

Worksheet #1: Developing a Research Question

Developing a Meaningful, Feasible, and Focused Research Question

A Good Research Question . . .			
Is meaningful and significant to you.	Is possible to research with the time, resources, and students you work with.	Is deliberate, narrow and focused, so that your project will adequately answer the research question.	Will need to be refined.

Define the problem and the situation and consider possible interventions:

What is the problem?	
What population? <i>(ex. first-year students, upper-level math, community college etc.)</i>	
Sample? <i>(ex. One section, multiple sections, cross-disciplinary, one class period, whole semester etc.)</i>	
Context? <i>(ex. Institution type, type of course, student demographic)</i>	
Intervention? * <i>(ex. What are you going to do? Describe, compare try something new, etc.)</i>	

* NOTE: some people prefer to draft a working research question and **then** consider possible interventions, so this step is optional)

Now try drafting a working research question. Get feedback on your drafts!

First Attempt	
Second Attempt	
Third Attempt	

Worksheet #2: Sample Planning Worksheet (blank version)
Identifying a Research Question and Planning a SoTL Project

Purpose		
<u>Institutional Context</u> – what factors do you want to examine? What issues and challenges are related to your context?		
<u>Literature Review Sources</u> – Focus on how your context differs from what has been published in the literature.		
<u>Working Research Question(s):</u> - Be specific - Consider Timeline - Be ready to refine		
<u>On Campus Resources</u> - IRB - Collaborators - Library (SOTL Library, USG) - Technology - Data Analysis		
<u>Data Collection Methods - Quantitative, Qualitative, Mixed Methods.</u> 		

<u>Evidence</u>	
<u>Data Analysis</u>	
<u>Sample</u>	<u>Scalability</u>
Timeline	
Plan for Pilot Study – How will you conduct a pilot study?	
Possible Outlets for Publication or Presentation	

Notes:

Parking Lot:

Worksheet #3: Sample Planning Worksheet (annotated version)
Identifying a Research Question and Planning a SoTL Project

Purpose	Think broadly about an area of concern or a pinch-point for your teaching/course development/evaluation. What areas would you like to figure out more about or resolve?		
Institutional Context – what factors do you want to examine? What issues and challenges are related to your context?	Institution type (2-year, 4-year, small institution, large institution, liberal arts, tech, undergraduate, graduate, HBCU, HSI, non-traditional, etc.) Population (Undergraduate, graduate, URM, at-risk, first-generation, honors, majors, underprepared students, etc.) Disciplinary or cross-disciplinary (English, STEM, supplemental instruction, tutoring, QEP, General Education, etc.)		
Literature Review Sources – Focus on how your context differs from what has been published in the literature.	What are the bodies of research that would inform this study? Are there specific databases that would include such research? Who are the leaders in the field? What are the seminal pieces relevant to this research? Conferences? Are there theoretical frameworks that would help develop this research?		
Working Research Question(s): - Be specific - Consider Timeline - Be ready to refine	Is meaningful and significant to you.	Is possible to research with the time, resources, and students you work with.	Is deliberate, narrow and focused, so that your project will adequately answer the research question.
On Campus Resources - IRB - Collaborators - Library - Technology - Data Analysis - Grants	<ul style="list-style-type: none"> - Find out process for gaining IRB approval. - Visit with colleagues who can guide you on research design, help conduct data collection, data analysis, proofreading, etc. - Identify the discipline specific librarian. - Identify available or easily purchasable technology - Contact your local CTL!!! - Visit with your institution's research office, if available. - Work with grants office/CTL to find funds to support your study 		
<u>Data Collection Methods</u>	<u>Qualitative</u> Case Study Observation Interviews Focus Groups Document Analysis	<u>Quantitative</u> Correlational Causal Comparative Experimental Quasi-experimental Experimental	

