Scholarship of Teaching and Student Retention

by Cindy Veenstra

Since Ernest Boyer wrote his 1990 book, *Scholarship Reconsidered: Priorities of the Professoriate*,[1] the higher-education community has been discussing "scholarship of teaching." What has is come to mean in the past 19 years? What have professors and instructors learned from this discussion to improve the quality of teaching? How does this discussion relate to student retention?

Boyer changed the scholarship paradigm in higher education from that of primarily research to a broader definition of scholarship that included teaching. In 1990 and today, at research universities, the three pillars for promotion and tenure are research, teaching and service. Because research universities drive the thought processes throughout academe, this is an important issue.

Even today, the three pillars for tenure are not equal, with most of the weight on research. Especially at research universities, if a faculty member is the best teacher but has not published substantial research, he/she will not make tenure. Thus, if a professor's promotion is based predominately on research, the professor may spend more time on research and less time preparing for classes and engaging with students due to the inherent reward system.

Explanation of scholarly teaching

Boyer approached the research/teaching/service issue as all representing scholarship. Instead of limiting scholarship to research, he defined a broader concept of scholarship that included original research: "looking for connecting bridges, bridges between theory and practice, and communicating one's knowledge effectively to students." On teaching, he wrote that "when defined as scholarship, however, teaching educates and entices future scholars ... good teaching means that faculty, as scholars, are also learners … Teaching, at its best, means not only transmitting knowledge, but also transforming and extending it as well."[2]

Boyer's idea is similar to a plan-do-study-act (PDSA) cycle: professors, as they teach, also learn from their students and thus generate more innovative and creative ideas.

During the last 19 years, Boyer's scholarship of teaching has come to be known as scholarship of teaching *and* learning. In this discussion, the phrase "scholarship of teaching" also includes learning. Additionally, Richlin divided Boyer's original concept of scholarship of teaching into two concepts: scholarly teaching and scholarship of teaching.[3]

It is instructive to understand this difference in discussing scholarship of teaching. Scholarly teaching is teaching with an inquiry approach to assess the learning outcomes from one's course which improves the quality of teaching; scholarship of teaching represents a broader view of understanding how students learn. For further explanation, consider these perspectives:

- "Scholarly teaching is an intellectual activity designed to bring about documented improvements in student learning … Scholarly teaching documents the effectiveness of student learning in a manner that models or reflects disciplinary methods and values."[4]
- "While the purpose of scholarly teaching is to impact the activity of teaching and the resulting student learning, the scholarship of teaching results in a formal, peer-reviewed communication in an appropriate medium or venue, which then becomes part of the knowledge base of teaching and learning in higher education."[5]
- "The scholarship of teaching goes beyond scholarly teaching and is driven by a desire to understand how students learn effectively and how teaching influences this process."[6]
- "Scholarly teaching is a method of designing and implementing a course or other teaching or learning activity to improve the learning of the students in the course."[7]

In summary, scholarship of teaching is seen today as the broader view of peer-reviewed publication of teaching assessment and an inquiry of how students learn. Scholarly teaching is the applied knowledge a professor gains by reviewing the literature on teaching in his or her discipline and applying it to his or her course or classroom.

In addition, a distinction has been made between excellent teaching and scholarly teaching. It is assumed that all faculty strive for excellent teaching, which includes a high level of student learning outcomes. Scholarly teaching includes excellent teaching and is viewed as a reflective process, which includes "practices of classroom assessment and evidence gathering" and "invites peer collaboration and review."[8]

A personal view

Based on my own teaching experiences, none of this is easy, whether it is excellent teaching, scholarly teaching or the application of scholarship (research) to teaching.

Unfortunately, some of my colleagues do not try to be excellent teachers; some minimally engage students due to other commitments or little experience. Sometimes, the least experienced professors with minimal training teach the freshman classes, in which the students need experienced, engaged faculty to enable student success and retention. On the other hand, I have seen successful student learning outcomes from a number of excellent professors.

Yet, this concept of scholarship of teaching is important for faculty to discuss. We are trying to reach a systemic teaching approach that includes research and enables professors to continue their continuous improvement journeys. We need a critical mass of faculty and university leadership interested in pursuing scholarship of teaching. Eventually, the idea will spread to the entire faculty. The more we know about how to conduct assessments in our own classrooms; and the more research on student learning and teaching strategies becomes available, the more each professor or instructor may engage students in his or her classroom and enable significant learning.

A quality view

From a quality viewpoint, scholarly teaching includes a continuous improvement PDSA cycle—for example, planning a course, conducting an assessment and revising a course plan or teaching strategy based on the assessment. University centers for research on learning and teaching have provided support to professors and instructors with summaries of best teaching practices, training orientation for first-year professors and professional teaching consultants that help professors evaluate strategies to improve their teaching.

These activities are greatly needed, and continuous improvement is happening. For example, Bloom's taxonomy can often be used for developing instructional objectives, and Gardner's theory of multiple intelligences has led the higher education community to balance teaching styles with their students' learning styles.[9,10] There is recognition of the success of active learning and cooperative learning.[11] Finally, there is the recognition of the importance of teaching students to be independent learners.[12,13]

In a positive sense, we are seeing more centers for research in teaching and learning, and more research dollars being dedicated to research in teaching. Higher-education institutions are focusing more on moving research into teaching, especially teaching strategies for teaching undergraduates how to learn. Some accreditations are now based on continuous improvement in student learning outcomes. This has created more focus on improving systems for delivering

teaching of these courses.

