



# Preparing Teachers Through Learning Assistants

2013 NSF Robert Noyce Teacher Scholarship  
Program Conference  
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NSF Noyce Scholars 2012-2014



# Overview

- Learning Assistants Become Teachers (LABT)
  - improve the quality of education using Noyce scholars as Learning Assistants (peer mentors using supportive teaching strategies)
- LABT Scholars' Experiences Year One
- Field-based Experiences Year Two



# Seminar and Interactive Webpage

**EDU 294 Seminar: Mathematics and Science Education, Theory, and Practice**

Thursday April 18, 2013  
7-8 PM

The course is designed for undergraduate students serving as Learning Assistants (LA) in science and mathematics courses and faculty working with LAs. The course will help participants integrate educational theory, pedagogy, and practice. It will touch on theoretical issues such as conceptual development, conceptual change, collaborative learning, technology in education, and students' conceptions of various topics in mathematics and science, as well as practical issues encountered in facilitating learning, managing the classroom, formative and summative assessment, and differentiating instruction in a collaborative environment. This is a seminar course where students are responsible for weekly readings, in-class discussions, and project presentations all based on the Learning Assistant field placement.

**New addition to the Herring family: Dorothy Moon Herring, 3/23/13. Congratulations!**

 [Announcements](#)



## RESOURCES

-  [RSA Animate - Changing Education Paradigms](#)
-  [LA Introduction Video](#)

## DISCUSSION FORUMS

-  [Questions for Immediate Response](#)

## ASSIGNMENTS



# Mathematics Learning Assistants

- Homework Help
- Test Review
- Geometric Construction Videos
- Helped in the Classroom
- Concept Tests



# Concept Tests

- Presentation of Question
- Discussion
- Deeper Understanding
- Develops Problem Solving Skills



# Concept Test

**Example:** If you're in a boat and drop a rock into the lake, how will the water level change?

- A. Water level rises
- B. Water level lowers
- C. Water level doesn't change



# Concept Test

**Statistics Example:** Wildlife biologists inspect 153 deer taken by hunters and find 32 of them carrying ticks that test positive for Lyme disease. What is the parameter of interest?

- a.  $m$  = the average number of deer carrying ticks with Lyme disease
- b.  $p = 32/153 = .209$
- c.  $p\text{-hat}$  = the true percentage of deer carrying ticks with Lyme disease
- d.  $p$  = the true proportion of deer carrying ticks with Lyme disease



# My Experience

- Help in the Classroom
  - Calculus One
  - Introduction to Statistics
- Challenges
  - Alternate Explanations
  - Content Knowledge
- Benefits
  - Getting Experience in the Classroom





# Megan Sutherland: My Experiences

- Worked one-on-one with a vision impaired student
- Worked with a group of individuals in a basic biology lab
- Attended lectures to keep up on content
- Visited weekly meetings with professor and TA's
- Attended summer workshop



# Challenges

- Adjusting to individual students
- Providing help to apathetic students
- Finding class in which being an LA is most beneficial
- Helping students learn content



# Summer 2012

## NSF Noyce Scholars Program Intern Workshop

- Day 1
  - Goals for using LA's on UM campus (David Erickson and Dick Hutto)
  - Place-based education initiatives (Steve Archibald)
  - Science as a way of knowing and field ecology exercise (Dick Hutto)
- Day 2
  - Bird banding station (Avian Science Center)
  - Math exercise (Josh Herring)
  - Fire ecology (Dick Hutto)
- Day 3
  - Globe exercise (Georgia Cobbs)
  - River system example (Deb Fassnacht)
  - Local citizen-science databases and opportunities (Dick Hutto)
  - Workshop evaluation



# Benefits of LA Experience

- Practice in assisting in student learning of science
- Experience co-teaching and working with cooperating staff
- Assisting a student with a disability



# Field-based Experiences Year Two

- Field Experiences II – develop the LA model for 7-12 grade students
- Field Experiences III – Student Teaching



# Questions

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