

PEARL: Promoters of Experiential and Active, Research-based Learning
Distinguished Speaker Series

Researching and Publishing on Teaching: How Do You Start? What is Valued?

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Centre for Teaching and Learning
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SoTL Workshop Exercises

Topics of Interest

What topic would you be interested in exploring in regard to your teaching or student learning?

Why Bother?

Why do you want to engage in SoTL?

How do you hope engaging in SoTL will affect your teaching?

Framing Your Topic as a Question

Reword your topic of interest into a question that you could answer. Consider Hutchings' Framework.

Tip: it might be useful to mind map your topic.

Refining Your Question

In pairs, help one another refine your questions. Consider assumptions, whether the question is answerable, too specific, too broad, whether there are too many studies on the topic, etc.


Answering Your Question


To start, take a few moments and individually, think through, how might you answer your question? Then, in small groups, help one another think of the ways they can answer their questions.

Welcome!

What topic would you be interested in exploring in regard to your teaching or student learning?

- Think individually, and then discuss with the people around you over lunch!




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What is SoTL?

- **Systematic study** of teaching and learning
- Uses **established criteria** to understand how teaching can maximize or develop a more accurate understanding of learning
- **Results in products** that are publicly shared for critique and use by an appropriate community


Potter & Kustra, 2011

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SoTL's Many Faces




- Experimental analysis
- Critique of literature
- Meta-analysis
- Description of a technique
- Case study
- Theoretical model
- Annotated bibliography


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Scholarly Teaching...?

- Teaching grounded in critical reflection
- Uses systematically, strategically-gathered evidence
- Maximizes learning through effective teaching


Potter & Kustra, 2011


All faculty should strive for scholarly teaching, but not all will engage in the scholarship of teaching. 

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Why bother...?

'Go and teach your students as if the country's future depended on it – which it does – and then go and publish as much research as possible. And never lose sight of either of those tasks.'





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Why bother...?

Why do you want to engage in SoTL?

- How do you hope engaging in SoTL will affect your teaching?



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Why do SoTL?

- Improve student learning
- Help with classroom and program assessment
- Bring in outside funding
- Add publications and presentations
- Reflect on teaching and learning
- Strengthen budget requests
- Inform future faculty
- Internal and external teaching awards

McKinney, 2007

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Why do research in any field?



- To pursue your interests
- To learn something new
- To hone your problem-solving skills
- To challenge yourself in new ways
- To contribute new knowledge to the world

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SoTL: Getting Started

In scholarship and research, having a 'problem' is at the heart of the investigative process; it is the compound of the generative questions around which all creative and productive activity revolves. But in one's teaching, a 'problem' is something you don't want to have, and if you have one, you probably want to fix it.

Bass, 1999

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Framing Your Question

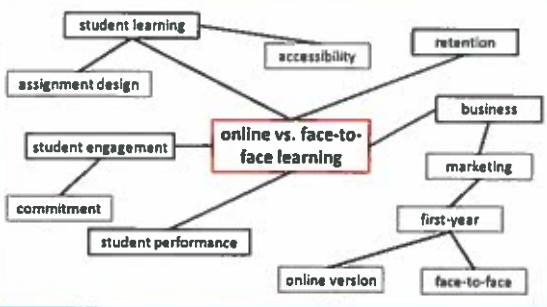
Hutchings' Categories of SoTL Questions

- What works
- What is
- What's possible
- Theory-building

Considering Hutchings' categories (p. 2), reword your topic into a question that you could answer. ~5 minutes

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Framing Your Question: An Example



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    graph TD
      A[online vs. face-to-face learning] --- B[student learning]
      A --- C[accessibility]
      A --- D[retention]
      A --- E[assignment design]
      A --- F[student engagement]
      A --- G[commitment]
      A --- H[student performance]
      A --- I[business]
      A --- J[marketing]
      A --- K[first-year]
      A --- L[online version]
      A --- M[face-to-face]
  
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Framing Your Question: An Example

- Does course delivery format impact student retention and academic performance in a first-year Business Marketing course?
- Do students in a face-to-face first-year Business Marketing course perform better on assignments than students in the online version of the same course?
- Are there any significant differences in student academic performance between online courses and face-to-face courses?

