

More riders than last year were sent up, but still too few of the candidates attempted them."

Of the Examination of the Senior Students the Examiners state :

In Arithmetic,

"The work both of boys and girls showed an improvement on that of last year, as regards both style and accuracy. There were but few candidates, however, of any great merit. Nearly half the whole number of boys and more than half the girls were but little above the minimum standard required for passing. The girls in many cases used heavy and cumbrous modes of working."

In Algebra,

"The Algebra was far from satisfactory. More than half the whole number of candidates failed to pass, and very many could have had no reasonable expectation of passing. The bookwork questions were written out at a very great length, but in most cases the important points were slurred over or altogether omitted."

In Euclid,

"The propositions of Euclid were on the whole creditably written out, but only the easier riders were solved. The percentage of failures in Euclid was higher in the case of the girls than in that of the boys.

It is more than probable that one of the causes of the unsatisfactory state of elementary knowledge of these subjects is the simple fact that too many subjects of study are prematurely forced on minds of ordinary capacity. In the case of inert and dull minds, no sound and exact knowledge is acquired; and in the case of active and precocious minds, a loose smattering of many subjects is crammed into the memory which have not passed through the understanding. Whatever may be forced into the memory in this way is only held in solution until it has served its purpose, and then it is precipitated.

The injudicious solicitude of some teachers to develop prematurely the mental faculties of youth will only result in furnishing illustrations of the consequences which flow from a disobedience to the laws of nature. The teacher ought not to forget that the organs of the brain equally with those of the body have their predetermined periods of growth and development. Any attempts to interfere with these cannot be made with impunity. How seldom do those who in youth have been nurtured in the forcing hot-bed exhibit in after life superior intellectual powers. They more commonly fall beneath than exceed the average in talent. But even if the mental capacity be enlarged, it is at the expense of the corporeal energies. These are not displayed in the strongly knit and active limbs, in the well-formed and robust frame. The brain may have grown, but it is almost invariably accompanied by a feeble and imperfectly developed body, which, in general, prematurely breaks up. If nature has given a superiority of mind, the less interference there is with the laws which regulate its development the more ample and gratifying will be the results. If she has withheld these conditions which are necessary for the manifestation of talent, it is not only in vain to endeavour to create what she has denied, but injudicious and fraught with danger. The vegetable kingdom illustrates the justice of these views.

In the use of ordinary language it is implied that there exists some sort of analogy between the bodily and mental faculties. As the mysterious processes of digestion and assimilation are necessary for the healthy development of the body, so also, unless the food of the mind be inwardly digested, it cannot contribute to the like development of the intellectual powers. The reception of knowledge into the mind has been described under the comparison of good seed sown in good soil or bad soil; and it is written that "men do not gather grapes of thorns nor figs from thistles."

As, therefore, the physical development of the organs and functions of the body take place gradually according to the order of fixed laws; it would appear that the development of the mind must, in a similar way, be subject to the same order. The mental acquirements suitable for youth cannot be put off with advantage till the ap-

proach of manhood. The consequences of neglect in early mental training will in time become as manifest as the lack of proper food and care in the healthy growth of the body. As the body for food, so the mind for knowledge has its hungerings and thirstings. The craving appetite in both cases implies a process of assimilation. As the mental food assimilated will affect the character of the mind itself, only wholesome mental food should be supplied, in the right order and quantity suitable for healthy and vigorous intellectual growth.

The study of the exact sciences is one of the most effective means of cultivating and developing the reason. Geometry is the Science of Space, and Arithmetic with Algebra in its character of Universal Arithmetic is the Science of Number. As all our knowledge of the external world must be subject to the conditions of Space and Number, the elementary portions of these sciences are from their nature better adapted than any other to form the habit of fixity of attention, of distinctness in the conception of ideas, and of precision in expression. The language, like the subjects, is fixed and definite, and does not admit of the same ambiguity and uncertainty as the language employed on other subjects. The reasonings are always conclusive and exact, expressed in terms whose meaning cannot change from the sense in which they have been defined. In one of his recent charges, the present Lord Chief Justice made a passing remark to the effect that Euclid's Elements were a mental training second to none.

It may be remarked that persons of the highest acquirements in any science do not always become the best teachers. Experience has shown that such persons may be utterly incompetent to adapt their knowledge to the capacity of minds of a lower character than their own. If a teacher has not skill to make the subject of his instruction interesting, and tact to adapt his knowledge to minds of different capacities, he does not possess one of the essential requisites of a teacher. It is a delusion to imagine that correct habits of thinking can be created, or exact knowledge acquired, by the mere passive attendance on lectures, however excellent. Class-teaching may be useful or useless, or even worse than useless. There are many youthful minds so constituted that they must be taught individually, if ever they are to be able to draw inductions from facts, or comprehend principles and apply them with success. In dealing with the misapprehensions and mistakes of learners, the teacher should observe how the learner was led into error, and by suitable questions lead him to perceive his mistake and to make the correction for himself. By this method the mind of the learner is brought into active exercise, and he will be less likely to repeat the mistake than if the correction were received passively from the teacher. If the learner exhibit a listless inattention or a positive dislike to the subject of study, the efforts of the most judicious teacher are in vain.

It may also be remarked that implicit obedience in the learner and the love of knowledge are also necessary conditions of improvement. A sense of duty rather than a desire of surpassing others constitutes the right motive of the learner. If a morbid appetite for praise or an eager strife for pre-eminence be encouraged, it may grow, and at length become the ruling passion, and create envy and hatred of every successful rival, and generate a feeling of discontent which may become a fatal obstruction to all mental and moral improvement.

These few words to teachers and learners may be concluded with the expressive words of the late Dr. Whewell:—

"The object of a liberal education is to develop the whole mental system of man—to make his speculative inferences coincide with his practical convictions—to enable him to render a reason for the belief that is in him; and not to leave him in the condition of Solomon's Sluggard, who is wiser in his own conceit than seven men that can render a reason."