Technology in the classroom

In the last several years, with the decreasing cost of technology in the classroom and students' common use of technology, there is increased faculty interest in using technology in the classrooms, including clickers, lecture-capture technology and podcasts.

There is the strong possibility that teaching strategies that were effective in the past may be less effective now. A literature review showed that the current generation of traditional college students possesses different characteristics than previous generations. They are socially connected, technology-savvy, idealistic, self-directed and value-oriented in their work.[14] They are comfortable with technology and social networking. It is possible they may relate more effectively to a different teaching style that involves technology.

For example, Patry reported that 46% of students surveyed found clickers helpful with understanding course material.[15] Another popular technology is podcasting. At the 2009 ASQ World Conference on Quality and Improvement, Kovach discussed the use of podcasts to increase engagement of students in her classes.[16]

Yet research in relating technology to student engagement, scholarship of teaching and higher student retention is in its early stages. Dey, Burn and Gerdes indicated that "while general guidance is plentiful, the evidence base on the educational consequences of specific technology applications on college student learning is, however, neither large or readily accessible to faculty seeking to make decisions about the kinds of outcomes they might expect … in the classroom."[17]

In their research on teaching physics, design of experiment techniques were used to understand technological factors that influence learning outcomes and compare traditional lectures to internet video formats. Interestingly, the internet video approach was significantly more effective as a learning outcome than a live lecture. This particular learning outcome was based on transferring learning about Newton's second law to a different physics application.[18] More evidence-based research is needed to understand the impact of technology on a teaching strategy, student engagement and student retention.

Tinto has discussed the importance of engaging students in learning and retention.[19] Nationally, the six-year graduation rate at all four-year colleges is about 58%.[20] A much higher

retention rate is needed and can be achieved. As Tinto wrote, "We must bring to the study of student retention the extensive body of research on student learning and demonstrate the multiple connections between faculty efforts to improve student learning to that of improved student retention."[21]

There is a significant connection among scholarship of teaching, engagement of students and student retention. Especially in the past five years, progress has been made in recognizing the need for research in teaching and learning. But much more progress is needed. Achieving it will require a systemic approach throughout each college or university. More innovative approaches to teaching are needed, and the research on using technology in college classrooms is very promising. The benefit will be a stronger scholarship of teaching, more engaged students and higher student retention.

References

1. E.L. Boyer, *Scholarship Reconsidered: Priorities of the Professoriate*, Carnegie Foundation for the Advancement of Teaching, 1990.

2. Ibid.

3. P.D. Witman and L. Richlin, "The Status of the Scholarship of Teaching and Learning in the Disciplines," *International Journal for the Scholarship of Teaching and Learning*, Vol. 1, No. 1, 2007.

4. T. Favero, "Teaching and Learning: Scholarly Teaching," University of Portland, www.up.edu/tl/default.aspx?cid=5545&pid=1196.

5. Witman, "The Status of the Scholarship of Teaching and Learning in the Disciplines," see reference 3.

6. L. Martin, "Defining the Scholarship of Teaching versus Scholarly Teaching," *Teaching and Learning in Higher Education*, Vol. 46, Spring 2007.

7. "Using Evidence to Teach (Scholarly Teaching)," Charles Drew University of Medicine and Science, http://www.cdrewu.edu/com/faculty-affairs/office_faculty_development/critical_topics/using_evidence, 2009.

8. P. Hutchings and L.S. Shulman, "The Scholarship of Teaching: New Elaborations, New developments," The Carnegie Foundation for the Advancement of Teaching, www.carnegiefoundation.org/publications/sub.asp?key=452&subky=613.

9. C. Robinson, "Lessons on Learning," *Journal for Quality and Participation*, Vol. 32, No. 1, 2009.

10. R.M. Felder and R. Brent, "How to Improve Teaching Quality," *Quality Management Journal*, Vol. 6, No. 2, 1999.

11. Ibid.

12. C.P. Veenstra, E.L. Dey and G.D. Herrin, "A Model for Freshman Engineering Retention," *Advances in Engineering Education*, Vol. 1, No. 3, 2009, pp.1-31.

13. A.W. Astin and H. Astin, *Leadership Reconsidered: Engaging Higher Education in Social Change*, Kellogg Foundation, 2000.

14. D. Chubin, K. Donaldson, B. Olds and L. Fleming, "Educating Generation Net—Can U.S. Engineering Woo and Win the Competition for Talent," *Journal of Engineering Education*, Vol. 97, No. 3,

pp. 245-258.

15. M. Patry, “Clickers in Large Classes: From Student Perceptions Towards an Understanding of Best Practices,” *International Journal for the Scholarship of Teaching and Learning*, Vol. 3, No. 2, 2009.

16. J. V. Kovach, “Podcasting: An Innovative Instruction Technology,” ASQ Education Division, www.asq.org/edu, July 2009.

17. E. L. Dey, H.E. Burn and D. Gerdes, “Bringing the Classroom to the Web: Effects of Using New Technologies to Capture and Deliver Lectures,” *Research in Higher Education*, January 2009.

18. Ibid.

19. V. Tinto, “Research and Practice of Student Retention: What Next?” *Journal of College Student Retention*, Vol. 8, No. 1, 2007, pp. 1-19.

20. A.W. Astin and L. Oseguera, *Degree Attainment Rates at American Colleges and Universities*, revised edition, Higher Education Research Institute, UCLA, 2005.

21. Tinto, “Research and Practice of Student Retention: What Next?” see reference 20.

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