Introduction to Inquiry-guided Learning

Fayetteville State University
Saturday, February 21, 2009

Virginia S. Lee, Ph.D.
Virginia S. Lee & Associates, LLC
Durham, NC

Workshop Goals

- To build together a common understanding of inquiry-guided learning.
- To develop an inquiry-guided learning experience for a common course in small groups and for one of your own courses.
- To develop a plan for incorporating inquiry-guided learning more fully into the course following the workshop.

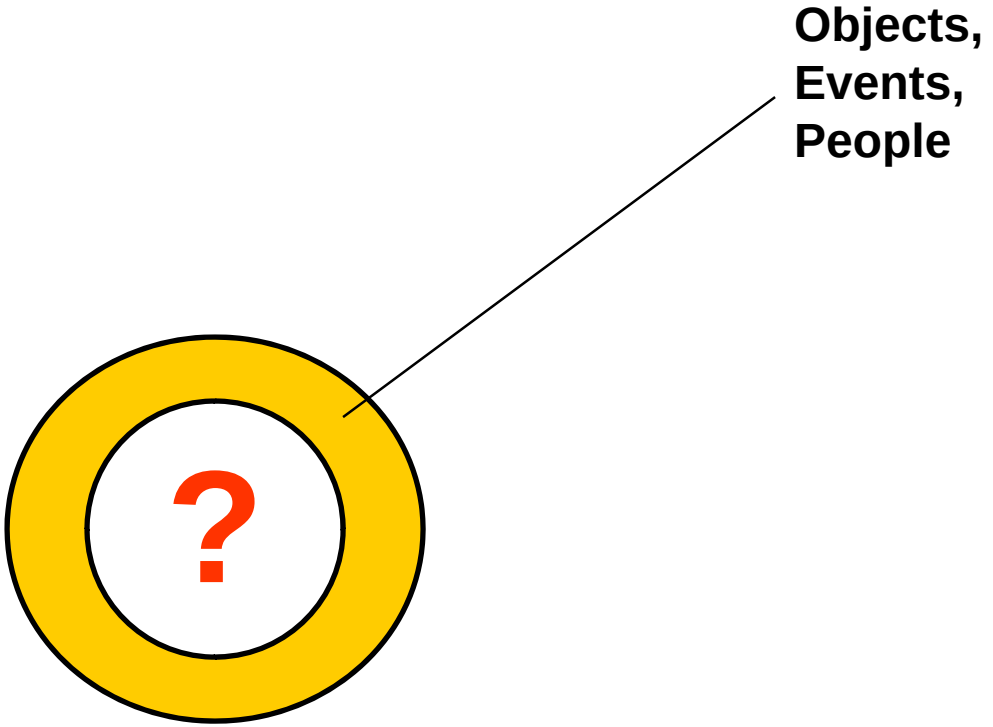
Workshop Schedule

- Introductions
- Questions regarding Inquiry-guided learning
- Four inquiry-guided learning exercises
- Characteristics of an inquiry-guided learning experience
- Review of two courses that incorporate inquiry-guided learning and the role of challenge and support
- Develop an inquiry-guided learning exercise for a common course
- Apply inquiry-guided learning to one of your own courses
- Next steps

What questions do you have about inquiry-guided learning?