<u>Evidence – Qualitative</u>	Video/audio recordings Artifacts/relics (photographs, Think-aloud protocol Mind maps Observation journal Interviews/focus groups Documents/student work	Survey/Questionnaire <ul style="list-style-type: none"> - Nominal (categories) - Ordinal (ordered – age range) - Interval (ex. Scale of 1 to 10) Student grades/scores Rubrics
<u>Data Analysis</u>	Constant Comparative Thematic Analysis Ethnography Grounded Theory Content Analysis	Descriptive Statistics ANOVA Multiple Regression Q-sort
<u>Sample</u> <ul style="list-style-type: none"> - Purposeful sample - Entire class or multiple classes - Single case study or select group - Time frame (class period, activity, module, course, course sequence, semester, program) 		<u>Scalability</u> <ul style="list-style-type: none"> - Are there ways to increase the reach with this study? - Mentor/collaborator options? - Increase within discipline or across discipline? - Work with other departments or institutions?
Timeline	<ul style="list-style-type: none"> - What amount of time do you think it will take to conduct this research? - Be sure to take into consideration the amount of time to gain Human Subjects approval, recruit participants, plan the intervention, collect, clean up/transcribe data, and analyze data. 	
Plan for Pilot Study – How will you conduct a pilot study?	<ul style="list-style-type: none"> - Is there a way for you to conduct the study on a much smaller scale? Use only a few students? - Ask colleagues to try the questions/approach out? - Analyze only a select group of documents? 	
Possible Outlets for Publication or Presentation – Significant Outlets	<ul style="list-style-type: none"> - Peer-Reviewed Disciplinary conferences/journals/blogs/newsletters - SOTL Conferences - Faculty Development/Educational Development Journals - Others 	

Notes:

Parking Lot:

Worksheet #4: Sample Planning Worksheet (**completed example** version)
Identifying a Research Question and Planning a SoTL Project

Purpose	To explore how flipped classrooms impact student perceptions of their effectiveness.	
Institutional Context – what factors do you want to examine? What issues and challenges are related to your context?	Underrepresented, underprepared, first-generation. Two-year college Students unaware of how to take control of their own learning.	
Literature Review Sources – Focus on how your context differs from what has been published in the literature.	URM Self-directed learning Perceptions of effectiveness	
Working Research Question(s): - Be specific - Consider Timeline - Be ready to refine	Given three flipped classroom sessions, how do URM students characterize their effectiveness in their learning?	What changes in their ability to learn on their own do they attribute to the flipped classroom activities?
On Campus Resources - IRB - Collaborators - Library (SOTL Library, USG) - Technology - Data Analysis	- Education librarian - Ethnographer - IRB office - Recorder - Transcriptionist - Scheduler - Donations for recruitment materials	
<u>Data Collection Methods - Quantitative, Qualitative, Mixed Methods.</u> - Interviews - Focus groups - Journaling		

<u>Evidence</u> Transcripts of interviews, journals, transcription of focus groups.	
<u>Data Analysis</u> Constant Comparative Analysis Thematic Analysis	
<u>Sample</u> URM Biology 101 students at a local, two-year college taking face-to-face classes.	<u>Scalability</u> Apply approach to STEM-H classes and train numerous graduate students on interviewing and data analysis to ensure interrater reliability.
Timeline	Conduct literature review and Create study proposal – One semester Write up plan for Human Subjects approval – One Week Submit for Human Subjects approval – two to four weeks (or more) Conduct three flipped classrooms for BIO 101 course (including having students journaling throughout the process) – two weeks Recruit for focus groups – two weeks Transcribe and analyze results – two weeks Recruit and conduct interviews – two weeks Transcribe and analyze interview data – three weeks Write up results and prepare for publication – one month
Plan for Pilot Study – How will you conduct a pilot study?	Interview three students after a series of flipped classes the semester prior to the beginning of the project.
Possible Outlets for Publication or Presentation	State level conference, regional journal, national conference in discipline.

Notes:

Parking Lot:

Resources to Support Your SoTL Work

For USG Chancellor's Learning Scholars

September 2019

Prepared by: Jim Berger, Kathryn Crowther (kcrowther@gsu.edu), Michele DiPietro, Mark Johnson, and Deborah Richardson (derichardson@augusta.edu)

Sources of research ideas

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: 7 research-based principles for smart teaching*. San Francisco, CA: Jossey-Bass.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.

