

Teaching and Its Encouragement (Some Post-Decanal Ramblings)

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INTRODUCTION

He was a teacher that wrote on the board with his right hand, and simultaneously erased with his left. His exams were multiple choice that required you to choose if a and b were correct or if c was more correct. He constantly challenged his students. Joe Bianculli, one of my undergraduate teachers at the University of Pittsburgh, was a great teacher. Professor Corley knew you by name by the second lecture period, never used a note during his biochemistry lectures, and during oral comprehensives at Purdue would send his cutting questions out through a large puff of smoke from his cigar. He also greatly influenced me as I evolved my teaching career. Tom Miya, who seemingly with a minimum of effort could clarify a mystifying pharmacology laboratory problem, and other men and women come to mind as I think about excellence in teaching.

You remember the good teachers that contributed to your learning experiences. Their strengths and idiosyncrasies provide anecdotes that flow through your memory. Those teachers that were ineffective disappear from thought unless they were incredibly inept. One undergraduate instructor of mine barely could keep the class awake. Those students awake would be betting on which of his two ties he would wear to class the next day—the plain blue or plain green one—both soiled from past meals.

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Those remembrances of my teachers came from the fifties when the faculties of pharmacy schools and universities were much smaller than today, teaching had a primacy, and the research elephant was just starting to grow. The World War II vets had taken advantage of the GI Bill, gone to graduate school, and were now finding their ways into the faculties of our schools. They brought with them an enthusiasm for their scientific disciplines that was reflected in both their teaching and in their efforts to increase pharmaceutical research. Joe Buckley, my mentor at Pitt, was an example of those innovative leaders that brought new dimensions to both undergraduate and graduate education. He introduced research concepts into what had been a very static pharmacologic component of the curriculum.

If the fifties were times where teaching was still revered, the sixties decade was a time of transition. The graduate programs in schools of pharmacy grew, the availability of NIH funds for investigators rapidly increased, and faculty evaluation gave increasing emphasis to research efforts. The elephant was grown and starting to crowd out its neighbors. Teaching would never again receive the same recognition that it did in the past.

The professional curricula of the pharmacy schools were still composed only of basic pharmaceutical science courses. They were loaded with what Ray Bachmann, then Dean at West Virginia, called "deadwood." During the transition from the four- to the five-year baccalaureate, most schools had just laid new material on top of the existing, and often obsolete, course offerings. Within that matrix the newer research-oriented faculty expanded the scientific content of the undergraduate courses to the point that many said that we were developing pharmacists that were "scientists on the street corner."

The clinical wave hit the schools of pharmacy in the seventies. Schools added clinical faculty, purged the deadwood in its curricula to find space for the new patient-oriented course work, and even allowed pharmacy practitioners to teach their students. The students were being taught outside the hallowed halls of ivy, and the case method of teaching was starting to appear. The course content taught by the basic science faculty was sometimes challenged by

the brash, young group of clinical faculty members as irrelevant and out-of-date.

Federal support of research continued to grow and contribute to the publish-or-perish attitude that now prevailed in the research universities. The same federal fountain now produced funds for health professions, schools to increase their enrollments so that physicians and others would be available to practice in underserved areas (an outcome that has still not occurred). Many schools of pharmacy added special faculty members or support services to improve teaching methodologies. Classroom techniques and testing procedures were subjects of many school workshops. Then the federal fountain dried up.

The eighties brought a change in the student body. After a drop in the enrollment in the early part of the decade, a growing pool of applicants allowed for a better selection of matriculating students. The classes also had a majority of women, and were more diverse in racial or ethnic composition than in the past. Faculty members were increasingly challenged more by the students, and, in turn, challenged them.

Biotechnology, communication skills, informatics, and other subjects were forced in the professional curricula causing baccalaureate bulge and other deformities. The research elephant still dominated the academic plains, and in the distance could be heard the calls for a single, doctoral-level, professional-entry degree.

The nineties now present us with new challenges. Research funds are less available. There are growing national calls for more recognition of teaching during faculty evaluation. The Pharm.D. is becoming the entry-level degree for the profession, and with it, our instructional efforts will be undergoing significant change.