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Refining Your Question

In pairs, help one another refine your questions. ~10 minutes



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Answering Your Question

1. Individually, think through, how might you answer your question? ~5 minutes

1. Then, in small groups, help each other think of ways to answer your questions.

- Consider the project type, possible data collection methods, and publication format. ~15 minutes

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Make Your Work Public!

How can you disseminate your research or engage in outreach?

- Publications
- Presentations
- Online Resources

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To summarize...

- Identify a topic
- Frame the research question
- Refine, refine, refine
- Consult the literature and your colleagues
- Consider the format
- Collect data
- Make your work public!

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Scholarship of Teaching and Learning Tips, Techniques, and Resources

1. Identify the problem. Choose a topic.

- a. Choose a topic or find a problem that can be investigated empirically, theoretically, or critically. Zoom in. And get comfortable. You'll be here awhile.
- b. A helpful strategy at this stage is observation – what do you see happening in your classroom? You can start with a teaching approach that you are good at, or interested in, or struggling with. Or think of an issue you have witnessed in your teaching, an a-ha moment in your students' learning.
- c. Ask around – consider your and others' interests. Consider your discipline and its teaching demands.
- d. Collaborate with colleagues both in and out of your department. Many faculty members assume that all instructors "teach the same way," which is rarely true.
- e. Be sure your topic is relevant to your current and future teaching, to your discipline, to your students' learning, and feasible to research with the time, resources, and students.

NOTE: One of the most difficult parts of a SoTL project is the first step – choosing a problem to investigate (and later, writing your research question). In their book, *Inquiry Into the College Classroom: A Journey Toward Scholarly Teaching*, Savory, Burnett, and Goodburn (2007) identify the following "starting points" from which you can choose a topic:

- teaching strategies;
- impact of a specific method on student learning;
- technology use;
- misconceptions or prior knowledge;
- transfer of learning to other courses;
- development of understanding of difficult ideas; and
- appropriate and/or effective assessment methods.

2. Frame the research question.

- a. The purpose of the research question is to explain specifically what you want to learn or understand about your topic. I say specifically because the more pointed, the more directed, the more focused the question, the easier it will be to research/answer/collect data/write.
- b. When crafting your research question, don't lose sight of what brought you here in the first place: what do you hope to learn, what's the point, why are you doing this?
- c. Framing your research question is the most important step in the process of classroom research – really come at this using the toddler strategy (why, why, why).

NOTE: In the introduction to *Opening Lines: Approaches to the Scholarship of Teaching and Learning* (Carnegie Foundation, 2000), Hutchings presents the following taxonomy of questions in an effort to categorize the ways in which faculty members can accomplish this inquiry into student learning.

What works?

- This is where many faculty members begin – seeking evidence about the relative effectiveness of various strategies or different teaching approaches. They tend to measure the effectiveness of a classroom strategy.
 - e.g., How does the use of clickers affect students' performance on exams? Does the use of standardized patients enhance student learning in a nursing course?
-

What is?

- Questions aimed not so much at proving (or disproving) the effectiveness of a particular approach or intervention but at describing *what it looks like*. What's happening in your classroom right now? What is actually going on when my students are trying to learn?
 - e.g., What are the dynamics of class discussion vs. lecture around a difficult topic? What benefits/drawbacks do students see in a discussion-based course?
-

What's possible?

