own divisions in a prescribed order during three years or more. They attend for eight months and a half in the year, the hours being from 10 to 1.15, and from 2 to 4. Most of the time is devoted to laboratory-work. Gratuitous instruction and a sum sufficient to pay the expenses of travelling and of maintenance during their visit are given to fifty teachers and candidates for appointment as teachers. Classes for teachers are held in vacation. There are 294 students attending, of whom 136 pay fees, the rest holding scholarships.

2. National Art Training School is an Academy of Fine Arts at South Kensington, principally for the training of teachers of drawing: There is a large number of pupils. Most of the classes meet in the day-time, but some at night. The instruction is purely academic. There are more women than men in attendance. The National Museum of Art, with its unrivalled collections, is accessible to the students. It is astonishing that, notwithstanding the presence of such a display of applied art in every form, instruction in art should continue to be so abstract—so restricted to the principle of "art for art's sake"—in a country where practical ends are so commonly paramount.

These colleges are specially devoted to the training of science and art teachers. Students intending to engage in manufacturing industries often go to complete their studies to the Central Technical College of the city and guilds.

5. *Central Authority of Technical Education.*

The Science and Art Department, without encroaching on the autonomy of local authorities, is a kind of Court of appeal in purely administrative matters affecting technical education. Many appeals are made on questions relating to subsidy, and to the constitution of committees. Such matters are usually arranged by an officer of the department, who holds an inquiry at the place. The department decides what subjects may be recognised for purposes of subsidy. Two lists—of subjects generally recognised, and subjects recognised in certain localities only—are kept, and these are revised annually. In 1895 considerably more than a hundred special subjects [stated in detail by the writer] were included in the two lists.

6. *Public Museums of Science and Art.*

1. The department's Museum at South Kensington has no equal in the world; its extent and wealth, the variety of its collections, and their truly practical character are unique. All industries are illustrated there: their raw materials, their tools and machinery, and their products. Working models of machinery are always on view. The place is most thronged at the time of school holidays. For the convenience of working-people it is open till 10 at night. A great library is annexed, replete with works bearing on arts, manufactures, and trade. The number of visitors to the museum in 1894 was 1,057,279. From the foundation up to the end of 1894, the money spent in the purchase of the contents of the museum was £400,000, of which £9,394 was spent in 1894. The favourite opportunities of purchase at low prices occur when great international exhibitions are breaking up.

2. Less important, yet highly interesting, is the Bethnal Green Museum, a Government establishment in the poorest and most densely populated part of London. Here are exhibited animal and vegetable products, and everything that can be made out of them, and all the processes of the manufacture of any particular article—a hat, for example. Placards and tables drawn up by the best authorities give the fullest explanation of every object and every process. No better object-lesson for artisans could be devised. The first section is devoted to the clothing industries, and trades products, leather, shoemaking, feathers, shells, coral, sponges, wool, silk, cotton, pearl, bone, horn, ivory, soap-making, and oils. The second section is taken up with food products, such as sugars, tobaccos, flours, &c. A series of illustrations of the diet of Eastern nations is exhibited, which formed part of the Colonial and Indian Exhibition of 1886. In 1894 the visitors numbered 591,302.

3. There are important museums in Dublin and Edinburgh.

4. The Government regards these museums as only a beginning, and contemplates the institution of others in London, and at the provincial centres.

7. *Grants and Loans to Local Museums.*

1. Grants are made for the purchase of objects of interest for museums attached to schools of science and art. These grants never exceed half the price paid, and voluntary subscriptions must be equal to the grant. In 1894 grants were made to four museums.

2. The Science and Art Department has a large number of loan collections, consisting of objects, books, drawings, photographs, &c., illustrative of some thirty subjects. These are lent to supply-