VIEWPOINTS

A Winning Combination: Basic/Clinical Science Research and the Scholarship of Teaching and Learning

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Some faculty members who completed a basic science degree or a residency may be hesitant to venture into the area of the scholarship of teaching and learning (SoTL).¹ Some may feel that it is not worth the effort, while others may feel that they are not prepared to conduct such research. However, educators — including basic and clinical scientists — have a major role to play in shaping the future of students and society at large. Being involved in original discovery in the area of teaching and learning is a major aspect of that, especially considering the many changes over the last few years in pharmacy education, with the introduction of new pedagogy, a culture of assessment, early experiential experiences, innovative new curricula, use of technology, distance education, and service-learning to name a few. All of these areas and others have created opportunities for SoTL projects.

Considering my basic science training and the great personal and professional satisfaction I receive from conducting bench research, it was difficult for me to think about teaching as a scholarly activity. However, as do all those in academia, I always held a strong belief in the importance of being innovative in the way I teach all my courses, in developing new teaching techniques, and in integration of knowledge. It was not until I attended the American Association of Colleges of Pharmacy (AACP) annual meeting in 1996 that I had a clear idea of the importance of the SoTL, the types of activities that are considered under SoTL, and how critical it is to share what you do with colleagues. Over the last 16 years, I have realized the importance of thinking about my classroom in the same way I so meticulously think about preparing and conducting my acute, subchronic and chronic toxicology studies. Over the years, I have tried to educate myself more on the SoTL by collaborating and learning from seasoned faculty colleagues, reading books¹⁻³ and articles,⁴⁻¹³ attending and presenting at the AACP Annual Meeting regularly, attending and presenting at several distance education meetings, participating in and contributing to faculty development activities on this topic, and conducting several research projects in the classroom and online. I also endeavor to share the importance of this form of scholarly activity with new faculty members

and encourage them to pursue it. During the last 16 years, I have mentored several faculty members and brought them in on my SoTL projects. In addition, I have collaborated with several science and clinical faculty members on a wide range of projects. We have been successful in publishing several manuscripts and in presenting numerous seminars and posters locally, nationally and internationally related to innovative work done in instructional methodology, integration of basic and clinical sciences, basic sciences and clinical relevance, technology and student learning, distance education, and service-learning— areas that a few years ago I would not have thought I would be doing any scholarly work in. Many of the projects were accomplished without pursuing any funding because of the nature of classroom research/SoTL. However, we have submitted several internal and external grants to support some of our SoTL projects.

The shift in my scholarly activities to emphasize SoTL has been an exciting and rewarding experience. As much as I enjoy my basic science research and being in the laboratory, the ability to use a lot of the skills I gained from my basic science research to tackle key questions in the classroom to improve on student learning, to investigate if a technology I am using is helpful for student learning, to identify best practices in the use of a particular technology and to address critical issues in distance education have provided me with many opportunities to challenge myself, collaborate with many colleagues and students, improve on how I teach, provide colleagues with practical ways to address key issues in their classroom, and offer my knowledge and expertise locally, nationally, and internationally. In addition, I have recognized that each of us in academia have to seek opportunities to excel in what we do and that the pursuit of original discovery is not limited to our main expertise gained in graduate school or clinical residencies. We always have to fine tune it and channel it into related and new areas based on interest or necessity. Finally, the rewards for the above have been beyond any of my expectations. While it is certainly rewarding to be acknowledged for expertise in a particular research area, taking time to expand into other areas — especially those of interest — can be accomplished by

any faculty member who is motivated, committed, and resourceful. Doing so can bring personal gratification, better awareness of possibilities for a wider range of scholarly activities, diverse research projects that energize research activities within an institution and address the need for scholarly work in new areas within schools/ universities, rewarding collaboration opportunities with faculty members across the campus, and local, national, and international recognition for oneself and one's institution.

In addition to the above, the rewards in the classroom are great as well. Over the last 10 years, I have been able to document an improved student experience and satisfaction based on the many modifications I made to how I teach and teaching methodologies I utilize, and just by addressing student perceptions from the many projects I have conducted over the years. For example, in the medicinal chemistry courses, student overall attitude towards the course and its relevance to their career goal certainly has improved, with less students questioning the clinical relevance of the course and indicating that it is an essential course for understanding drug action and therapeutic decision making. Student perception of the instructor has also improved with the majority of students appreciating the instructor's enthusiasm and effort. In distance education, for example, strategies were developed to help ensure that both performance and learning parity existed between our campus and distance students, and that the 4 important interactions in distance education were optimized for our distant student cohort.

New and seasoned basic science and clinical faculty members alike must be encouraged and rewarded for pursuing the SoTL. Certainly, AACP can play a major role in that by emphasizing the importance of SoTL in its strategic plan and its policies and recommendations to member schools. In some cases, SoTL can be a good avenue for faculty members to pursue if they work at an institution lacking an infrastructure for basic or clinical science research, or if they are having difficulty obtaining funding in their own area of research or in finding committed research collaborators or qualified graduate students for their main area of research. In addition, increased administrative

duties, clinical responsibilities, or personal issues may make it difficult to pursue their own basic or clinical science research. Further, in schools where, for example, there is more emphasis on teaching, service learning, use of technology, and distance education, SoTL provides a great opportunity to contribute scholarly to this goal. Certainly, a background in basic or clinical science research is an asset to these faculty members and I have no doubt that they can have a winning combination.

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