THE PHYSICIAN
AS TEACHER

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3. The conditions or external influences that enhance the teaching-learning process;
4. The types of interactions themselves.

This chapter will address the first three factors; chapter 4 discusses the fourth.

The Role of the Teacher

Many physicians think that their only role as teacher is to be a reservoir of knowledge with information flowing randomly toward students. Unfortunately, as noted often by McKeachie (1969), expertise is not enough for good teaching. The physician's success in teaching will depend largely on his believing "that the teaching-learning process is basically a delicate human transaction, requiring skill and sensitivity in human relations" (Bradford 1958, p. 138). Knowledge is necessary but not a sufficient, in mathematical parlance, "quantity" to guarantee good teaching.

Beyond presenting information—after all, most medical facts can be found in journals and textbooks—the desire of most medical teachers is to make the practice of medicine understandable and meaningful. What the teacher can provide that does not appear in print is what one scientist called the "inner relevance" of the material (Kestin 1970). Clinicians do this when they personalize the material relating their own patient-care experiences.

For example, an unattributed story describes the introductory lecture to sophomore medical students in the obstetrics/gynecology section of the organ systems course. The course director's goal was to get the students excited about the course. In addition, he wanted the students to anticipate with great interest and excitement their junior-year ob/gyn rotation. To achieve these goals, he presented a case in which doing the right thing at the right time made all the difference in the world. He presented a case of a pregnant woman carrying twins with twin transfusion syndrome in which one fetus transfuses blood to the other through a single placenta. Digoxin was given orally to the mother, resolving heart failure in the hemodynamically overloaded twin. After discussing the case, he introduced the mother and the twin boys to the class as the students rose in applause. In his introductory session, this course director was aiming at something other than a transfer of information; the remaining sessions would provide ample time for that. His purpose was to motivate students and to share his love for his chosen specialty. While this amount of drama may not be appropriate in every teaching session, this example clearly demonstrates that how facts are presented is as important as what is presented.

If the teacher, then, is not just a fountain of knowledge, what is he? Mann and his colleagues (1970) describe six roles that a teacher may assume to varying degrees. The degree to which each of these roles is adopted will characterize the physician's "style" as a teacher. Style is probably not as important as character or expertise, but may be a reflection of both.

Expert

The teacher is the source of all knowledge (the "reservoir of facts" described above) and there is considerable discrepancy between the teacher's level of experience and wisdom and that of the students. To close this gap is the reason for teacher and students to come together. The physician teacher may choose the role of expert in medical emergencies or while giving lectures in his area of expertise.

Formal Authority

The teacher is responsible to school administrators, specialty boards, and hospital credentials committees for evaluating and certifying student competency. The teacher upholds professional stan-
The teacher and students feel sufficient mutual trust to share ideas, feelings, and thoughts. The teacher does not necessarily have to like the students but can accept their needs and imperfections. The teacher may provide significant personal help and support outside the formal teaching setting. This role may evolve over a long time, although not with every student. When the teacher and learner become close medical colleagues, the teaching-learning process has been successful.

The parallel is obvious between the roles and behaviors of a teacher and that of a physician providing patient care. There is a spectrum of physician behaviors, ranging from the physician as medical expert to the physician as person/friend, that is analogous to the spectrum of teaching roles defined by the six roles described above. Physicians may use part of these roles, to varying degrees, in any one teaching activity, but the usual mix defines the physician's style as a teacher. Most medical teachers are probably too much the expert and too little the mentor, facilitator, and friend. To the degree that physicians can move towards the latter direction, without forsaking the former, the resultant teaching style will be more successful.

What do learners bring to the teacher-learner relationship? Bradford (1958) notes that learners are usually loaded with all sorts of anxieties, needs, problems, and "screens" that interfere with learning. How secure is the learner in the situation and group? "Does he perceive the teacher as capable of understanding and helping him? To what extent does he even recognize the kinds of help he would most appreciate as well as most need?" (Bradford 1958, p. 136). How motivated is the learner to learn and to risk giving up old ideas and...
knowledge for the sake of new ones? To what extent is self-esteem, self-image threatened by learning?

Mann et al. (1970) have described eight general types of students that are somewhat analogous to the six roles for teachers presented earlier. Of the eight, five types are most applicable to medical students and residents. (The other three types, discouraged workers, heroes, and attention-seekers, are rarely seen in medical settings.)

Compliant Students

These are the typical “good” learners who work hard, are task oriented, show little emotional turmoil, and are primarily concerned with understanding the material and complying with teacher requests.

Anxious-Dependent Students

This may be the predominant type in medical school; they are dependent on the teacher for knowledge and support and are anxious about evaluation. Feelings of anxiety and incompetence block these students from actively learning and make them more concerned about grades than actual learning. They are difficult to engage in discussion and prefer lectures.

Independent Students

These learners are often older than their counterparts and seem confident and unthreatened by the teacher. They favor peer relationships with the teacher and approach the material calmly, objectively, and often creatively. Medical students with previous graduate work and chief residents often fall into this category.

Sniper Students

These learners are uninvolved due to a low level of self-esteem and a high level of pessimism concerning their ability to form productive relationships with authority figures. They can be hostile, but are elusive when confronted with a particular issue. Every class has a few of these; they may go on to lackluster careers, always complaining and making excuses about mediocre efforts and performance.