First Exercise

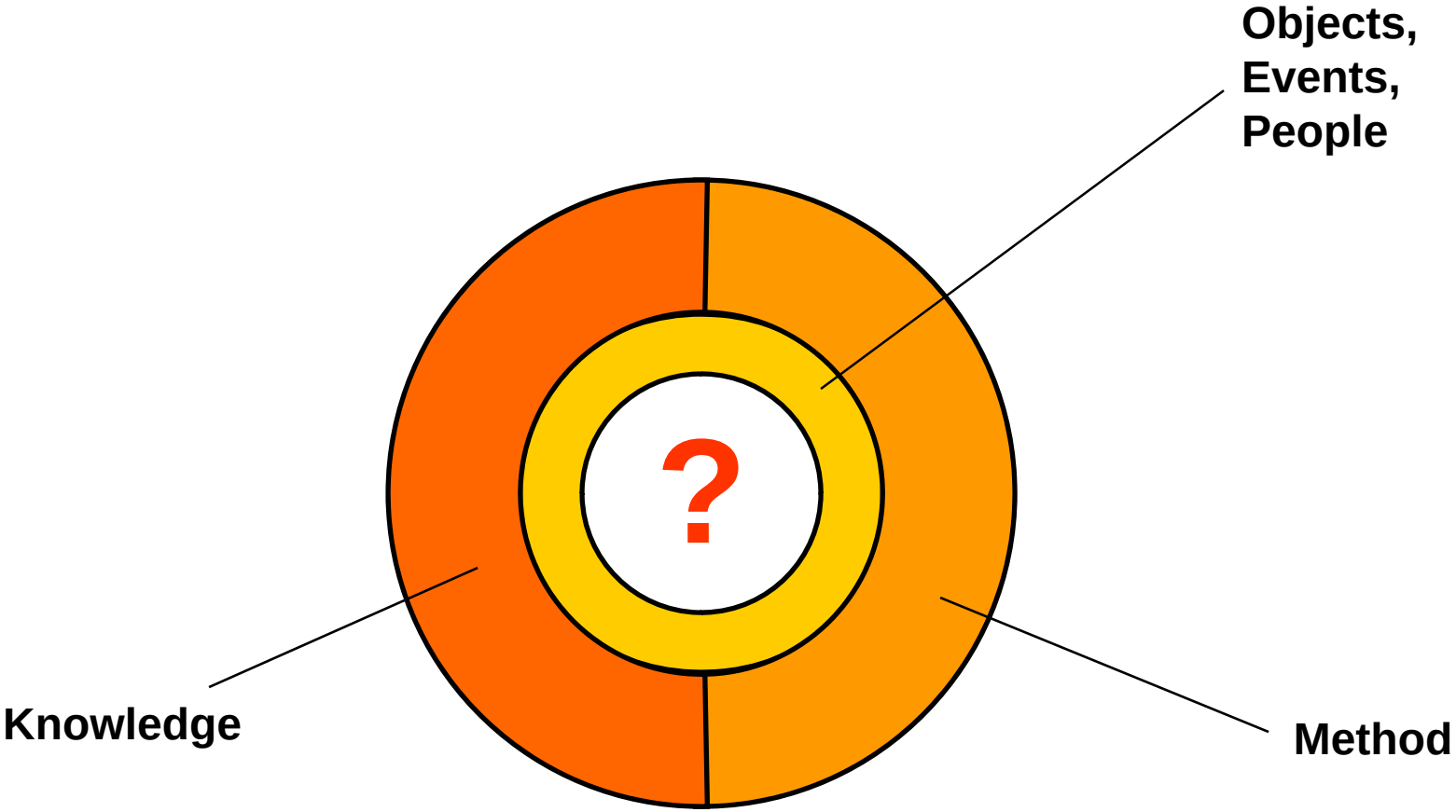
Anatomy of an Inquiry



Copyright © 2008 Virginia S. Lee

Second Exercise

Anatomy of an Inquiry



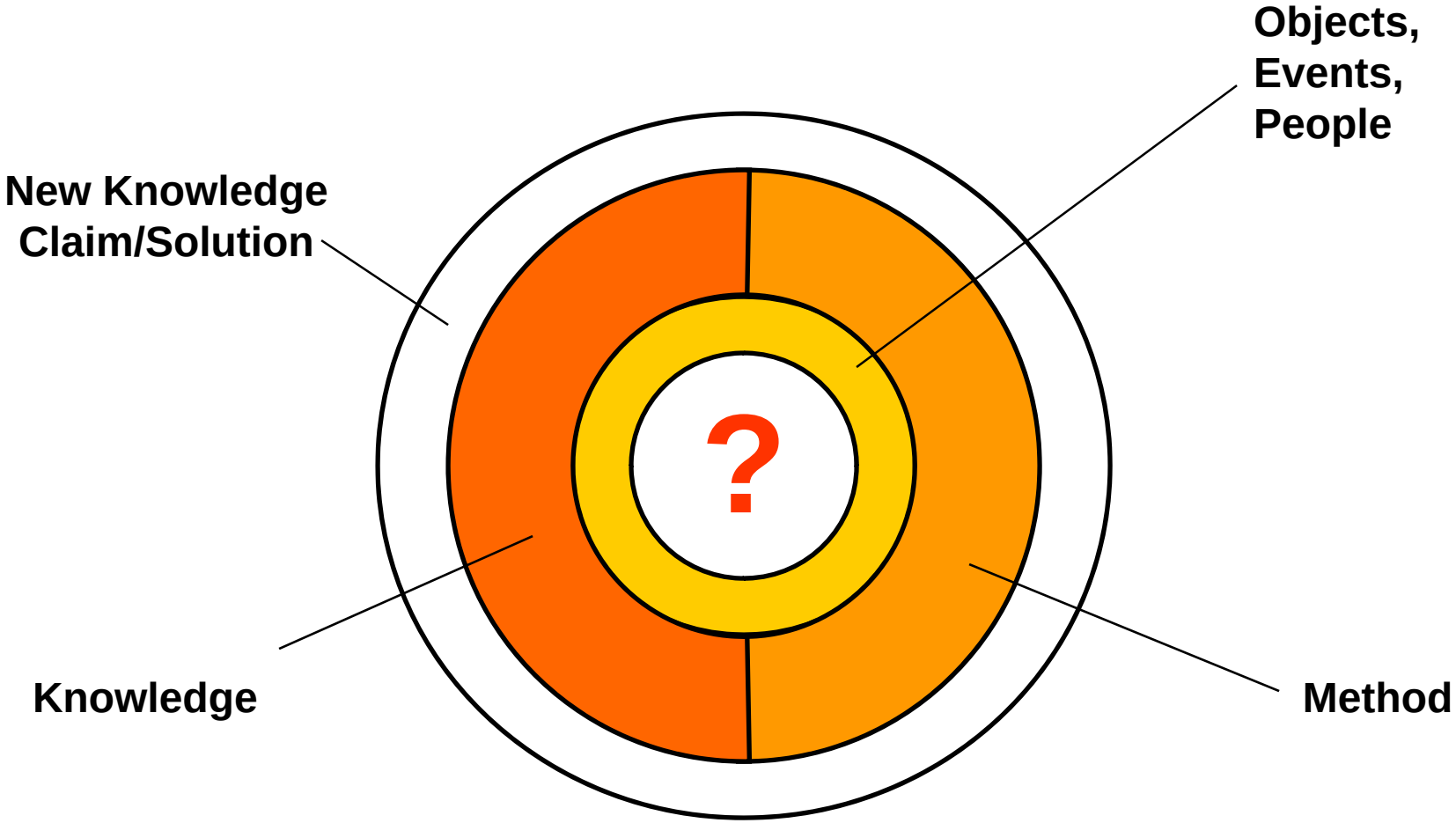
Copyright © 2008 Virginia S. Lee

Third Exercise

Table 10-1. Mean Enjoyableness Ratings of Assembling Jigsaw Puzzles as a Function of Payment of Subjects and Illustration

