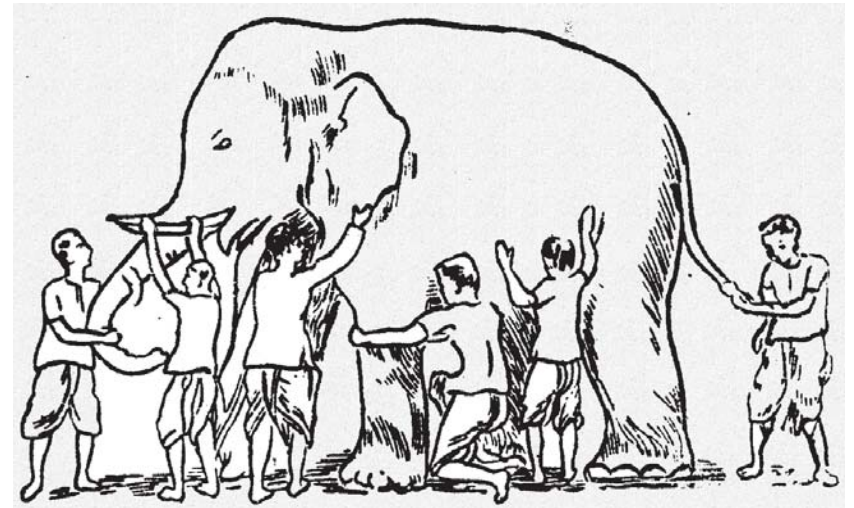


Peer Review of Teaching: Recognizing Serious Intellectual Work

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Peer Review Workshop, University of Florida
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The classic parable of the blind men



A literary treatment added intent



Converging measures are an answer to complexity

- Common in social and natural sciences
- Rely on multiple perspectives
- Three voices in this conversation
 - Students
 - Peers
 - Instructor
- They are interdependent and all necessary

There are many peer review options

- Ask you to consider examples of faculty work
- Offer possible characteristics of excellence
- Describe a continuum of review practices
- Identify a few of the many challenges
- Invite you to find your place(s) on the continuum
- Offer a quick précis of six KU colleagues' work
- Ask you to consider which two are best
- No worries, they are all excellent – it's about what features you notice and find important

Consider a teaching challenge in history

Goal: learn to think about historical events and evidence differently

Sheyda Jahanbani read from Sam Wineburg's book *Historical Thinking*

Her goals were not met
Students not supportive

"You did not give us the stuff."



Sheyda noted her students really like working with communications devices

- Comfortable with devices and systems
- Preference for mediated communication
- Adept at using established programs

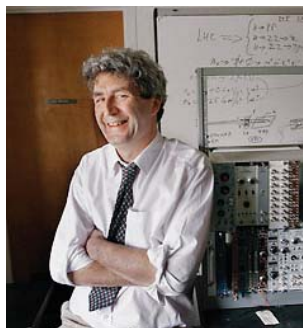


Made course more student centered

- What did students want from her? **FACTS**
- What did students not warm up to? **THINKING**
- Changed front end to active construction:
 - Student teams built online version of "the stuff"
- Rest of course on thinking like a historian
- **Student ratings went up**
- She responded well to their needs
- **In return** she was able to focus on thinking and **saw engaged students**

Transition to Group Problem Solving in Physics

- Michael Murray wanted students to solve problems in physics
- They did not recognize new versions of similar problems
- Decided they needed more practice, but they also needed help while they were practicing
- Read about problem sheets that can be done during class, as preparation



Added worksheets into lecture

13 Rotation of a Rigid Body

13.1 Rotational Kinematics

1. The following figures show a rotating wheel. Determine the signs (+ or -) of ω and α .

2. The figure shows a pendulum at one end point of its arc.

a. At this point, is ω positive, negative, or zero?
b. At this point, is α positive, negative, or zero?

3. The figures below show the radial acceleration vector \vec{a}_r at four successive points on the trajectory of a particle moving in a counterclockwise circle.

a. For each, show the tangential acceleration vector \vec{a}_t at points 2 and 3 or, if appropriate, write $\vec{a}_t = \vec{0}$.
b. Determine if the particle's angular acceleration α is positive (+), negative (-), or zero (0).

