VIEWPOINTS

Teaching, Practice and Technology

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I continue to be amazed at the advancements in the technologies we can use daily to transfer and share information with our students and with each other for our various teaching, scholarly, and service activities. We are continuously bombarded by voice mail, e-mail, instant messaging, text messaging, and pod casts throughout each day. It seems to never have been easier to share information between long and short distances. These advances have and will continue to have dramatic effects on our teaching in the classroom, laboratory, and experiential rotations. Yet one wonders to what extent technology has caused us to lose the essential element in our colleges and schools of pharmacy that distinguishes professionals and promotes professional growth. Specifically, are we losing the one-on-one, face to face interactions that we seek to develop between pharmacists and patients as we lessen the number of opportunities students have to interact with each other and with their teachers. This is particularly a problem as class sizes increase and new technologies make it all too easy to deliver content without direct human contact. Does having state of the art technology in our classrooms or other environments ensure outstanding teaching and, more importantly, student learning?

No one can dispute the advantages technology has allowed for enhancing the teaching process. Students have the ability to access class information, grades, and materials; obtain current biomedical and pharmaceutical literature; and find additional sources for providing information on a given topic at any time or place. Faculty members can easily communicate electronically with students either individually or in larger groups. Students can also learn from each other via electronic blogs and chat rooms. It has never been easier to present contemporary concepts and topics, provide relevance to contemporary pharmacy practice, submit assignments, test, provide individualized feedback, and screen for cases of academic dishonesty. Indeed, it seems impossible to imagine teaching without these available technologies,

so we seek to provide state of the art technologies in our classrooms and laboratories as well as in student learning spaces.

In spite of this, it should be remembered that too much of any technology has a potential for a dark side. Technology can and should never be confused or considered a substitute for excellence in teaching. Teaching and, more importantly, facilitating student learning is about guiding our students to learn new knowledge and to challenge their thinking as they build their expertise in areas they care about or are interested in learning. Most would agree that becoming a health care professional is more than simply remembering facts and information. We seek effective communication and professional interactions of our students with patients and other health care professionals. Yet can effective communication and professional interactions be achieved without seeing it role-modeled in a live setting? It is faculty members who can provide the framework, through their actions and attitudes in the classroom, laboratory, or clinic, to assist our students in developing the requisite critical thinking, problem solving skills, and life-long learning for a successful practice. Furthermore, our students tell us it is during face-to-face student-preceptor interactions that they “get it” or see what it means to provide pharmacist care to their patients or function as a member of a health care team. Certainly, current standards and guidelines have emphasized the importance of these face to face interactions in the introductory and advanced practice experiences in our doctor of pharmacy curriculum.

Ken Bain, in his prize-winning text on education and society, suggests the best college teachers are successful because they can create a “natural critical learning environment” in their educational efforts.¹ This is an environment where students are challenged to rethink or confront what they thought they knew on important problems or tasks in a supportive environment in which they can fail and receive feedback, yet still have control over their learning. Effective teaching is also about caring for student learning. When students talk about outstanding teachers in our programs, the terms used for these individuals include being a caring individual, one who shows

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their caring through challenging students in their thinking, and brings enthusiasm, energy, and excitement to their topic. The technology utilized in the classroom is generally not mentioned. Teaching is about human interaction, albeit it sometimes takes place in larger classrooms and may not involve one-on-one communication with faculty members. For each student, teaching is the tool needed for learning and requires human interactions.

Teaching must have a personal touch. Thus, the use of technology in our classrooms should not be the engine by which we drive our teaching efforts or define what we consider to be excellence in teaching and learning.

REFERENCES

1. Bain K. *What the Best College Teachers Do*, Cambridge, Mass; Harvard University Press, 2004.