Leadership Virtual Community of Practice (LVCP)

Cindy Finelli - Karl A. Smith

University of Michigan -
Purdue University/University of Minnesota

cfinelli@umich.edu - ksmith@umn.edu

Session 1: Introduction to the LVCP

January 15, 2013

Tentative Agenda

- Welcome, introductions, and navigating the technology ~ 15 minutes

- Overview of project (Russ) ~ 10 minutes

- Overview of plans for the ten sessions ~ 15 minutes

- Discussion of Session 1 materials including results of pre-survey ~ 15 minutes

- Wrap up and plans for Session 2 ~ 5 minutes

LVCP Goals

- Effectively and efficiently manage time and expectations

- Prepare VCP leaders with examples, strategies and resources to:
    - Effectively facilitate their VCP
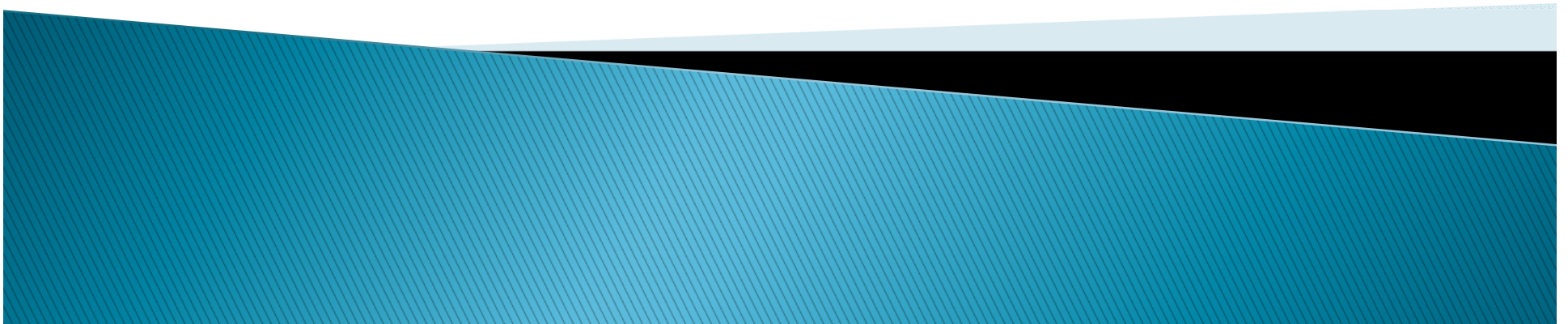   - Foster a LVCP that learns, problem solves and provides support

Introductions

- We assume you read the bios
- We need to familiarize ourselves with everyone's voice

http://www.asee.org/asee-vcp/communities
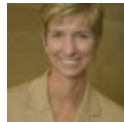
Introduction to VCP Project

Russ Pimmel
January 15, 2013

Project Goals

- Sustainable VCP model that enables faculty members to work as a community to
  - Share knowledge
  - Develop Instructional strategies
  - Implement and evaluate approaches
- Identify VCP best practices

Expected Outcomes

▸ 2 Leadership VCPs and 12 (now 0) Faculty VCPs

▸ A knowledgeable, skilled community of leaders

▸ Approximately 300 faculty members that have
  ◦ Shared practices and gained a deeper understanding
  ◦ implemented and evaluated approaches
  ◦ Continued involvement with their VCP

▸ VCP knowledge base and best practices

Five Premises

- Need for advancement in engineering education and effective methods of dissemination

- Current short-term, one-shot, face-to-face faculty workshops are inherently flawed and not scalable

- Learning communities and communities of practice offer an effective alternative

- Virtual approaches provide an effective economical, and scalable approach without geographical constraints.

- Engineering faculty members will participate in VCPs

High-Risk-High-Payoff Experiment

- Really an experiment
  - High-risk-high-payoff experiment
- Crucial experiment
  - it will test a viable, scalable approach
    - Perhaps the only one
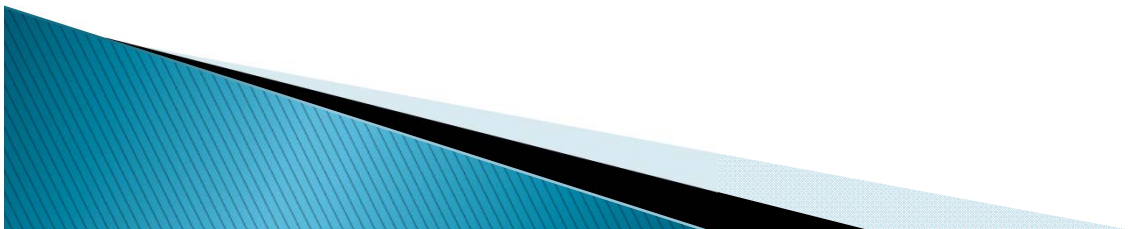
LVCP Sessions Overview

