

## ENGAGING WITH THE LITERATURE ON TEACHING AND LEARNING

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Doing research on teaching and learning is a scholarly endeavor, which means not only gathering and analyzing evidence in a rigorous fashion but also studying the scholarly literature in the field. Engaging with the relevant literature early and often will help you develop a meaningful question and effective methodology. I deliberately use the phrase “engaging with the literature” rather than “conducting a literature review” because the latter sounds like a discrete step than can be completed and “checked off” at the beginning of a project. I recommend that you begin reviewing the literature while you are formulating and refining your research question and continue to explore the literature as you define your research methods and analyze the evidence you collect.

If you are just getting started doing SoTL, you will find it very useful to read a few foundational works on teaching, learning, and course design. I have marked several books and articles with an asterisk (\*) to flag them as essential reading. These works discuss key pedagogical theories and principles that you can use to help frame a research question.

### Teaching, Learning, and Course Design: Foundational Works and Learning Theories

\*Ambrose, Susan A., et al. *How Learning Works: Seven Research-Based Principles for Smart Teaching*. San Francisco: Jossey-Bass, 2010. Each chapter is devoted to a particular learning principle and includes a set of specific strategies for teaching and assessing with that principle in mind. For a brief overview, see: <http://tinyurl.com/ycraobu>.

Anderson, Lorin W., et al., eds. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Abridged ed. New York: Longman, 2001. This revision of Bloom's classic taxonomy divides learning into several “process categories”—remember, understand, apply, analyze, evaluate, and create—and “knowledge dimensions”: factual, conceptual, procedural, and meta-cognitive. Helpful for define learning outcomes.

\*Bain, Ken. *What the Best College Teachers Do*. Cambridge: Harvard Univ. Press, 2004. Offers an analysis not of teaching “techniques” but of how successful college teachers conceive of their work as teachers and structure the learning experiences of their students.

Bransford, John D., Ann L. Brown, and Rodney R. Cocking, eds. *How People Learn: Brain, Mind, Experience, and School*, expanded ed. Washington, D.C.: National Academy Press, 2000. An accessible introduction to “the science of learning.”

Cousin, Glynis. “An Introduction to Threshold Concepts.” *Planet*, no. 17 (Dec. 2006): 4-5. Clear and concise. <http://www.gees.ac.uk/planet/p17/gc.pdf>

\*Davis, James R. and Bridget D. Arend. *Seven Ways of Facilitating Learning: A Resource for More Purposeful, Effective, and Enjoyable College Teaching*. Sterling, VA: Stylus Publishing, 2013.

Fink, Dee L. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass, 2003.

King, Patricia M. and Karen S. Kitchener. “The Reflective Judgment Model.” An overview of King and Kitchener's research-based developmental model of how students develop critical thinking and reflective judgment. <http://www.umich.edu/~refjudg/>

Meyer, Jan, and Ray Land, “Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines,” Occasional Report 4 (May 2003). <http://tinyurl.com/cq2zxyk>

- \*Wiggins, Grant and Jay McTighe, *Understanding by Design*, 2<sup>nd</sup> ed. Upper Saddle River, NJ: Pearson Education, 2006. Although this book is burdened with an apparatus of acronyms and rubrics, its discussion of understanding and “backward design” is essential reading.
- \*Wirth, Karl R. and Dexter Perkins. “Learning to Learn,” 2008. This essay provides a concise overview of recent models of learning. <http://tinyurl.com/bu5r6y6>
- Wiske, Martha Stone, ed. *Teaching for Understanding: Linking Research with Practice*. San Francisco: Jossey-Bass, 1998.

