

Assessing the role of a graduate pedagogy course in the development of future teacher-scholars

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Pedagogy Courses and teaching enhancement programs may support developmental progression of graduate students

Aspect	New graduate student ↔ Junior colleague		
Teaching & research skills	Survival	Developing skills	Outcomes oriented
Disciplinary language	Simplistic	Insider	Jargon-free
Interpersonal reliance	Dependent	Independent or counter-dependent	Interdependent

Pedagogy courses: Developing and reflecting on teaching experience

From excellent to scholarly teachers

- Describe
- Rationalize
- Gather evidence
- Analyze
- Transform



Teaching Enhancement Programs have been a subject of inquiry for over 20 years...

Program/Activity	Outcomes	References
<ul style="list-style-type: none"> • Teaching orientations • Classroom observation and feedback • Pedagogy courses • Teaching certificates • Preparing future faculty (PFF) programs 	<p>Increased or improved:</p> <ul style="list-style-type: none"> • Student learning • Course ratings • Knowledge about teaching and learning topics • Attitudes about teaching • Self-confidence • Self-efficacy • Attitudes about discipline • Self-awareness of career progress 	<ul style="list-style-type: none"> • Abbott et al., 1989 • Austin, 2002 • Baumgartner, 2007 • Black, 1995 • Bomotti, 1993 • Carroll, 1980 • DeNeef, 2002 • Gaff and Lambert, 1996 • Gaia et al., 2003 • Jerich and Leinicke, 1993 • Kearns et al., in press • Nyquist and Wulff, 1996 • Prieto and Altmaier, 1994 • Prieto and Meyers, 1999 • Schussler et al., 2008 • Shannon et al., 1998 • Taylor et al., 2008 • Tice et al., 1998a,b • Williams, 1991 • Wulff et al., 2004

Yet most studies have focused on short-term outcomes, such as reduced anxiety, increased self-efficacy or confidence...

Wulff et al. (2004) stated additional empirical data are needed to methodically assess this development and reveal how pedagogy courses facilitate graduate student development as teacher-scholars

MSCI M620: Pedagogical Methods in Health Sciences

- Student learning styles
- Classroom presentation
- Syllabus construction
- Classroom research
- Scholarship of teaching
- Statement of teaching philosophy
- Teaching portfolio
- Metacognition of teaching



http://medsci.indiana.edu/m620/sotl_o8/start.htm

Pedagogy Course Demographics

- Class offered Spring 2007 (10 participants) and Spring 2009 (7 participants*)
- Multiple life-sciences discipline
- Varied teaching backgrounds

*one individual from spring 2007 took the course again in spring 2009

Our Research Questions

As a result of taking M620, did our students:

1. Develop a more complex attitude regarding student learning?
2. Question and evaluate their current teaching methods?
3. Explore methods of evaluating their own classroom teaching strategies?
4. Envision themselves becoming involved in a public teaching resource network?

And were these attitudes and skills long lasting and continuing to develop months AFTER the course?

As a result of taking the pedagogy course, did students progress as scholarly teachers?

Sources of data:

- Course & instructor evaluations
- Pre and post course surveys of student attitudes
- Quantitative & qualitative analysis of class assignments
 - Statement of teaching philosophy
 - Teaching portfolio
- Six month follow-up interview
- Participation in activities outside of the classroom

Reflection

In what ways do you assess if students have achieved the goals you've set for them in your classes?

Discussion: Compare draft to final teaching statements

Review teaching statement excerpts and discuss how effectively each excerpt describes assessment of student learning.

Draft

“I give my students frequent quizzes...”

Final

“Critical to the teaching process...is having an accurate assessment of how much material..”

What do you believe has changed about this successive version?

How is our teaching statement rubric different from others?

Other rubrics*

- For self-assessment
 - Formative assessment
- Used by the writer or by the faculty mentor assisting the writer in draft preparation

Our rubric**

- For scoring purposes
 - Summative assessment
- Used by researchers to *quantify* the writer's pedagogical progression through his/her teaching statement

*Kaplan et al. (2007) *To Improve the Academy* 26: 242-262.

