

# The similarities and differences between scholarly teaching and the scholarship of teaching and learning

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## Abstract

While engaging in the Scholarship of Teaching and Learning (SoTL) is a laudable activity and an important endeavor for teaching improvement and the elevation of teaching within the academic and professional hierarchy, I suggest that increased and continued focus needs to be placed on enhancing scholarly teaching as a precursor to the scholarship of teaching and learning. I believe that there would be a greater return on investment, e.g., better teaching and greater learning, if universities first focus on enhancing scholarly teaching before efforts to encourage academic staff to develop time and resource-intensive SoTL projects. This article clarifies the similarities and differences between scholarly teaching and SoTL to assist universities in this process. I present an overview of scholarly teaching based on a model describing important variables in university teaching and learning, as well as a brief history and essential elements of SoTL. The article concludes with a summary of scholarly teaching and SoTL which suggests that the two educational processes possess complementary but, at times, divergent goals.

*Keywords:* scholarly teaching, scholarship of teaching and learning, academic staff roles, action research, comprehensive course design

## Context

I have conducted many courses, seminars and workshops, and written on teaching, learning, and SoTL over a 40-year career as a counseling and educational psychologist, academic developer, and academic staff member. I hope this article stimulates a discussion of scholarly teaching and efforts to produce

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a scholarship of teaching and learning by suggesting the commonalities and differences between these two academic outcomes with the overarching goal of enhancing efforts to support academic staff and academic developers to facilitate teaching and learning outcomes. The article begins with a discussion of scholarly teaching based on a model I developed to guide course development. The key role of assessment and reflection is highlighted. Next, a brief history of the definition and development of SoTL is presented with an extended description of expanded academic roles that support academic staff focus on SoTL as an intersection between teaching and research. Some guiding ideas for identifying a SoTL question or problem are then discussed to provide some practical application of the article. The article concludes with a summary figure and discussion of the similarities and differences between scholarly teaching and the scholarship of teaching and learning.

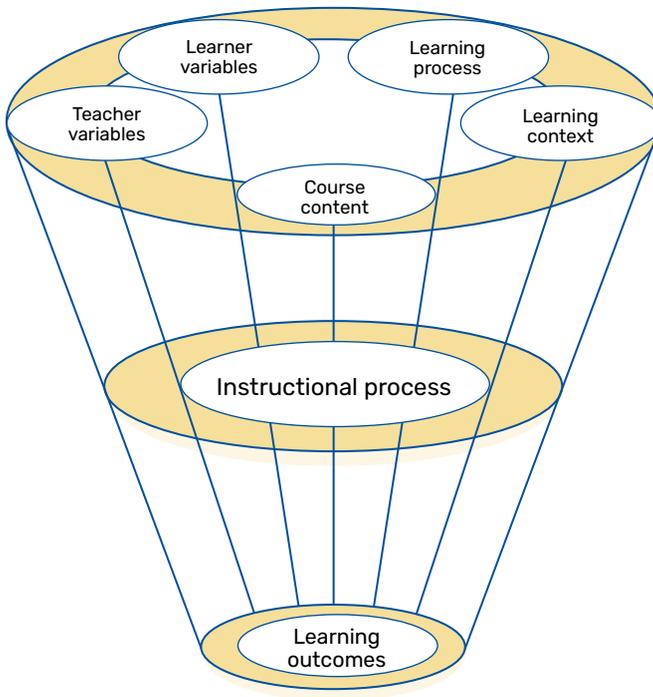
## Introduction

For over 30 years, the scholarship of teaching and learning (SoTL) has been seen as a focal point for the reconceptualization and renewal of higher education worldwide. Many institutions have viewed SoTL as a means to (re)emphasize the importance of pedagogical practice within an organizational structure that is perceived as prioritizing research, often at the expense of quality teaching. The reasons for this position are understandable: the difficulty of assessing quality teaching, and conversely, the apparent simplicity of measuring research quality (e.g., the number of publications, the amount of research funding attained); the decline of fiscal support for higher education which results in the need to pursue extramural funding; pressure from parents and students who demand quality education in return for ever-increasing tuition costs; and criticism from employers and governmental agencies suggesting that graduates of higher education institutions are ill-prepared to function effectively in real-life jobs.

While pursuing SoTL is an important activity, greater focus should be placed on enhancing scholarly teaching as a precursor to the scholarship of teaching and learning. I believe that there would be a greater return on investment, e.g., better teaching and greater learning, if universities first focus on enhancing scholarly teaching before efforts to encourage academic staff to develop time and resource-intensive SoTL projects.

## Scholarly teaching

**A model for understanding university teaching and learning.** Groccia's model (Figure X-1.), developed and discussed in *The Handbook of University Teaching and Learning: A Global Perspective* (2012), serves as an integrating framework and organizational aid that creates a holistic conceptualization of scholarly teaching. This model helps guide efforts to develop scholarly teaching and SoTL research topics by illustrating the interconnections between variables of interest and helps the teacher understand their interplay and interdependence. Such awareness provides multiple intervention points for teaching and learning enhancement efforts, as a change in one element or variable in the model can stimulate change in others. This systemic model maximizes efforts to enhance teaching and learning and empowers teachers in scholarly teaching and research efforts.



