

frequent oral and written exercises in cultivating this important art; but the practice of requiring pupils under ten years of age to prepare set lessons from a grammatical text-book, often accomplishes little more than to form and strengthen the habit of studying without thinking.

Few of us have any just conception of the latent energies of our own minds. It was eloquently said by Prof. B. B. Edwards, that "Genius lies buried on our mountains and in our valleys;" and he might with equal truth have added, that genius lies buried in our schools and colleges.

A successful teacher, of many years' experience, was accustomed to say to his pupils that he did not believe their average intellectual progress was over half so great as they were capable of making. But it would be absurd to suppose that pupils do not generally devote half so much time to study as their duty requires. Most of the pupils in our higher seminaries study too many hours in a day already. The loss is in the *manner of studying*. The mind is not perfectly abstracted from every thing except the subject in hand. The mental energies are not all aroused and concentrated on a single point.

A young man was employed, some years ago, as an assistant teacher in a flourishing New England academy. Among the classes which he was called to instruct was one composed mostly of older pupils, in Day's Algebra. He had been over the greater part of this text-book before, but there were two or three problems which he had never been able to solve. There was one in particular on which he had already tried his strength a number of times without success. His class was now rapidly approaching this portion of the book, and he must be prepared for any emergency. He accordingly set himself at work, and devoted several hours to the unsolved problem; but still the desired result was as far from his grasp as ever.

Mortifying as the alternative was, he decided at length to go to one of the teachers of the school, and ask for assistance. The teacher kindly engaged to examine the question, but remarked that it was some time since he had been over this portion of the work, and he really was not quite sure that the method of solving it would readily occur to him. The class had now reached the section in which his difficulty occurred, and there was no time to be lost. After waiting one or two days the problem was returned to him, without a solution. What could be done? To go before his class and acknowledge that he was unable to master it, would be to lose caste at once. The necessity of the case suggested one more expedient. He had a friend, in an adjoining city, who was quite distinguished as a teacher of mathematics. To the house of his friend he now directed his course with as little delay as possible, but on arriving he learned that his friend had left the city and would not return for several days.

His last hope had fled, and his heart sunk within him. With a burden of chagrin and mortification that was almost insupportable, he commenced retracing his steps. "What," thought he to himself, "am I doing? Why am I here?" And his steps gradually quickened, as the excitement of his mind increased. He walked a few moments in silence; but his emotions soon found audible utterance. "I can solve the problem," he said, with emphatic gesture, "and I will solve it!" He went to his room, seated himself at his table, and did not rise till the task was accomplished.

This single triumph was worth more to him than a year of ordinary tuition, and the pleasure it afforded seemed to him like the concentration of a life of bliss. The solution was written out in full, and at the end of it there still stands a memorandum of the date and the hour of the night when the desired answer was obtained.

If we examine the intellectual efforts of our pupils we shall probably find that nine-tenths of them fall below the maximum of their own previous efforts, and can not therefore be taken into the account in estimating their intellectual progress.

Two pupils of equal abilities have the same lesson to prepare for recitation. One accomplishes the task by putting forth twenty distinct mental efforts. Eighteen of these cost him no greater energy or activity of mind than he has often brought into exercise before. The other two relate to difficulties which can not be overcome without efforts one degree higher than any that he has previously made. But the appearance of new difficulties only stimulates his mind to action, and the task is accomplished.

The other pupil puts forth the eighteen efforts that come within the range of his previous attainments, and leaves the two difficulties which would cost a new effort, to be explained at the recitation. To a superficial observer, these two pupils may seem to progress in the ratio of 20 to 18; but the true philosopher will tell us that their progress, so far as intellectual growth is concerned, is in the ratio of 2 to 0.

It is our misfortune that we have no means of measuring and recording from day to day the successive steps of mental growth. Heat and cold, the lapse of time, the speed of lightning, are made tangible, and measured with ease and exactness. We can even form a tolerably correct estimate of the amount of knowledge acquired in a single day or hour; but our estimates of progress in intellectual strength are exceedingly uncertain and often fallacious. It is to be feared, that we often give our pupils credit for having passed a very profitable day in school, when they have actually deteriorated in mental power. We are in danger of forgetting that they may add to their stores of knowledge, without increasing their intellectual strength.