- 15 min lecture
- Groups work problems as he listens
- Teams report out and discuss
- Resume lecture after the discussion
- Addressing questions raised by students and observed in problems

Better learning than parallel course

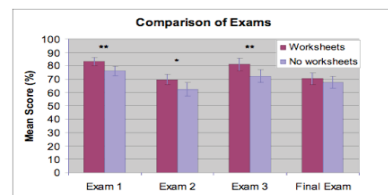
- Exam scores better with worksheets
- Overall course grades better as well
- Design issues and classroom inquiry

Transitioning from Lecture to Group Problem-Solving Act Michael Murray

Background | Implementation | Student Performance | Reflections | Comments

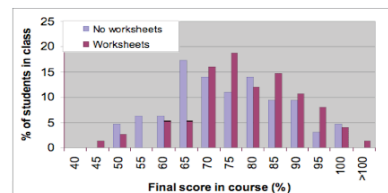
Student Performance Notes - Figures and statistics

Figure 1:



Comparison of mean exam scores for students in physics classes with and without worksheets. Error bars are $\pm 2SE$. Significant difference in mean scores ($p < 0.01$) indicated by ** (two-tailed t-tests, $df = 131$). Significant difference in mean scores ($p < 0.05$) indicated by *.

Figure 2:



Comparison of the grade distribution in physics classes with and without worksheet supplements.

Andrea Greenhoot

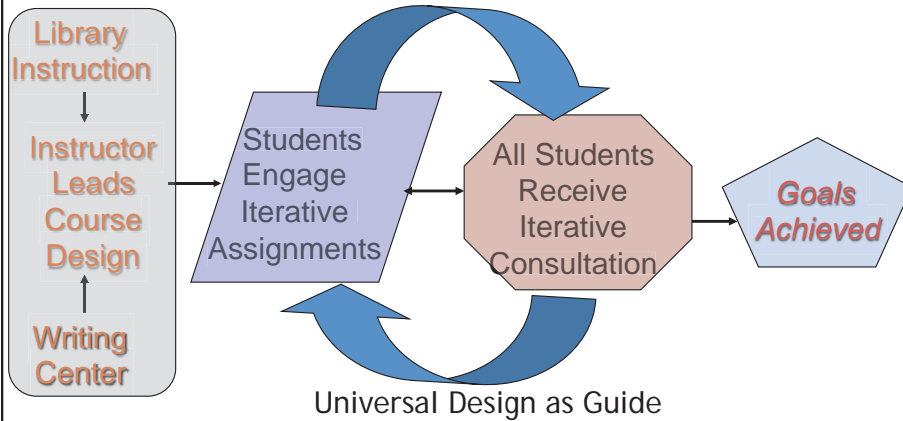
- Read / understand three primary sources in child psychology
- Use the ideas to write an advice column for parents
- Complex writing task
 - Understand articles
 - Create synthesis
 - Apply in problem given
 - Translate to ordinary language



- Book reports of sequential findings
- Little integration
- Key goal of synthesis still at 1-2% of class after three years

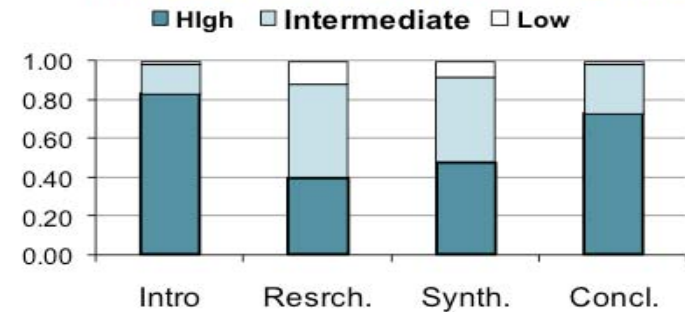
Team Design Project in 2007

Collaborative Design:



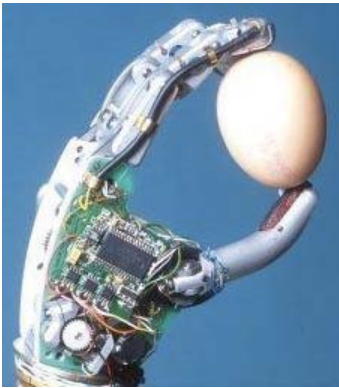
A big jump in synthesis

Fall 2010 Advice Column: 4 Studies



- Doubled research assignment
- More steps and designed with colleagues
- In 2012 60% of class reached HIGH synthesis

Biomechanical Engineering



- Design of mechanical parts to replace body functions lost
- All round course
 - Engaged
 - Integrative
 - Collaborative

Lisa Friis, Mechanical Engineering

- Design course for integrating skills in engineering and biology
- Also concerned with product development
- Other instructors agree to connect their students:
 - Market analysis
 - Business plan
 - Legal liability



