

be found possible, without detriment to the just claims of the R's, to do something in the way of bringing the children in our Public Schools to an acquaintance with the elements of science. This is eminently the age of science. The most wonderful discoveries are being daily made; while at the same time a scientific literature at once popular and exact, is bringing the results of philosophical research within the reach of the general public. In these circumstances, a School System, which should fail to furnish the elementary education, that would give every child in the Province the means of fitting himself to look with intelligence, when he grows up, on the great scientific movement going on around him, and to take part, if qualified, in the work of original scientific investigation would be seriously defective. The only question, it seems to me, which can here be raised, is whether the teaching of the elements of science should be confined to the High Schools, or made part of the work of the Public Schools also—the Legislature has taken the latter view. I observe that it is fortified in this by the opinion of the British Royal Commission on education; for, in reporting on the most suitable course of study for a class of schools similar to our Public Schools the Commissioners recommend the introduction of elementary scientific subjects. It may also be remarked that a large number of boys and girls will probably complete their education in the Public Schools; so that, if they do not obtain an acquaintance with the elements of science in these institutions, they will get it nowhere else. Some persons, when they see the programme of study which the Council of Public Instruction has drawn up for the Public Schools, may very possibly scoff at the extremely elementary character of the lessons to be given in natural history and agricultural chemistry, and mechanics, and may say: What is the use of learning anything where so little is learned? But, if the little be only well taught, it will be invaluable. It will create a taste for more. It will be an instrument for the acquisition of more. It will introduce into the mind new conceptions—seed-thoughts, which may germinate, and bring forth, in due time, who can tell what fruits?

In the High Schools the study of Latin and Greek is henceforth to be optional. A thorough elementary classical education is still to be provided for boys (and girls, if you please) who may purpose to enter a University; but boys and girls, who have no such intention, are not to be debarred from receiving a superior High School education adapted to their wants. In order to give effect to the views of the Legislature, the Council of Public Instruction has addressed itself to the task of framing two programmes for High Schools, one classical, and the other non-classical. In the non-classical course prominence is given to various branches of science, the curriculum being, in this respect, a continuation of what was prepared for the Public Schools; and an attempt is made to exhibit, in definite outline, a scheme of advanced study in the English language. I have elsewhere stated at length, and with all the earnestness in my power, my opinion in regard to the value of the English language, as an instrument of education; and I will now merely say, that in order to vindicate for English a far higher place than it has yet received in our provincial schools, it is not necessary to institute a comparison between it and the ancient classical languages, or the modern German and French; for it is perfectly certain that the great mass of the boys and girls in our schools must receive almost their entire culture, so far as dependent on the study of language, neither from the ancient classics nor from French and German, but from their own language. In illustration of the fact that the study of the English language and literature may be rendered not only fascinating, but extremely useful even for the accomplishment of many of the results for which it has hitherto been the habit to look almost exclusively to Latin and Greek. Let me quote a passage from a lecture of Professor Tyndall, one of the best writers, as well as ablest philosophers of the present day:—"If I except discussions on the comparative merits of Popery and Protestantism, English grammar was the most important discipline of my boyhood. The piercing through the involved and inverted sentences of *Paradise Lost*; the linking of the verb to its often distant nominative, of the relative to its distant antecedent, of the agent to the object of the transitive verb, of the preposition to the noun or pronoun which it governed—the study of variations in mood and tense, the transformations often necessary to bring out the true grammatical structure of a sentence—all this was to my young mind a discipline of the highest value, and, indeed, a source of unflagging delight. How I rejoiced when I found a great author tripping, and was fairly able to pin him to a corner from which there was no escaping. I speak thus of English because it was of real value to me. I do not speak of other languages, because their educational value for me was almost insensible. But," he adds,—and the words merit attention, as showing how the appreciation of one means of culture does not necessarily lessen, with a broad minded man, the appreciation of another—"knowing the value of English so well, I

should be the last to deny, or even to doubt, the high discipline involved in the proper study of Latin and Greek."