**Figure X-1.** Groccia's model for understanding university teaching and learning (Groccia, 2012, p. 9).

This model has seven interconnected variables: learning outcomes; instructional processes; course content; teacher and student characteristics; learning process; and learning context. Learning outcomes are at the bottom serving as the base for all other variables. The instructional process lies in the center of the model, showing teaching and learning behaviors, techniques, and methods. The five variables at the top must be studied and understood prior to determining and assessing learning outcomes and implementation of teaching processes.

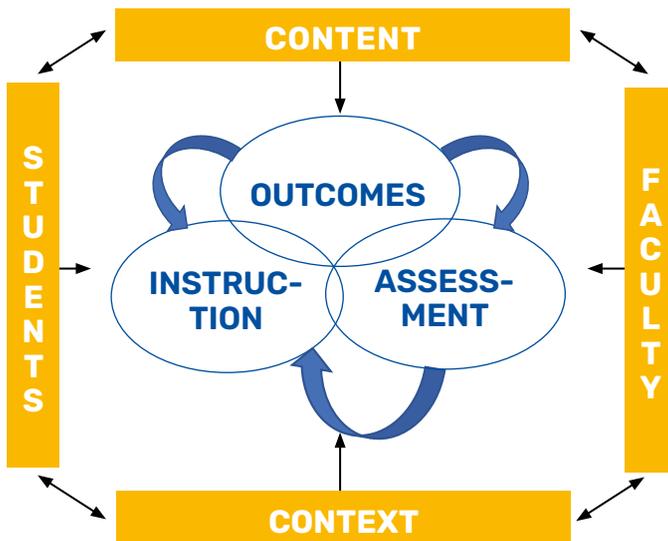
Learning outcomes are what educators expect students will take away from the learning experiences. These can be both short-term and long-term and should include an assessment to determine if the learning outcome was met. Attainment of learning outcomes is the marker that indicates if the teaching that occurred was effective. Faculty variables relate to the level of faculty understanding of who they are as a person and what they bring to the learning experience. Most higher education educators, regardless of what they teach, are not trained to teach and do not grasp the importance of evidence-based teaching (Groccia & Buskist, 2011; Therrell & Dunneback, 2015). Understanding the impact of teacher and student age, gender, academic background, learning style, rapport, and enthusiasm, is important to recognize in order to maximize strengths and minimize weaknesses in support of improved teaching and learning. Educators should be aware of and plan learning activities that are appropriate to both the teachers' and students' prior knowledge, skills, interests, and needs (Groccia, 2012).

Knowing theories and research on the learning process is essential to enhance teaching and learning (Groccia & Hunter, 2012; Groccia et al. 2014). The evidence on human learning and its application to enriching teaching is voluminous and should inform the teaching and learning process (Bransford, Brown, & Cocking, 2000). Educators must also be aware of the context or situation in which learning occurs. This includes not only the physical characteristics of the space, seating, room dimensions, and classroom setting, but also the institution where the learning occurs. Such institutional variables as administration and leadership policies and practices, departmental values and goals, course and teacher evaluation approaches, learner selection criteria, and cultural and diversity effects all impact the teaching and learning process (Groccia, 2012).

The next variable, course content, is crucial in designing and delivering effective teaching. Therrell and Dunneback (2015) note that the faculty may know their goals and how to accomplish them but do not understand what students want or need to accomplish them. The difficulty level, organization of, accuracy, and purpose of the content should be matched with learners, learning outcomes, and the knowledge level of the faculty teaching the course.

Finally, regarding how the content is taught, the choice of one teaching method over another (e.g., lecture, small group activities, project-based learning, peer-assisted teaching) should be made after consideration of each of the preceding components of the model – desired short and long-term learning outcomes, a careful review of the evidence on the effectiveness of different teaching approaches and research and theories of learning, the background, prior knowledge and present needs of learners, the characteristics and expertise of instructors, and the limits or advantages presented by the classroom and institution teaching and learning context.