The change from baccalaureate to doctoral-level professional education is a significant one. Some of our schools want to equate the Pharm.D. with the level of a research doctorate, requiring a seven-year program that includes five professional years interrupted by the awarding of a baccalaureate degree. However, a professional doctorate does not require the rigor of a major research program, and can be accomplished in four professional years. Critics say that all doctoral degree programs should be seven to eight years in length. However, it does appear that a significant number of

our students already have baccalaureate degrees, and many of the entering classes average three years or more of preprofessional education.

What the change will require is not simply the addition of more courses and a restructuring of the curriculum. It will require that the program's graduates possess the independence of thought, the curiosity of a prepared mind, and critical thinking skills that a doctoral education should provide. That, in turn, requires a different approach to teaching and a greater commitment of time to instructional activities for individual faculty members than has been true in the past.

The Biancullis, Corleys, Miyas, and Buckleys of our past could have coped with the changes facing us, and our present faculties have similar individuals who can be the role-model leaders in our academic transition. Deans must recognize, encourage, and reward them. The other faculty members must be retrained, supported, and also suitably rewarded for their efforts.

TEACHING EXCELLENCE—WHAT IS IT?

We often speak of teaching excellence, but in reality we cannot easily define it. Each person seems to have her own definition, and occasionally, when career promotions loom, qualitative attempts are made to judge teaching abilities. Student course evaluations, peer review of classroom skills, and other subjective methods are most often used to make those teaching evaluations. I've never been satisfied with the use of such methods. The student course evaluations tend to be skewed for various reasons, and, unless, the peer reviewers are trained in educational methodology, in-class evaluation rarely points out excellence when it occurs.

Definitions of teaching excellence do vary widely, so it is almost easier to say what it is not. It is not necessarily: the instructor that gives the students all As and Bs; the individual that is very popular with the students, spending hours with them at the local coffee house discussing Spinoza and Galen; nor the latest recipient of a teaching award. The definition should relate to effectiveness. It is found in the person that can set attainable, but challenging educa-

tional outcomes, and then use innovative methods to assist students in their successful attempts to achieve those goals.

Today, the emphasis is shifting from discussing teaching to a concern for student learning. It is clear that our schools need to create as positive a learning environment for our students as possible. While that does mean that we want to strive for excellence in teaching, a much bigger issue is the reduction or elimination of mediocrity of teaching within the ranks of our faculty. We need to raise the overall level of teaching, especially as we subject all our students to what should be the rigors of doctoral professional education.

WHAT QUALITIES SHOULD A TEACHER POSSESS?

The support of faculty in their efforts to improve their teaching requires a sense of the skills and abilities that good teachers should possess. They include:

Creativity

Creativity begets creativity. We need to seek out and support the kinds of instructional creativity that will provide the type of learning environment that leads to professional creativity among our graduates. Students should be encouraged to excel by innovative classroom skills, unique curricular and course designs, alternative instructional methods, and more challenging student evaluation procedures. School administration should fund creative ideas and evaluate them. If funds are limited, the least the administration can do is to remove bureaucratic barriers to instructional innovation.

Knowledge of a Discipline

The transmission of knowledge is the core of the teacher-student relationship. That, in turn, requires that the instructor has an in-depth knowledge of the discipline being taught—not so shallow that the lecture material represents the extent of that person's knowledge. The instructor must be able to plunge deeper into the course content when challenged.

While it must be assumed that all new faculty members bring with them a more than adequate knowledge of their discipline's subject matter, it is the department chair's responsibility to assure that fact, as is true for assuring that faculty members in that department continue to update their course content. The instructor that uses the same old yellowing, dog-eared notes without change from the previous year is not serving his program well.

Course Design Skills

One of the major skills that pharmacy faculty lack is that of course design. It is one that can be easily developed with suitable workshops and renewal sessions. Deans should call upon the departments of education in their university to present such workshops as part of a continuing faculty development program.