- Questions related to teaching and learning goals that have yet to be met or are new to the investigator.
 - e.g., How can I get students to see difficulty as an opportunity instead of a shortcoming?
-

Theory-building questions

- Questions designed to build theoretical frameworks for SoTL similar to those in traditional disciplines.
 - These questions are designed to help build theory for shaping thought about practice, rather than about exploring evidence for the effectiveness of a specific teaching practice.
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3. Consult the Literature

- a. What have others done to address this problem/topic?
- b. Review existing literature – books, journals, newsletters, blogs, magazine articles, etc. Locate a related study/paper as a starting point – this will help you to discover what you want your project to look like, but more importantly, what you don't want it to look like.
- c. Relate and be relevant: How will your work contribute to your practice, your colleagues, both within your university and beyond, and to the study of teaching as a whole?
- d. It's easier to find what you're looking for when you know what you're looking for.
 - Write out your research question at the top of a blank page.
 - Separate the page into two columns.
 - In the first column, jot down what you already know about your topic. What do you think, or hope, you will learn? If you're having trouble, talk it out. Map it. Daydream. Note-take.
 - Once you've filled the page, go off and do a preliminary search using some of the buzzwords you recorded in the first column.
 - Then, in the second column, record your research findings – note authors who support your "gut" feeling, and those who don't (stay close to your enemies; it's really the only way to take them down).
 - Put this document aside - you'll revisit it when you begin writing your paper/proposal.
- e. Once you've collected your resources, cite your references.

NOTE: Unless you are writing a reflective journal or teaching blog, never simply describe a teaching approach you enjoy. Your editors and reviewers expect you to embed your idea in existing literature, connect your practices to existing theories, and assess their effectiveness with data/evidence, always within a conceptual framework.

4. Collect and Analyze Data

- a. The research method, the way in which you collect data and what you will actually do to collect data, is driven only by the research question. In short, the research question drives the design.
- b. Consider your question. Decide whether you will collect qualitative, quantitative, or both types of data. Good scholarship involves assessment of *any* sort, and SoTL is no exception.
 - Qualitative data is fairly textual, resulting in trends/themes and open-ended comments, both dependent on the investigator's questions. Collection is small, purposeful, non-random, sought to help the investigator understand, describe, discover individual and/or group experiences. Qualitative methods include focus groups, interviews, observation, text analysis. Because these methods result in textual data, it can be difficult and time-consuming to analyze – smaller sample sizes may help.
 - Quantitative data focuses more on exactly what it's called – quantity. Collection can be large, random, representative, sought to help the investigator understand group experiences via statistical methods. Findings are precise, presented in quantities/numbers. Quantitative methods include surveys, questionnaires, achievement tests.
- c. "Research on teaching and learning welcomes the context of the classroom in all its complexity as a resource for understanding" (Cross & Steadman, 1996) – you can collect credible data using either affective, process, or performance measures. These can include Likert scores, comments on instructor evaluations, surveys and questionnaires, mid-semester feedback, and more. Basically, collect evidence of student learning. Yes, case studies appear to help students in law learn complex legal theories better than lectures, but can we prove it?
- d. To be or not to REB – if necessary, obtain approval from your institution's ethics review board. This reads like an easy call, but it's not so transparent. MacLean and Poole (2010) write, "the teacher's responsibility to hold students' educational interests paramount provides an important perspective when considering ethical issues for research in teaching and learning." For more information, see the *Ethical Considerations* citations below.
- e. Involve your students as co-researchers. Their insight is valuable.
- f. Seek support from past students. Many students do not realize the effects of more non-traditional approaches to teaching, such as inquiry-based learning, until long after the course is completed.
- g. Research does not end with data collection – analyze, write, consult, reflect, collaborate, and if necessary, collect MORE data.
- h. Draw reasoned, supported conclusions.

5. Write!

- a. Don't give in to the pressure of the "first line."
- b. Just jump in with what you already know – a review of the literature (visit your worksheet), a title, even your biography. Just start writing.
- c. Prepare an outline. Include your data.
- d. State your hypothesis or question at the very start.
- e. Write. Re-write. Rest. Write. Re-write.