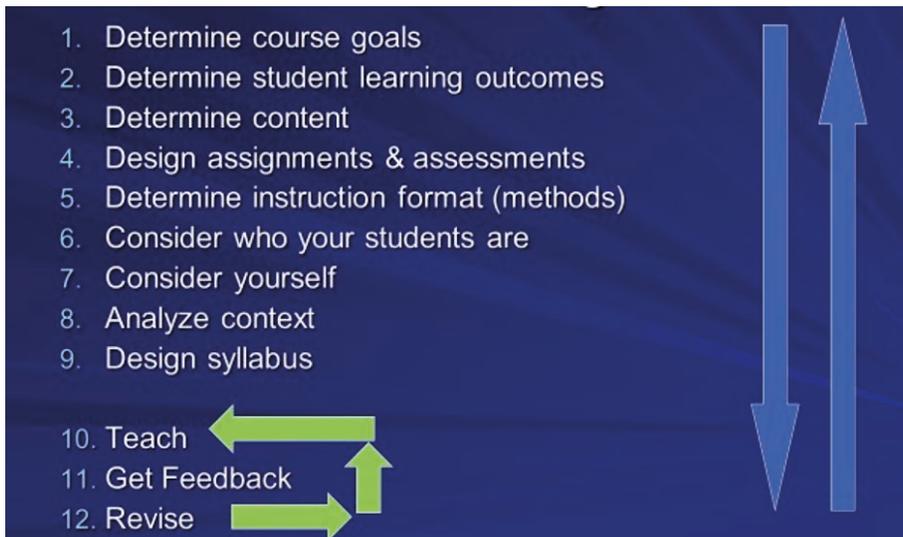
**Comprehensive course design for scholarly teaching.** Scholarly teaching begins with a transformation and application of this model of teaching and learning to a course design process that I call Comprehensive Course Design (CCD) (Figure X-2.) Scholarly teaching course development is grounded in consideration of three central processes (outcomes, assessments, and instruction) that are informed by four influencing variables (content, knowledge of teachers and students, and instructional context).



**Figure X-2.** A Model for comprehensive course design based on Groccia’s model for understanding university teaching and learning.

Comprehensive course design follows a 12-step planning process (see Figure X-3). The first five steps in CCD are an extension and elaboration of the backward course. Steps 6 through 9 ask the teacher to reflect on four essential elements in Groccia’s model: Students, teachers, context, and content.

Finally, steps 10, 11, and 12 illustrate the instruction, feedback, and revision process. The large arrows on the right side of Figure X-3 indicate that this process is circular, meaning that once the course is designed and taught, the process is repeated for subsequent iterations of the course. Scholarly teaching is a dynamic, not a static process; courses, teaching, and outcomes are in a constant state of review and improvement.



**Figure X-3.** 12 steps of comprehensive course design.

**Assessment and reflection.** Essential to scholarly teaching are the processes of formal and informal reflection and assessment. Brookfield (2017) proposes four lenses that can be engaged in by teachers in the process of critical reflection: (1) the autobiographical, (2) the students' eyes, (3) our colleagues' experiences, and (4) theoretical literature. Brookfield's autobiographical and student lenses are represented in steps 6 and 7 in the course design process – reflecting on what both teachers and students bring to the teaching-learning process, such as background characteristics (e.g., age, gender, socio-economic status, race), prior knowledge, and experience. Consideration of theoretical literature is a component in the preliminary stages of course design and suggests that teachers review both theory and research when selecting appropriate instructional methods (Step 5). *Evidence-Based Teaching* (Buskist & Groccia, 2011) provides a good overview of the need for evidence-based teaching as well as a summary of various empirically supported teaching approaches. For a brief historical overview of higher education learning theories, see Groccia, Nickson, Wang & Hardin, 2014.

Scholarly teaching also requires a combination of summative and formative assessment as well as some degree of feedback from peers, colleagues, and students. Measures of student learning, such as grades and test scores, performance on in- and out-of-class assignments, as well as student engagement and participation indices, should be reviewed to ensure that learning outcomes are achieved. Additionally, formative assessments, such as classroom assessment techniques as described by Angelo and Cross (1993), should be utilized to get feedback on how students are experiencing the teaching approaches used.

Scholarly teaching can also be enhanced by utilizing peer review of teaching and feedback from colleagues and supervisors, as well as teaching consultants and staff from the university's center for teaching (see Buskist et al., 2014 for a practical approach to conducting a helpful peer review of teaching). Revision of course instruction, assessment, and content can then be made based on this assessment and feedback.

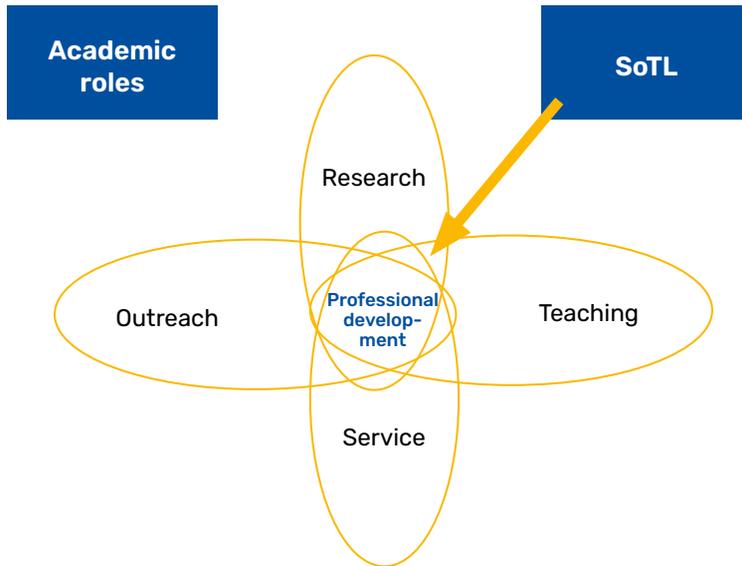
## The scholarship of teaching and learning