Schönwetter et al. (2002). *International Journal for Academic Development*, 7(1), 83-97.

**Rubric developed by K. Kearns and C. Subiño Sullivan

URL: http://medsci.indiana.edu/m620/sotl_08/teaching_phil_rubric.pdf

Quantifying scholarly teaching in the statement of teaching philosophy

- Five basic dimensions
 - Learning goals
 - Teaching methods
 - Assessment of student learning
 - Teaching assessment
 - Style
- Specific criteria within each dimension (total of 27)
- Defined performance each criterion
 - Exceptional (3)
 - Adequate (2)
 - Needs Work (1)
 - Absent (0)



Kearns et al. (in press - 2010) *Journal on Excellence in College Teaching*.

Example Dimension: Assessment of Student Learning

- Assessment of student learning criteria
 - Specificity
 - Integration
 - Variety
 - Interpersonal
 - Learning outcomes
 - Outcome analysis



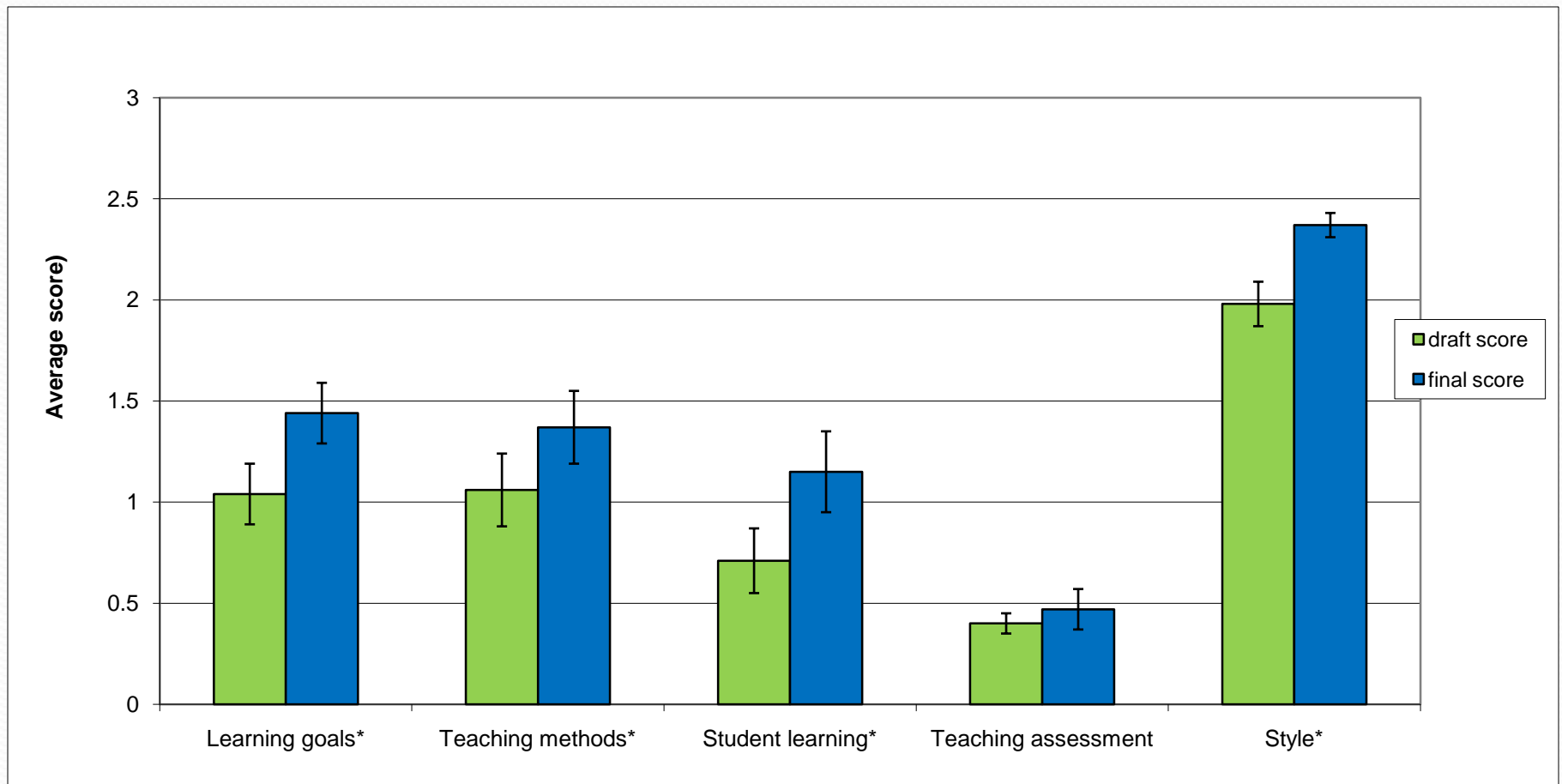
Example Criterion: Student Learning Outcomes