Silent Students

These learners are characterized by what they do not do. They are notable for their lack of participation and the passivity of their learning, which may therefore be inadequate. They feel helpless and vulnerable, but without the anxiety characterizing the anxious-dependent learners.

Learners bring vastly different needs and agendas to their interactions with teachers just as patients do to their medical encounters. Teachers cannot be all things to all learners, just as physicians cannot provide medical care effectively for patients of all personality types. However, awareness of different types of learners and adjustment of the teacher’s style insofar as is possible, will be helpful (chapter 4 will discuss how to adopt new teaching styles).

Conditions for Effective Learning

Medical students and residents are adult learners, and medical education should follow the principles of adult learning. Readers who do not find this statement absurd deserve applause. Many physicians, however, may disagree, if not consciously, at least in their manner of teaching. Despite the fact that medical learners are adults
pursuing a difficult field of study requiring discipline and maturity, many of the basic assumptions underlying their current education would be recognizable to an elementary school teacher. How is the apparent paradox resolved and how can medical education become more of an adult learning process? The principles that enhance the teacher-adult learner relationship are discussed next.

Four Adult-Learning Principles

**Adults prefer to apply what they learn shortly after learning.** This principle is violated frequently in basic science education, perhaps less so in clinical teaching; it ought not to be violated at all. The challenge for teachers is to justify any teaching that cannot be shown to have some, albeit small or indirect, application to a relevant patient problem or clinical situation. bedside teaching should focus on the findings and problems of the patient at hand. Lectures and grand rounds should include relevant case presentations. Other teaching should be case-based insofar as is possible.

**Adults prefer learning concepts and principles rather than facts.** This issue has, of course, been directly addressed in the Report of the Panel on the General Professional Education of the Physician (Association of American Medical Colleges 1984). Medical education suffers terribly under the weight of unrelated and sometimes relatively useless facts. As medical knowledge expands, so does the density of the medical education process, often to the detriment of the problem-solving and clinical-reasoning skills of future physicians. It is generally believed that the increasing rate of this information explosion precludes the learning of every new medical fact. This suggests that learning how to use facts is likely to be more helpful than accumulating additional facts, a task that is by definition impossible to do successfully in the long run. Therefore, teachers ought not to compound what is already recognized as a major problem by national authorities. To alleviate this problem, several medical schools (e.g., New Mexico, Southern Illinois, and Harvard) are pursuing major curricular redesigns that are case based and that emphasize clinical problem solving rather than fact learning (Barrows & Tamblyn 1980).

**Adults like to help set their own learning objectives.** "What!" the reader may ask. "How can students and residents possibly determine what they need to learn? Are they not 'unconsciously incompetent' (see chapter 8) by definition?" Yes and no. The teacher, of course, possesses considerable knowledge and experience that learners do not. However, just as the physician discusses or negotiates the objectives of a proposed treatment with a patient, the physician teacher should also negotiate with learners regarding appropriate educational objectives. These objectives, of course, may be limited by overall needs, resources, and goals. However, all instruction must include some previous assessment of experiences and negotiation of objectives. Assessment of objectives may be done directly, in the case of a resident in an office preceptorship, or more implicitly in the case of a new class of medical students. The teacher who does negotiate learning objectives will be pleasantly surprised at the remarkably positive effect this has on learner motivation.

**Adults like to receive feedback to help them evaluate their own performance.** Feedback for the sake of improving performance is called "formative evaluation." Formative evaluation is rarely offered compared with the numerous opportunities for making decisions about competence, promotion, or advancement (i.e., summative evaluation). Unfortunately, many physician teachers hesitate to make negative comments even though this might help a learner change professional behavior, make a better decision, or perform a skill more precisely. Well-intentioned formative evaluation is critical for cementing a teacher-learner relationship and successfully ending the learning process (chapter 4 further addresses these important skills).
Summary

In summary, the teacher-learner relationship is a communication relationship between two people, just like many other relationships of which the physician may be a part. The teacher has certain roles to play; these roles may vary according to the situation or learner, just as the physician varies his style with different patients in different situations. The learner has a role to play as well, and, like the patient, he tends to play the same role most of the time. These roles are played under certain conditions that strongly influence the relative success of the teacher-learner relationship. The next chapter examines some specific types of physician-patient interactions and shows how they are directly analogous to teacher-learner communications. Rather than require the reader to learn a whole new set of skills to become a better teacher, chapter 3 shows the physician-teacher how to adapt patient-care communication skills that are already familiar to him.

CHAPTER 3

The Teacher-Learner Relationship

A little boy tells his friend, "I taught Rover how to whistle!" With an ear up to the dog's face, the friend responds, "I don't hear him whistling." The first boy responds, "I said I taught him. I didn't say he learned it." (Anonymous)

Some teachers believe that if there was no learning there was no teaching. According to this view, the verb "to teach" is analogous to the verb "to give." When something is given, it is received. However, if something was never received, then it was never given. Proponents of this view recognize that an instructor may have tried to teach, but if there was no learning, then what the instructor did should not be called "teaching." The significance of this view is that a teacher may not be considered a good teacher just because he seemed to teach well. What counts is whether someone learned from that teacher (Machlup 1979).

Other teachers believe that teaching is anything done by an instructor that intentionally promotes learning. According to this view, the verb "to teach" is analogous to the verb "to offer." When something is offered, it may or may not be received. When something is taught, it may or may not be learned. Proponents of this view recognize that teaching may occur in circumstances so adverse that little learning