Technology-Enabled Learning

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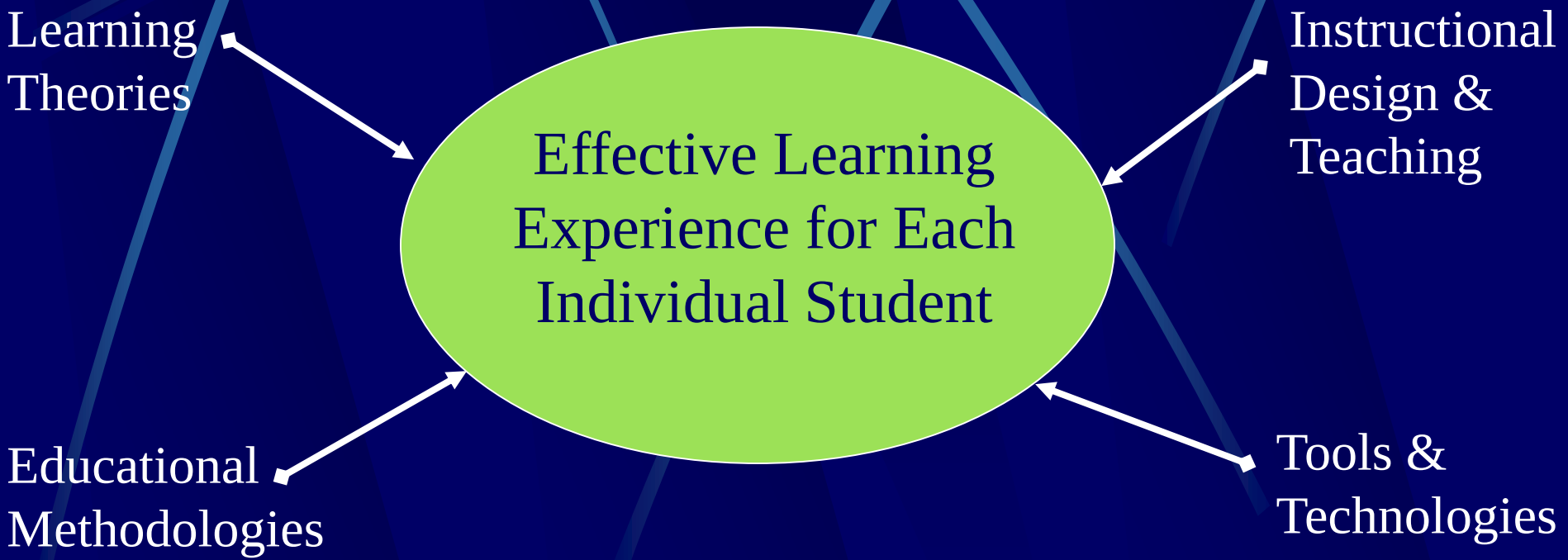
Focus on Learning



Agenda

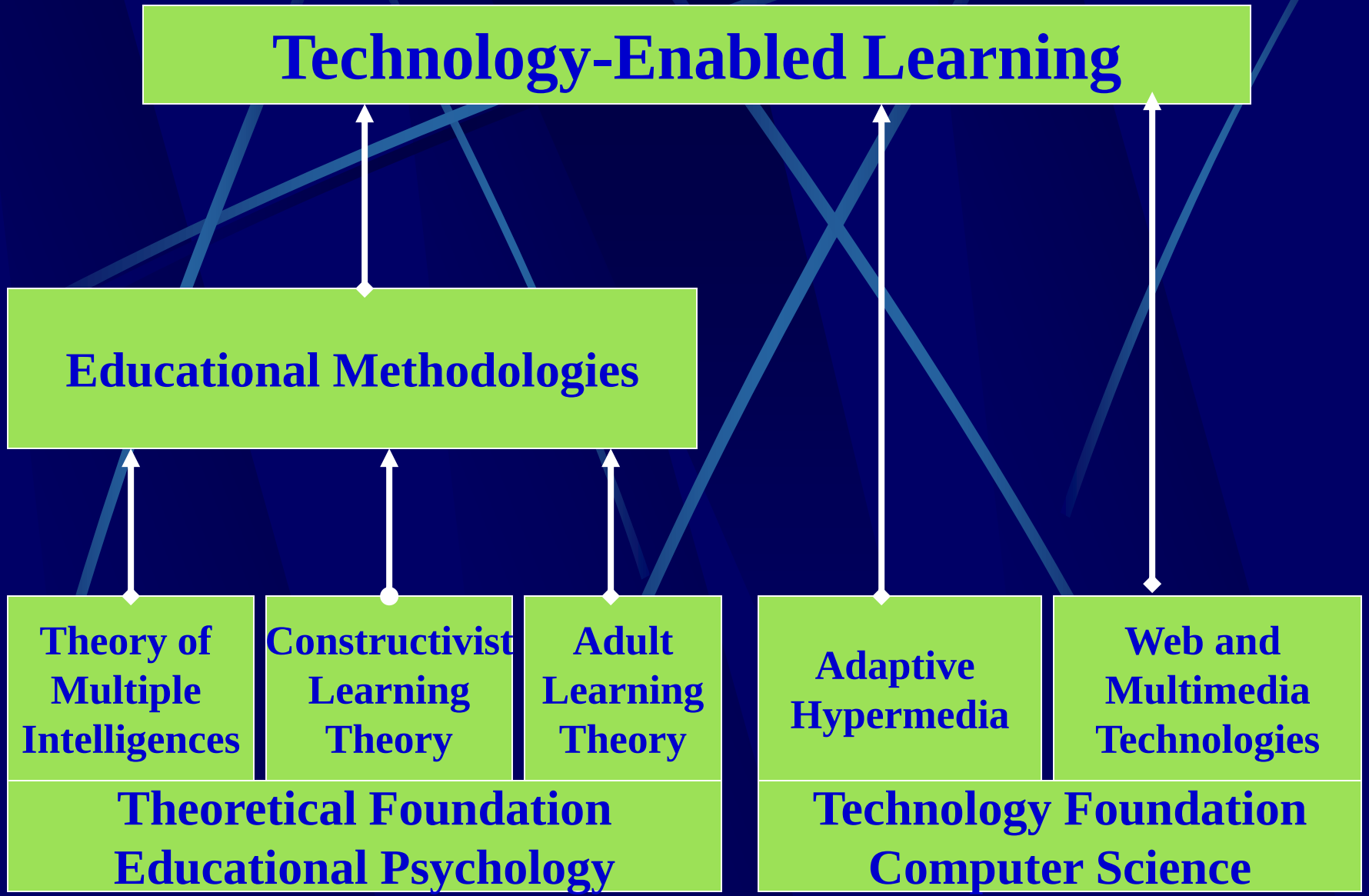
- Integrating Theory, Methodology, Technology
- Successful Graduates
- Learning Theories
  - Theory of Multiple Intelligences
  - Constructivist Learning Theory
  - Adult Learning Theory
- Educational Methodologies
  - Teaching for Understanding Framework
  - Entry Point Framework
  - Multiple Representations
  - Problem-Based Learning
- E-Learning and Enabling Technologies