- Exceptional (3)
 - Incorporates descriptions of specific assignment outcomes (e.g., exam grades, example projects)
- Adequate (2)
 - Incorporates descriptions of specific assignment outcomes, although more details or outcomes may be needed
- Needs work (1)
 - Descriptions of assignment outcomes are usually stated too broadly or generally
- Absent (0)
 - Does not present outcomes of assignments



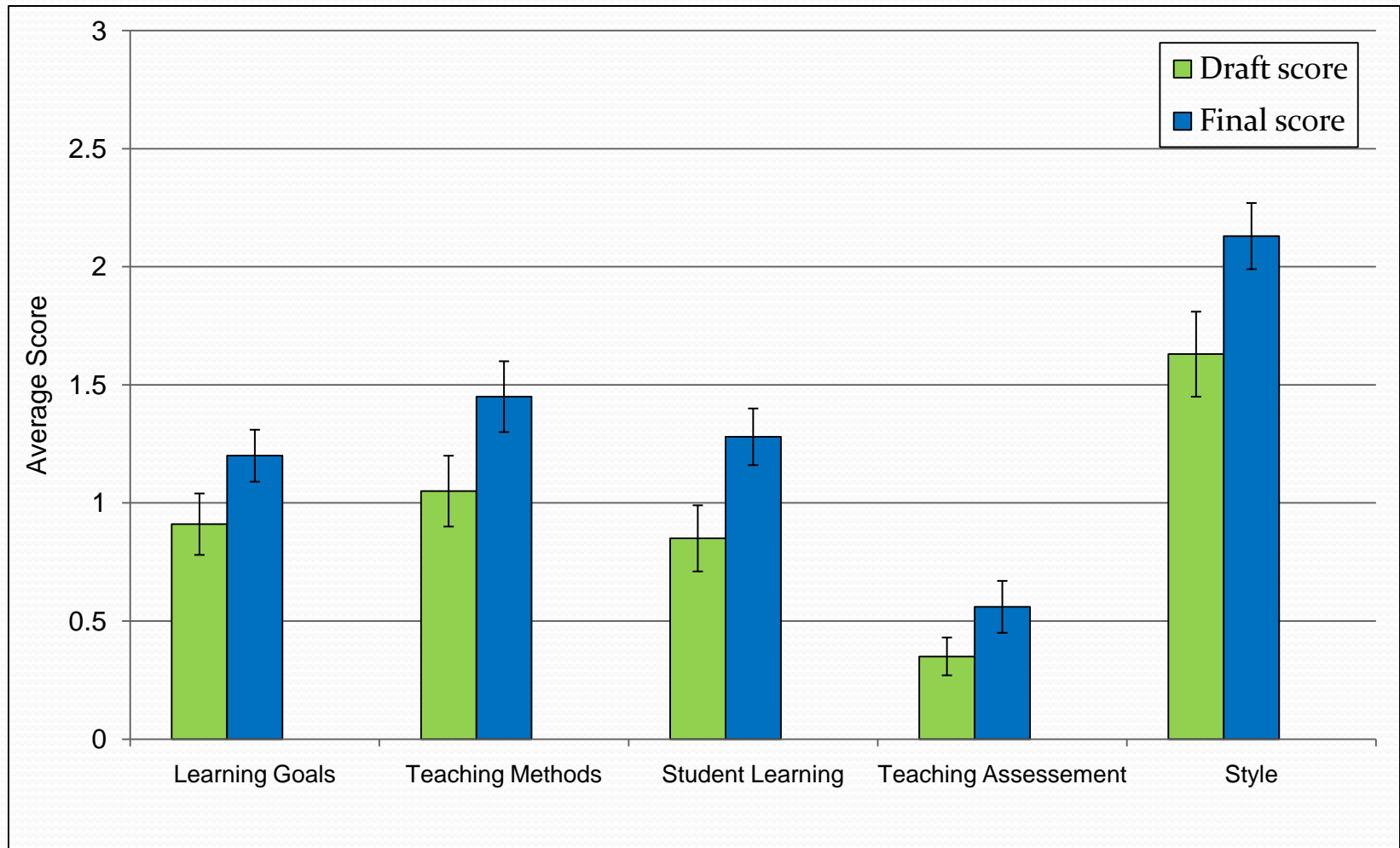
Comparison of Draft & Final Teaching Statements by Dimension: Spring 2007 class