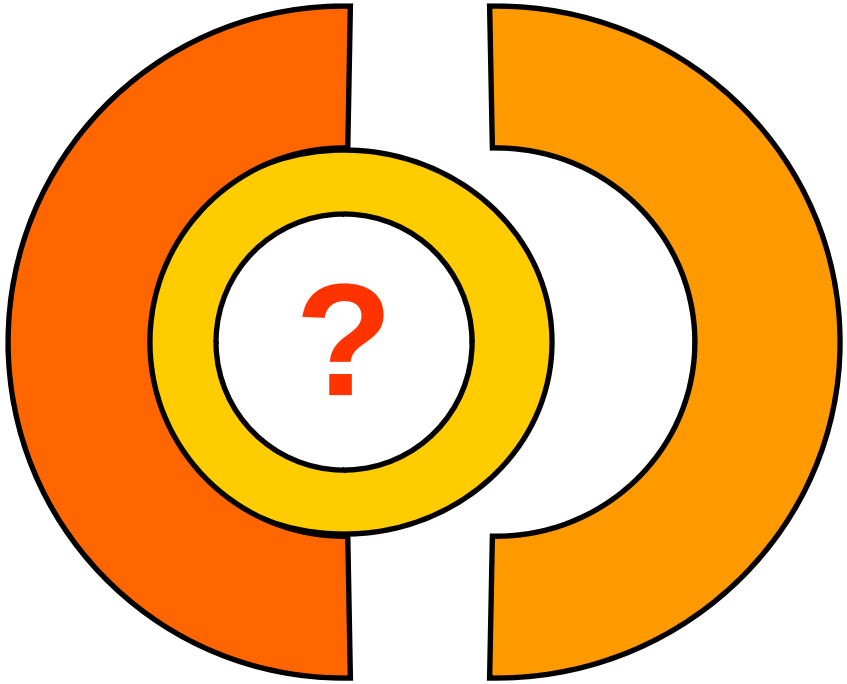
	Blank Puzzle	Picture Puzzle
No Payment	-1.8	2.3
Payment	1.4	-.1

