

Five Basic Steps to Participation in the Scholarship of Teaching and Learning

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Center for the Advancement of Teaching
and Faculty Development ♦

For 'the development of faculty across all career stages
and areas of professional responsibility'



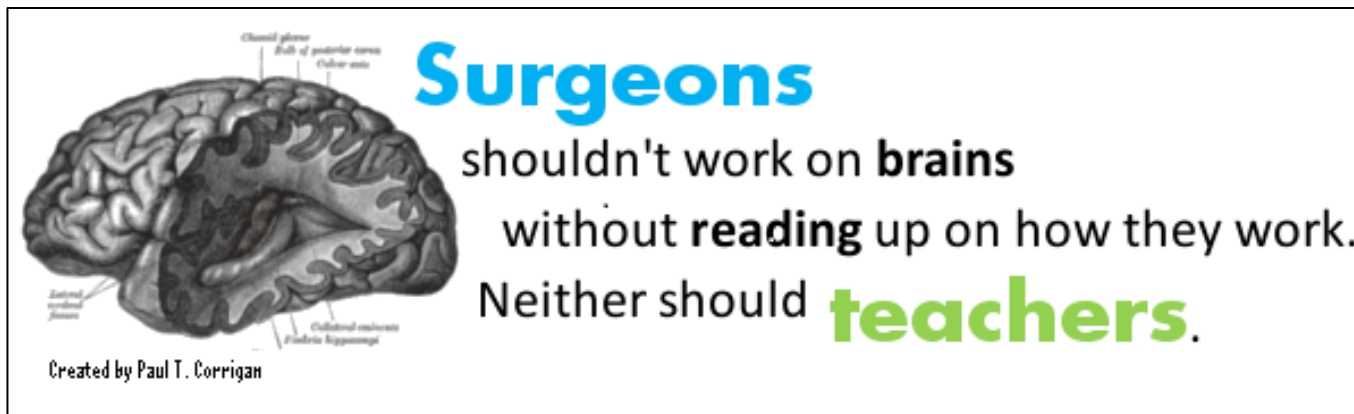
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Goals

- To introduce and define the scholarship of teaching and learning
- To convey the benefits of and need for the scholarship of teaching and learning
- To introduce five steps to participation in the scholarship of teaching and learning
- To provide resources that facilitate participation in the scholarship of teaching and learning

Scholarship of Teaching and Learning (SoTL)

- study of teaching and learning and the communication of findings so that a body of knowledge can be established



Bishop-Clark, C and 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 Publishing, LLC.

Benefits of SoTL

- Improves student learning by informing teaching
- Facilitates collaboration across disciplines
- Enhances teaching field overall
- Enriches teachers' experience

Bishop-Clark, C and 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 Publishing, LLC.

Need for SoTL

- Need empirical evidence to ensure effectiveness of pedagogical activities
- Responsibility of educators to both consult and contribute to the body of knowledge on effective teaching and learning
- Enhance the credibility of research on teaching and learning

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STEP 1: Generating the Research Question

- Take observations and curiosities and create interesting, meaningful and measurable research questions

Identify the Research Question

Do students using Peer Instruction (PI) in algebra- and calculus-based introductory physics courses increase mastery of conceptual reasoning and quantitative problem solving?

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STEP 2: Designing the Study

- Provides the mechanism to answer the question
- Consider which type of research design best matches the research question

Qualitative Methods	Quantitative Methods
Descriptive	Survey
Case Study	Experiment
Observation	Quasi-Experiment
Interview	
Focus Group	

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STEP 2: Designing the Study

Design the Study

What groups do you want to study? Students at Harvard University taking calculus- and algebra-based introductory physics courses.

How many people will you study? Over a period of seven years, approximately 1,500 students.

Will you do a pilot study? In the traditional sense of the word, no “pilot” study was performed; however, each year, the study built on the findings from the previous year.

Where will you conduct the study? The authors conducted the study in a classroom setting.

Will you use comparison groups? Students using PI from 1991 to 2000 were studied. Data were collected from students using traditional instruction in 1990 and were used for comparison.

What kinds of outcomes do you expect? The authors expected to see increased mastery of conceptual reasoning and quantitative problem solving as they refined their implementation of the PI strategy.

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STEP 3: Collecting the Data

- Collect the data that will (hopefully) answer the research question
- Comes in a variety of forms (student feedback, exam scores, observation, *etc.*)

Collect the Data

What data will you collect? Data to evaluate student learning, including scores on two standard tests (Force Concept Inventory and Mechanics Baseline Test), traditional examination questions, and ConceptTests.

When will you collect them? The beginning of the term, throughout the class, and at the end of the term.

Who will collect the data? The instructors of the course.

Why are you collecting these data? To identify whether PI and subsequent improvement leads to improved understanding.