**Definitions of the scholarship of teaching and learning (SoTL).** While there are many definitions of SoTL, one that I have used is research that investigates the variables, factors, and contexts that influence teaching and learning with an emphasis on understanding and improving both. This research is then shared with others through public dissemination channels such as presentations and publications. Stated in an even simpler form, SoTL can be defined as the scholarly practice, investigation and sharing of the philosophy, methods, and outcomes of the teaching and learning process. For additional definitions of SoTL, see Patricia Albergaria Almeida's excellent 2010 article entitled *Scholarship of Teaching and Learning: An Overview* ([https://www.researchgate.net/publication/233817081\\_Scholarship\\_of\\_Teaching\\_and\\_Learning\\_An\\_Overview](https://www.researchgate.net/publication/233817081_Scholarship_of_Teaching_and_Learning_An_Overview)) and an annotated list of SoTL definitions compiled by Buffalo State University et al. (N.D.): <https://sotl.illinoisstate.edu/downloads/definingSoTL.pdf>.

A central point in most or all these definitions is the intent of the educational practitioner/researcher to go beyond the investigation of teaching variables or approaches to improve his/her practice to the dissemination of this analysis to others to enhance the general practice and outcomes of higher education.

**SoTL within an expanded view of academic roles.** An academic staff member's position is influenced by many factors, including national, institutional, and departmental goals, values, and needs, and the individual's skills, interests, needs, goals, and career stage. One role definition does not fit all academics. While rec-

ognizing the dynamic nature of academic responsibilities and expertise, some higher education institutions around the world are broadening the expectations of academic staff to go beyond the traditional “three-legged stool” model of research, teaching, and service to a model that includes four overlapping functions (Groccia & Hunter, 2012, p. 9) – teaching, research/scholarship, outreach, and service, each with a professional development component (Figure X-4).



**Figure X-4.** The place of SoTL within the roles of an academic staff member in today’s university (adapted from Groccia and Hunter, 2012, p. 9).

Within this expanded view of academic staff roles, *Teaching* includes not only the obvious teaching of established classes but also teaching-related functions such as advising undergraduate and postgraduate students and revising existing courses and/or developing new ones.

*Research/Scholarship* includes both what we traditionally think of as research (discovery of innovative ideas/knowledge/processes) and what Ernest Boyer (1990) calls the scholarship of integration (melding old and new ideas and crossing discipline boundaries to create new fields or bring more richness into both fields).

*Outreach* involves applying the skills and knowledge in one’s discipline to help others in the general community. Examples of Outreach include such activities as pro-bono clinical practice (medical or health professions), advising city planners on a building project (urban design), speaking in high schools on

one's subject area (all), arranging service-learning credit for students to assist with tax preparation for the elderly (accounting), or designing a safe house for pets or abused women fleeing their spouses (veterinary medicine).

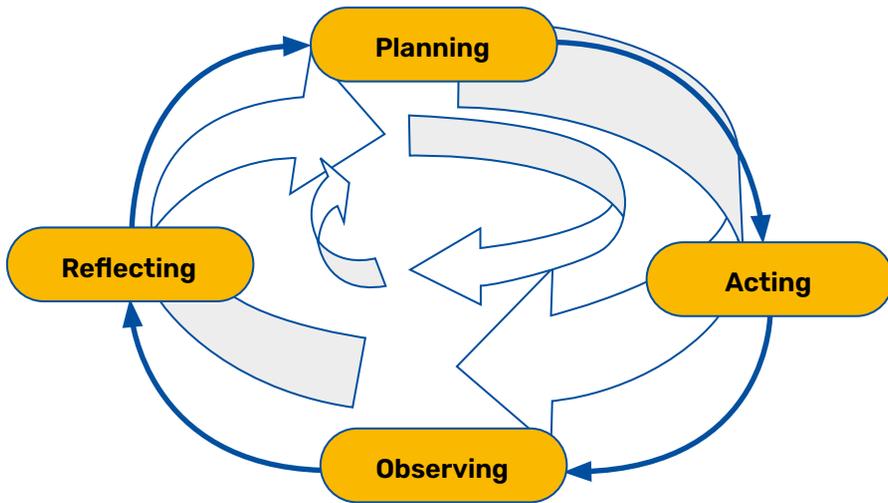
*Service* involves “good citizen” duties such as serving on hiring, parking, and other departmental and university committees, organizing a portion of a conference in one's discipline, and participating in recruitment and admission activities in one's department. Service differs from outreach in that the former does not capitalize on disciplinary expertise, while outreach activities are directly connected to the skills, abilities, and knowledge related to professional training or position.