#### The Scholarship of Teaching and Learning: Research Methods

- Berk, Ronald A. *Thirteen Strategies to Measure College Teaching*. Sterling, Virginia: Stylus Publishing, 2006.
- \*Bishop-Clark, Cathy and Beth Dietz-Uhler, *Engaging in the Scholarship of Teaching and Learning: A Guide to the Process, and How to Develop a Project from Start to Finish*. Sterling, Virginia: Stylus, 2012. Very good introduction to the process and methods of doing SoTL work. Includes many useful examples, worksheets, and citations.
- \*Bloch-Schulman, Stephen, et al. “Asking Bigger Questions: An Invitation to Further Conversation.” *Teaching & Learning Inquiry* (2016): 4 (1). Argues in favor of humanistic approaches to SoTL research.
- Cerbin, Bill. *Lesson Study: Using Classroom Inquiry to Improve Teaching and Learning in Higher Education*. Sterling, Virginia: Stylus, 2011. Great guide to collaborative lesson study.
- Chick, Nancy, and La Vonne Cornell-Swanson, Katina Lazarides, and Renee Meyers. “Reconciling Apples & Oranges: A Constructivist SoTL Writing Program.” *International Journal for the Scholarship of Teaching and Learning*. Vol. 8: No. 2, Article 13.
- Felton, Peter. “Principles of Good Practice in SoTL.” *Teaching & Learning Inquiry*. Vol. 1, No. 1 (2013), pp. 121-125.
- Gurung, Regan A. R. “Getting Foxy: Invoking Different Magesteria in the Scholarship of Teaching and Learning.” *Teaching & Learning Inquiry*. Vol. 2, No. 2 (2014), pp. 109-114.
- \*Gurung, Regan A. R. and Beth Schwartz. *Optimizing Teaching and Learning: Practicing Pedagogical Research*. Malden, MA: Wiley-Blackwell, 2009. An excellent introduction to both scholarly teaching and SoTL.
- Gurung, Regan A. R. and Janie H. Wilson, eds. *Doing the Scholarship of Teaching and Learning: Measuring Systematic Changes to Teaching and Improvements in Learning*. New Directions for Teaching and Learning, Number 136. San Francisco: Jossey-Bass, 2014.
- Healy, Ruth L., et al. “Being Ethically Minded: Practising the Scholarship of Teaching and Learning in an Ethical Manner.” *Teaching & Learning Inquiry*. Vol. 1, No. 2 (2013), pp. 23–33.
- Huber, Mary Taylor and Pat Hutchings. *The Advancement of Learning: Building the Teaching Commons*. San Francisco: Jossey-Bass, 2005.
- Huber, Mary Taylor, Pat Hutchings, and Anthony Ciccone. *The Scholarship of Teaching and Learning Reconsidered: Institutional Integration and Impact*. San Francisco: Jossey-Bass, 2011.
- Jhangiani, Rajiv S., et al., eds. *A Compendium of Scales for Use in the Scholarship of Teaching and Learning*. Society for the Teaching of Psychology, 2015. <http://tinyurl.com/zn3dpqn>
- McKinney, Kathleen. *Enhancing Learning through the Scholarship of Teaching and Learning: The Challenges and Joys of Juggling*. San Francisco: Jossey-Bass, 2007.
- \*McKinney, Kathleen, ed. *The Scholarship of Teaching and Learning in and across the Disciplines*. Bloomington: Indiana University Press, 2013. An excellent collection of essays that address critical issues in SoTL methodology.

- Potter, Michael K. and Erika D. H. Kustra. "The Relationship between Scholarly Teaching and SoTL: Models, Distinctions, and Clarifications." *International Journal for the Scholarship of Teaching and Learning*. Vol. 5: No. 1, Article 23.
- Schwartz, Beth and Regan A. R. Gurung, eds. *Evidence-Based Teaching for Higher Education*. American Psychological Association, 2012.
- \*Wilson-Doenges, Georjeanne, Jordan D. Troisi, and Robert A. Bartsch. "Exemplars of the Gold Standard in SoTL for Psychology." *Scholarship of Teaching and Learning in Psychology* (2016): Vol. 2, No. 1, 1–12.

