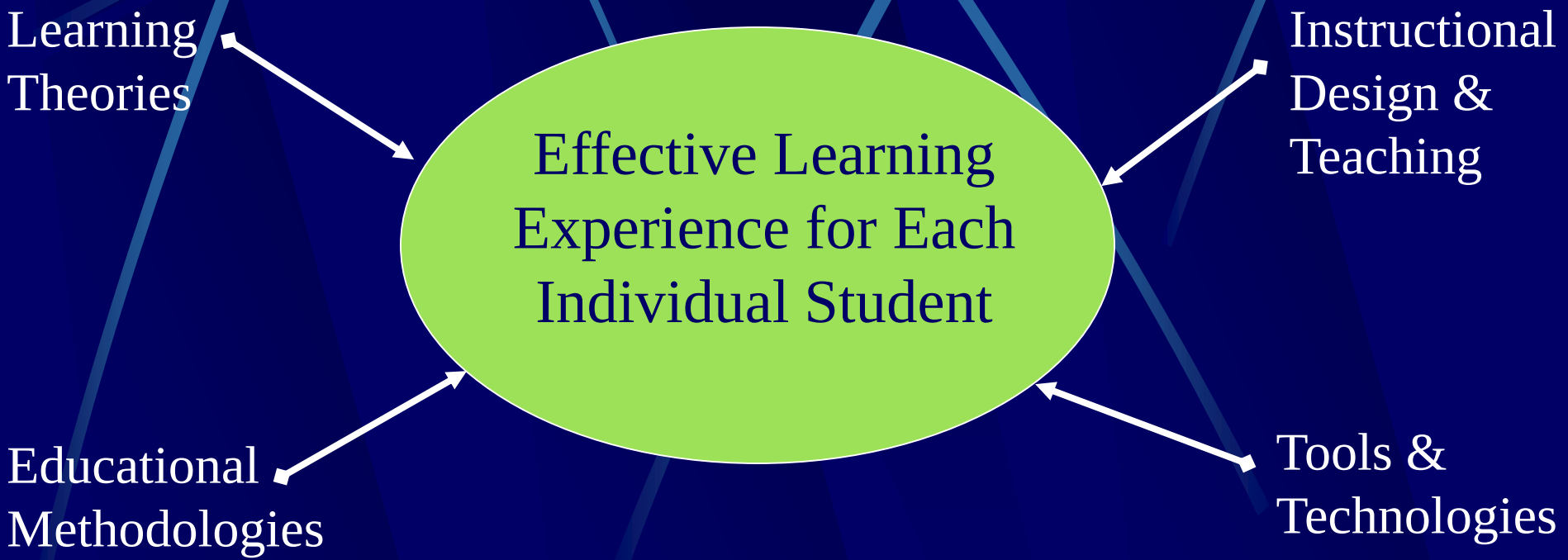
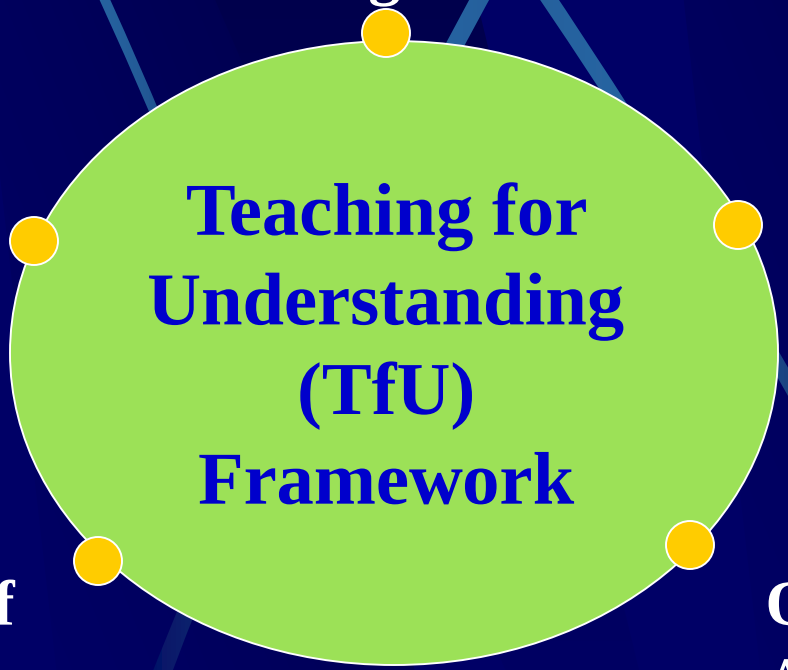
Educational Methodologies and Enabling Technologies

Benay Dara-Abrams, Ph.D.
Santa Clara University
May 15, 2003

Focus on Learning



Teaching for Understanding



Throughlines and Generative Topics

- Throughlines — ideas that are developed across the curriculum.
- Generative Topics
  - What will students learn about?
  - Why is this worth learning?
  - Central to one or more disciplines or subjects
  - Accessible and interesting to students
  - Connected to instructor's passions.