- Session 1, 1/15. Introduction to the LVCP
- Session 2, 1/22. Creating a positive & inclusive learning environment
- Sessions 3+4, 1/29 & 2/5. Active learning
- Session 5, 2/12. Student teams for active learning
- Sessions 6+7, 2/19 & 2/26. Student motivation
- Sessions 8+9, 3/5 & 3/12. Learning objectives & Bloom's taxonomy
- Session 10, 3/19. Reflection on LVCP and identification of best practices for FVCPs

*** Faculty VCPs begin March 21***

Session 1: Participant Learning Objectives

- Explain and apply LVCP design features in your VCP

- Describe key features of the *Rethinking and Redesigning*

  - Articulate an integrated approach to course design which aligns curriculum (or content or outcomes), assessment and instruction

- Summarize research on *How Learning Works* (HLW)

- Identify connections between effective, interactive learning strategies such as cooperative learning and desired outcomes of courses and programs

*"It could well be that faculty members of the twenty-first century college or university will find it necessary to set aside their roles as teachers and instead become **designers** of learning experiences, processes, and environments."*

James Duderstadt, 1999
Nuclear Engineering Professor, Dean, Provost & President of the University of Michigan
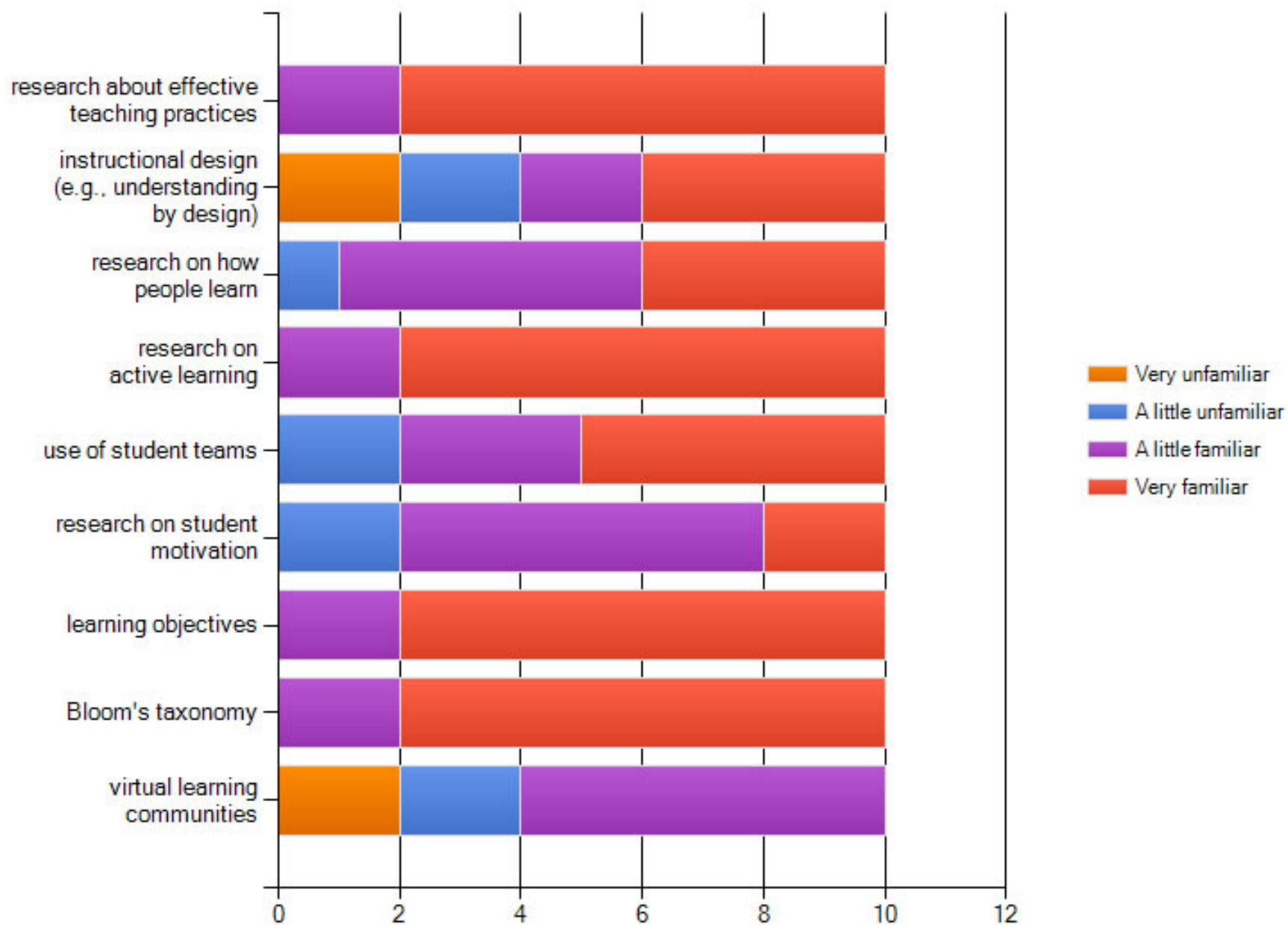
What do you already know about course design?

