

with regard to the last named, with regard to *giving out* or expressing, that our present school methods are chiefly defective, being both incomplete and ill-constructed; while it is constantly forgotten that information and knowledge are not the same thing—that information only becomes knowledge by being assimilated, and only in proportion to the degree of assimilation; that making use of information is one of the most potent means to produce assimilation; and that effectiveness in work is the only true test that the assimilation is being or has been accomplished.

The learner, we find, is to gain knowledge for himself at first hand, by the exercise of his own native powers and thorough personal experience. The teacher is to be a stimulator, director, superintendent. Indeed, teaching may be described as "co-operative learning"—by which we mean to indicate not only that learner and teacher are to be fellow-workers *both* of them *active*, but also that there should be a co-operation amongst the learners themselves. The educative influence of the young on one another is recognized clearly enough as existing *outside the class-room*, and especially in the playground; but we need to recognize it far more than we do as an educative influence *inside the class-room*, as a valuable factor in the process of learning, especially during the earlier and more imitative period of school-life.

The learner must begin with concrete objects and visible actions—with what to him are facts—and from these he is to get ideas, ideas of his own. He cannot teach himself by abstractions, rules, and definitions packed into words for him by others; for these seldom or never give him ideas of his own—his own, that is in the truest sense. Under the direction, then, of the teacher and in companionship with other learners he teaches

himself, beginning with facts and things—because these are what he *apprehends* best, and will find easiest to begin *comprehending*. He sees, handles, experiments; observes what things are, what they do, what they are like; exercises his power of observation, memory, imagination, judgment; prepares himself, *fits himself* for understanding at the proper time *general* propositions founded on what he has acquired. He analyzes, notes likenesses and unlikenesses, combines, constructs, expresses himself, all in a way well within his power. He is a discoverer, and is, therefore, interested; and remembers, because he gets the new information *when he wants it*, and therefore when it is most interesting; and he understands it, because he gets it in its right connections; while by so getting it he likewise renders what he already knows both more intelligible and more interesting. This acquiring of information in its right connections—together with the maintaining of the interconnections between facts, and the constant extension of these interconnections on every side—is another point of critical importance in the art of teaching, and especially in that part of it which has to do with the acquirement and skilled use of knowledge.

Again, by teaching himself, in the sense we have explained, the pupil proceeds in proportion to his strength, and must, perforce, advance from the known to the unknown, from particulars to generals, from compound to simple. He passes at the right rate from the indefinite to the definite. He also learns to *reason* on the relation of facts to each other, and of ideas to each other; while the logic of experiment will gradually lead him to the logic of thought—an order of progress which is of the greatest importance. He has, in fact, started a fund of knowledge and mental con-