*Professional Development* includes regular and continuous efforts to get better at each of the above activities. This could include professional reading, attendance at conferences and workshops, enrolling in skill development courses, consulting with colleagues, peer-review of teaching, and critical self-reflection.

SoTL, within this expanded view of academic staff roles, occupies the space within the intersection of teaching and research. Considered in this way, SoTL does not necessarily indicate added professional responsibilities but rather a synthesis and integration of two traditional academic functions.

**A very small history of SoTL.** While SoTL is mainly associated with Boyer's 1990 seminal publication *Scholarship Reconsidered: Priorities of the Professoriate*, other authors such as Braxton and Toombs (1982), Pellino et al. (1984), and Shulman (1987) highlighted efforts to integrate research and teaching to enhance the latter.

The origins of SoTL can be considered to predate these authors and rest on the foundation of action research. According to George (2023), action research is attributed to Kurt Lewin (1944) and is “a research method that aims to simultaneously investigate and solve an issue. In other words, as its name suggests, action research conducts research and takes action at the same time. ... A highly interactive method, action research is often used in the social sciences, particularly in educational settings” (n.p.). Particularly popular with educators as a form of systematic inquiry, action research prioritizes reflection and bridges the gap between theory and practice” (n.p.) (George, 2023).



**Figure X-5.** Lewin's action research (Education Planning and Research Division (EPRD), 2008. *Manual of action research*. Putrajaya: The Ministry of Education Malaysia (cited in Amim, Rashad and Teh, 2019).

Boyer (1990) proposed a scholarship of teaching to address the unbalanced standing of teaching and research in university reward and recognition systems to provide teaching with an appropriate, possibly even equal level of importance. “Learning” was added later to create the acronym SoTL in recognition of the student-centered focus of this scholarship and to highlight the importance of putting scholars in the role of co-learners (Almeida, 2010). According to Boyer (1990), the scholarship of teaching explores the transmission of knowledge, thereby making the knowledge of the professor understood and known by others. Boyer’s concept of the scholarship of teaching asked how knowledge created through the scholarships of discovery, integration, and application can be shared, modified, and expanded.

Lee S. Shulman (1999) described the essential conditions of any form of scholarship and further connected SoTL to accepted research standards and processes. According to Shulman:

For an activity to be designated as scholarship, it should manifest at least three key characteristics: It should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one’s scholarly community. We thus observe, with respect to all forms of scholarship, that they are acts of mind or spirit that have been made public in some manner, have been subjected to peer review by members of one’s intellectual or professional community, and can be cited, refuted, built upon, and shared among members of that community. Scholarship properly communicated and critiqued serves as the building block for knowledge growth in a field. (p. 13).

Shulman goes on to provide a rationale for engaging in SoTL research:

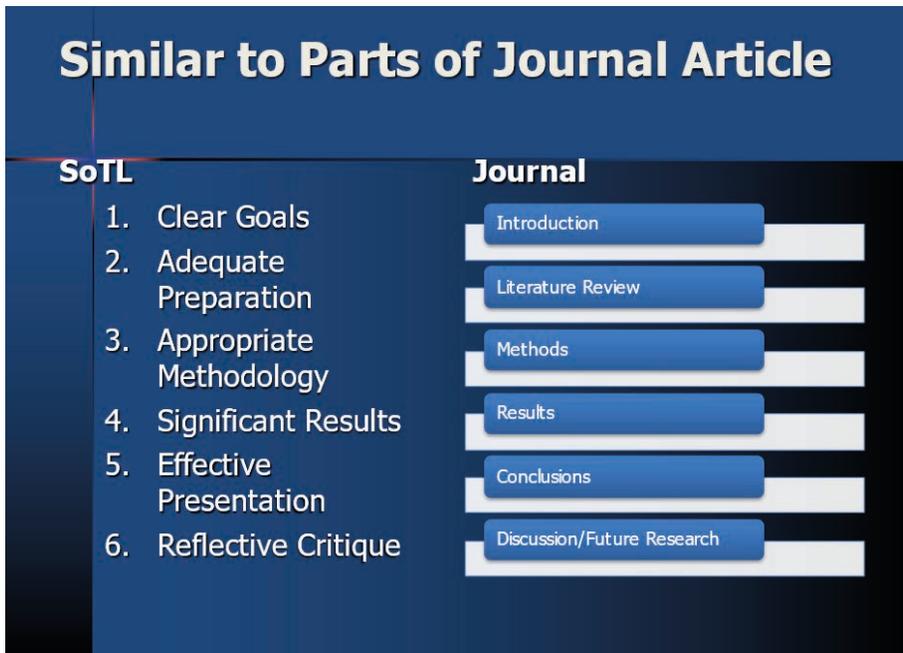
These three characteristics are generally absent with respect to teaching. Teaching tends to be a private act (limited to a teacher and the particular students with whom the teaching is exchanged). Teaching is rarely evaluated by professional peers. And those who engage in innovative acts of teaching rarely build upon the work of others as they would in their more conventional scholarly work. When we portray those ways in which teaching can become scholarship through course portfolios, therefore, we seek approaches that render teaching public, critically evaluated, and useable by others in the community. (p.13.)