- [Background Knowledge Survey]

How familiar are you with the following topics:

Seven Principles for Good Practice

- Good practice in undergraduate education:
  - encourages contact between students and faculty,
  - develops reciprocity and cooperation among students,
  - encourages active learning,
  - gives prompt feedback,
  - emphasizes time on task,
  - communicates high expectations, and
  - respects diverse talents and ways of learning.

Chickering & Gamson, 1987. *Seven Principles for Good Practice in Undergraduate Education.*

Course Design Foundations
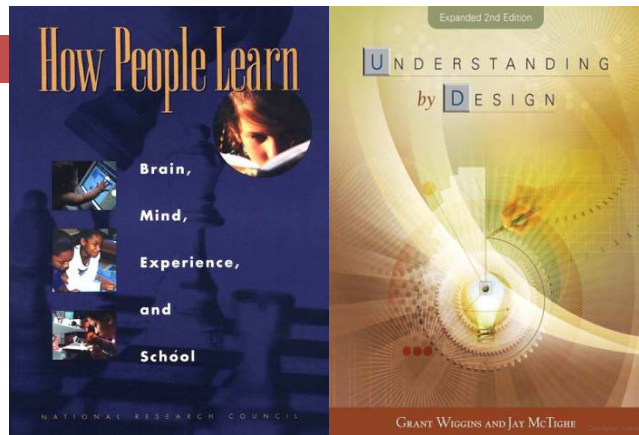
Science of Instruction (UbD)

	No	**Yes**
Yes	Good Theory/ Poor Practice	Good Theory & Good Practice
No		Good Practice/ Poor Theory

Science of Learning (HPL)

Bransford, Brown & Cocking. 1999. *How People Learn*. National Academy Press.
Wiggins & McTighe, 2005. *Understanding by Design, 2ed*. ASCD.

How People Learn (HPL)

HPL Framework
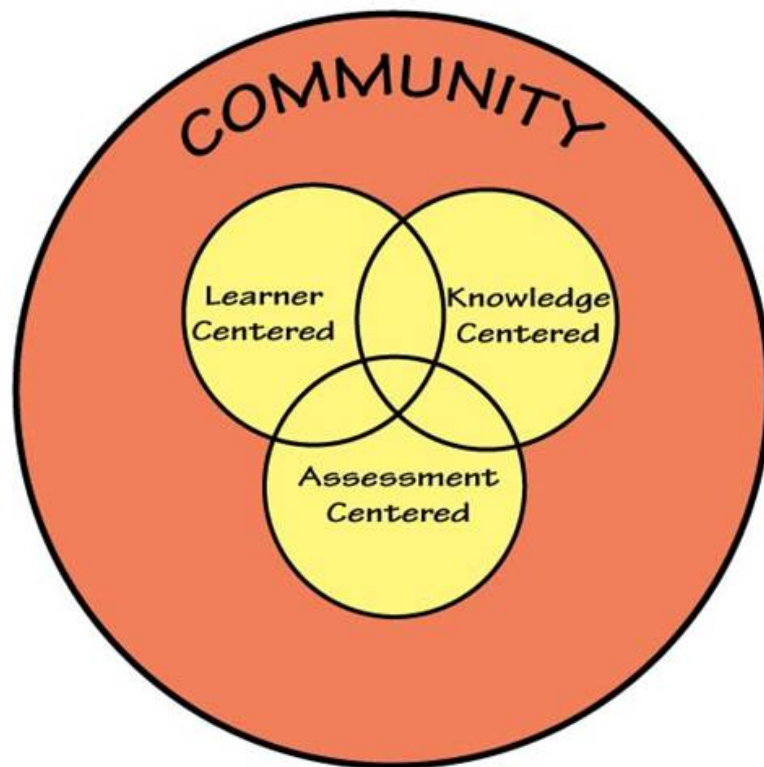
Expertise implies (Ch. 2):

- a set of cognitive and metacognitive skills
- an organized body of knowledge that is deep and contextualized
- an ability to notice patterns of information in a new situation
- flexibility in retrieving and applying that knowledge to a new problem

Bransford, Brown & Cocking. 1999. *How people learn.* National Academy Press.