STEP 4: Analyzing the Data

- Look carefully at the data to determine the answer to the research question

Analyze the Data and Draw Conclusions

How will you analyze the data? A variety of statistical tests.

If your data set needs to be coded, who will code it? The data do not need to be coded.

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STEP 5: Presenting and Publishing SoTL

- Share research with colleagues via conferences and journals

Report the Findings

Where do you plan to present your findings? It is not clear whether the authors intended to present their findings.

Where do you plan to publish your findings? *American Journal of Physics.*

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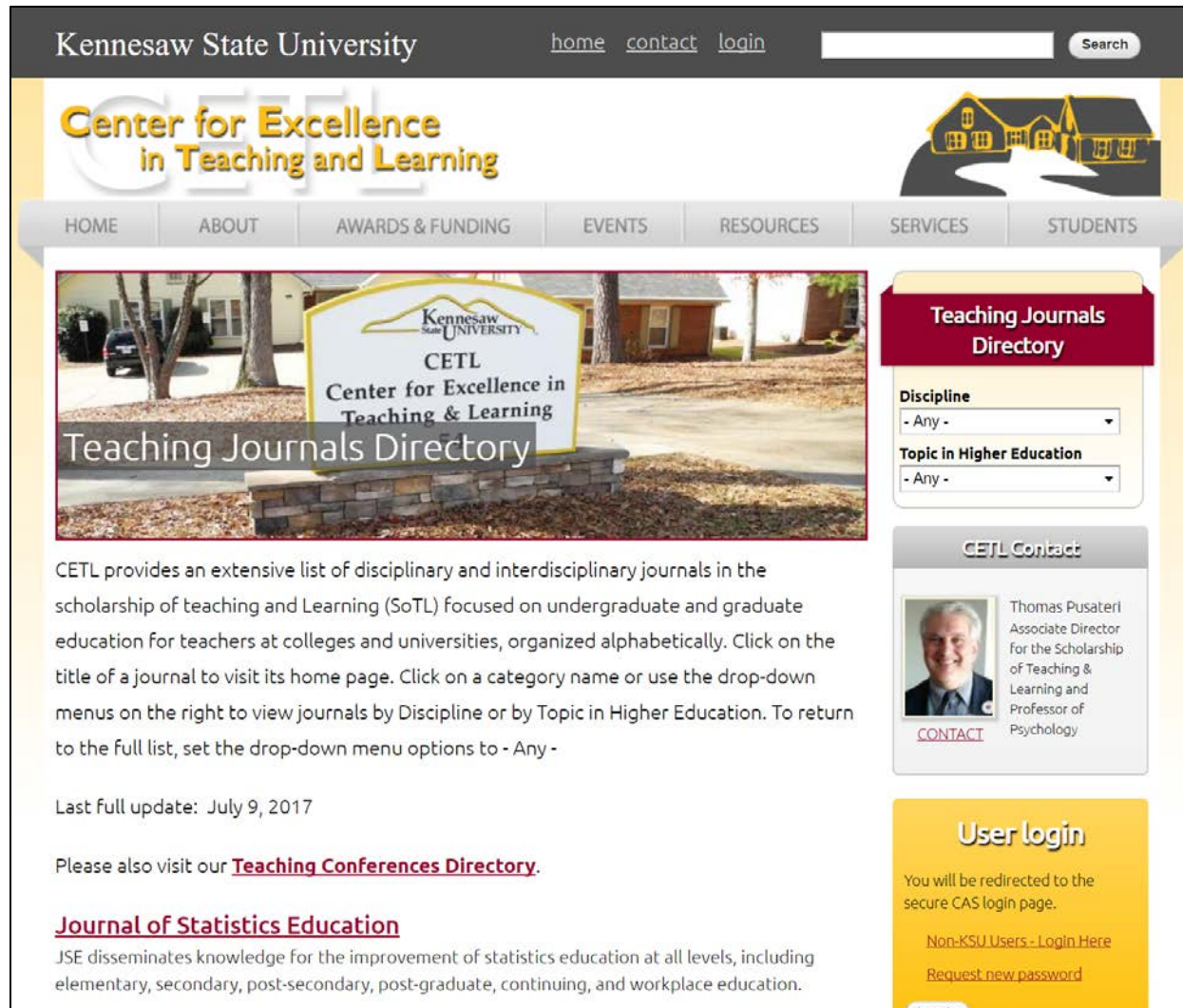
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SoTL Resources



