THE PURSUIT OF PEDAGOGICAL RESEARCH IN
THE DISCIPLINES

CUNY Community College Research Grant Workshop
10 January 2019
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I. Introductions and Acknowledgements

II. Workshop Goals and SoTL Context, Michele Piso Manoukian

III. SoTL Examples and Experiences, Tara Coleman and Maria Entezari

IV. Breakout Sessions
   - Framing SoTL Questions and the Lit Review, Tara Coleman, English
   - Framing SoTL Questions and Evidence, Maria Entezari, Biology;
     Eric Hofmann, The LaGuardia Center for Teaching and Learning

V. Questions and Observations; Resources
SoTL is a process that engages “what we need to know and be able to do in order to teach what we know to someone who does not.” (Shulman, 2002)

SoTL assumes *dynamic attention* to the relation/gap between *disciplinary content knowledge* and *pedagogical content knowledge*
Why do we teach (the new wave, *Middlemarch*, chemistry, research methods) the way we do (discussion, lecture, problem-based, project-based, etc.)? What is my rationale? Is my way effective in improving learning?

• **What** am I doing now that I would like us (teacher and students) to do better?

• **What** pedagogical issues haunt me? What are my compelling questions, researchable ideas? (For example, “*concept development*” may be a topic to be revised into a line of more closely defined inquiry.

• **What** can we, my students and I, practice more often or differently? (Example, *defining/questioning concepts*).
In *Scholarship Reconsidered*, 1990, Ernest Boyer identified four distinct areas of scholarship in higher education:

- scholarship of *discovery* (new knowledge in the disciplines),
- scholarship of *integration* (research connecting disciplines),
- scholarship of *application* (research applied to needs/problem).
Boyer added a fourth category: "the scholarship of teaching," which is complementary to traditional forms of scholarship; worthy of reward and recognition: focuses on improving teaching and learning through systematic and reflective study and analysis (Boyer, 1990, p. 24). Boyer leaves vague the process of such scholarship.

Shulman extends Boyer: focuses on scholarship of teaching and learning and provides a definition:

• systematic, critically reflective,
• informed by relevant literature,
• open to external review and critique
• aimed at improving student learning and constructing verifiable and shared knowledge of the same. (Shulman, Huber, Hutchings; distinct from good teaching, scholarly teaching)
7. HISTORICAL EXPLOSIONS

• **Knowledge**: advances in technology, the sciences, and neurology

• **Data-driven instruction**: accountability and assessment

• **Demographics**: diversity of individuals, experiences, and ways of knowing

• **Justice in education**: equitable educational environment; decentered classrooms and hierarchies; collaborative student/faculty research projects;
GETTING STARTED

• Explore a worthy t/l issue problem, question related to your course, discipline, assignment, students, program, etc. Frame the issue or problem as a question.
• Identify who will be studied.
• Review your knowledge, the direct or indirect experiences shaping context.
• Identify at-hand information/artifacts that can help to answer your question.
• Identify additional information necessary to answer your question.
• Research strategy: portfolios, focus groups, interviews, experiment, etc.
• Identify logistical constraints: Time frame, challenges, resources, IRB,
• Identify outlets for critical review.
Ask
• What is my pedagogical method for teaching content (discussion, lecture, performance, computer-based interactions, project-based, problem-based, etc.)? How do I represent content?

Clarify
• Personal teaching and learning objectives (passion)
• Disciplinary substance, its issues and topics, the animating concepts and principles to be grasped, practiced, applied, transferred
• Disciplinary/departmental objectives

Identify
• The point at which you or your students falter or fly: the bottleneck or ah ha moment
• The research method deployed to capture the effects of your pedagogy
HUTCHINGS’ TAXONOMY: ASKING QUESTIONS

https://www.youtube.com/watch?v=JCxPttq_e_Y
SOME EXAMPLES: QUANTITATIVE/MIXED

- **Question:** To what extent does student involvement in co-curricular experiences affect retention? (number of students/hours, value attributed; gender, race, employment, immigrant, major, etc.): method: questionnaire

- **How do students read literary texts in a literature course?** Method: Exams and interviews, focus groups, discussion blogs; attitude survey.
McKinney’s problem: Observed graduating majors lacked the desired level of “sociological imagination” and of sociological research skills.