Anatomy of an Inquiry



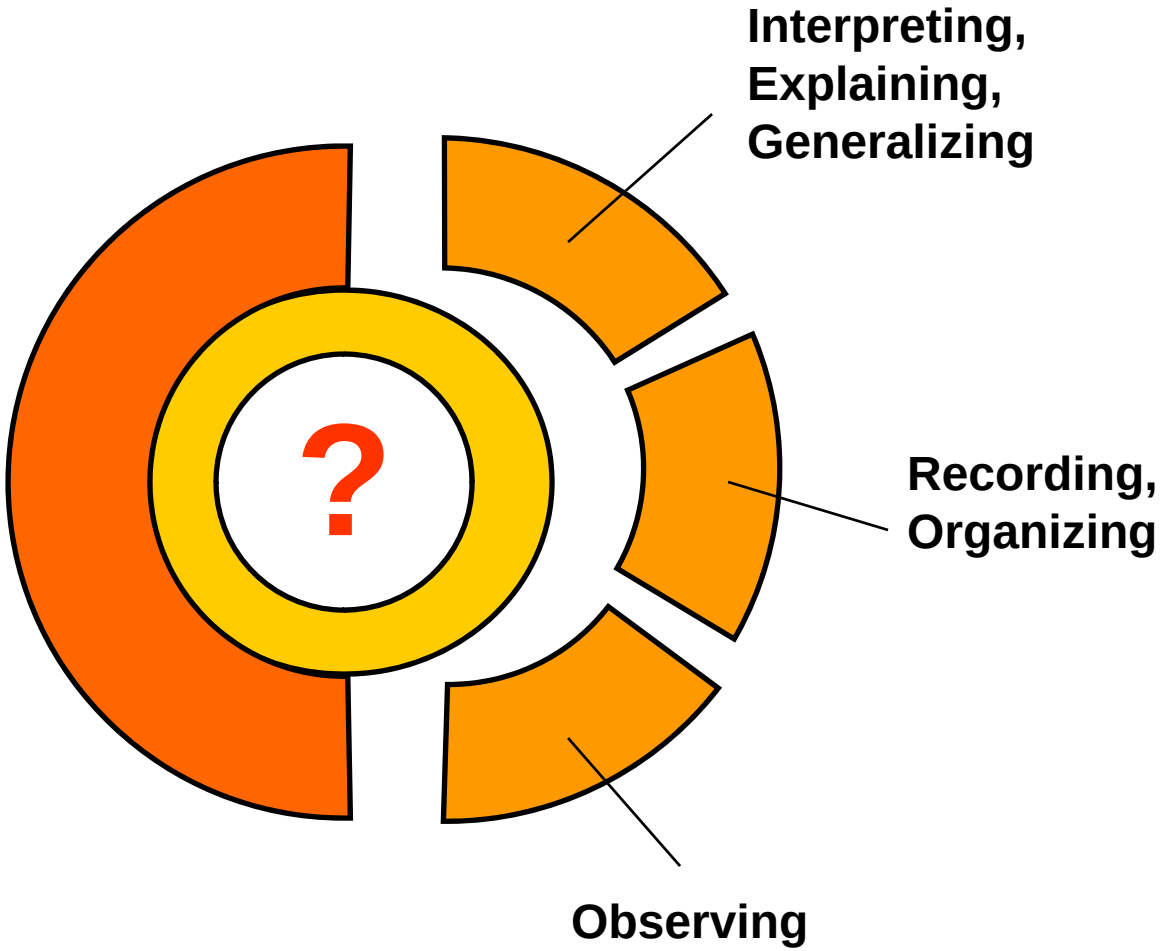
Copyright © 2008 Virginia S. Lee

Anatomy of an Inquiry: Method



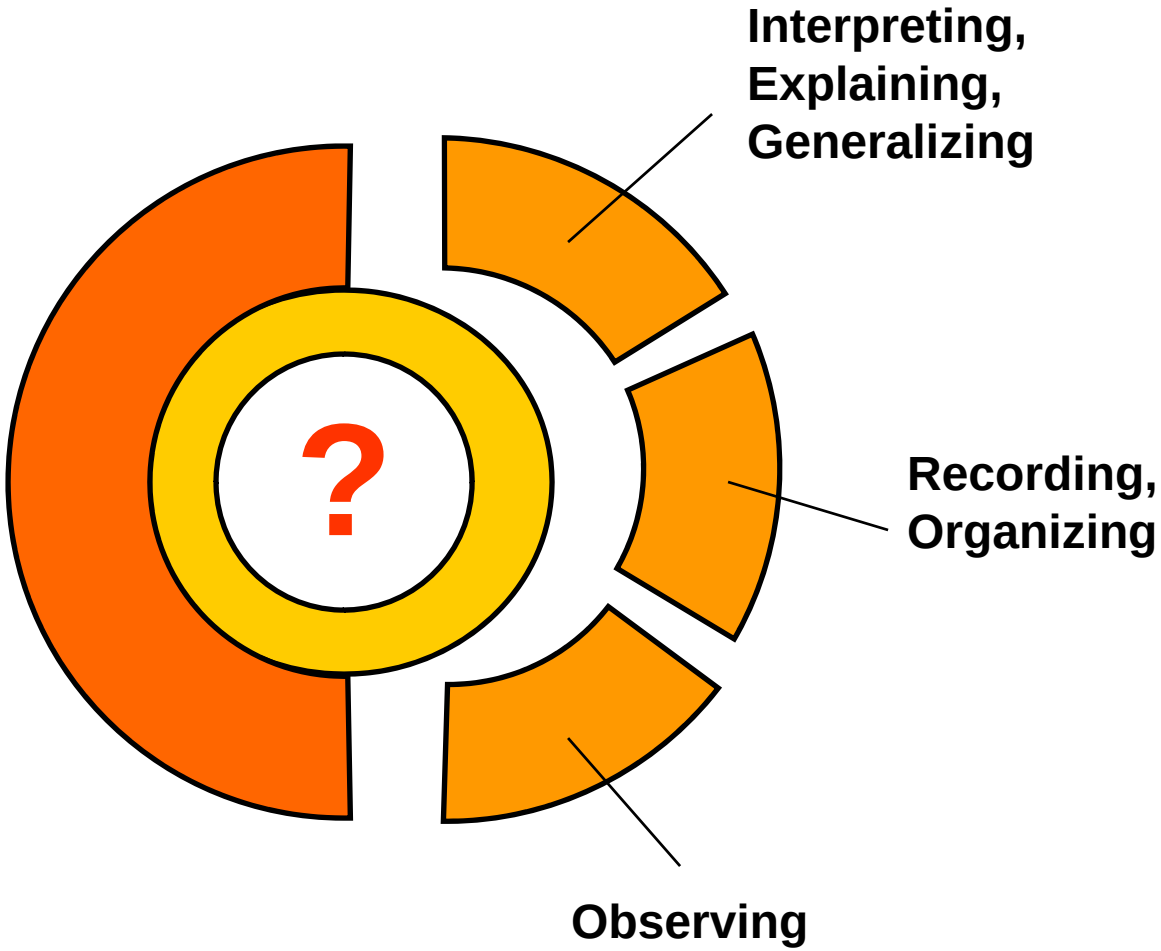
Copyright © 2008 Virginia S. Lee

Anatomy of an Inquiry: Method



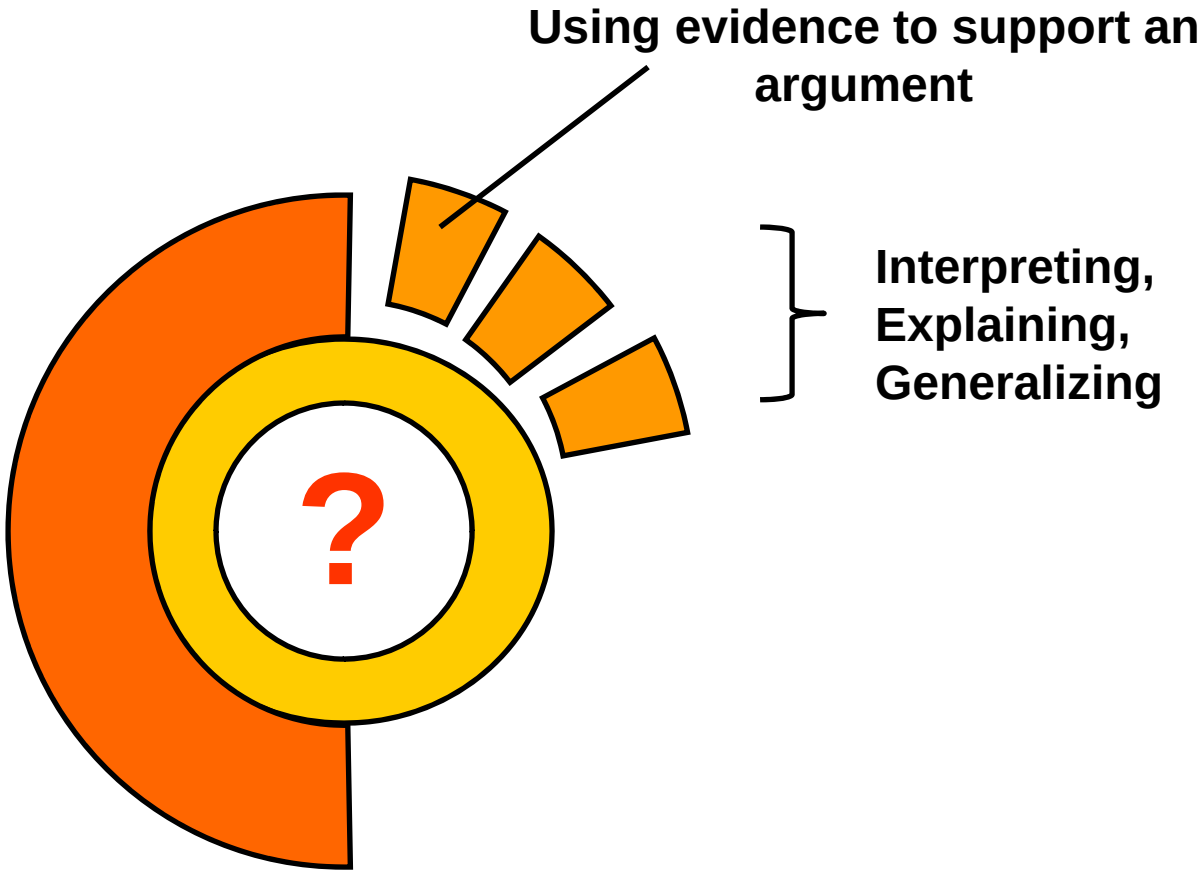
Copyright © 2008 Virginia S. Lee

Anatomy of an Inquiry: Method

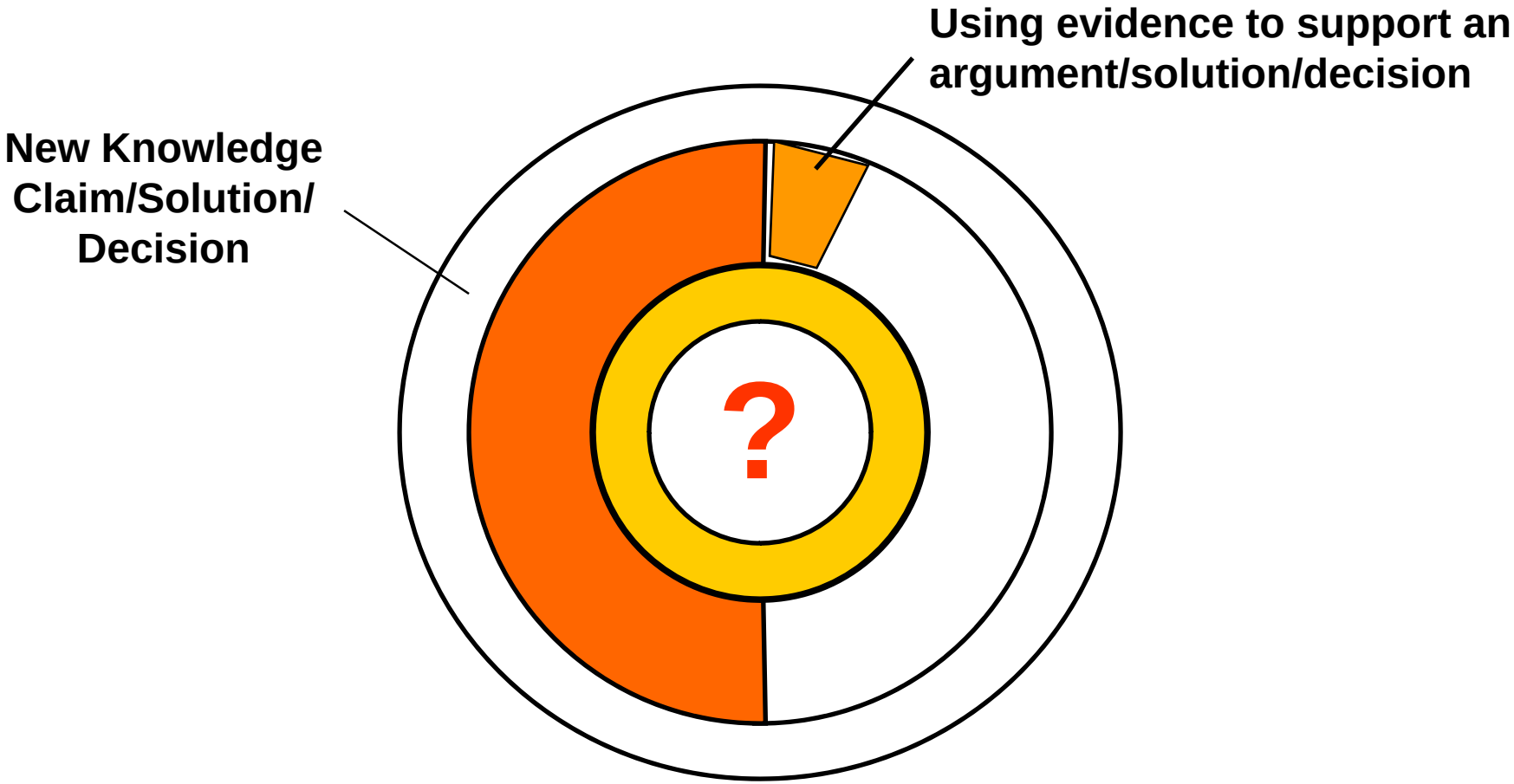


Copyright © 2008 Virginia S. Lee

Anatomy of an Inquiry: Method

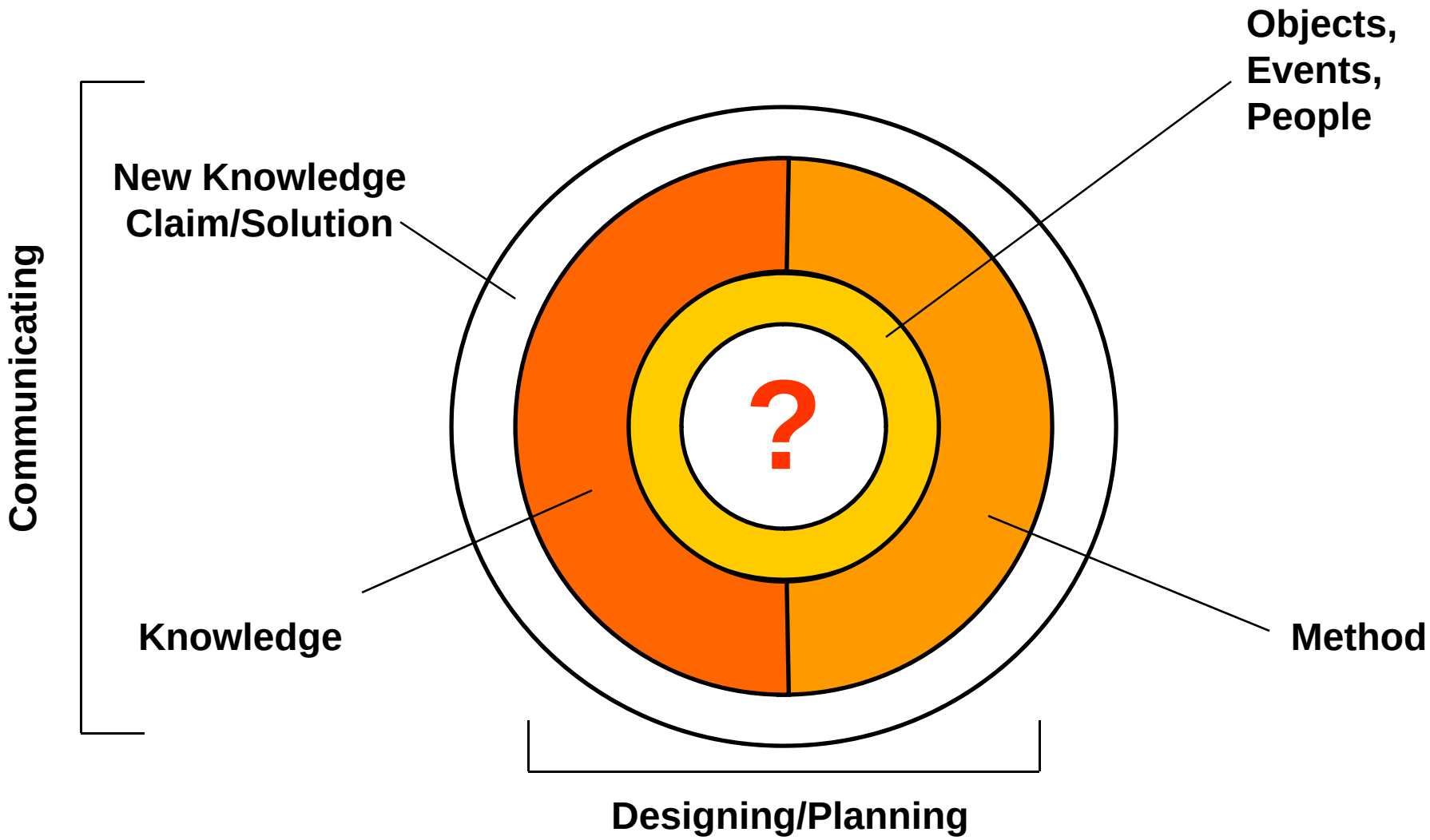


Anatomy of an Inquiry: Method



Fourth Exercise

Anatomy of an Inquiry



Copyright © 2008 Virginia S. Lee

Inquiry-guided learning is...

- Learning promoted through the investigation of questions, problems, and issues, often for which there is no single answer.