The screenshot shows the CETL Teaching Journals Directory website. At the top, the Kennesaw State University logo and navigation links (home, contact, login) are visible. The main header features the CETL logo and a search bar. Below the header is a navigation menu with links to HOME, ABOUT, AWARDS & FUNDING, EVENTS, RESOURCES, SERVICES, and STUDENTS. The main content area is titled "Teaching Journals Directory" and includes a large image of a sign for the CETL. Below the image, a paragraph describes the directory's purpose: "CETL provides an extensive list of disciplinary and interdisciplinary journals in the scholarship of teaching and Learning (SoTL) focused on undergraduate and graduate education for teachers at colleges and universities, organized alphabetically. Click on the title of a journal to visit its home page. Click on a category name or use the drop-down menus on the right to view journals by Discipline or by Topic in Higher Education. To return to the full list, set the drop-down menu options to - Any -". To the right of the text are two drop-down menus labeled "Discipline" and "Topic in Higher Education", both set to "- Any -". Below these menus is a "CETL Contact" section featuring a photo of Thomas Pusateri, Associate Director for the Scholarship of Teaching & Learning and Professor of Psychology, with a "CONTACT" link. At the bottom right is a "User login" section with a message: "You will be redirected to the secure CAS login page." and links for "Non-KSU Users - Login Here" and "Request new password". On the left side of the main content area, there is a section for the "Journal of Statistics Education" (JSE) with a brief description: "JSE disseminates knowledge for the improvement of statistics education at all levels, including elementary, secondary, post-secondary, post-graduate, continuing, and workplace education."

Kennesaw State University [home](#) [contact](#) [login](#)

Center for Excellence in Teaching and Learning


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Teaching Journals Directory

Discipline
- Any -

Topic in Higher Education
- Any -

CETL Contact

 Thomas Pusateri
Associate Director
for the Scholarship
of Teaching &
Learning and
Professor of
Psychology
[CONTACT](#)

User login

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[Non-KSU Users - Login Here](#)
[Request new password](#)

Teaching Journals Directory

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Last full update: July 9, 2017

Please also visit our [Teaching Conferences Directory](#).

Journal of Statistics Education

JSE disseminates knowledge for the improvement of statistics education at all levels, including elementary, secondary, post-secondary, post-graduate, continuing, and workplace education.

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

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HOME

ABOUT


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Teaching Conferences Directory

CETL maintains one of the most extensive directories of conferences focused on college/university teaching and their sponsoring organizations. Use the drop-down menus at the top right to sort the directory by City, State/Province, Country, Discipline, or Topic in Higher Education.

Click on [this link](#) to view past conferences. The directory was updated on June 30, 2017. If you have any suggestions for changes or additions to this list, contact Tom Pusateri, CETL Associate Director for SoTL.

Please also visit our [Teaching Journals Directory](#).

Sunday, June 18, to Friday, July 21, 2017
[Distance Learning Administration Conference](#)
Jekyll Island, Georgia

Teaching Conferences
Directory

City

- Any -

State or Province

- Any -

Country

- Any -


Discipline

- Any -

Topic in Higher Education

- Any -

CETL Contact



CONTACT

Thomas Pusateri
Associate Director
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Past Conferences

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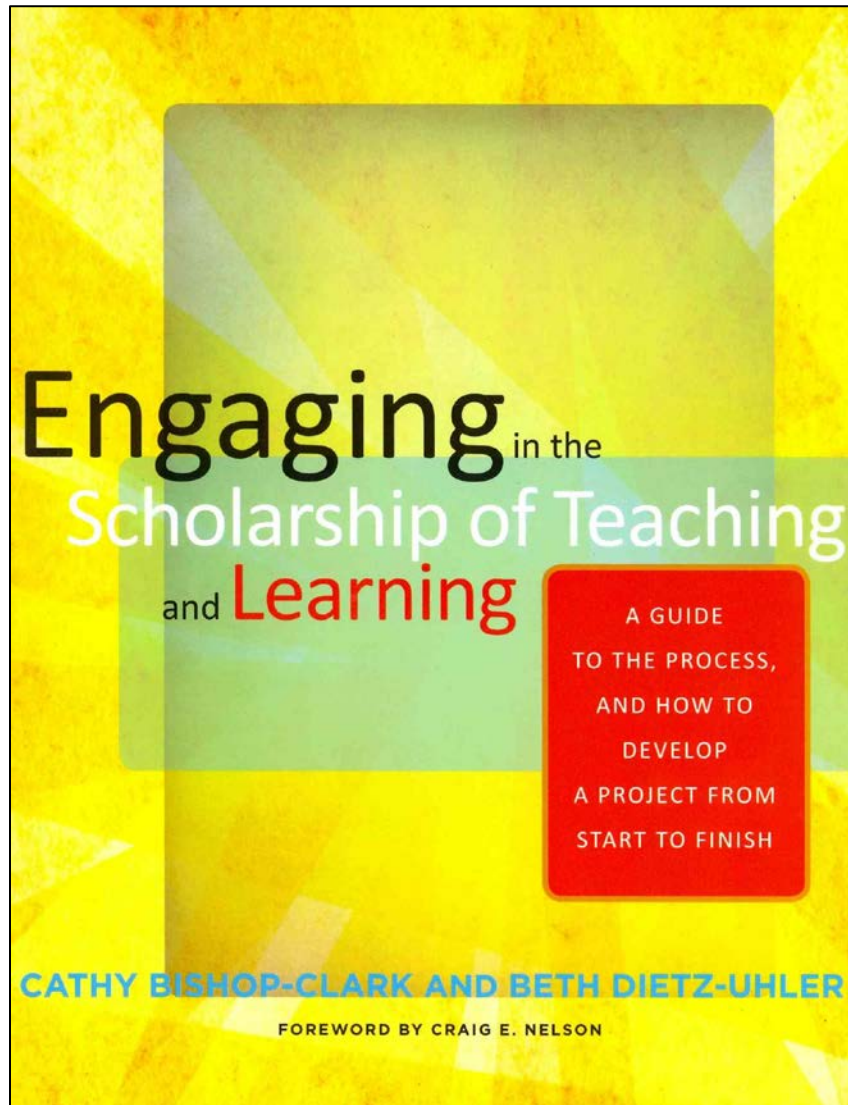
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<http://cetl.kennesaw.edu/teaching-conferences-directory>

