

# Inventive Faculty Development Strategies

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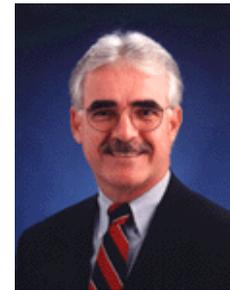
Neil A. Knobloch  
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# Credits

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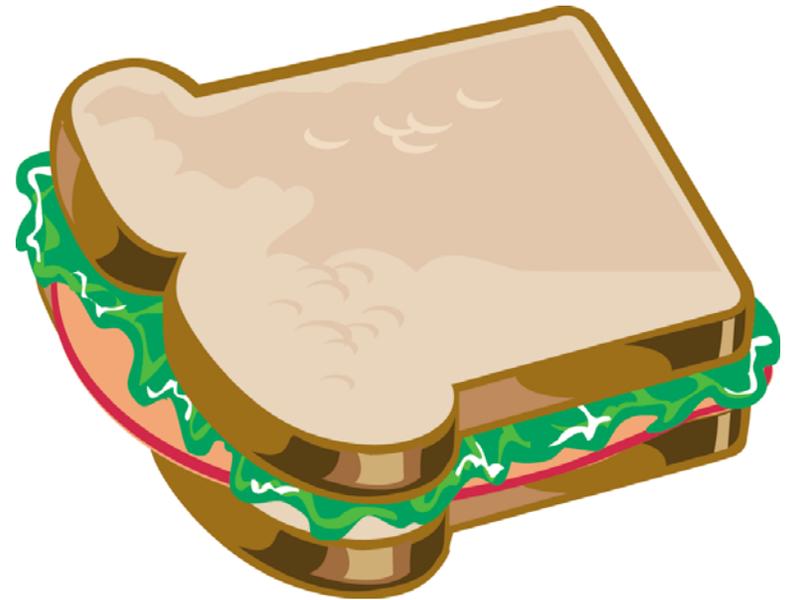
- Anna Ball, Co-PI
- Sheila Settle & Emily Morehouse
- Advisory Panel
  - Kirby Barrick, UIUC
  - Jimmy Cheek, UF
  - Barbara Kirby, NCSU
  - LH Newcomb, OSU



# Objectives

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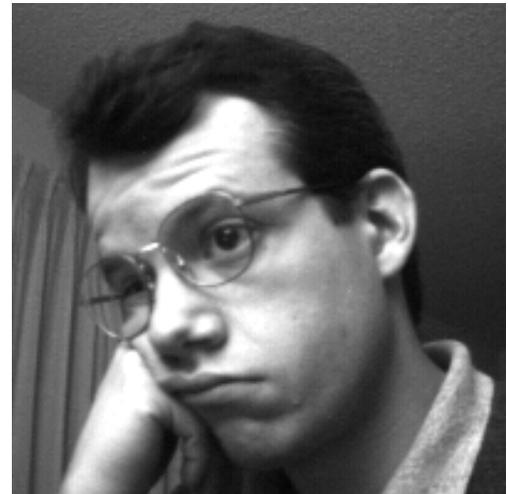
- Challenges
- Framework of LCT
  - Active Learning
  - Inquiry Learning
  - Service Learning
- Faculty Development



# What does learning look like in your classroom?

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This...



# ...or this?

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# Is it getting more difficult to teach?

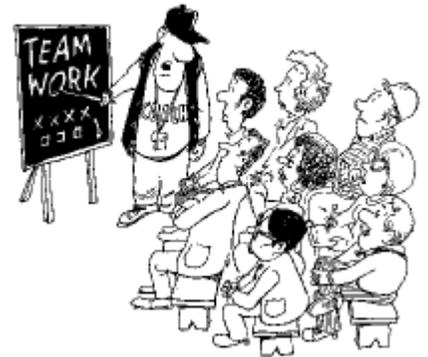
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Greater diversity of learners

More content to teach

Increased demands on faculty time

Higher expectations of graduates to think critically and work in teams



# What challenges do faculty face in their teaching?

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Discussion, please...