Glassick, Huber, and Maeroff in *Scholarship Assessed: Evaluation of the Professoriate* (1997), built upon Boyer's 1990 work and provided a foundation for Shulman's later description of scholarship by describing the criteria by which SoTL could be evaluated and assessed. According to Glassick, Huber, and Maeroff, all works of scholarship involve six criteria in a common sequence over time:

1. Clear goals
  - a. The basic purposes of the work are stated clearly.
  - b. Research objectives are described in ways that are realistic and achievable.
  - c. Important research questions for the field are identified.
2. Adequate preparation
  - a. Provides an understanding of existing scholarship.
  - b. Applies the necessary investigative skills to his/her work.
  - c. Brings together the resources (time, personal, fiscal, professional) necessary to move the project forward.
3. Appropriate methods
  - a. Selects research methods appropriate to the goals.
  - b. Applies the methods selected effectively.
  - c. Adapts and modifies procedures in response to changing circumstances.
4. Significant results
  - a. Achieves the intended goals.
  - b. Adds consequentially to knowledge in the field.
  - c. Suggests additional areas for further research.

5. Effective presentation
  - a. Uses a suitable style and effective organization to present the work to others.
  - b. Uses appropriate forums for communicating work to its intended audiences.
  - c. Presents his/her message with clarity and integrity.
6. Reflective critique
  - a. Reviews and critically evaluates work.
  - b. Brings an appropriate breadth of evidence to the critique.
  - c. Suggests evaluation alternatives to improve the quality of future work.

I find it interesting to note that the six criteria for assessing SoTL work proposed by Glassick, Huber, and Maeroff mirror the traditional parts of standard research design and journal publication format (see Figure X-6 below).



**Figure X-6.** Similarity of Glassick, Huber and Maeroff's six criteria for assessment of SoTL to journal article/research format.

For additional resources describing the history of SoTL, as well as additional links to SoTL journals and books, conferences and associations, and annotated literature database I recommend you get acquainted with the website created by the University of Connecticut at <https://guides.lib.uconn.edu/sotl/links>.

**Some guiding ideas for identifying a SoTL question or problem (Note: the ideas below are NOT exhaustive).** When one considers developing a SoTL project, they are often motivated for three reasons: The project addresses a question of interest about one's teaching and students' learning; it enhances teaching and students' learning and/or the overall quality of university education; or provides an opportunity to develop one's career in terms of publications or professional presentations. The focus of the research can be directed to the enhancement of student, institutional or personal development, as well as providing a contribution to advancing professional or disciplinary knowledge.

Some potential areas for SoTL research may include textbook use; note taking habits; the impact of new or revised teaching techniques; incivility or problematic student behavior; development and application of critical thinking skills; modification or application of different learning assessment tools or approaches; modification or application of different assessment of teaching tools or approaches; teacher bias; the impact of extra help or tutorial sessions; course design modifications; classroom space/arrangement design; the impact of differing student or teacher characteristics on learning; the habits and practices of successful/unsuccessful students/teachers; the impact of technology use on student learning or engagement; the impact of AI (e.g. ChatGPT) on student learning and/or academic honesty; student/teacher rapport.

Examples of some questions to ask oneself in developing a SoTL project are: Are there more effective ways to teach your classes? Will adding a new component to your class make a difference in student learning? How might you increase both student learning and student enjoyment of learning? How might you "test" the effectiveness of your teaching methods and how they impact learning? In what ways, if any, does your approach to teaching impact student retention of information? How can you improve student writing skills in your classes? What can you do to increase academic honesty? Do peer reviews of teaching improve teaching effectiveness? How does what you do on the first day of class affect the rest of the semester? Do certain types of testing produce better learning and retention of information?

A common dependent issue in most, but not in all SoTL projects revolves around some aspect of student learning – how does X change student behavior related to the achievement of student learning outcomes or student motivation/satisfaction?

However, additional areas of SoTL research and example questions can revolve around themes related to enhancing student and teacher well-being, creating emotionally safe teaching and learning atmospheres, and other elements that highlight the humanized aspect of teaching and learning.

In general, each of the seven components of the model of teaching and learning previously discussed can be useful in guiding topics for SoTL research.