The single difficulty which I foresee in the way of carrying out to the most happy results the programmes with which the Council of Public Instruction has been engaged, is the lack of competent English and scientific teachers. To teach the higher branches of English well, demands a somewhat rare faculty. And, as regards science, I am satisfied from the recent examinations in which I have taken part, that many of the Public School masters need to have their notions about science entirely reconstructed. I make no apology, gentlemen, for speaking frankly. An idea seems to be entertained that scientific knowledge consists in being acquainted with rules for working problems. I was amused with a note which a gentleman, who came up at the recent Normal School examination, appended to his answers to a paper in natural philosophy, which bore my name at its head: "Mr. Young" said he, "if you had given me problems in steam I would have shown you how to work them." Now, as it is possible that I may have something to do again in the examination of teachers, though I fervently hope not, I give notice to all whom it may concern, that I attach not the slightest importance to the working of problems in steam or in anything else. What I value is, facts apprehended as bound together by a principle, or what is the same thing, principles as summary expressions for classes of clearly apprehended facts. The knowledge of rules without an acquaintance with the principles lying at the bottom of them may have a little, a very little, technical use; but educationally it is worthless. It might be dangerous, perhaps, to hint that even the High School Masters may not all possess the requisite scientific accomplishment to qualify them for the duties which are now to devolve upon them. Are they not, most of them, graduates of a University?

COLLEGIATE INSTITUTES.

The last point to which I shall ask your attention is the authority given to the Lieutenant-Governor in Council to establish Collegiate Institutes.

The effect of that part of the School Act which makes the study of Latin and Greek in the High Schools optional, will probably be to banish classics almost entirely from the majority of the High Schools, and in a great measure to concentrate the study of Latin and Greek in a few localities. If this should happen, it would not be a misfortune. It may reasonably be expected that as large a number of good classical pupils will be produced in the few schools which will become the foci of classical instruction, as are now sent forth from the whole body of the High Schools; while at the same time the mass of the schools, at least after the High School system fairly gets under weigh, and the teachers have grown familiar with their new duties, will be doing a genuine and important work, which they were not doing previously. In order, however, that classical study may be properly maintained in the schools where it is likely henceforth to be mainly prosecuted, these schools must receive special pecuniary aid; and for furnishing such aid under what are considered proper conditions the 41st clause of the Act makes provision. "Whereas," the clause runs, "it is desirable to encourage the establishment of superior classical schools, it shall be lawful for the Lieutenant-Governor in Council to confer upon any High School in which not less than four masters are fully engaged in teaching the subjects of the prescribed curriculum, and in which the daily average of male pupils studying the Latin or Greek language shall not be less than sixty, the name Collegiate Institute, and towards the support of such Collegiate Institute it shall be lawful for the Lieutenant-Governor in Council to authorize the payment of an additional sum, at the rate of, and not exceeding, seven hundred and fifty dollars per annum, out of the Superior Education Fund; provided that if in any year the average of pupils above described shall fall below sixty, or the number of masters be less than four, the additional grant shall cease for that year; and if the said average shall continue to be less than sixty, or the number of masters less than four, for two successive years, the institution shall forfeit the name and privileges of a Collegiate Institute, until restored by the Lieutenant-Governor in Council, under the conditions provided by this section."

I go heartily along with the framer of the Act in desiring the establishment of superior classical schools. A few schools of the type of Upper Canada College might, with great propriety, be planted in different parts of the Province, not perhaps immediately, but with a wise regard to circumstances. I cannot say, however, that I look with favour on the proposed Collegiate Institutes. A year ago, on the invitation of the Grammar School Masters' Association, I stated to that Association my objections to the Institutes; I stated the same objections when called to give evidence before a committee of the Provincial Parliament; and, as my views remain unchanged, I will now state them to you.