

## Section on Education and Legislation

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### CONSERVING THE WASTE FROM THE EDUCATIONAL MILL.

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For years the annual crop of graduates in pharmacy has been far short of the demand. Unfortunately owing to certain economic conditions (which we cannot alter) we need not at present expect an increase in pharmacy matriculants at all commensurate with the increase in the demand for graduates. In the language of the manufacturer, our supply of crude material is falling short. A shortage of crude material arouses interest in waste conservation.

The crude material which goes into the educational mill is the most precious of all crude material. No waste deserves greater attention and study than does this waste of human grist. How much of it is needless waste?—how much of it reclaimable?—how can we reclaim it? These questions set forth problems which are not new in pedagogic circles. But owing to the peculiar conditions now obtaining in pharmacy it is hoped that pharmacists generally may become interested in these problems as far as they pertain to pharmaceutical education; for it is the pharmacist in business—the preceptor of prospective students—whose aid the pharmaceutical educator would solicit in the work of reducing the percentage of failures in schools of pharmacy.

A college course operates inevitably as a sifter. There is bound to be shrinkage in the classes during the college year. Nearly five per cent may be expected to leave school because of sickness or physical disability. Another five per cent probably find that they have been too optimistic in their expectations of earnings at college, and must needs leave because of the unsatisfactory condition of their exchequer. Some fail because of inadequate preparation. Others because they lack inherent mental ability—nature having intended that they become “hewers of wood and drawers of water.” These latter are of course irreclaimable; to coach them through to graduation would simply “clutter up” the waste baskets of the state boards of pharmacy; or what would be worse, the profession, with incompetents. Fortunately, the inherently unable seldom exceed *five per cent* of the class enrollment. (This is the writer’s estimate based on a careful analysis of his own classes during the last six years, and no doubt is indicative—approximately at least—of the character of pharmacy students the country over.) Now let us see: If we estimate the losses due to sickness and to lack of funds, (medical, hygienic, or financial problems) at about 10 per cent in all, we have, on

adding the mentally incapacitated, i. e., five per cent, a total of 15 per cent, which furnish no pedagogic problems, and need not further concern us in this discussion.

But the average shrinkage in classes in schools of pharmacy the country over is about 35 to 40 per cent and, taking into account the length of course, exceeds the shrinkage in the classes of most other vocational schools. So we have approximately 20 per cent or more of the class enrollment dropping out before graduation for reasons deserving our closest scrutiny. Now there are many reasons why capable students may fail. Some of these reasons are of interest to no one except to the professional teacher, and hence will be omitted from this paper, which is addressed primarily to the retail pharmacists. Suffice it to say that educational institutions are carefully studying the problems involved in saving students from failure, and are making headway in the right direction—are getting results. But of the various reasons why capable students fail there are two which should interest not only teachers, but also preceptors or friends of prospective students. To set forth these two reasons to which may be attributed a very large percentage of failures is the special object of this paper.

In the first place, the writer would call attention to the great difficulty some new students experience in adjusting themselves to the conditions which obtain in the university and in the vocational school; conditions which differ radically from those to which the high school student is accustomed. In the high school he is assumed to be a rather irresponsible boy. His study hours and his recreation hours are mapped out for him as definitely as is his class schedule. And there is some one—parent or instructor—to see to it that each task is begun at the proper time, and is duly finished. At the university or vocational school there are, to be sure, a schedule of class work, and lessons definitely assigned. But each student is his own taskmaster when it comes to the outside study which must accompany the class work. As some one has said, a lesson is like a photographic plate: the text book is studied prior to class—the exposure; the instructor in class attends to the developing; and this in turn is followed by supplementary home study—the fixing. If the fixing is omitted, the image is evanescent, and much of the instructor's work is without lasting benefit to the student. Is it surprising that the student fresh from the high school, used to discipline and to a taskmaster, is apt to omit the "fixing"? He may realize in a general way that home study is necessary. But there are the theater, ball games, and other diversions. So Monday's work is postponed to Tuesday; on Tuesday something interferes, and the work of two days must be laid aside for a more opportune time, which, strange to say, fails to materialize. Naturally, work accumulates in geometric ratio, and before the student realizes the situation he is hopelessly behind. And this student may have been a success in high school. The secret of his failure is that he has not learned to boss himself—to be his own taskmaker. A few institutions, recognizing the difficulties incident to the transition from high school to college, see to it that the new student gets the *personal* attention of some member of the faculty, who acts in the capacity of adviser, and helps the student to adjust himself to the liberal government of the university or vocational school. It should be remembered, however, that some students are slow to enter into cordial relations with their instructors. When such relationship has finally been established, and the

student has become convinced that the motives of his adviser are really altruistic, he may, unfortunately, already have passed the stage during which recovery is possible. So we find, frequently, that more effective than an instructor's counsel is the advice from other sources—from the preceptor, or from a friend who has recently graduated. Strange to say, very few students enter college forewarned and hence forearmed. The young man who is planning a tour, the young lady contemplating matrimony, the old man who would "a-fishing go"—can find plenty of literature embodying the experiences of others. But the prospective pharmacy student will search in vain, even in the Boston library, for any article which could shed the light of experience upon his path. It seems that the "old grad" is loath to tell tales out of school—in print. And so each generation of pharmacy students is forced to travel (in this respect at least) on an unblazed trail.

Still other failures at college may be traced to the antipathy which the students involved manifest for so-called theoretical subjects. Many a pharmacy student enters upon his college work imbued with the opinion, which in some cases amounts to a deep conviction, that a retail pharmacist has no more use for science than "a frog has for tail feathers"; so he takes the theoretical work because it is obligatory, not because he expects to find it of practical use after graduation. Now is it not true that it is against human nature to do well work which is not considered useful, but is looked upon as a mere graduation requirement? Accordingly, the inevitable result is—unless the student's attitude is changed, and that at the outset—that he gets behind in the foundation subjects. Naturally, the more he gets behind the more distasteful does the subject become; and as the distaste develops he finds it more and more difficult to carry the work. We have here another vicious circle, in which cause and effect change places in rhythmic regularity.

No other vocational schools—surely not schools of engineering, or of medicine, or of agriculture—find it incumbent upon them to combat this invidious influence which endeavors to exalt commercialism by belittling scientific attainment. And we have here one, though not the only one, of the reasons why the percentage of failures in schools of pharmacy is exceptionally high.

Every college man of discernment recognizes the fact that retail pharmacy is a business; that commercial skill is desirable, indeed, is necessary. But as long as we have compounding and dispensing of medicinal materials, Pecunia must in Pharmacy remain wedded to Science: there can be no divorce. And as long as we have practical pharmacy in our curriculum, there must be the foundation for it. No house—nothing but a shack—can be built without a foundation.

So in conclusion: If you, Mr. Pharmacist, can send your clerk to college properly forewarned against the dangers of procrastinating habits of study—if you have inculcated an appreciation of thoroughness—if he has been made to realize that the public has a right to expect scientific and correct compounding, just as it has a right to expect unadulterated drugs—in short, if he has been taught to look upon pharmacy not as a refined method of separating the public from its money, but as an essential part of the world's work—you have done much to prevent his falling into the waste from the educational mill.