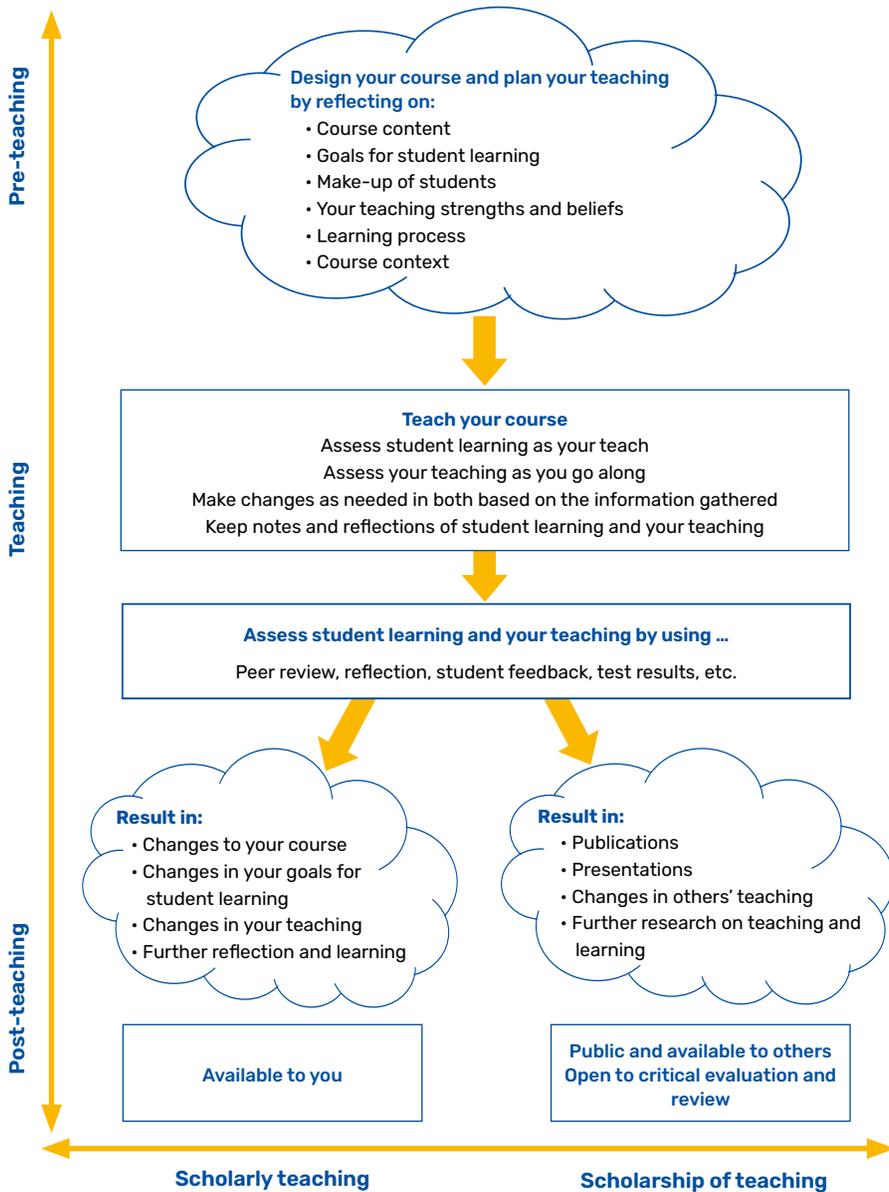
### **Summary: The similarities and differences between scholarly teaching and the scholarship of teaching and learning**

When you approach your teaching development in a reflective and evidence-based manner by gathering data, making changes, and gathering more data, you are engaging in scholarly teaching. When you present and publish your research on teaching, you are engaging in the scholarship of teaching and learning.

Observing others teach, attending seminars, reading books on teaching, and reviewing research on teaching effectiveness and human learning all provide essential data for developing your teaching skills. Coupling this information with assessment and feedback on your teaching strengths and weaknesses and reflection on your teaching goals and your students' learning provides solid data for making informed decisions about changing your teaching practices. When you develop your teaching in such a manner, you approach your teaching development as you would a research question in your discipline area. This approach to teaching development is called scholarly teaching.

When you present and write on how changes in teaching behaviors have affected student learning, you are engaged in the scholarship of teaching and learning. SoTL presentations and writing include baseline assessment data on your teaching, descriptions of the teaching changes, and post-change teaching assessments to show the effects of the change. Usually, the baseline and post-change assessments include measures of student learning (e.g., test scores, grades, and retention) as well as teaching assessments (e.g., student evaluations and teaching observation).

Figure X-7 illustrates the scholarly teaching – scholarship of teaching and learning continuum as a process that encompasses activities that occur before, during, and after the actual instructional process.



**Figure X-7.** Similarities and differences between scholarly teaching and the scholarship of teaching and learning.

The pre-teaching activities reflect the application of comprehensive course design based on Groccia's model for understanding and enhancing teaching. The teaching activities mirror steps 10, 11, and 12 of the steps of CCD (Figure X-3). Assessment of learning and teaching, both summative and formative, occurs during and after teaching. Its results are reviewed, and modifications are implemented as necessary.