Let me here suggest the importance of having lessons recited by pupils, and not by teachers. Many teachers fall into the habit of supplying all the *ellipses* made by their pupils during recitation. A pupil rises in his place with an air of assurance, and proceeds with a full voice till he meets with some trifling difficulty, when the teacher supplies the desired word or hint, and the pupil proceeds as before, till another difficulty arises, and the teacher again comes to his aid.

In this way a very fair recitation is made out; and neither teacher nor pupil appears to know that if the pupil had been left to stand independent and alone he would have made almost an entire failure.

The practice of asking questions that suggest, directly or indirectly, the desired answer, has been exposed and condemned again and again in educational conventions and educational journals, but it has not yet been banished from the school-room. Many teachers who are careful to avoid *leading questions*, still ask altogether too many questions. Instead of giving the pupil a general topic, and expecting him to exhaust it, they kindly throw in a number of *additional questions*, to draw out the particulars which the pupil ought to associate with the main thought, and present in full, without this aid. Younger pupils require more questions than those more advanced; but even younger pupils should be allowed to carry some portion of a recitation without assistance.

Let me not be misunderstood in the views I have expressed respecting the importance of requiring pupils to rely upon their own resources. The first germs of knowledge must come from *without* and not from *within*, and very much of the knowledge acquired by younger classes, must be imparted directly by teachers and others. There are many branches of learning which we must all derive, in a greater or less degree, from teachers and books. The treasures of knowledge that have been accumulating for nearly 6000 years, are not to be rejected nor lightly esteemed. They are a precious inheritance; but he who contents himself in idleness and ease, and neglects to put his inheritance to usury, will find that his riches are little better than shadows.

But there are other departments of study, in which the value of our acquisitions depends almost entirely upon the action of our own minds; and it is upon these branches that we depend in a great degree for intellectual growth. Here, then, I would apply most rigidly the rule—never do for a pupil what he is capable of doing for himself.

*Passive instruction* is always attended with danger to the mental habits of pupils. A happy faculty of explaining and illustrating the principles of a lesson is an exceedingly valuable gift, but it is a gift that is often exercised to the detriment of learners. Whatever instruction we attempt to impart orally, should be given in such a manner that it will not fail to find a lodgment in the mind of the pupil. It is not sufficient to illustrate principles by examples and then leave them. They may even be *understood* at the time, and yet not fully *possessed*. The learner must go through the process *himself*, to be sure he is master of it.

Five boys of a class had failed to solve a difficult example in their lesson. The teacher went to the blackboard, and explained very carefully the manner in which the work was to be performed. He then requested those that understood the explanation to manifest it, and the five hands were all promptly raised. "Well," said the teacher, removing his work from the board, "you may all perform it now on your slates." The effort was made, but the result showed that only two of the five were able to perform the task. The others were perhaps right in saying that they *understood* the work, as the teacher explained it, step by step, on the board; but it was quite another thing to *do it*.

In our efforts to cultivate habits of self-reliance on the part of our pupils, one of the best and most feasible measures to which we can resort, is the practice of introducing frequent written reviews.

Several topics are written distinctly on the black-board, and the pupils are required to expand them as fully and accurately as possible. Each pupil is seated by himself, and furnished with pen and paper, but receives no assistance, direct or indirect, from either teacher or text-book.

There are too many teachers who seem to regard it as their chief business to exercise and develop their *own* minds, instead of attending to the minds of their pupils. There are those who even manage to sustain a very good degree of popularity, in school and in the community, by a display of themselves. "What stores of knowledge he possesses," says one. "How beautiful his illustrations," says another. This display of the teacher's knowledge may serve for *exhibition*, but it will prove of little value to the pupils in after life. The scholar whose attainments at school are but the echo of what the teacher has learned, will be sure to become one of that large class of citizens whose opinions and actions are always governed by those who have the independence to think and and act for themselves.

I have dwelt at considerable length upon the subject of this article, because I believe that very few pupils are taught to rely sufficiently upon their own resources, and because I believe that many of the modern appliances in schools militate directly against the accomplishment of this object.

A few brief quotations will close this article.

"One preliminary truth is to be kept steadily in view in all the pro-