Too many instructors develop their courses by starting at the beginning, adding each section to the preceding one, finally ending the course when they run out of content. Instead, a top-down approach should be used, clearly setting the objectives of the course and the educational objectives (or learning outcomes). The course content must then be carefully mapped out using a logical sequencing of the material. Many of us, when we face this challenge, stumble and consider returning to the easier, former approach, but a recognition that the student is our client who is deserving of an optimal learning environment helps to get us back on track.

Classroom Skills

A teacher doesn't need the stage presence of great actor to be effective, but it can help. Many of us are hams, possibly because of a suppressed desire to be actors. I'm not suggesting that we dress in the garb of Galen or use theatrical makeup, but there are other skills of the stage that must be used. They include:

Clarity of word. The notes used for lectures should be carefully scripted. An economy of words directed toward specific outcomes is more effective than a rambling discourse that takes too many side trips on unessential missions. The instructor should establish the key points that must be emphasized during the lecture, and build the

other material around them. Students retain very little of what is said in a classroom, so the instructor should ensure that those key points are presented clearly.

Clarity of voice. Even the best set of lecture notes can lose its value when used by a mumbling speaker. A course in public speaking wouldn't hurt many of our instructors. Even with a microphone, the speaker must project his or her voice so that those in the back row are kept awake. One of the most indefensible actions taken by our schools is the use of those foreign graduate students who speak English poorly as teaching assistants in lecture situations.

Pacing of words. The rapid delivery of the lecture material coupled with the constant note taking of the students fails to provide an optimal learning environment. The more deliberate lecturer, who provides annotated outlines to the students, allows the students time to think about the material as it is presented and ask questions. That should be the function of the lecture.

Placing of the feet. I wish we could throw out the podium from each lecture hall. I realize that some notes are necessary for the lecturer, but too often the speaker becomes glued to the podium reading the notes, occasionally raising his head to see if the class is still there. At the other extreme is the walker who paces from one side of the room to the other with the students' heads moving as if they were at a tennis match. Just as opera singers assume a stable standing posture when they sing, or a quarterback plants his feet before throwing a pass, the speaker should move around occasionally, but mostly provide students with a stable focus for the lecture.

Use of props. As a dean I had a nightmare that involved the technologic classroom. As I walked into the classroom I found each seat occupied by a tape recorder, and on the stage was another tape player and a computer-driven overhead projector—the room contained no instructor or students. That could be instructional technology driven to the extreme. Blackboard, overhead projector, slide projector, and video-tape projector are all essential props for the modern lecturer. The school must provide such equipment, but it also must provide the training in their use. How often do we see a slide that overwhelms the audience in the amount of data crammed within its borders, a lecturer writing on the blackboard in letters so

small that they can only be seen back to the fourth row, or a person that can't focus the projector?

Sense of the audience. The experienced actor knows when the audience is caught up in his words, or when she is "bombing." The lecturer must be able to do the same thing. If the class does not understand the material being presented, the lecturer must repeat it using an alternative approach. That can only be achieved if the lecturer is watching the class and detecting the signs of frustration or disinterest. That can't be achieved if you lecture, as did one of my earlier colleagues, by constantly facing the blackboard while writing miles of equations. The optimal, but almost impossible, approach was the no-note lectures given by Professor Corley. He could constantly interact with the class, usually in a very challenging way.

Questioning the masses. The new technology of interactive TV is an exciting component of distance learning programs, but unfortunately we often don't have interactive lecture-based classrooms. Instead of stimulating a student's curiosity in a way that spawns questions, some lecturers feel that questions take away from the time that they have for spewing out more facts. A questioning of the class and its questioning of the lecturer provide the appropriate learning environment. Once again, it should not be assumed that faculty members know how to question their students in a manner that will elicit the desired response. They may need some help from educational specialists. I vividly remember when I was given some help as a young teacher by a colleague at Pitt. He gave me a clue to the questioning of a class. "Never say, 'Mr. Jones, what is the mechanism of action of atropine?'" That causes all the other brains in the class to shut down. If you ask the question and then name the student, you force all those in the room to think about the answer."