Characteristics of Inquiry-guided Learning

- Motivated by curiosity and the need to resolve uncertainty
- Takes place in a specific context
- Proceeds from the specific to the general (i.e., inductive)
- Requires active engagement of the learner
- Involves the integration of content and thought, knowledge and method
- Results in a knowledge claim, decision, or solution developed by the learner

A Continuum of Strategies for Engaging Students in Learning through Inquiry

- Reading about the nature of inquiry
- Reading/analyzing short journal articles or analyzing case studies about research projects
- Observing & interviewing researchers about their projects
- Analyzing & synthesizing data compiled by other researchers
- Doing preparatory exercises to actual research
- Conducting inquiry about questions generated by others or self

Learning through Inquiry: Example I

Introduction to Psychology: Intended Learning Outcomes

- To explain fundamental concepts in psychology in your own words
- To think like a psychologist
- To apply psychological principles to solve real world problems

Outcome & Selected Objectives from an Introductory Psychology Course

Think like a psychologist

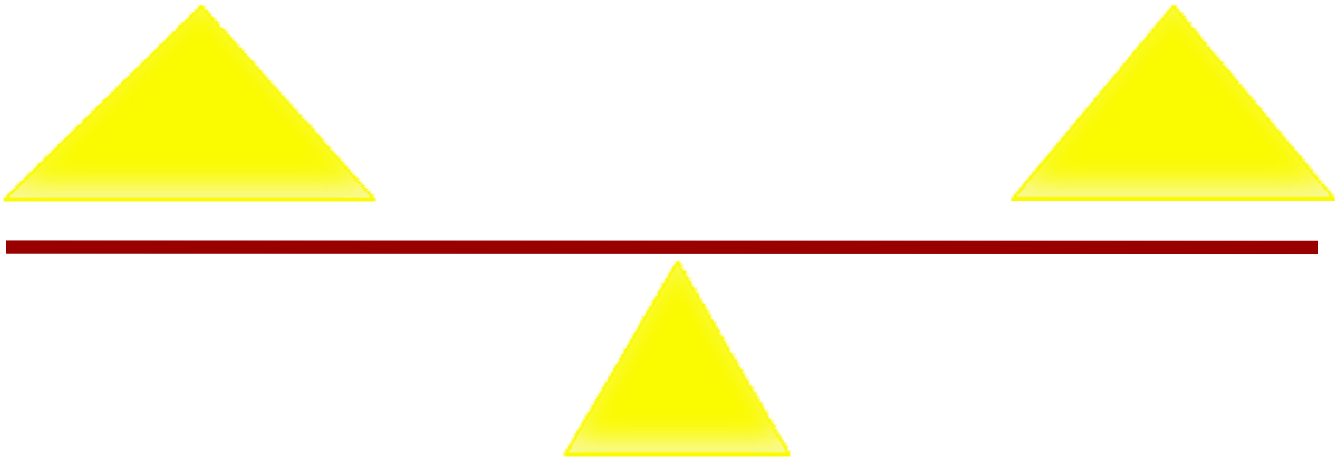
- Formulate good research questions & hypotheses
- Read a journal article & identify the features of the study (**Sensation/Perception**)
- Write up the results of an in-class experimental study in standard psychological report format (**Memory/Learning**)
- In groups conduct a semester-long qualitative research study (**Child Development**)