# Ten Challenges of UI Faculty

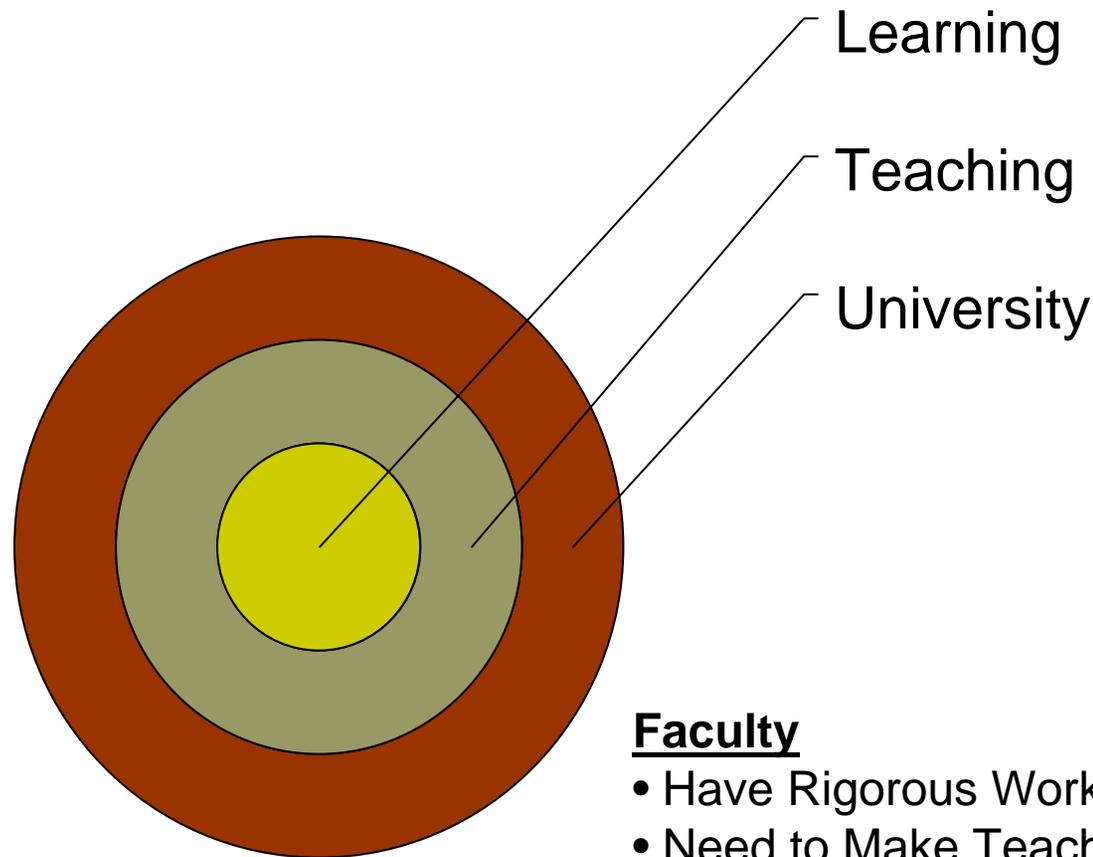
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1. Motivating students
2. Managing time
  - Not enough time to prepare; difficulty balancing with research and outreach/service
3. Accommodating student needs
  - Diverse learning styles, educational preparation and background
4. Remaining current with the course content
5. Communicating content
6. Extending students' thinking
7. Lack of university support
8. Reaching and inspiring students for life long learning
9. Self improvement
10. Teaching concepts for student understanding



# Focus on Learning

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## **Faculty**

- Have Rigorous Workloads
- Need to Make Teaching a Priority
- Become Reflective Practitioners, Learners, and Scholars of T&L



# What is LCT?

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- Students construct knowledge based on
  - Applying concepts
  - Solving problems that are relevant to students' experiences
  - Performing authentic learning tasks
- Three approaches
  - Active Learning
  - Inquiry Learning
  - Service Learning



# Active Learning

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- “Anything that involves students in doing things and thinking about the things they are doing”  
(Bonwell & Eisen, 1991)
- Engaging students to think at higher levels through purposefully created well-designed (classroom) activities
  - Students discuss and process content through cooperative learning
  - Learning is made visible through technology

# Examples of Active Learning

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- Gary Moore, NCSU
  - Three-stage exam
  - Individual—Team—Class
- Nancy Markee, U of NV-R
  - Students are assigned issues
  - Class debates
- Rich Aldredge, WSU
  - Projects
  - Application of statistics
- Ann Kenimer, TAMU
  - On the fly problems
  - Models problem-solving