Student Evaluative Skills

There must be life after multiple-choice. The pressures of academic life have driven most of us to the use of computer-graded multiple-choice or true-and-false testing methods. While it is possible to construct multiple-choice questions that force the student to display critical thinking skills, such a constructive effort is rarely done by instructors. A variety of test structures should be used,

because students soon learn an instructor's style and begin to study for the test rather than the course content.

Regardless of the structure of the test question, the instructor should constantly ask, "What am I trying to examine?" Rather than trying to determine the depth or breadth of the student's knowledge base in a particular subject, students should be tested on their ability to achieve the stated course objectives. Since most of us have never been exposed to courses in the development of educational testing instruments, the faculty development program of a school should ensure that such material is made available to its faculty members.

One of my pet peeves over the years is the faculty member that clings to the use of the "curve" in the grading of exams. It appears to be incongruous for a person to consider it to be statistically important to use a bell-shaped distribution curve, when the sample being used has been heavily skewed by SAT, PCAT, and other attrition processes. If all the students achieve the desired educational outcomes they deserve their just rewards.

In the end, there is still a large level of subjective judgment that enters into student evaluation. Therefore, another self-answering question for an instructor must be, "Was I reasonable and fair?"

Empathy for Students

Perhaps empathy is the wrong word to use in today's world. As we consider the need to bring the ideas of total quality management into our academic efforts, we must recognize that the student is really our customer or client. The instructor must ensure that students receive that to which they are entitled. The course, with its clearly defined educational objectives, must be adequately presented to the students, and the personal barriers to learning of individual students dealt with in a sensitive and supportive manner. That requires that student accessibility to the faculty member is reasonable and open to all students. While it is tempting to retreat into the haven of the laboratory, away from the questions and tears of the students, the caring faculty member sets reasonable hours for student meetings that balance between the needs of the faculty member and the students.

Interfacing with the Curriculum

There is a tendency for us all to retreat into the subject matter of our own courses, the course content ebbing and flowing as we decide to make changes that we deem essential. But the course is not one's individual property, rather it is a component of the larger entity—the curriculum. The good teacher functions within the latter's global framework.

An individual course must react to the needs of those that follow it, supporting and developing the student's prerequisite knowledge base for those courses. The instructor must therefore be aware of the changes occurring in the curriculum and its individual courses. A strong intradepartmental management of its educational programs helps to achieve such a flow of knowledge, but the school's curriculum committee must also be deeply involved in the oversight of the content being offered.

Knowledge of the Profession

In my days as a student or in my early faculty years, it was rare to find a faculty member who was not a pharmacist. They were all familiar with the practice of pharmacy and its professional and political changes and intrigues. Many served in local and national professional associations, and many worked part-time in pharmacies. Today, our faculty positions are being filled increasingly with those without a pharmacy degree. This trend appears to be one that will continue, as evidenced by the decreased number of graduate students that have a pharmacy background.

Just as the good teacher offers his course within the global framework of the curriculum, that must also be done within the context of the profession and the changes that it is undergoing. That does place an additional burden on a new faculty member, but also on those with whom she works. They must help to inform that new instructor about the world of pharmacy.

Effective Self-Management

The typical faculty member labors under a heavy teaching load, tries to conduct a research program, provides various types of ser-

vice, and in return is bombarded by endless paperwork and other bureaucratic demands. Some faculty members juggle their time to meet all the demands in an almost effortless manner. Some become so stressed that they lapse in years of little or no productivity. However, the vast number of faculty members struggle to achieve their goals, getting through the academic year only to find the next hectic year facing them.

I have often walked into a faculty office to find its occupant awash in paper. The room was in a state of chaos, with paper and journals piled everywhere. It is true that some people thrive in organized chaos, as witnessed by the office of the former chairman of one of our medical school departments. His office was filled with *neat* stacks of paper, some of which had to be moved off a chair for a visitor to sit down. He knew where everything was, and disdained the usual filing systems. He was the unusual person, others with chaotic offices are disorganized, not only in their office space, but also in their mind.