Introduction to Psychology: Assignments

Course Goals/Method of Evaluation	Concept Map	Vision Exercise	Motivation Case Study	Behavior Modfctn Exercise	Exper' t Write-up	Grp Rsrch Prjct	Final Exercise
Explain fundamental concepts in psychology	X	X	X	X	X	X	X
Think like a psychologist		X	X	X	X	X	X
Apply psychological principles			X	X			X

Learning through Inquiry: Example II

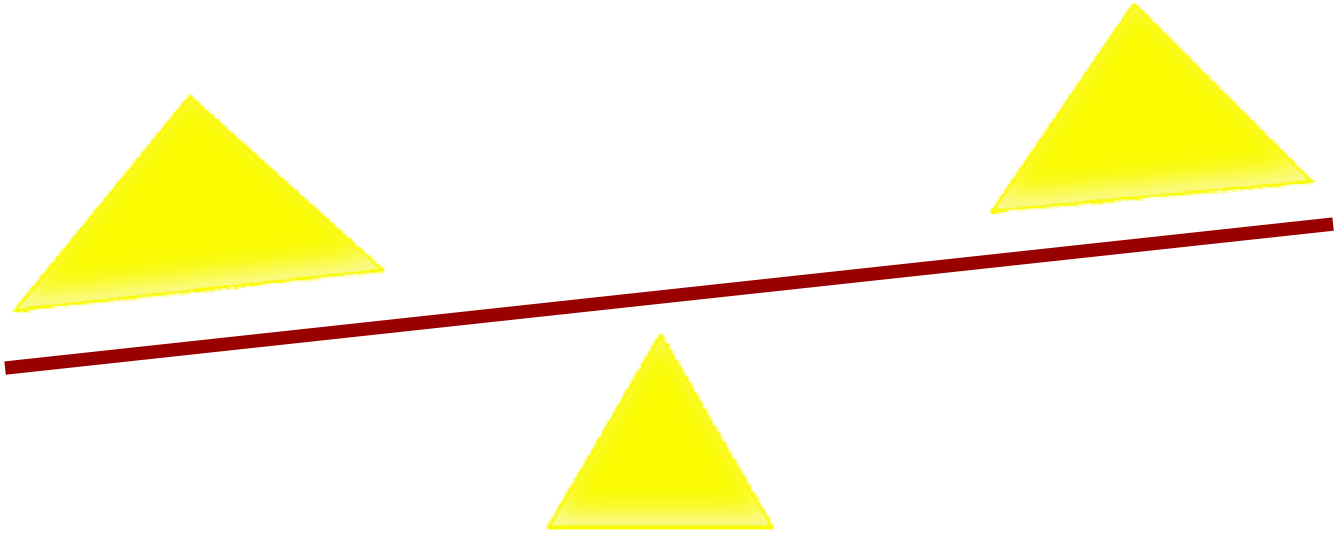
Balancing Challenge & Support



Challenge

Support

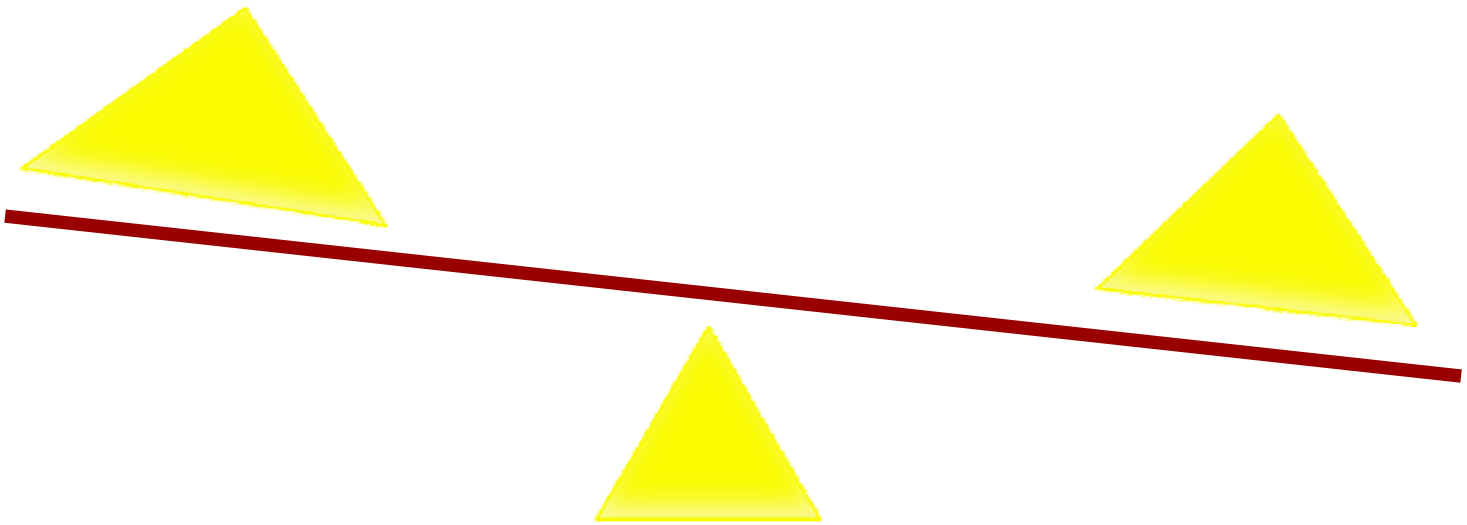
Balancing Challenge & Support



Challenge

Support

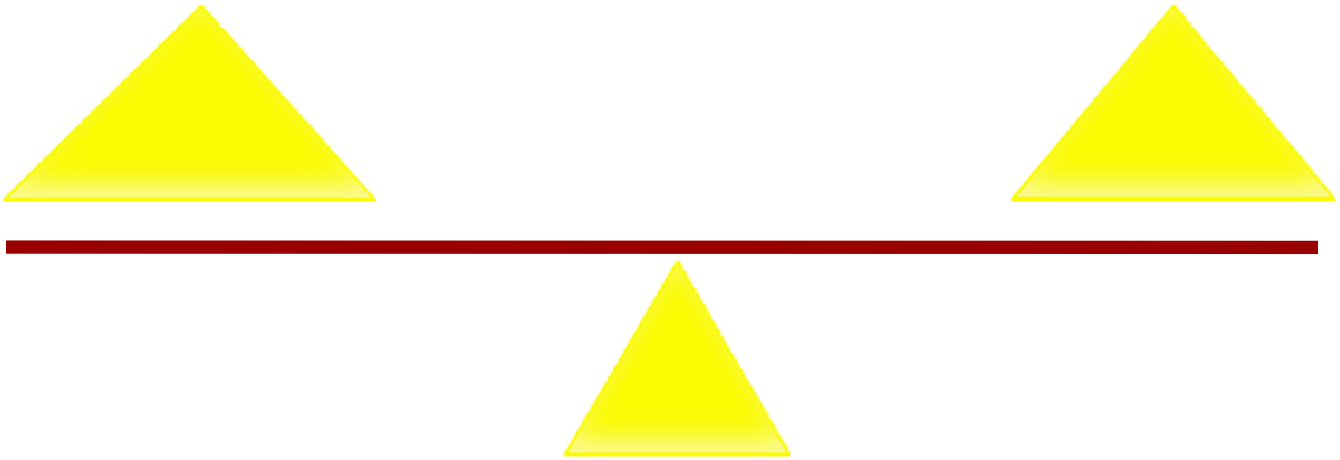
Balancing Challenge & Support



Challenge

Support

Balancing Challenge & Support



Challenge

Support

List the various ways the instructors of the two courses support students in the challenges of inquiry.

Selected Resources on Inquiry-guided Learning

- Bean, J.D. (1996). **Engaging ideas: the professor's guide to integrating writing, critical thinking, and active learning in the classroom.** San Francisco, CA: Jossey Bass.

- Belenky, M.F., Clinchy, B.M., Goldberger, N.R. & Tarule, J.M. (1986). **Women's ways of knowing: the development of self, voice and mind**. New York, NY: Basic Books.

- Donald, J.G. (2002). **Learning to think: disciplinary perspectives. San Francisco,** CA: Jossey Bass.

- Huba, M.E. & Freed, J.E. (2000). **Learner-centered assessment on college campuses: shifting the focus from teaching to learning.** Boston, MA: Allyn & Bacon.

- King, P.M. & Kitchener, K.S. (1994). **Developing reflective judgment: understanding and promoting intellectual growth and critical thinking in adolescents and adults**. San Francisco, CA: Jossey Bass.

Selected Resources on Inquiry-guided Learning

- Lee, V.S. (2004). **Teaching and learning through inquiry: a guidebook for institutions and instructors**. Sterling, VA: Stylus.