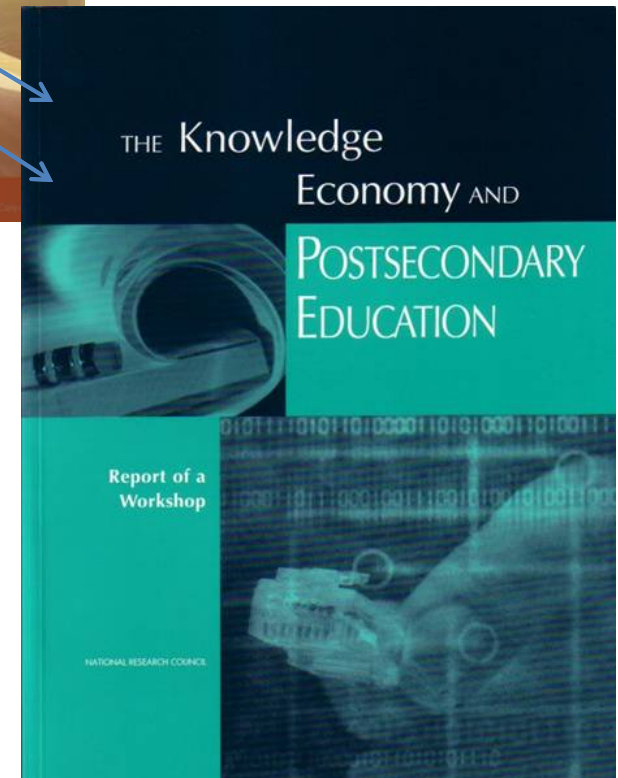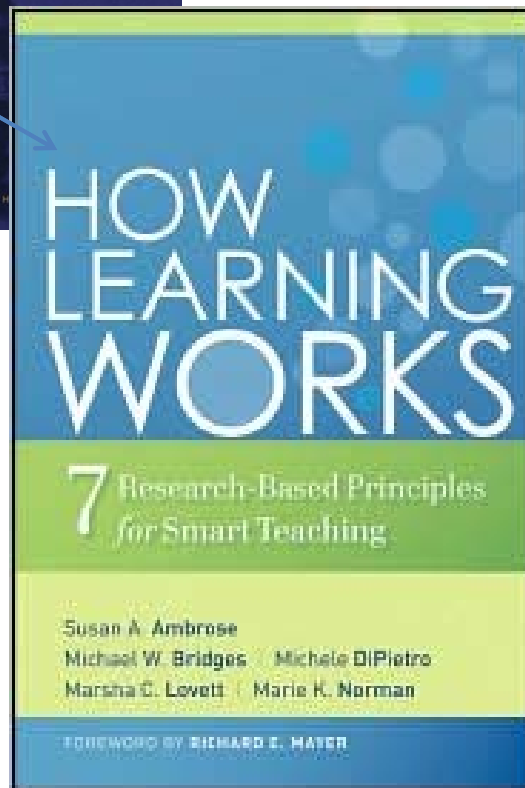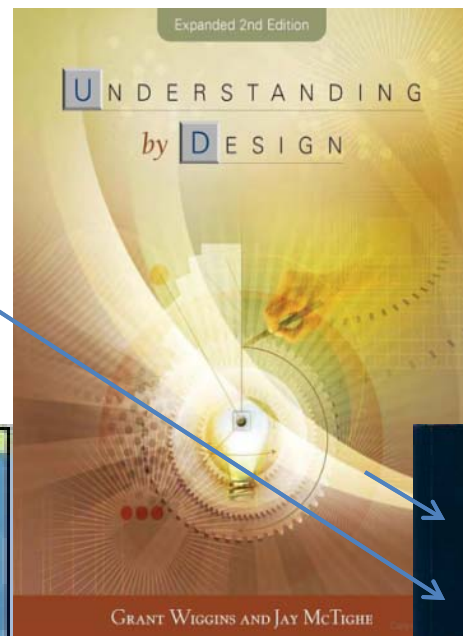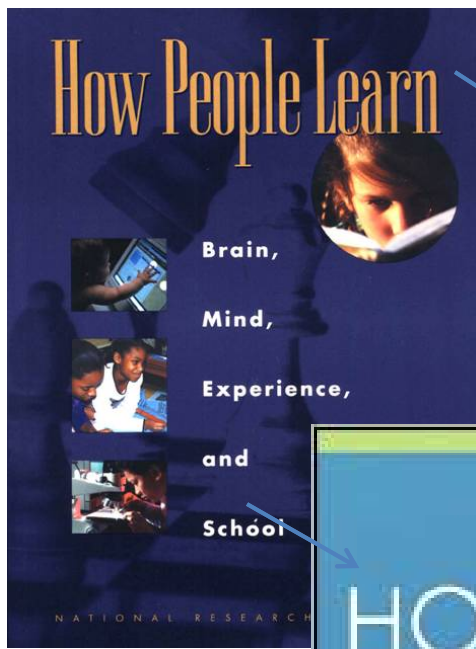# Three Important Principles About Learning and Understanding

