

Secondly, it is doubtful whether the conditions on which free places are granted do not err on the easy side. In the course of inspection I have seen pupils that have qualified for free places by gaining certificates of proficiency, who seem unable to cope with the work of the secondary school, and are accordingly deriving very little benefit from it. To a slight extent this may be due to the fact that the secondary schools have not all quite accommodated themselves to the new conditions; but in most cases it is probable that the boys or girls referred to would be better employed in learning a trade, or in training themselves for domestic life, extending their general education and beginning the special preparation for their life work by attending continuation and technical classes in the evening. It does not appear to be sufficiently known that any one who has gained a certificate of proficiency may hold a Junior Technical Scholarship, entitling him to free technical education without any limit as to age; in other words, he may substitute for a free place at a secondary school a free place at a technical school. It would probably be more satisfactory if free places and scholarships all over the colony were awarded on the results of one examination, say, the Junior National Scholarship Examination, all who passed being entitled to free places, and the best candidates being allotted scholarships in the several education districts. This examination is already being used for the purpose, and large numbers now hold free places gained in this way; its general adoption would tend to simplification in other ways, and would remove certain apparent anomalies in respect to the age-limit. A similar system is working extremely well in the Ontario Province of Canada.

Another matter referred to in a former report is the great mistake that is being made in the secondary schools, and even to some extent in the district high schools, of attempting to teach to pupils, who will in general spend only a year or two in the schools, the elements of two foreign languages; if a foreign language is taught to such pupils at all, attention should certainly be confined to one language, which pupils could then attack in such a way as to leave some lasting result in mental discipline or knowledge acquired. It should not be forgotten, moreover, that the same effort and the same time and skill devoted to the teaching of English would produce far more valuable results in the development of the pupil's literary tastes and of his power of expressing his thoughts clearly and easily in his own language. Our own literature is one of the grandest in the world, and no English-speaking youth should grow up without learning to know and love its treasures. In these days of good and cheap translations the best thoughts of ancient and modern authors can be brought within the reach of those who know no other language but their own—if they know that thoroughly.

Considerable advance is being made in the practical teaching of science; but I regret to say that there are still secondary schools where adequate provision, in the form of laboratories and apparatus, does not exist for teaching science practically to all the pupils; and this defect is at least as marked in one or two of the largest schools as it is in the smaller schools, where more excuse might be made for it. All our efforts to secure sound technical education will be rendered futile if boys and girls do not receive while at school a training in elementary scientific method by means of individual experiment and observation with their own hands and eyes. It should be obvious, moreover, that the science subjects chosen should as far as possible have relation to the surroundings or future life of the pupil; in every country district high school, for instance, rural science—particularly plant-life, elementary physiology, and physics and chemistry so far as they touch the common facts of country life and of rural pursuits—should form the main basis for scientific training. The safest and best guide to a true co-ordination of studies is secured by bringing the instruction into close relation with the facts of life that immediately surround the pupil; and the instruction will gain in force and interest by such a natural co-ordination.

For this reason, if for no other, the recent reform in the teaching of elementary mathematics, particularly of elementary geometry is a matter for rejoicing. It makes geometry in the school—what it really is in fact—a branch of physical science, and breaks down the artificial barrier that has been erected by schoolmasters between arithmetic and drawing on the one hand, and algebra and geometry on the other. As there are still some teachers who apparently have misgivings in regard to the effect of the reform upon the standard of mathematical knowledge that it is possible to reach in the secondary school, I will conclude by quoting the opinions of three eminent Frenchmen on the question. One of them, M. Tannery, is the head of the mathematical department of one of the leading higher institutions of France; the second, M. Laisant, is a well-known mathematician and worker in the pedagogy of mathematics; the third, M. Le Bon, is a general writer on a wide range of topics.

M. Tannery says,—

“Is it credible that children thirteen or fourteen years old have a natural taste for logical abstractions, for empty ratiocinations, for demonstrations which seem much less evident to them than the things to be demonstrated? Without doubt, they must be trained to reason correctly, but to reason about realities, or at least to reason about models or images which approximate reality, which are simplifications of what they see, of what they touch. They must be made to experience how, according to Descartes, geometry facilitates all the arts. How shall I make this drawing? How measure this field?” After an illustration of how theory and practice can be made to go hand in hand (triangle and the determination of the distance of an inaccessible object), he proceeds to add, “They” [the pupils] “will have to reason about things; they must be trained to regard things, to eliminate this or that characteristic which is of no geometric import; to see things in their geometric aspect; to reproduce them by drawing; to gain more exact knowledge of them by measurement. Far from teaching pupils to despise intuition, this very intuition must be developed; they must be shown that they have it, and made little by little to gain confidence in themselves.”