During the post-teaching phase scholarly teaching and the scholarship of teaching and learning diverge. Scholarly teaching primarily utilizes post-teaching assessment and feedback to inform future teaching, thereby improving the instructional process and enhancing student learning. When one chooses to engage in the scholarship of teaching and learning, the decision is made to make one's scholarly teaching public, accessible to others, and open to critical review. Both scholarly teaching and SoTL are based on a reflective and evidence-based approach to teaching and learning that is grounded in thoughtful consideration of the multiple and interrelated variables that comprise the instructional process, a course design process based on backward design principles, and the utilization of assessment and critically reflective feedback throughout the teaching and learning process.

## References

- Almeida, P. A. (2010). Scholarship of teaching and learning: An overview. *Journal of the World Universities Forum*, 3(2), 143–154. [https://www.researchgate.net/publication/233817081\\_Scholarship\\_of\\_Teaching\\_and\\_Learning\\_An\\_Overview](https://www.researchgate.net/publication/233817081_Scholarship_of_Teaching_and_Learning_An_Overview). Accessed on 6/7/23.
- Amim, M. Z. M., Rashid, Radzuwan, A., & Teh, K. S. M. (2019). Investigating Issues and challenges in employing action research for teacher training in Malaysian context. *International Journal of Educational Practice*, 7(1). <https://doi.org/10.18488/journal.61.2019.71.30.40>
- Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers*. 2<sup>nd</sup> Edition. San Francisco, CA: Wiley.
- Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. New York, NY: Carnegie Foundation.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience and school*. Washington, D. C.: National Academies Press.
- Braxton, J. M., & Toombs, W. (1982). Faculty uses of doctoral training: Consideration of a technique for the differentiation of scholarly effort from research activity. *Research in Higher Education*, 16, 265–282. <https://doi.org/10.1007/BF00973587>
- Brookfield, S. D. (2017). *Becoming a Critically Reflective Teacher*, 2nd Edition. San Francisco, CA: Wiley Publishing.

- Buffalo State College, et al. (N. D.). Definitions of the scholarship of teaching and learning (SoTL). <https://sotl.illinoisstate.edu/downloads/definingSoTL.pdf>. Accessed on 5/5/23.
- Buskist, W., & Groccia, J. E. (Eds.). (2011). Evidence-based teaching. *New Directions in Teaching and Learning, No 128*. San Francisco, CA: Jossey-Bass.
- Buskist, W., Ismail, E. A., & Groccia, J. E. (2014). A practical model for conducting helpful peer review of teaching. In J. Sachs, & M. Parsell (Eds.), *Peer review of learning and teaching in higher education: International perspectives*. London: Springer. Pp. 33–52.
- Education Planning and Research Division (EPRD). (2008). *Manual of action research*. Putrajaya: The Ministry of Education Malaysia.
- George, T. (2023). What is action research? Definition & examples. <https://www.scribbr.com/methodology/action-research/>. Accessed on 5/4/23.
- Glassick, C. E., Huber, M. T., & Maeroff, G. I. (1997). *Scholarship assessed: Evaluation of the professoriate*. San Francisco, CA: Jossey-Bass.
- Groccia, J. E. (2012). A model for understanding university teaching and learning. In J. E. Groccia, M. A. T. Alsudairi, & W. Buskist (Eds.), *Handbook of college and university teaching: A global perspective*. Thousand Oaks, CA: Sage Publications. P. 9.
- Groccia, J. E., & Hunter, M. S. (2012). *The first-year seminar: Designing, implementing, and assessing courses to support student learning and success: Volume 2: Instructor training and development*. National Resource Center for the First-Year Experience and Students in Transition. University of South Carolina, Columbia, SC.
- Groccia, J. E., Nickson, S. C., Wang, C., & Hardin, H. (2014). Historical overview of learning theories. In B. F. Tobolowsky. (Ed.). *Paths to learning: Teaching for engagement in college*. Columbia, SC: University of South Carolina, National Resource Center for the First-Year Experience and Students in Transition. Pp. 31–45.
- Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, 2(4), 34–46. <https://doi.org/10.1111/j.1540-4560.1946.tb02295.x>.
- Pellino, G., Blackburn, R., & Boberg, A. (1984). The dimensions of academic scholarship: Faculty and administrator views. *Research in Higher Education*, 20(1), 103–115. <https://doi.org/10.1007/BF00992038>
- Shulman, L. S. (1987). Knowledge and teaching foundations of the new reform. *Harvard Educational Review*, 57(1), 1–23. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
- Shulman, L. S. (1998). Course anatomy: The dissection and analysis of knowledge through teaching. In P. Hutchings (Ed.) *The course portfolio: How faculty can examine their teaching to advance practice and improve student learning* (p. 13). Sterling, VA: Stylus. <https://files.eric.ed.gov/fulltext/ED441393.pdf>. Accessed 5/18/23.
- Shulman, L. S. (1999). Taking learning seriously. *Change: The Magazine of Higher Learning*, 31(4), 10–17. <https://doi.org/10.1080/00091389909602695>
- University of Connecticut. (N.D.). Topic: Scholarship of teaching and learning (SOTL) – Selected SoTLlinks. <https://guides.lib.uconn.edu/sotl/links>. Accessed 5/18/23.