6. Make it Public

- a. Learn about the world in which you write.
- b. Be wary of disciplinary language and style differences. SoTL is unique in that it crosses all disciplinary boundaries, without excuses, without apologies, without direction. In many cases, your readers will not already know what you are telling them.
- c. Do not over-acronym. There is no need to shorten common (SC) phrases (P). SC words or P will only confuse your reader, who may not be familiar with well-known disciplinary jargon.
- d. People approach SoTL from a variety of disciplines – this makes it characteristically unique. This also means that your reviewers will be from different disciplines – clarify all of your terms.
- e. Identify appropriate journals. Read them and learn what they publish. Review the author and reviewer's guidelines. Ask questions when you are unsure. Know your audience.

And don't worry: no one is an expert!

Resources

Introductory Resources

- Bass, R. (1999). The scholarship of teaching: What's the problem? *Inventio: Creative thinking about learning and teaching*, 1(1), 1-10.
- Boyer, E.L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. New Jersey: The Carnegie Foundation for the Advancement of Teaching.
- Cross, K.P. & Steadman, M.H. (1996). *Classroom research: Implementing the scholarship of teaching*. San Francisco: Jossey-Bass.
- Glassick, C.E., Huber, M.T., & Maeroff, G.I. (1997). *Scholarship assessed: Evaluation of the professoriate*. New Jersey: The Carnegie Foundation for the Advancement of Teaching.
- Hutchings, P. & Shulman, L.S. (1999). The scholarship of teaching: New elaborations, new developments. *Change*, September/October, 1999, 10-15.
- Kreber, C. & Cranton, P.A. (2000). Exploring the scholarship of teaching. *The Journal of Higher Education*, 71(4), 476-495.
- Shulman, L.S. (1999). Taking learning seriously. *Change*, July/August 1999, 10-17.
- Shulman, L.S. (2000). Inventing the future. In P. Hutchings (Ed.), *Opening lines: Approaches to the scholarship of teaching and learning*. Menlo Park, CA: The Carnegie Foundation for the Advancement of Teaching.

Ethical Considerations for SoTL

- Healey, R.L., Bass, T., Caulfield, J., Hoffman, A. McGinn, M.K., Miller-Young, J., & Haigh, M. (2013). Being ethically minded: Practising the scholarship of teaching and learning in an ethical manner. *Teaching and Learning Inquiry*, 1(2), pp. 23-33. Retrieved from <http://www.jstor.org/stable/10.2979/teachlearninginqu.1.issue-2>
- MacLean, M. & Poole, G. (2010). An introduction to ethical considerations for novices to research in teaching and learning in Canada. *The Canadian Journal for the Scholarship of Teaching and Learning*, 1(2). Retrieved from http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1016&context=cjsotl_rcacea
- Mount Royal University Human Research Ethics Board. (2012). Ethical considerations for dual - role research: Conducting research with students in your own classroom. Retrieved from <http://www.mtroyal.ca/wcm/groups/public/documents/pdf/dualroleresearchers.pdf>
- Pecorino, P.A., Kincaid, S., & Gironde, B. (2008) Research and experimentation in teaching effectiveness: The ethical review process and the IRB. *International Journal for the Scholarship of Teaching and Learning*, 2(1). Retrieved from http://digitalcommons.georgiasouthern.edu/int_jtl/23/

Stockley, D. & Balkwill, L. (2013) Raising awareness of research ethics in SoTL: The role of educational developers. *The Canadian Journal for the Scholarship of Teaching and Learning*, 4(1), Article 7. Retrieved from http://ir.lib.uwo.ca/cjsotl_rcacea/vol4/iss1/7

Other Useful Resources

McKinney, K. (2007). *Enhancing learning through the scholarship of teaching and learning: The challenges and joys of juggling*. San Francisco: Jossey-Bass.

Kathleen McKinney provides practical tips on how writers can move their projects forward, and from there, how they can make their SoTL projects public. She includes a helpful set of questions on “getting started” (p. 26-27) and spends a majority of the book answering them in multiple ways, along with questions and further reading.