Understanding Goals

- What will students come to learn in this unit?
- What the instructor/teacher wants the students to learn
- Explicitly stated
- Public goals
- Focused on key concepts, methods, purposes, and forms of expression
- Linked to assessment criteria

Ongoing Assessment

- Asks the question: how will you and your students know what they understand?
- Students reflect on their own learning experiences throughout the process
- Multiple ways for students to demonstrate to the teacher and to themselves what they understand.

Performances of Understanding

- Asks the question: what will students do to build and demonstrate their understanding?
- Demonstrate to instructor and to themselves what they have learned
- Presentations
- Written reports
- Portfolios
- Hands-on activities

Entry Point Framework

- Narrative – introduce through story-telling
- Numerical – engage through computation
- Logical – deduction to learn new concepts
- Existential/Foundational – ask questions
- Aesthetic – engage senses through artworks
- Hands-On – experiential, manipulation
- Interpersonal – cooperative learning

Multiple Representations

- Family of representations
- Activate different intelligences
- Present new concepts in multiple ways
- Content presentation activates more than one intelligence

Problem-Based Learning

- Process Skills + Content Knowledge
- Analyze and solve real-world problems
- Find, evaluate, use learning resources
- Demonstrate communication skills
- Case study analysis
- Case study development

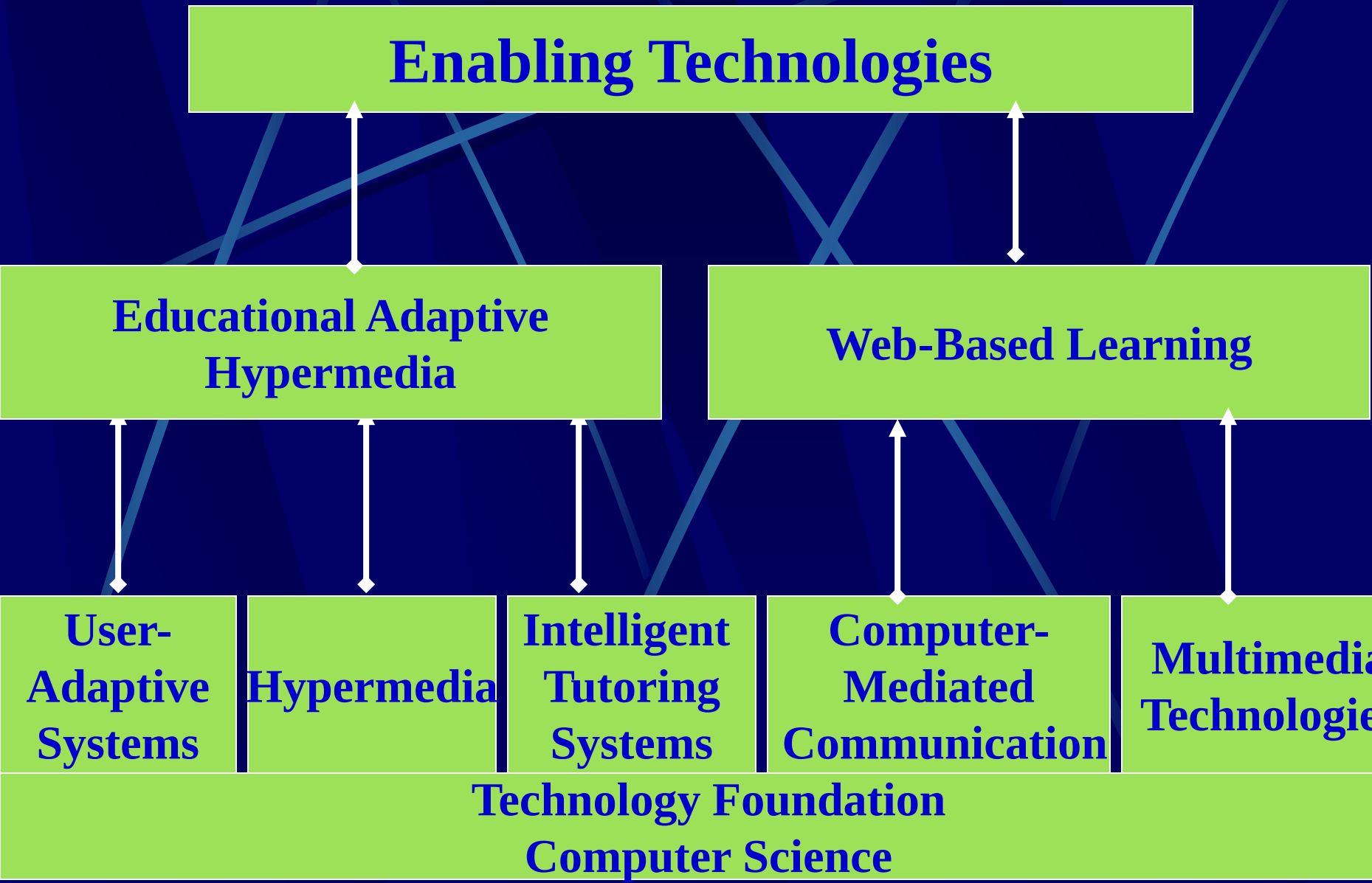
What is E-Learning?