Students advise each other



- Design market research
- Determine liability
- Create a viable plan for production and distribution
- Authentic performances offered to meaningful audience

Danny Anderson, Spanish



- Language and Culture class
- Engaged students with agency needs for help with Spanish speaking clients
- Documented advanced work on linguistic and cultural course goals

Detailed assignment and samples

SPAN 494. Diario contemplativo (reflection journal)

Los cursos que incluyen el servicio comunitario como un componente académico se basa en la idea que la experiencia es un elemento fundamental en el aprendizaje. Además, para que el aprendizaje tenga sentido, es necesario que el estudiante participe activamente en un proceso de contemplación sobre el significado de su propia experiencia sirviendo a la comunidad. Es a través de la contemplación que nos distanciamos de la experiencia inmediata para (a) comenzar a analizar a nosotros mismos como actores sociales, (b) plantear nuevas preguntas para entender la situación de la comunidad a que estamos sirviendo, y (c) hacer conexiones entre los textos leídos en clase, la actividad de servicio, y el proceso experiencial e intelectual. El conjunto de estos factores nos permite entender más profundamente la situación actual de la comunidad y pensar más creativamente en nuestro papel en encontrar posibles soluciones para sus necesidades.

El diario es un texto muy personal. Sólo será leído por los profesores. Pero, es mucho más que un espacio confesional. El diario contemplativo constituye el espacio de pensamiento y descubrimiento en que vas a plantear dudas, anotar observaciones, cuestionarte a ti mismo/a, y vislumbrar la identidad de la comunidad a la que has dedicado tu servicio voluntario durante diez semanas.

Esta hoja incluye pautas básicas para ayudarte a escribir en tu diario y además describe una lista mínima de temas que debes cubrir. Por supuesto, es permisible escribir más y sobre otros temas. Cada viernes, vas a entregar lo que has escrito en tu diario esta semana. Puedes entregar un cuaderno en que vas anotando tus contemplaciones o puedes escribir el diario en la computadora, entregando cada viernes el nuevo fragmento que has escrito.

Departmental curriculum reform

Drawing Parallels Between Aesthetic Experience and Life Experience— Danny Anderson

[Background](#) | [Implementation](#) | [Student Performance](#) | [Reflections](#) | [Comments](#)

Reflections Notes - Curriculum reform/ Department response/ Plans for next time

I would like to repeat this course and also develop a sequel. I had many queries from students who wanted to sign up for the course in future semesters. I expect that I will modify the present course and offer a new version of it in spring 2007. In terms of a sequel, the materials from the present service learning course have given me the basis for an ideal follow-up course, a senior colloquium on the topic of immigration, SPAN 540 (Im)Migrant Images in Latin(o) America. For the SPAN 540 class, rather than require a service learning activity of all students, I plan to structure one major assignment so that students have the choice to do library research or experiential research for their writing.

I initially proposed to revise the one-credit hour SPAN 329: Intermediate Spanish Conversation II class as a service learning course before implementing service learning in Spanish 494. The conversation class, SPAN 329, had typically been taught as a course in which the instructor creates opportunities for in-class conversation. Usually the instructors and students are frustrated because it is hard to get students simply to converse unless there is real motivation for involvement. A typical conversation class is taught with an anthology that covers a controlled body of vocabulary and a series of supposedly provocative topics. One of the real dilemmas is that repeatedly, from the introductory Spanish language class through the advanced language class, the same bodies of vocabulary and the same supposedly provocative topics are covered. Instructors



Project notes

[Student Service Evaluation](#)
(Word file)

[Curriculum reform/
Department response/
Plans for next time](#)

[Teaching responsibilities](#)

Susan Williams, Chemical Engineering KU Center Faculty Fellow

- Significant enrollment increase, wider range of students
- Critical course in major
- Big increase in D's and F's
- Looked closely at the D and F students' work
- During a summer read about "flipped" class practices



Failure due to low performance on challenging problems, so she moved easy work out of class and moved the hard work into class – with help

During class

- Meet in teams
- Extrapolation to variations on the problems
- Application of basics
- Challenging problems like those on the exam (practice)
- Brief synthesis of her approach to each problem

Outside of class

- New reading
- Online review problems
- BRIEF VIDEO:
- Reviewed the reading
- Discussed the homework
- Lectured on the basic ideas
- Worked a simple problem as an example

The D's disappeared

- Many students were capable of learning
- They could not learn it on their own
- Did learn with peers and with feedback in real time
- Yield was more skilled engineers for Kansas



Which are the best two of the six?