Students greatly improved in all dimensions except assessment of teaching



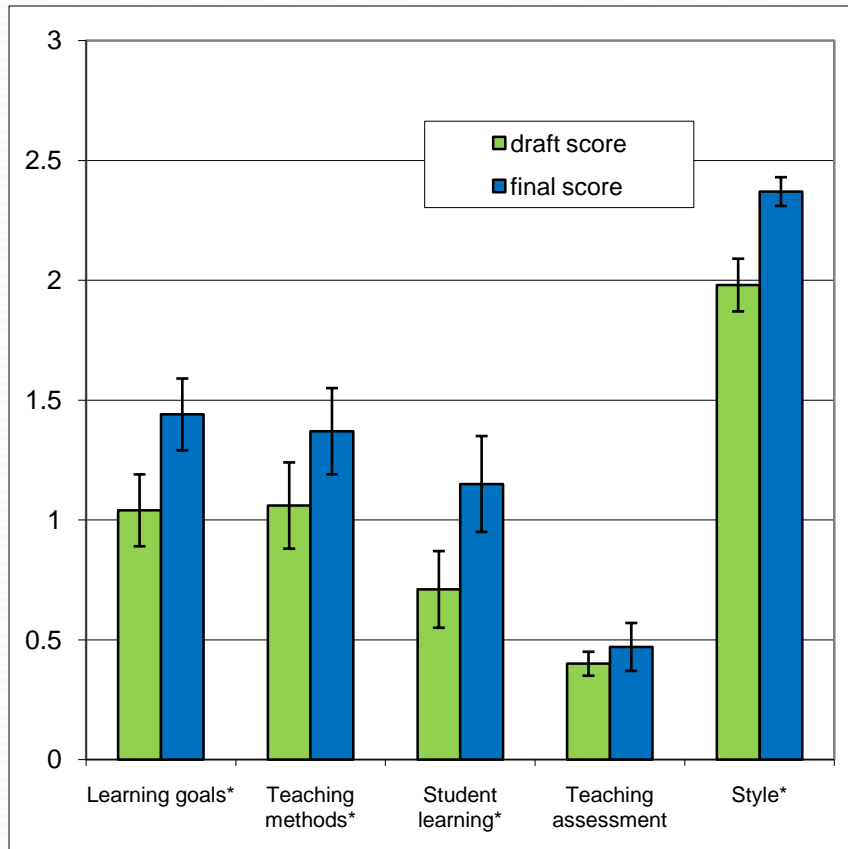
Comparison of Draft & Final Teaching Statements by Dimension: Spring 2009 class