Here again a faculty development program, especially for new faculty members, could help instructors more effectively manage themselves and their time. That, in turn, would help them to be more effective teachers. The abilities to set priorities, eliminate unessential tasks, make effective decisions, communicate well, consolidate routine work, and create and protect discretionary time must be part of the skills of the effective teacher.

A Sense of the Future

The ability to see into the future is limited. Most of us have a myopic view of the times that lie ahead. Futurists seem to possess the ability to assess the directions of today's world and make relatively accurate projections into the future. A few faculty members in 1970 probably knew that the future held courses in pharmacokinetics, informatics, biotechnology, and parenteral nutrition. However, most faculty members were unaware of such potential changes in our curricula.

The excellent teacher not only is thinking about the changes in her course, or about a new course, that will help to shape the practice of the profession in the future, but is also stimulating and preparing the minds of the students for their practice in that chang-

ing time. Innovative teachers adjust to the changes that occur around them.

ROLES OF FACULTY COMMITTEES IN TEACHING

First, a general word about faculty committees. During my work with the ACPE and on other visitations to schools of pharmacy, I have been amazed at the range in the number of committees found in those schools. Some have so many that the faculty must be committed to death. The best rule of thumb about committees is to create one less committee than you think is absolutely necessary.

Another problem is the lack of committee continuity in some schools, as evidenced in a few schools that completely change committee membership every year. Three-year terms on a staggered basis gives the continuity that a curriculum committee or several other key committees require. Some schools put too many new faculty members on the curriculum committee. The membership of such committees should consist of a majority of the more senior or seasoned faculty to bring their experience to the deliberations of the group. New faculty members do bring new ideas to the group, but they also need to learn from their more experienced colleagues.

All faculty committees have some direct or indirect effect of the teaching process, but the curriculum, faculty affairs (promotion), and student affairs (promotion) committees should have the greatest impact on an instructor's efforts.

The *curriculum committee* usually establishes the content that it expects will be offered in each course, basing its actions on specific curricular goals. However, the committee rarely reviews the course later to see if the desired content is still being offered. Such actions should be considered, even while recognizing that academic freedom must be preserved.

The *faculty affairs committee* has an impact on teaching through its evaluation of the individual faculty member during its tenure and promotion review actions. It should also coordinate school-wide faculty development actions, especially those having to do with educational methods development.

The *student affairs committee* should evaluate an individual student's performance within the framework of the overall class per-

formance in each course. Student evaluation of courses should be only one of the factors considered. Grading patterns and other aspects should be considered to ensure that poor academic performance by a class is not because of poor instruction.

NEW FACULTY MEMBERS: DEVELOPING THEIR TEACHING SKILLS

New and untested faculty members usually arrive on a campus eager to accept their academic responsibilities, but unaware of the transition required to move from student or postdoc to a faculty member. I was as guilty as most administrators in not meeting the needs of those persons. A copy of the faculty handbook, a map of the campus, a copy of the parking regulations and they're sent on their way with a pat on the back. We need to talk about the academic culture, the issues that face them in their new roles, and help them to develop their teaching and student evaluation skills.

Many academics recognize that we seek out our new faculty members because of their research background and potential rather than their teaching ability. While many have served as teaching assistants, it is the rare applicant that has taken any courses in educational methodology. The new faculty member is then given minimal or no teaching during the first year so that his research can be started. During that time the dean and the department head see that the necessary space, equipment, and laboratory supplies are made available to start the research efforts. That new staff member is subsequently given a course(s) to teach, but often without the tools to accomplish the same level of instructional support that she was given to start the research. No wonder some succumb to an acceptance of their own mediocrity. Soon the department head says, "He's a good researcher, but a poor teacher. Let's just keep him in the lab." Often, that's the easy way out. If that person is a good researcher our students should receive the benefit of that research in their classroom. We should be providing all our new faculty with training in educational methodology, and periodically updating the whole faculty on new methods or issues in the field.