- What stood out to you as evidence of quality education delivered and received?
- Is this just a matter of taste or opinion?
- Are some features of teaching more critical?
- What forms of evidence might be useful?

Mary Huber articulated characteristics of scholarly inquiry

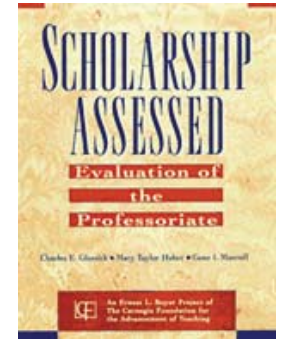


- Cultural anthropologist
- Identified the qualities of scholarly work
- Not a definition, but a process of continuous exploration and growth

Scholarship Assessed (1997)

- All forms of scholarship include:

- Clear goals
- Adequate preparation
- Appropriate methods
- Significant results
- Effective presentation
- Reflective critique



Glassick, Huber, & Maeroff

How might those characteristics inform a peer review of teaching?

- Can teaching be serious intellectual work or just delivery of a performance of knowledge?
- Is “inquiry into learning” the right metaphor for excellence in teaching?
- What do these ideas add to your understanding of how to ask who are the better examples?
- **Note: there are still value judgments here, but they are specific to shared criteria (like research)**

Continuum of review

- Observe a class and write a letter
- Observe multiple classes, interact, write on specific prompts
- Read syllabus and assignments, observe classes, write based on interactions about plans
- Read assignments, discuss and observe learning activities, look at student work, write about achievement of course and program goals
- **All above**; give detailed reading of students’ level of understanding, discuss relation to learning activities
- **All above**; look at trajectory of understanding over several offerings, related to changes in learning activities

What could a reviewer look at?

- Domain of the course and its context
- Goals for the semester and program as appropriate
- Assignments with frameworks for evaluation
- Planned activities outside of and in preparation for class
- Planned activities in class
- Descriptions and analysis of student understanding
- Lessons learned from the current iteration
- Connections with related points in curricula
- Overall reflection by instructor
- **Nota Bene:** No direct observation is required

How can this process be practical?

- What would the instructor provide?
 - Access to **existing** materials (syllabus, assignments)
 - Brief reflection on development across offerings
- What would the peer look for and produce?
 - Comments on the components of scholarly practice
 - Can be made into efficient report format
- Students' voices already present
 - Course ratings and examples of understanding
- Not every course or every semester
 - 2 key courses, 3 offerings reviewed pre-tenure

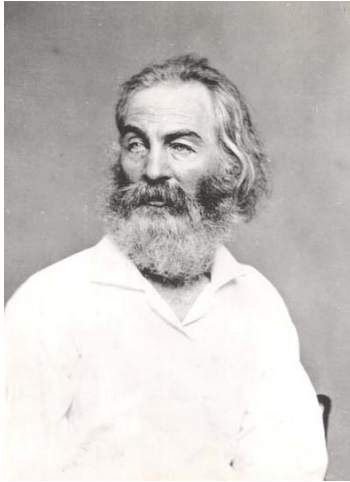
Many Challenges

- Time: to review and to become excellent
- Preparation for valid and reliable judgment
- Preparation of material for review
- Differentiation – all reviews are glowing
 - Formats of teaching are too diverse to compare
 - Roles post tenure or post promotion to full
- How to include student voices (ratings/learning)
- Universities need to excel in research
 - (the mathematical solution) 40-40-20?
- Academic freedom here?

Relation among the three voices

- **Students are non-expert observers** who raise questions or highlight perceived strengths
 - Praise from students and high quality demonstrations of understanding prompt review
 - Warnings from students and poor learning prompt inquiry and exploration
- **Both instructor and peers follow up** on student observations and comments
 - Instructor's narrative is a guide to intentionality and inquiry
 - Peers look for coherence and alignment in plans and evidence
- **Peers are professional judges of the quality** of the intellectual work
- **All three combine when used over time** for improvement and provide substantive evidence at evaluation moments

Need sophisticated readers



- Walt Whitman:
“To have great poets there must be great audiences too.”

Continuum of review

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Recognizing has two meanings

- Discerning the differences among instructors' designs and implementation of courses
- Honoring those whose work is exemplary with awards or professional standing
- The first requires skilled interaction with peers
- The second requires that the first is done well
- Invite you to situate yourself within the range of options



Thank you. djb@ku.edu