Sought literature on how students learn sociology and found little literature.

Decided to uncover how her own students learn sociology; and what factors are statistically associated with learning or success in the discipline.

Question: What are senior sociology majors’ beliefs about how they best learn sociology, and 2) What factors relate to learning or success (op. def.) in the discipline?

Verbal, textual, visual; voice of participant
• How does enrollment in LaGuardia’s first year seminar affect GPA?
• How does class size affect student learning?
• What Is: a picture of the problem: how do my students understand this key disciplinary concept (close reading, film grammar)?
• What Works: evidence for the effectiveness of certain strategies. Example: to what extent has “flipping learning” in my physics class affected student attitudes toward chemistry?
KEY TERMINOLOGY

• **Pedagogy**: Processes and relationships of learning and teaching (Stierer and Anioniou, 2004) (distinct from “education”)

• **Research**: Systematic, evidence-informed, critical, self-critical inquiry; advances knowledge, (Bassey, 1989); finding out something. making it public

• **SoTL**: All of the above; its particular focus on practices of teaching and learning is also systematic, critically reflective, informed by relevant literature, open to external review and critique, and aimed at improving student learning and constructing verifiable and shared knowledge of the same. (Shulman, et al; distinct from good teaching, scholarly teaching)

• **Pedagogical research methods**: Qualitative (interviews, focus groups, case studies, content analysis) or quantitative (questionnaires, comparisons, etc.), or mixed.
SOTL is the study of the effectiveness of the ways we teach disciplinary content to students disposed or obliged to learn it; our pedagogical research is the study of the reciprocal relation between individuals engaged in classroom teaching and learning.

SOTL or (pedagogical research) in turn affects multiple future points in the learning environment. (Convex mirror, virtuous circle, the widening gyre)
I. Foundational Texts; Current Explorations and Examples


Hutching, Pat, Mary Taylor Huber, and Anthony Ciccone. *Scholarship of Teaching and Learning Reconsidered*. The Carnegie Foundation for the Advancement of Teaching


II. Centers for Teaching and Learning

- Bergen Community College, Center for Innovation in Teaching and Learning
- Carnegie Mellon University, Eberly Center, Teaching Excellence and Educational Innovation
- Columbia Center for Teaching and Learning
- CUNY Graduate Center Teaching and Learning
- Durham Technical College, Teaching-Learning Center
- Elon University, Center for Engaged Learning
- Indiana University Bloomington, Center for Innovative Teaching and Learning
- Michigan State University, Academic Advancement Network
- Rochester Institute of Technology, Innovative Learning Institute
- University of California, Berkeley, Center for Teaching and Learning
- University of Edinburgh, Institute for Academic Development
- University of Virginia, CASTL, Center for Advanced Study of Teaching and Learning
- University of Central Florida, Faculty Center for Teaching and Learning
- Vanderbilt University, Center for Teaching

III. Conferences

- ISSOTL 2019
- List of SoTL Conferences Illinois State University

IV. Resources: A SoTL Primer

General Resources

- Faculty Center for Teaching and Learning, University of Central Florida
- Center for Excellence in Teaching and Learning Kennesaw University
- Center for Innovation in Teaching and Learning University of Illinois
- International Society for the Scholarship of Teaching and Learning
- MinneSotl, Documenting and Advancing the Scholarship of Teaching and Learning
- Research Guide Vanderbilt University
- The SoTL Advocate

Journals: Disciplinary

- ISSOTL International Society for the Scholarship of Teaching and Learning
- SoTL Journals with Acceptance Rates
- University of North Carolina, Greensboro, Hosted Online Journals

Journals: Topic Specific

- International Journal Scholarship of Teaching and Learning
- International Journal of Teaching and Learning in Higher Education
- Journal on Excellence in College Teaching
- In Transit The LaGuardia Journal on Teaching and Learning
- Learning Communities Journal
- The International Journal of ePortfolio
Literature Review


Research Methodologies


Project Design


SoTL Writing


SoTL Videos

Scholars on Scholarly Teaching vs SoTL

What is SoTL?

Which SoTL books to read?

V Links to Data Coding

These are links to free coding software:

- http://www.umass.edu/qdap/
• http://www.butleranalytics.com/10-qualitative-data-analysis-software-free/