"Learning experiences enabled or enhanced by technological resources that support the development, exchange, and application of knowledge, skills, attitudes, aspirations, or behaviors for the purpose of improving teaching and increasing student achievement."

National Staff Development Council

Hybrid/Blended Learning

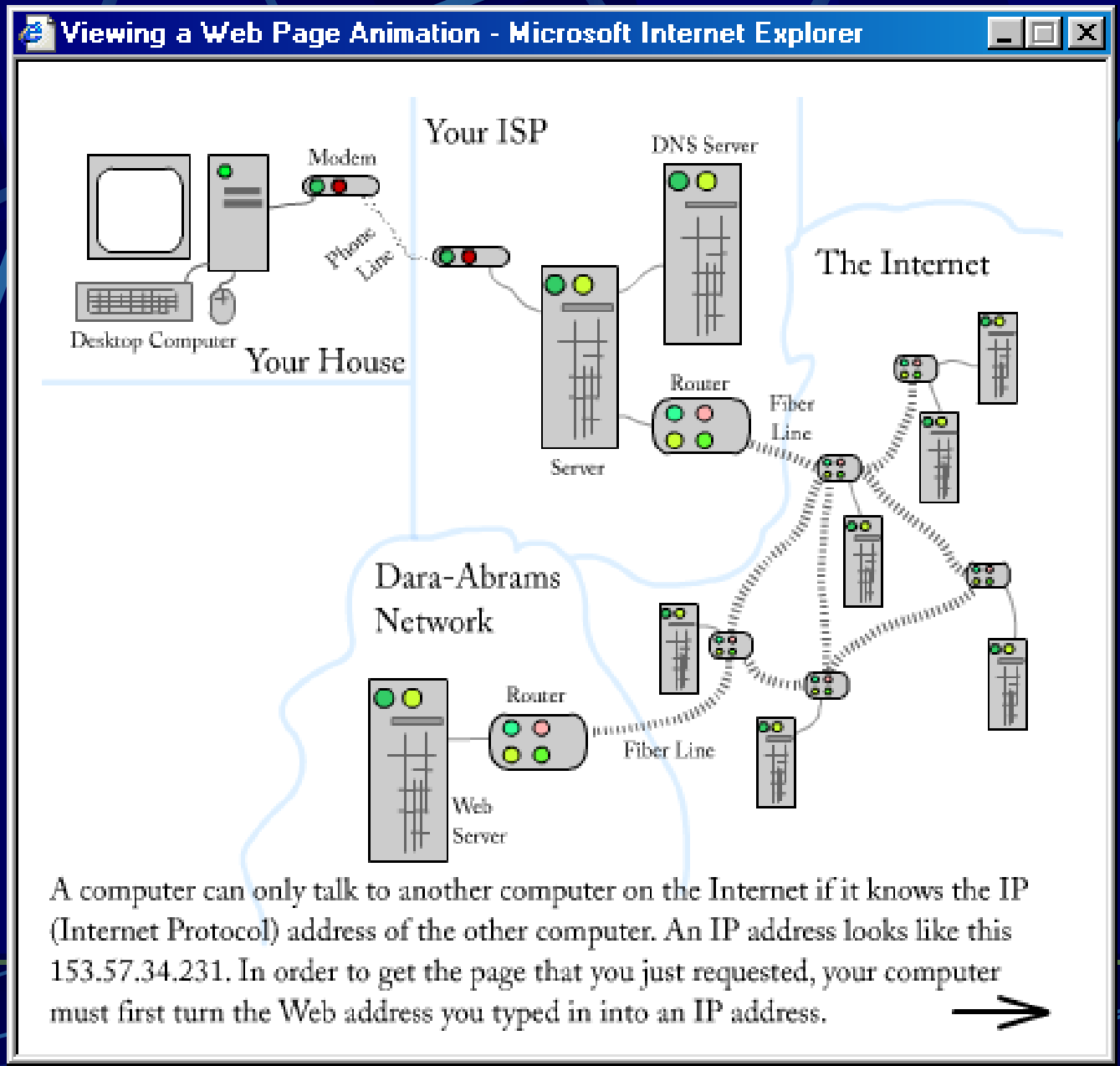
- Face-to-Face (F2F)
- Online Learning
- Move to 7 X 24 learning experience
- Structured discussions supplement class session
- Encourages quiet students to participate
- Opportunity for reflection
- Build & apply knowledge incrementally