#### Research Methods and Design: General

- Cresswell, John C. *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. 3rd ed. Thousand Oaks, Calif.: Sage Publications, 2013.
- Cresswell, John C. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 4th ed. Thousand Oaks, Calif.: Sage Publications, 2013.
- Denzin, Norman K. and Yvonna S. Lincoln, eds. *The SAGE Handbook of Qualitative Research*. 4th ed. Thousand Oaks, Calif.: SAGE Publications, 2011.
- Locke, Lawrence F., Stephen Silverman, and Waneen W. Spirduso. *Reading and Understanding Research*. 3rd ed. Thousand Oaks, Calif.: Sage Publications, 2009.
- Weiss, Robert S. *Learning From Strangers: The Art and Method of Qualitative Interview Studies*. New York: Free Press, 1995.

#### Discipline-Specific SoTL

- \*Gurung, Regan A. R., Nancy L. Chick, and Aeron Haynie, eds. *Exploring Signature Pedagogies: Approaches to Teaching Disciplinary Habits of Mind*. Sterling, Virginia: Stylus Publishing, 2009. Analyses of discipline-specific pedagogies and related SoTL research. Essential!
- Huber, Mary Taylor and Sherwyn P. Morreale, eds. *Disciplinary Styles in the Scholarship of Teaching and Learning: Exploring Common Ground*. Washington, D.C.: American Association for Higher Education, 2002.
- Kelly, Niamh, Susan Nesbit, and Carolyn Oliver. "A Difficult Journey: Transitioning from STEM to SoTL." *International Journal for the Scholarship of Teaching and Learning*. Vol. 6: No. 1, Article 18.
- Pace, David, and Joan Middendorf, eds. *Decoding the Disciplines: Helping Students Learn Disciplinary Ways of Thinking*. *New Directions for Teaching and Learning* 98 (Summer 2004). See also: <http://decodingthedisciplines.org/index.html>

#### Model Articles Useful to SoTL Scholars Regardless of Discipline

- Bloch-Schulman, Stephen. "A Critique of Methods in the Scholarship of Teaching and Learning in Philosophy." *Teaching & Learning Inquiry* (2016): 4 (1). A discussion of SoTL methods appropriate for philosophy, including an analysis of a think-aloud exercise.
- Calder, Lendol. "Uncoverage: Toward a Signature Pedagogy for the History Survey." *Journal of American History* 92 (March 2006): 1358–70.
- Chick, Nancy L., Holly Hassel, and Aeron Haynie. "'Pressing an Ear against the Hive': Reading Literature for Complexity." *Pedagogy* 9 (2009): 399-422. Excellent example of how to apply disciplinary methods (in this case, close reading) to SoTL.
- Crowe, Alison, Clarissa Dirks, and Mary Pat Wenderoth. "Biology in Bloom: Implementing Bloom's Taxonomy to Enhance Student Learning in Biology." *CBE—Life Sciences Education* 7 (Winter 2008): 368-81. <http://tinyurl.com/7bybscg>

- DeHaan, Robert L. "Teaching Creativity and Inventive Problem Solving in Science." *CBE—Life Sciences Education* 8 (Fall 2009): 172-181. A well-structured analysis of a teaching and learning problem, with a call for additional research. <http://tinyurl.com/86vs2nk>
- Sizemore, O. J. and Gary W. Lewandowski, Jr. "Learning Might Not Equal Liking: Research Methods Course Changes Knowledge but Not Attitudes." *Teaching of Psychology* 36 (2009): 90-95.
- Voelker, David J. "Assessing Student Understanding in Introductory Courses: A Sample Strategy." *History Teacher* 41 (August 2008): 505–18. A good example of a meaningful SoTL question, situated within the relevant literature—but the methods used to collect evidence of student learning are somewhat rudimentary.