- **Students come to the classroom with preconceptions** about how the world works which include beliefs and prior knowledge acquired through various experiences.

- **To develop competence in an area of inquiry, students must:** (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.

- A "**metacognitive" approach to instruction** can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.

Pellegrino, 2006. *Rethinking and redesigning curriculum, instruction and assessment: What contemporary research and theory suggests.* www.skillscommission.org/commissioned.htm

Understanding by Design

- Stage 1. Identify Desired Results
  - Enduring understanding
  - Important to know and do
  - Worth being familiar with
- Stage 2. Determine Acceptable Evidence
- Stage 3. Plan Learning Experiences and Instruction
- Overall: Are the desired results, assessments, and learning activities ALIGNED?

Wiggins & McTighe, 1997, 2005. *Understanding by Design*. Alexandria, VA: ASCD.

How People Learn

Brain,

Mind,

Experience,

and

School

NATIONAL RESEARCH

HOW
LEARNING
WORKS

7 Research-Based Principles
for Smart Teaching

Susan A. Ambrose
Michael W. Bridges   Michele DiPietro
Marsha C. Lovett   Marie K. Norman

FOREWORD BY RICHARD E. MAYER

Expanded 2nd Edition

UNDERSTANDING
by DESIGN

GRANT WIGGINS AND JAY McTIGHE

THE Knowledge
Economy AND
POSTSECONDARY
EDUCATION

Report of a
Workshop

NATIONAL RESEARCH COUNCIL

Bransford, Vye and Bateman.
*Creating High Quality Learning
Environments*

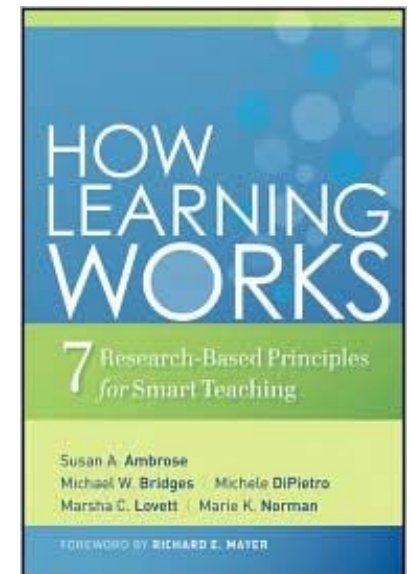# Seven Research-Based Principles for Smart Teaching

- Reflection and Discussion
  - Which of the 7 research-principles have you embraced and how?

Seven Research-Based Principles

1. Students' prior knowledge can help or hinder learning
2. How students organize knowledge influences how they learn and apply what they know
3. Students' motivation determines, directs, and sustains what they do to learn
4. To develop mastery, students must acquire component skills, practice integrating them, and know when to apply what they have learned
5. Goal-directed practice coupled with targeted feedback enhances the quality of students' learning
6. Students' current level of development interacts with the social, emotional, and intellectual climate of the course to impact learning
7. To become self-directed learners, students must learn to monitor & adjust their learning approach

HOW LEARNING WORKS

7 Research-Based Principles for Smart Teaching

Susan A. Ambrose   Michael W. Bridges   Michele DiPietro   Marsha C. Lovett   Marie K. Norman

FOREWORD BY RICHARD E. MAYER

Session 2. January 22, 2013

- Creating a positive & inclusive learning environment
- Pre-work
  - Create a diagnostic (background knowledge) survey for use with your VCP and post the survey questions to the ASEE VCP portal
  - Read and be prepared to discuss Chapter 6 of HLW, Why do student development and course climate matter for student learning?