I'm sure that many campuses have faculty orientation programs, but I was particularly impressed by the three-day program that

SUNY-Buffalo offers to all new faculty on campus. If a campus doesn't offer such a program, then the school should contract with an education department or consultant to prepare a special program for its use. Three days don't make an excellent teacher, but it does form a baseline from which the person can evolve.

TEACHING EVALUATION, FACULTY DEVELOPMENT, AND THE REWARD SYSTEM

Evaluation, development, and reward must be tied together when the work of the individual faculty member is being considered. Each faculty member generally has a different workload with varying proportions of time devoted to teaching, research, or service. During the past 20 years the publish-or-perish phenomenon drove the teaching share of a faculty member's time into increasingly smaller segments. Today, the changeover to the doctoral-level professional program and the need to develop greater critical-thinking skills in our students has caused many faculty members to consider how they can balance the new teaching demands with their ongoing research program. Alternative teaching methods, distance learning programs, and other new educational thrusts enter into the matrix that comprises the educational work of the faculty member.

The faculty members of tomorrow will have to be more productive, i.e., efficient, in their work to achieve a proper balance between teaching, research, and service. In turn, the school of pharmacy and the university must be supportive of those efforts.

Evaluation

The annual evaluation of a faculty member is usually composed of a collection of data in an effort report, a goals statement, and an analysis by the departmental chair. The *effort report* is filled with information on classes taught, numbers of students involved, and other measures of teaching work load, some of which is required by university or state officials. The effort report can provide an outline of the productivity of the individual faculty member and the total work effort of the school, but it doesn't allow the evaluation of the core of the faculty member's work.

The *goals statement* is the important evaluative tool. Each year a faculty member should outline her goals for the coming terms, and review them with the departmental chair. The development of that document should focus on the coming year, but also should be part of a continuing five-year career plan. The review of that document by the faculty member and the chair at the time of the *annual evaluation* would then consider the work of the individual during the past year within the framework of his long-range career development.

A key section of the goals statement should be directed toward teaching. That doesn't mean a simple statement that the individual will teach the course in ethics, but rather how she is going to improve that course (e.g., the development of case studies of ethics in pharmacy practice using computer-based learning techniques).

Faculty Development

Faculty development programs in most schools are unstructured, and tend to be limited to the use of sabbaticals—the latter most often devoted to research opportunities. The departmental chair should have at his disposal a collection of courses, workshops, and regular or mini-sabbaticals that can be used to correct a problem identified in the evaluation of past year's performance of the faculty member. The same resources would be used to aid the individual to attain the goals established in the five-year career plan.

Workshops in instructional design, courses in student evaluation, and sabbaticals in alternative teaching methodologies should be used to improve the instructional skills of faculty members. A sabbatical in educational methodologies would benefit not only the individual, but also the department and the school.

Rewards

The sudden light in a student's eyes as she suddenly understands the difficult material that you've been explaining, the receipt of a teaching award from the students, or a call from a former student telling you how helpful your course is in his present practice are rewards for a good teacher. Other such rewards should also include

the recognition and praise for the outstanding teaching efforts of faculty members by the departmental chair and dean, the opportunity for the school's and university's communities to learn of unique teaching efforts through seminars and campus publications, and the recognition of outstanding teaching through the opportunity to be named a university (or distinguished) professor.

The rewards that have just been named appeal to the altruistic nature of the teacher, but they won't put bread on the table. The merit salary system that too often relies on the number of grants won or papers published must give suitable recognition to work of the dedicated teacher. While scholarly efforts should stand at the center of the reward system, some of the scholarship can involve improved educational programs. In addition, the outstanding classroom and other teaching efforts of each faculty member must be recognized as part of the merit system.

IN FINE

Teaching excellence is sought by many, but attained by few. Let's first seek to eliminate instructional mediocrity in our classrooms and create innovative environments for learning. Let's remember what Kenneth E. Eble and others have said about learning—that it is essentially pleasurable. Given the proper environment, students will want to learn. Then, as each of us seek out the basic skills of teaching, supported by strong faculty development programs, our growing educational effectiveness will yield excellence to those that seek it.