

the principles of the laboratory methods in his own future work. While then the introduction of laboratory work into the University scope has tremendously improved and augmented our means of instruction and education, it must be appreciated that not the laboratory itself, but rather the spirit and method of laboratory research are to be cultivated. For the laboratory, just as much as the lecture, may become fossilized, rigid, and a burden rather than a stimulus. What should be taught in the laboratory, therefore, is what is fundamental, not what is superstructure and still uncertain, for it must be appreciated that the student uses the laboratory for a different purpose to which the pure investigator puts it.

Besides these two main currents of instruction, University life maintains collaterals. One of these is reading. Reading during University study should, in my opinion, be limited and to the point. Nothing is worse, and more destructive to real education than memorizing day by day a certain number of pages from text books, most of which are written with the scissors and not with the pen. Text book instruction destroys the very ideals and purposes of lectures and laboratory. But very different is reference to originals and reading with definite questions and a purpose in view. That is to search for real enlightenment on a point which has remained unclear in the lecture or laboratory, or to penetrate deeper into it. This is reading which requires thought and judgment. There is an old saying that repetition is the mother of all students. (*Repetitio est mater studiorum.*) It is only by continual thought, and by repeated impressions upon the mind that a solid reliable foundation is laid. Moreover, it is only by repeated reading that a matter is really understood and appreciated from all angles. It is appalling today to read even in scientific literature mis-statements and mis-quotations which result from superficial or incomplete or second-hand reading. Again, re-reading awakens memories, refreshes and supplements the mind and often leads to new ideas.