#### Other Essential Publications on Teaching and Learning

- Angelo, Thomas A. and K. Patricia Cross. *Classroom Assessment Techniques: A Handbook for College Teachers*. 2nd ed. San Francisco: Jossey-Bass, 1993. This book describes 50 assessment techniques, many of which could be used to gather evidence of learning for a SoTL project.
- Barkley, Elizabeth F., K. Patricia Cross, and Claire Howell Major. *Collaborative Learning Techniques: A Handbook for College Faculty*. San Francisco: Jossey-Bass, 2005.
- Handelsman, Jo, Sarah Miller, and Christine Pfund. *Scientific Teaching*. Madison: Wisconsin Program for Scientific Teaching, 2007. SoTL for scientists.
- Johansson, Charity and Peter Felton. *Transforming Students: Fulfilling the Promise of Higher Education*. Baltimore: Johns Hopkins University Press, 2014.
- Michaelsen, Larry K., Arletta Bauman Knight, and L. Dee Fink, eds. *Team-Based Learning: A Transformative Use of Small Groups in College Teaching*. Sterling, VA: Stylus Publishing, 2004.
- \*Nelson, Craig E. "On the Persistence of Unicorns: The Trade-Off between Content and Critical Thinking Revisited." In Bernice A. Pescosolido and Ronald Amizade, eds., *The Social Worlds of Higher Education: Handbook for Teaching in a New Century*, 168-184. Boston: Pine Forge Press, 1999. An excellent and provocative essay on students' cognitive development.
- Nilson, Linda B. *Teaching at its Best: A Research-Based Resource for College Instructors*. 3rd ed. San Francisco: Jossey-Bass, 2010. Perhaps the best practical handbook for teaching.
- Stevens, Dannelle D. and Antonia J. Levy. *Introduction to Rubrics: An Assessment Tool to Save Grading Time, Convey Effective Feedback and Promote Student Learning*. Sterling, Virginia: Stylus Publishing, 2004.
- Walvoord, Barbara E. *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education*. 2nd ed. San Francisco: Jossey-Bass, 2010. A great resource for SoTL scholars who want to use their work to support institutional assessment.
- Walvoord, Barbara E. and Virginia Johnson Anderson, *Effective Grading: A Tool for Learning and Assessment*. San Francisco: Jossey-Bass, 1998.

#### Additional Resources

- Association of American Colleges and Universities: VALUE: Valid Assessment of Learning in Undergraduate Education. Research-based rubrics for assessing critical thinking, creative thinking, etc. <http://www.aacu.org/value/index.cfm>
- International Journal for the Scholarship of Teaching and Learning*. Open-access online journal. <http://digitalcommons.georgiasouthern.edu/ij-sotl/>
- ISSOTL: International Society for the Scholarship of Teaching and Learning. See the Resources section. <http://www.issotl.com/>
- Journal of Chemical Education* (American Chemical Society). <http://pubs.acs.org/journal/jceda8>

*Life Sciences Education* (American Society for Cell Biology). Free, full-text access to peer-reviewed SoTL research in the life sciences—an excellent source of model articles! <http://www.lifescied.org/reports/most-read>

*Pedagogical Pundit*. SoTL site by Regan Gurung. See the section “On Teaching.” <http://pedagogicalpundit.com>

*Physics Education* (an international journal). Some articles are available for free. <http://iopscience.iop.org/0031-9120/>

*Scholarship of Teaching and Learning in Psychology*. <http://www.apa.org/pubs/journals/stl/>

*SoTL Guide*. Taylor Institute for Teaching and Learning, University of Calgary. Developed by former OPID WTF&S co-director, Nancy Chick. <http://sotl.ucalgaryblogs.ca/>

*Teaching & Learning Inquiry: The ISSOTL Journal*. Open-access online journal. <http://tljournal.com/>

\*UW-Milwaukee, Center for Instructional and Professional Development, SoTL Resources. <http://www4.uwm.edu/cipd/sotl/>



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