Poole, G., Taylor, L., & Thompson, J. (2007). Using the scholarship of teaching and learning at disciplinary, national and institutional levels to strategically improve the quality of post-secondary education. *International Journal for the Scholarship of Teaching and Learning*, 1(2), 1-16.

This article is a great summary of the important elements required for the continual improvement of post-secondary education: an understanding of good teaching across disciplines; use of well-collected data to inform decisions that can affect change; and access to the SoTL projects across disciplines.

Potter, M.K. & Kustra, D.H. (2011). The relationship between scholarly teaching and SoTL: Models, distinctions, and clarifications. *International Journal for the Scholarship of Teaching and Learning*, 5(1), 1-18.

Michael Potter and Erika Kustra provide a thorough investigation of the available literature and relationship between SoTL and scholarly teaching. The authors also provide an accessible and comprehensive definition of both terms – especially useful for beginning SoTL scholars (p. 2-3).

SoTL Publication Outlets

The Canadian Journal for the Scholarship of Teaching and Learning (CJSoTL)

CJSoTL is the official journal of the Society for Teaching (STLHE) and Learning in Higher Education. It is an open access online journal dedicated to publishing quality peer-reviewed articles and essays in French and English that address teaching and learning interests of universities and colleges across Canada.

Website: <http://www.cjsotl-rcacea.ca/>

Collected Essays on Learning and Teaching (CELT)

CELT is a peer-reviewed journal which accepts submissions from STLHE conference presenters wishing to publish the essence of their workshops and concurrent, round table, and poster sessions in essay form for a wide readership interested in teaching improvement practices in higher education. CELT accepts articles in both English and French. Website: <http://celt.uwindsor.ca>

International Journal for the Scholarship of Teaching and Learning (IJSoTL)

IJSoTL is an open, double-blind peer reviewed electronic journal published twice per year at Georgia Southern University. The journal is an international forum for research and information about the scholarship of teaching and learning and its applications in higher education.

And other SoTL-related journals...

- University of Windsor's List: <http://www.uwindsor.ca/ctl/research-and-dissemination-opportunities>
- Michigan State University's List: <http://teaching.uncc.edu/learning-resources/sotl/sotl-journals>
- Illinois State University (SoTL by Discipline):
http://sotl.illinoisstate.edu/resources/disciplinary_support/
- International Society for the SoTL's List: <http://www.issotl.com/issotl15/node/21>
- Ryerson University's List: http://www.ryerson.ca/lt/resources/prof_dev/sotl.html
- University of Central Florida's List: <http://www.fctl.ucf.edu/ResearchAndScholarship/SoTL/journals/>
- University of Toronto Mississauga's List: http://guides.library.utoronto.ca/SOTL_journals_databases
- UNC Charlotte's List: <http://teaching.uncc.edu/learning-resources/sotl/sotl-journals>

Opportunities and Resources at the University of Windsor

- University of Windsor-Oakland University Teaching and Learning Conference:
<http://cleo.uwindsor.ca/oakland/>
- Centred on Learning Innovation Fund (CLIF): <http://www1.uwindsor.ca/ctl/clifgrants>
- Teaching and Learning Conference Travel Grants: <http://www1.uwindsor.ca/ctl/faculty-travel-grants>
- Undergraduate Research Experience (URE) Grants: <http://www1.uwindsor.ca/oris/ors-internal-programs>

Research Planning Checklist*

1. What is your hypothesis or question to be answered?
2. What will be the setting for your study: When will it take place? How many students will be involved? How will they be selected?
3. What data will you collect? What measures will be needed?
4. How will you analyze your data, and how will you know they are reliable and valid enough for you to generalize your results to other groups and situations?
5. What other studies have been done, in your own discipline or elsewhere, on the general issue you are investigating?
6. Does your study speak to any educational theory about the way students learn?

*Scholarship of Teaching and Learning Institute
Centre for Leadership in Learning
McMaster University, May 2008
Chris Knapper & Serge Piccinin
Retrieved from: http://cll.mcmaster.ca/scholarship/pdf/research_planning_checklist.pdf