# Inquiry Learning

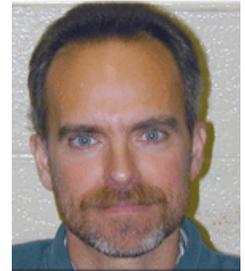
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- Scientific method of inquiry as a means to study a problem in depth
  - Contextualized, ill-structured problems to find meaningful solutions and concepts
  - Inductive approach – in contrast assigning an application problem at the end of a conceptual unit
  - Problems to motivate, focus, and initiate student learning
- Problem-based learning

# Examples of Inquiry Learning

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- Mark Ryan, U of Missouri
- Rique Campa, Michigan State
  - Wildlife Conservation
  - Management problems
- James Beierlein, Penn State
  - Active, collaborative case method
  - Covey's Habits & Bloom's taxonomy
- Ed Deckard, NDSU
  - Real-life, ill-structured problems
  - Plant science cropping systems





# Service Learning

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- Engaging students through thoughtfully-organized service in community-based environments outside of the classroom
  - Learn concepts
  - Reflect about the context/culture
  - Develop civic engagement
- Engagement & Reflection

# Examples of Service Learning

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- Tracy Hoover, Penn State
  - United Way project
  - School-based project
- David Knauft, U of Georgia
  - Collaborate with schools
  - Teach science
- Heidi Brady, Texas Tech
  - Equine therapy
  - Students help Ss with special needs
- Tom Green, WIU
  - Arbor Day plantings
  - Elementary schools



Think about...

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How should faculty development programs be structured?



# Professional Development

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- Experiences indicate
  - Teaching is complex with no easy answers
  - Further, significant investment of time is necessary
  - Faculty place low on agenda (Johnston, 1997)
  - Faculty development needs to change (Eleser & Chauvin, 1998)
    - Understand the goals and needs of professors within the organizational context
    - More reflective and collaborative processes





# Scenario

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You are a seasoned tenured professor at a research-based land grant university. The expectations to be more productive and seek external funding are greater now than when you started 15 years ago. You have also noticed that your students have a much broader range of experiences, most of which are not related to agriculture. About 5 years ago, you started to gradually change your teaching methods to be more engaging for students. Although challenging at first, you see that students are more prepared for their careers. Your passion in helping other faculty change their teaching to be more learner-centered has motivated you to respond to a call for proposals to improve undergraduate education in the agricultural, environmental and life sciences.

What are some **inventive** and **effective** faculty development strategies that you believe would help faculty become more learner-centered in their teaching?

Discussion, please...



# LCT Assumptions

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- Meaning is created from **experience**
  - Is grounded in real-life situations
- Encourages **participation**
  - Creativity and discovery in and outside of the classroom
- **Multiple sources** of knowledge
  - Creating and forming concepts, thinking critically, and solving problems

# Faculty Development

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- LCT Faculty Development
  - Reflection (Bengtsson, 2003)
  - Wisdom of Practice
  - Reading Circles (Kreber, 2001)
  - Team Teaching (Kreber, 2001)
  - Courses on College Teaching and Learning (Kreber, 2001)
  
- Scholarship of Teaching and Learning
  - Collaborative Action Research Programs (Kreber, 2001)
  - Community of Scholars (Cox, 2003)
  - Institutional Support (Saylor & Harper, 2003)
  - Workshops on Ed Theory and Research (Kreber, 2001)
  - SoTL Projects (Kreber, 2001)



# LCT Resources

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- LCT website
  - Fall, 2005
- Active Learning
  - <http://www.active-learning-site.com/>
  - [http://www.ncsu.edu/felder-public/Cooperative\\_Learning.html](http://www.ncsu.edu/felder-public/Cooperative_Learning.html)
- Inquiry Learning
  - <http://www.udel.edu/pbl/>
  - <http://www.samford.edu/pbl/>
- Service Learning
  - <http://www.gseis.ucla.edu/slc/>
  - <http://www.compact.org/>
- SoTL
  - <http://www.carnegiefoundation.org/CASTL/>
  - <http://www.ala.org/ala/acrl/acrlpubs/crlnews/backissues2002/julyaugust/scholarshipteaching.htm>

# Project Website

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