Spring 2009 class mirrored that of Spring 2007 – improved in all dimensions except teaching assessment

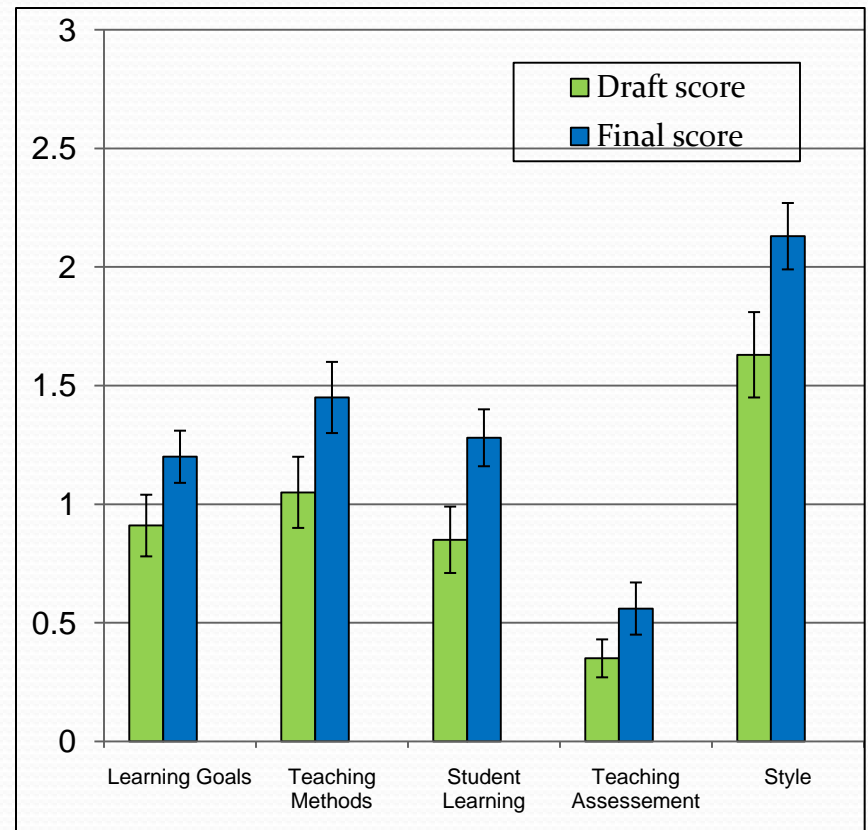


Side by Side Comparisons

Spring 2007 (n=10)



Spring 2009 (n=6)



Qualitative and quantitative comparison of draft & final teaching statements

Final teaching statements:

- Were more descriptive and had better narrative flow
- Included instructor goals and motivations
- Were more student-centered

Students improved in their ability to*:

- Describe their teaching
- Explain their learning goals and assessments
- Engage the reader with an organizing thesis



* Statistically significant criteria based on 2-tailed t-tests, $p < .05$

Teaching Portfolio Analysis

- Rubric for assessing final versions of teaching portfolios
- Seven dimensions
 - Structure
 - Teaching History
 - Course Design
 - Teaching Methods
 - Student Learning
 - Assessment of Teaching
 - Reflection on Teaching
- 17 total criteria (among the 7 dimensions)
- Spring 2007* M620 students scored highly in all dimensions except reflection on teaching
- http://medsci.indiana.edu/m620/sotl_o8/teaching_portfolio_rubric.pdf

* Spring 2009 data still being analyzed

Interview data: Spring 2007 students

- Six-month follow up interview by grad student not involved in course
- To date, 5 of 10 students interviewed
- Interviews transcribed by 3 social science graduate students
- One graduate student research (LMG) used inductive coding to determine what themes were evident in the interviews
- (Spring 2009 students in process of being interviewed)

Positive outcomes of the pedagogy course

Students said they enhanced their teaching skills:

- Gained a deeper understanding of their students
- Examined how to evaluate student learning
- Evaluated their own teaching effectiveness

“I think I really grew as a teacher...it made me a lot more conscientious about what I should be doing overall so that I actually am more aware of reaching out to everybody.”