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SoTL Resources (CAT+FD)

Website: <https://cat.xula.edu/>

Wiki: <http://xulacat.wikispaces.com/>

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CAT+FD: Center for the Advancement of Teaching and Faculty Development


CENTER FOR THE ADVANCEMENT OF TEACHING AND FACULTY DEVELOPMENT

Our mission: the development of faculty across all career stages and areas of professional responsibility.

New Courses

Teaching a new course at Xavier? Revised an existing course? Please list it.

Recent Photos



Upcoming Events

July 11th-18th:
2017 RISE/BUILD Summer Workshops
[RISE/BUILD \[details\]](#)

Monday, July 17th:
The Classroom as Practice Using [\[details\]](#)

CAT FooD (for thought)

- Provide Meaningful Feedback to Students
- FaCTS on Wiki Ed
- The Simon Initiative--Short Videos on the Science of Learning

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2017 RISE & BUILD Summer Workshops

The summer workshops are a series of three-hour meetings where faculty come together to discuss curriculum development and improvement projects that are designed to enhance the learning of their students. The workshops are funded by the National Institutes of Health RISE and BUILD programs as Xavier University of Louisiana. Each participant gives a 20 to 25 minute talk that provides the rationale for and details of their project. Participants also share data (including methods of assessment), challenges and successes and future directions for their projects. Plans for dissemination of the findings is a key part of every presentation. The 2017 are scheduled as follows:

Tuesday, July 11, 2017

- Grants Overview by Dr. Maryam Foroushani
- Workshop Structure by Dr. Tiera S. Coston
- Ethics at the End of Life by Dr. James Dunsen
- Advanced Biochemistry by Drs. Kelly Johnson & Terry Watt
- Introduction to Biochemistry (Incorporation of 3-D Molecular Models by Dr. Terry Watt)
- General Biology I Lecture & Developmental Biology by Dr. Ian Davenport

Thursday, July 13, 2017

- Applied STEM Cell Biology by Dr. Harris McHerrin
- Handbook for Computational Science and Engineering by Drs. Gurdeep Arora and Anderson Sunda-Meyra
- Introduction to Physics I & II Laboratories by Dr. Freddie Lantry
- Calculus II by Drs. Gurdeep Arora & Donna Skutumpah
- Physics I & II Instruction Workshop by Dr. Dean Richardson
- Flipping the Physics I Classroom by Dr. Jessica Graber


Monday, July 17, 2017

- Dr. Christopher Hakala, Executive Director, University Teaching and Learning and Professor of Psychology at Quinnipiac University, will speak on the topic of The Classroom as Practice. He emphasizes that by applying the science of learning to the classroom in a nonthreatening way,

CAT FooD
(for thought)

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Provide Meaningful Feedback to Students



BLACKBOARD

BLACKBOARD DOCUMENTS

- Guide to Taking Tests in Blackboard
- Collaborate
- Record, Upload, and Share Video on YouTube

BLACKBOARD FAQ

- Respondus Monitor FAQ
- Respondus LockDown Browser FAQ
- VoiceThread FAQ

TOPICS

Select Category

ARCHIVES

Providing students with meaningful feedback can greatly enhance learning and improve student achievement. In an Edutopia blog post, Marianne Stenger, provided five research-based tips for providing students with the kind of feedback that will increase their motivation, build on their existing knowledge, and help them reflect on what they've learned. Marianne's tips are:

Acknowledgements

- CAT+ FD Staff
 - Ms. Janice Florent
 - Mrs. Olivia Crum
 - Dr. Elizabeth Yost Hammer
- Ms. Amy Billizon
- Mrs. DeMiracle Woodson
- Dr. Christopher Hakala

Thank you!