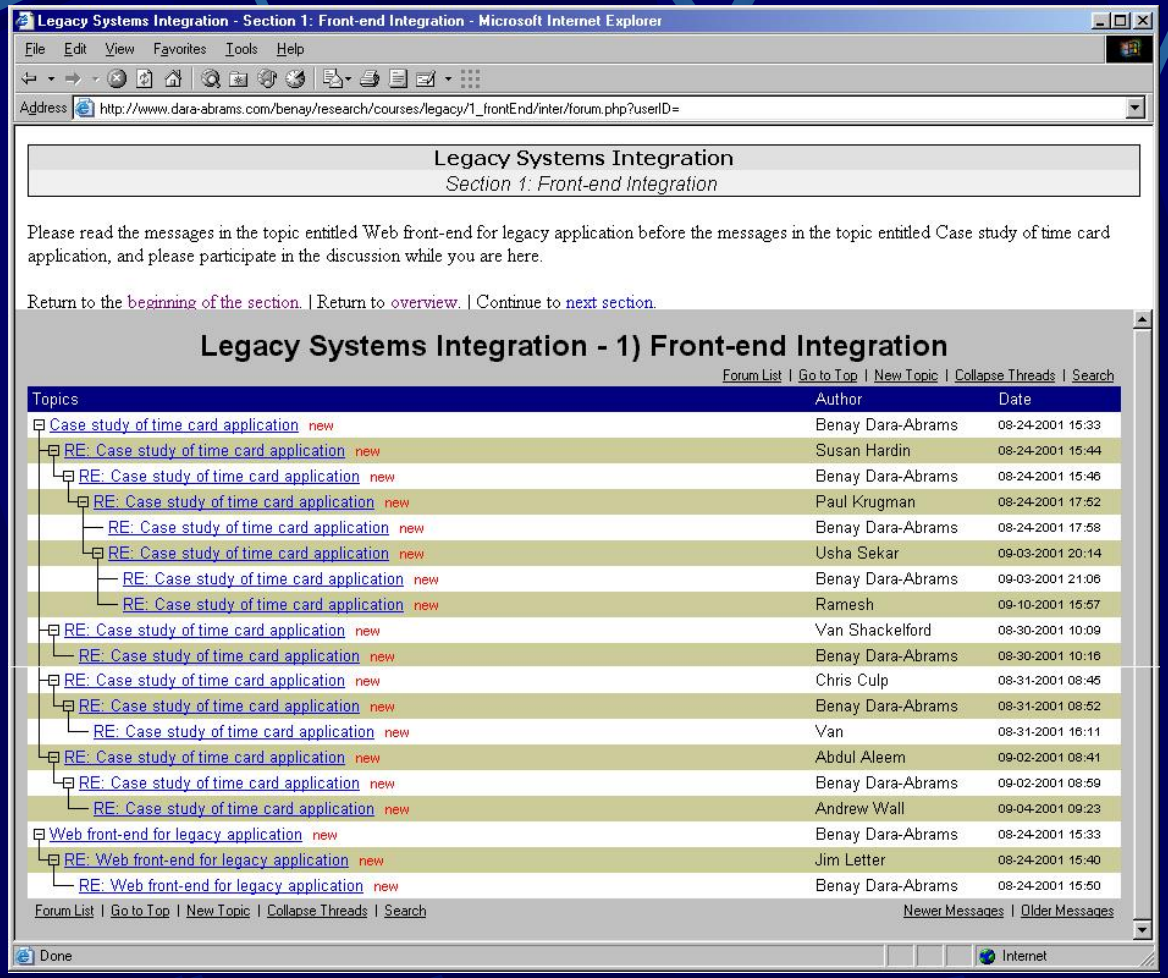
Explanation Variants

Intelligence	Explanation Variant	Technology
Linguistic	Prose, Textual Explanation	HTML, Word
Logic-Math	Bulleted List	HTML list
Spatial	Diagrams, Graphics, Movies	Flash, iMovie, PowerPoint
Musical	Sound Effects, Sound Track	Flash, Audio
Intrapersonal	Self-Guided Problem Analysis, Journals	HTML forms with script
Interpersonal	Discussions – problems, cases, questions	Threaded discussion
Naturalist	Categories and Metaphors	HTML lists, Flash
Bodily-Kinesthetic	Hands-on Exercises Simulations	Scripts Virtual Environments

Spatial and Musical



Interpersonal



Intrapersonal