(Miller, O’Loughlin, Kearns et al., in review)

Positive outcomes of the pedagogy course

Students said they progressed as teacher-scholars:

- Engaged in a forum to discuss their teaching
- Received collaboration, communication, feedback re: teaching statements and teaching portfolios
 - Produced quality products well before the job search, instead of rushed products during the search
- Developed an interest in pedagogical research

“I think it can be a real eye opener that...being a teacher doesn't mean giving up research at all. In fact, you're still expected to do both.”

(Miller, O'Loughlin, Kearns et al., in review)

Disconnects to teacher-scholar development

Our students said they:

- Struggled with how to measure and document teaching effectiveness
- Lacked documentation from past TA experiences for use in their portfolios
- Had difficulty justifying time spent on teaching improvement with the competing demands of coursework and research

“I have the additional challenge of trying to convince [my advisor] that no, this is really something that I need to do for my own professional development and I can balance it with research.”

(Miller, O’Loughlin, Kearns et al., in review)

As a result of taking the pedagogy course, did our students:

	Develop complex attitudes regarding learning?	Evaluate teaching methods?	Explore methods of evaluating teaching?	Envision becoming involved in a teaching network?	Demonstrate lasting scholarly approaches?
Evaluations	✓	✓	✓		
Survey	✓	✓	✓		
Teaching statement	✓	✓	✓		
Portfolio	✓	✓	✓	✓	
Interview	✓	✓	✓	✓	✓
Extracurricular activities	✓	✓	✓	✓	✓

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Reflection

- Can you apply these assessment tools (teaching statement/portfolio rubric, interview data) to your own teaching context?
- What questions remain for you?

Thank you!

Can Graduate Pedagogy Classes Promote Lasting Scholarly Approaches to Classroom Teaching? Lessons Learned from Medical Sciences.

Valerie O'Loughlin, Katherine Kearns and Mark Braun

Previous research indicates that graduate courses in pedagogical methods, which typically are designed to prepare future faculty for teaching, produce specific teaching behaviors in the short term. However, little assessment has been done to examine how teaching behaviors and attitudes endure over time. Assessments of pedagogy courses can and should be based on changes in graduate students' understanding of the teaching and learning process, observations of teaching behaviors, perceptions of self-efficacy, and measures of undergraduate learning. Further, assessment of these measures should continue well past the completion of the course, in order to determine the persistence and ongoing development of the students' perceptions of teaching and learning. ([Click for full abstract](#))



Below are the pertinent links to the files and additional websites discussed in our talk.

- The [Pedagogy course website \(MSCI M620\)](#)
 - Our SOTL proposal and IRB request:
 - [SOTL grant proposal](#)
 - [IRB proposal](#)
 - [Participant consent form](#)
 - Research materials
 - The [pre](#) and [post](#) course survey forms.
 - The [teaching philosophy statement rubric](#).
 - The [teaching portfolio rubric](#)
 - Our recent presentations.
 - IS-SOTL 2009 Conference
 - [Presentation Poster \(8 X 11 PDF\)](#)
 - [Preconference Workshop](#)
 - [PowerPoint Slides PDF](#)
 - [Bibliography](#)
 - [Interview Themes](#)
 - [Teaching Statement Rubric](#)
 - [Indiana University Scholarship of Teaching and Learning Poster, April, 2009.](#)
 - Resources about TA training
 - [Annotated bibliography](#) regarding research dealing with TA training
 - [Indiana University information about departmental pedagogy courses](#)
 - [Selected websites about writing teaching statements](#) from other universities instructional support centers.
 - Important Indiana University resources
 - [Instructional Support Services](#)
 - [Office of Human Research and Protection Programs - IUB](#)
 - [SOTL, Indiana University](#)
-  [More of our presentations](#)

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Our SOTL research site:
http://medsci.indiana.edu/m620/sotl_o8/start.htm