

were also elements in all successful enterprises. But the main motive in business should not be either the gratification of commercial pride, or the mere making of money, but for the power to do good, and the acquisition of a name that would redound to the glory of God. Let those who attained to wealth, prove themselves faithful stewards of the mammon of unrighteousness. Let them aid charitable institutions, and especially the church of Christ, when putting forth efforts for the spread of the gospel. Let them enlarge their contribution as their means increased, and to counteract the danger arising from the earnest prosecution of business, let them engage in some system of benevolence, and by so doing, business would become a practical field for the cultivation of Christian graces.

II. Papers on Education in other Countries.

1. THE EDUCATIONAL SYSTEM IN GERMANY, AND ITS ADVANTAGES.*

BY CAPTAIN BOSCAWEN IBBOTSON, F.R.S.

By the method of education pursued in Germany, the pupils, besides receiving instruction, are stimulated by emulation into a system of good conduct and strict moral observances. The general object of education is, that all persons should have the opportunity of gaining, and be encouraged to seek, such instruction as will enable them to become useful members of all communities, and to adapt themselves, by their education and by the development of their talents, to their after-pursuits in life.

It is proved by experience that children, when good encouragement and opportunity is afforded them, are found to possess unknown talents of great utility to the commonwealth, although their commencement has been the most unpromising. I could quote numerous instances of this fact; but I will merely state, that it depends greatly on their early associations as a groundwork for their future advancement. I do not mean to say that cases have not occurred where persons, without such advantages, have made themselves notable by their talents and their discoveries; but I mean to say, that if such persons had received at first a good "elementary education," and afterwards followed it up from class to class, as far as their time and occupation would permit, that instruction so gained would decidedly have raised them much higher, and with greater ease and security, than their talents alone, without such instruction, could have procured them.

The German rule of forced public examinations has great advantages. If the pupils at these examinations get a good certificate, they are certain of being employed either by the state or the town, or that certificate will greatly facilitate any other private employment. This is not the only good result of a public examination; it also enables the parents to find out what pursuits are best adapted to their children's talents; as most children have latent talents, little known even to themselves, which require study and example to develop. Public examinations also avoid, in a great measure, favoritism, which is the bane of all moral advancement. In Prussia, and in some other states in Germany, no persons can be appointed to any state offices, and in some places to any employment as apprentice, or to any trade, without passing a well-defined examination, to show their fitness to enter such employment. Each examination is made in different gradations, according to the education necessary for their various pursuits. These examinations were introduced by Herman Franke, in Halle, in the year 1696.

Money prizes are also given in many states. In 1853 Munich gave altogether twenty-nine prizes, varying from 120 guldens. The first prize was awarded to a postilion's son, a mechanic sixteen years of age. Owing to the cheapness of the country, this sum has enabled him, with the aid of the town, to settle in business. The second prize to a watchmaker's apprentice; and the third to a typesetter.

It is by this liberality on the part of government that parents are encouraged to let their children remain at school; for if they leave before an examination, they cannot reap any of these benefits. And the "principle" that is most detrimental to the progress of education in England is, that the parents take their children too early from school, but which could be, in a great measure, remedied by liberal encouragement from government, who would themselves reap the benefit of it.

The system of education in Germany is a progressive one, and in most places the pupils cannot enter into a higher class or school without passing an examination of their qualifications on leaving a lower class or school.

A Latin or Greek education is only employed by those students entering into higher professions, as surgeons, chemists, &c, not tradesmen and artisans; but it is considered necessary that they should possess a sound knowledge of mathematics, physics, and mechanics in their lower branches. It has been said in England, that, without that system of education, the English workmen bring their work to greater perfection than the Germans; but this is not the fact. The English mechanic works rapidly only at the occupation he is trained to, and does that effectually; but he is, from deficient education, incapable of working any new branch of his business; and high-class labour is scarcer in England than elsewhere; whereas a German, who understands the principle of mechanics and physics, can set to work to produce any instrument or machine the principle of which he can understand. This is found to be the case particularly by philosophical instrument-makers.

The Prussians were the first in Germany to find out the necessity of a national education to the poorer classes, not only for their own good, but for the good of the state. We see in Mrs. Austin's *Germany* that the leaders of that movement were Wm. von Humboldt, Schleiermacher, Niebuhr, and Count Dohna, and the new system of education was commenced when the country was in a most deplorable condition, viz. in 1808, just after the treaty of Tilsit. It was such a year, says Mrs. Austin, that gave birth to the system of national education which has since obtained so much notice and admiration. Pestalozzi's method was introduced, and a pupil of his engaged to teach at Berlin; and, although the country was in a state of poverty the Government gave 150,000 thalers for educational purposes. The King also presented to the university the palace of Prince Henry. "It was the highest example," says Fitch, "of a practical respect for science ever afforded by a state; for the measure was entered upon during a period of the direst oppression, and under the greatest financial difficulties. It was not a matter of display that was sought for, but an instrument to give new health and vigour to the nation."

In all lands you find, from the earliest period of civilization, that those states wherein education has been made the standard of all advancement in worldly pursuits have raised themselves to the greatest pre-eminence.

The greatest increase of pupils in all the industrial schools in Germany is worthy of notice, showing that the people begin to see the practical necessity of industrial education to enable them to keep pace with the rapid strides that science and manufacture are now making in all parts of the globe, and that the country that does not encourage this system of solid education for their youths must loose caste both morally and financially.

Industrial education has been much neglected in England, and it is very rare to find artisans well instructed in the lower branches of mathematics, physics, and mechanics; whereas in Germany it is very uncommon to find any who are not well instructed in all these branches of knowledge. I know from experience that many old hands in the English factories know nothing of the rationale of their business, and fancy, through want of education, that their work cannot be surpassed. Their labour is all chance, and they always follow up the same routine without any likelihood of improvement, the why and the wherefore being never thought about. The Exhibition of 1851 has done much good in undermining this state of ignorant prejudice, as it has opened the eyes of many foremen and workmen who were before that bigoted to their own opinions. The establishment essential for this country, and which would be highly popular, would be a large industrial school in London, copied from the polytechnic schools of Vienna, Hanover, Dresden, the (Gewerbe) Industrial Schools of Berlin, Carlsruhe, &c, the best plan being taken from each of them, with branch schools belonging to it in all parts of the country, as in Prussia.

In some towns in Germany they have large gardens, in which only the students are employed, and paid for their labour; there is a house in the garden in which they make nets for walls, matting, straw hats, &c.; so that they are always employed. If the custom of organizing such institutions were established in many towns in England, it would be another encouragement for parents to allow their children to remain at school; and it would, I am convinced be found to be a profitable speculation.—*National Society's Monthly Paper*.

2. EDUCATION IN FRANCE.

The Emperor in his celebrated speech at the opening of the French parliament, said that since 1848 the populations receiving education have increased by one-fourth. At the present time there are nearly five-millions of children, of which a third obtain gratuitous instruction in our primary schools. But our efforts ought not to relax, since 600,000 more remain deprived of instruction. The higher studies have been revived in our secondary schools, where the course has been specially reorganized.

* Extracted from *Essays upon Educational subjects*, edited by Alfred Hill.