- Lee, V.S. (2003). Promoting learning through inquiry. **Essays on Teaching Excellence, 15**(3). Fort Collins, CO: POD Network in High Education. Available at
- Lee, V.S. (2003). Vees, thinking frames, and concept maps: Supporting student thought and inquiry. **National Teaching & Learning Forum, 12**(4), 1-4.
- Lee, V.S. (1998). The uses of uncertainty in the college classroom. **Essays on Teaching Excellence, 12** (1). Fort Collins, CO: POD Network in Higher Education. Available at http://oregonstate.edu/ctl/articles/packet14/The%20Uses%20of%20Uncertainty.htm

Selected Resources on Inquiry-guided Learning

- Lee, V.S., Shaw, P., & Snyder, L. Learning Objective 12: Acquiring an interest in learning more by asking questions and seeking answers. **POD-IDEA Learning Notes**. Available at http://www.theideacenter.org/sites/default/files/Objective12.pdf
- Novak, J.D. & Gowin, D.B. (1996). **Learning how to learn**. New York, NY: Cambridge University Press.
- Perry, W.G., Jr. (1970). **Forms of intellectual and ethical development in the college years: a scheme**. New York, NY: Holt, Rinehart, & Winston.
- Riordan, T. & Roth, J. (2005). **Disciplines as frameworks for student learning: teaching the practice of the disciplines**. Sterling, VA: Stylus.
- Walvoord, B. E. & Anderson, V.J. (1998). **Effective grading: a tool for learning and assessment**. San Francisco, CA: Jossey Bass.
- Weaver, F.S. (Ed.) (1989). **Promoting inquiry in undergraduate learning**. New Directions for teaching and learning, no. 38. San Francisco, CA: Jossey Bass.

Questions? Please feel free to contact me:

Virginia S. Lee, Ph.D.

Senior Consultant

Virginia S. Lee & Associates, LLC

P.O. Box 51746

Durham, NC 27717-1746

(919) 493-4729

vslee@virginiaslee.com

http://www.virginiaslee.com