

THE AIM OF PHARMACEUTICAL EDUCATION.

RUFUS A. LYMAN.

A perusal of the minutes of this section for a number of years back might lead one to think the further discussion of the subject of this paper to be superfluous. The time devoted to it, not only in the national but in the state associations and local branches and the space given to it by the pharmaceutical press shows the interest taken in, and the importance of the subject. Because of this fact, the writer believes the interchange of views at this time especially appropriate. Adverse criticism, coming largely from men engaged in the actual business and practice of pharmacy, has in recent years been directed towards the present day methods of pharmaceutical instruction. The statement is made that the curriculum is too academic, that the instructors are not practical men, that graduates in pharmacy are not at once practical druggists, that students are permitted to enter upon the study of pharmacy with little or no drug store experience, that the schedule is so full that there is no time for store experience during the college course, that students get no or a limited amount of instruction in the commercial aspect of pharmacy and so on *ad infinitum*.

The pharmaceutical curriculum as we now have it, is an evolutionary product. There has in recent years been a tendency on the part of school men to eliminate store experience as a requirement for entrance to or graduation from a school of pharmacy. Very few schools require either at the present time. It is interesting to note in how many catalogs we now find this statement, "Experience is not made a requirement for graduation from this school." It is an indication of what has been. It is probable that even that reference will soon be omitted. Now it seems that many good men take this to mean that the schools are making a special effort to minimize the importance of store experience. This is not so. Rather is it an attempt on the part of schools not to assume the responsibility for something for which they are not responsible and over which they have no control. There is a close connection between state universities and the secondary schools. In most Western states at least, a secondary school inspector is employed by the state, whose sole occupation is to investigate the work done in the secondary schools of the state, and to see to it that a required standard is maintained both as to the course given and the type of instructors employed. Suppose we require a year of store experience for entrance to our schools of pharmacy—how shall we determine the value of that experience—can the state be induced to maintain a salaried inspector for the purpose of passing upon the proficiency of the various proprietors in the state as instructors—or could it be gotten at through an examination? If so, how, and what would the applicant be expected to know? The same difficulties are met with when we come to pass upon store experience for graduation. It is logical that a school should be responsible only for what it teaches. No one denies or wishes to minimize the importance of store experience in the making of a finished pharmacist. The time when it should be acquired is the disputed point. The writer believes there is no question but that it should follow the study of the fundamental branches.

Everyone is familiar with the changes in the system of medical instruction in recent years. A few years ago such instruction was given only in the office of the preceptor. With the beginning of didactic and laboratory medical teaching, the importance of the preceptor began to wane until now he is unknown. Today no allowance in the way of credit or otherwise is allowed by our medical schools for experience acquired either in a physician's office or in a hospital. Medical men have long since recognized that in order to cope with the complex medical problems of today, it is necessary that the student be trained in the fundamental sciences, by the application of which medical problems are solved. The smattering knowledge, the isolated points which he may "pick up" by coming in contact with professional men are of little value to him. For years we have been telling the graduate in medicine of the things he will have to unlearn when he leaves school and enters the actual practice of medicine. But what a student who has obtained some scattered information through experience, must unlearn when he enters a modern medical school, can be appreciated only by those of us who come in daily contact with him. Our best medical students, as a rule, are those who have never come in contact with practitioners, never had any kind of a position about a hospital until they have reached such a point in their medical training that they are in a way to comprehend the problems presented. It is true that neither pharmaceutical education nor legislation has yet reached the same stage of development as has medical. Yet if pharmacy is a science, if it does have problems which require solution, why do not the same general principles apply in preparing the student for his work as applying in medicine?"

In my own state, my older pharmaceutical friends tell me that they think we should require at least one year experience in a store preliminary to entering the university. The argument which they advance is this, "A boy working in a store will learn what a funnel is, what a burette is and become familiar with the big botanical names, which are always a source of trouble, etc." The argument is weak. The funnel he should have learned to recognize years before when he used it to fill the jug from the old oaken bucket. Whether it be made of tin, glass, copper, or rubber, it should not long puzzle his imaginative mind. So far as the burette is concerned, most students would come to us unprepared. And finally, had he studied Latin grammar a year or so in the high school, botanical names would have been robbed of most of their terror. The members of the examining boards the country over, are practical pharmacists. After a student has had his school training, it seems logical that the members of the examining board are in a position to judge best when the applicant's practical experience has been sufficient to admit him to registration.

The profession has often accused pharmaceutical instructors of being impractical men. I take this to mean that most instructors in schools of pharmacy are not engaged in the actual practice and business of a druggist. This is undoubtedly true, yet it need not mean that such an instructor is not aware of the actual problems of the drug business. In every line of educational work we meet with the same condition. It was only a few years ago that in medicine, the chemist, the physiologist, the anatomist, the pharmacologist, were all practitioners. Now the practitioner-teachers have given way to the research-teachers, who know little of the actual practice of medicine, but better than any one else the actual problems

of medicine. And who will gainsay that these students who receive their training from these men will make better practitioners than those of a decade or two ago? This same policy with the research type of teacher is even being extended to clinical medical teaching.

The average student's mind shows a perversion with reference to the purpose of pharmaceutical training. The all-important question to him is how to pass the state examining board. To him, that examination is the only obstacle in his path to future progress and prosperity. His idea is fostered by certain institutions, that make it a business of all but guaranteeing to a student the assurance that, for a certain consideration, they will, in the space of from three to six months, put him in position to pass any board in the Union. The sad part of it is, that in the majority of cases they can do it, too. Another type of institution advertises the "Come at any time, stay as long as you can, pay only for what you get," or, "We do not charge exorbitant prices and our students pass the board." Recently the writer heard a prominent Eastern pharmacist say that the day of the diploma mill had passed. Certainly he is not conversant with conditions in the Middle West. It has become chronic for the prospective pharmacy student to inquire, "Do most of your graduates pass the state board?" Even more respectable schools have played to the galleries and in the senior year, instituted courses which consist of a more or less extensive cramming of the compiled lists of board examination questions. This gives the student the impression of its being the chief end of pharmaceutical training. I have known cases where the giving of such courses has been the factor which caused a young man to make the final decision in the choice of his future alma mater.

There has been a popular demand for courses in our schools which familiarize our students with the commercial side of pharmacy. Some of us, in an attempt to please our friends, have introduced such courses under the names of business methods, accounting, etc. They consist of a few lectures, or at best of one or two hours a week for a semester. Such courses may be entertaining to the student, but they have little or no educational value. Such information can be acquired to much better advantage, under present conditions, by store experience.

It is impossible to add more courses to the curriculum without lengthening the course another year. This would meet with much opposition from certain quarters. And it is impossible to outline a course of study of any length which will cover each and every phase of work that may arise in pharmaceutical business and practice. Why should we not in pharmacy, as we have in medicine, forget that there is a separate general chemistry, general botany and general physiology for students of pharmacy? Chemistry is chemistry, botany is botany, and physiology is physiology, no matter which variety of student we may have before us. The writer maintains that the reform most needed in our present method of teaching is to so train students in the fundamental sciences that they acquire independent methods of work and ability to apply such methods to the study of the problems, varied as they are, which the business and profession presents. Such training will elevate the professional status of pharmacy and can in no way injure pharmacy as a business.