Dweck, C. S. (2013). *Mindset: The new psychology of success*. Ballantine.

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC: Association of American Colleges and Universities.

Lang, J. M. (2016). *Small teaching: Everyday lessons from the science of learning*. San Francisco, CA: Jossey-Bass.

<https://tilthighered.com/>: Transparency in teaching and learning.

What is SoTL?

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professorate*. San Francisco, CA: Jossey-Bass. [The "origin"]

Coppola, B. P. (2011). Making your case: Ten questions for departments and individuals building an argument for work in discipline-centered education. *International Journal for the Scholarship of Teaching and Learning*, 5(1). Available at: <http://digitalcommons.georgiasouthern.edu/ij-sotl/vol5/iss1/5>

Felten, P. (2013). Principles of good practice in SoTL. *Teachng and Learning Inquiry: The ISSOTL Journal*, 1(1), 121-125. Retrieved from <https://journalhosting.ucalgary.ca/index.php/TLI/article/view/57376/43149>.

Felten, P., Kalish, A., Pingree, A., & Plank, K. (2007) Toward a scholarship of teaching and learning in educational development. *To Improve the Academy*, 25, 93-108.

Glassick, C. E., Huber, M. T., & Maeroff, G. I. (1997). *Scholarship assessed: Evaluation of the professoriate*. San Francisco, CA: Jossey-Bass. [picks up where Boyer left off by proposing standards for documenting and evaluating scholarship]

Hutchings, P., Huber, M. T., & Ciccone, A. (2011). *The scholarship of teaching and learning reconsidered: Institutional integration and impact*. San Francisco. CA: Jossey-Bass.

Hutchings, P., & Shulman, L. S. (1999, September/October). The scholarship of teaching: New elaborations, new developments. *Change*, 31(5), 10-15.

McKinney, K. (2007). *Enhancing learning through the scholarship of teaching and learning: The challenges and joys of juggling*. San Francisco, CA: Anker Publishing.

McKinney, K. (Ed.). (2013). *The scholarship of teaching and learning in and across the disciplines*. Bloomington, IN: Indiana University Press.

Richlin, L. (2001) *Scholarship revisited: Perspectives on the scholarship of teaching*. San Francisco: Jossey-Bass.

Sill, D. (n.d.) Simple Commitment but Long-Term Challenge: Promotion and Tenure, and the Scholarship of Teaching & Learning. In "Faculty Promotion and Tenure: Eight Ways to Improve the Tenure Review Process at Your Institution." Faculty Focus.

How to do SoTL

Bishop-Clark, C., & Dietz-Uhler, B. (2012). *Engaging in the scholarship of teaching and learning: A guide to the process, and how to develop a project from start to finish*. Sterling, VA: Stylus. [A helpful step-by-step guide that has been used for FLCs aimed at producing SoTL projects]

Chick, N. L. (Ed.) (2018) *SoTL in action: Illuminating critical moments of practice*. Sterling, VA: Stylus.

Gurung, R. A. R., & Schwartz, B. M. (2009). *Optimizing teaching and learning: Practicing pedagogical research*. Malden, MA: Wiley-Blackwell. [practical guide to the scholarship of teaching and learning with instructions on how to design, conduct, analyze, and disseminate SoTL work]

Gurung, R. A. R., & Wilson, J. H. (2014). *Doing the scholarship of teaching and learning, measuring systematic changes to teaching and improvements in learning: New directions for teaching and learning*. San Francisco, CA: Jossey-Bass.

Hutchings, P. (Ed.) (2000). *Opening lines: Approaches to the scholarship of teaching and learning*. Stanford, CA: Carnegie Foundation.

Faculty Center for Teaching and Learning, University of Central Florida

<https://fctl.ucf.edu/research-on-teaching/getting-started/>

Teaching Conferences and Teaching Journals Directories Center for Excellence in Teaching and Learning
Kennesaw State University

<http://cetl.kennesaw.edu/teaching-conferences-directory>

<http://cetl.kennesaw.edu/teaching-journals-directory>