Integration

Education

Computer Science

Psychology



Successful Graduates

- Systems perspective
- Problem solving and decision making
- Use of information technology
- Negotiation and teamwork
- Communication skills and multicultural awareness
- Adaptability and flexibility
- Creativity and leadership
- Analysis and synthesis
- Learning to learn
- Practical experience

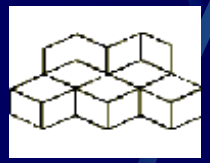
American Council on Education (ACE)

Theory of Multiple Intelligences

- Linguistic

- Logical-Mathematical

- Spatial



- Bodily-Kinesthetic

- Musical

- Interpersonal

- Intrapersonal

- Naturalist

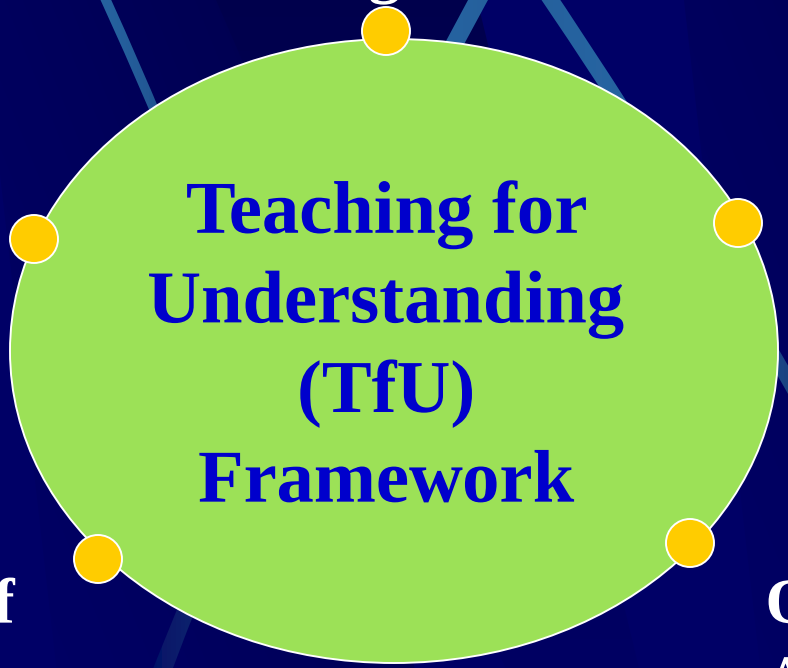
Constructivist Learning Theory

- Based on research of Piaget
- Learning - result of individual's mental construction
- Individuals learn by actively constructing their own understanding
- Incorporate new information into base of knowledge already constructed in their minds
- Discovery learning - "True learning is based on discovery guided by mentoring rather than transmission of knowledge" John Dewey

Adult Learning

- Learn throughout their lives
- Transitional stages – cause for learning
- Diverse learning approaches
- Problem-centered and relevant
- Immediacy of application
- Past experiences
- Self-concept
- Self-directed

Teaching for Understanding



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

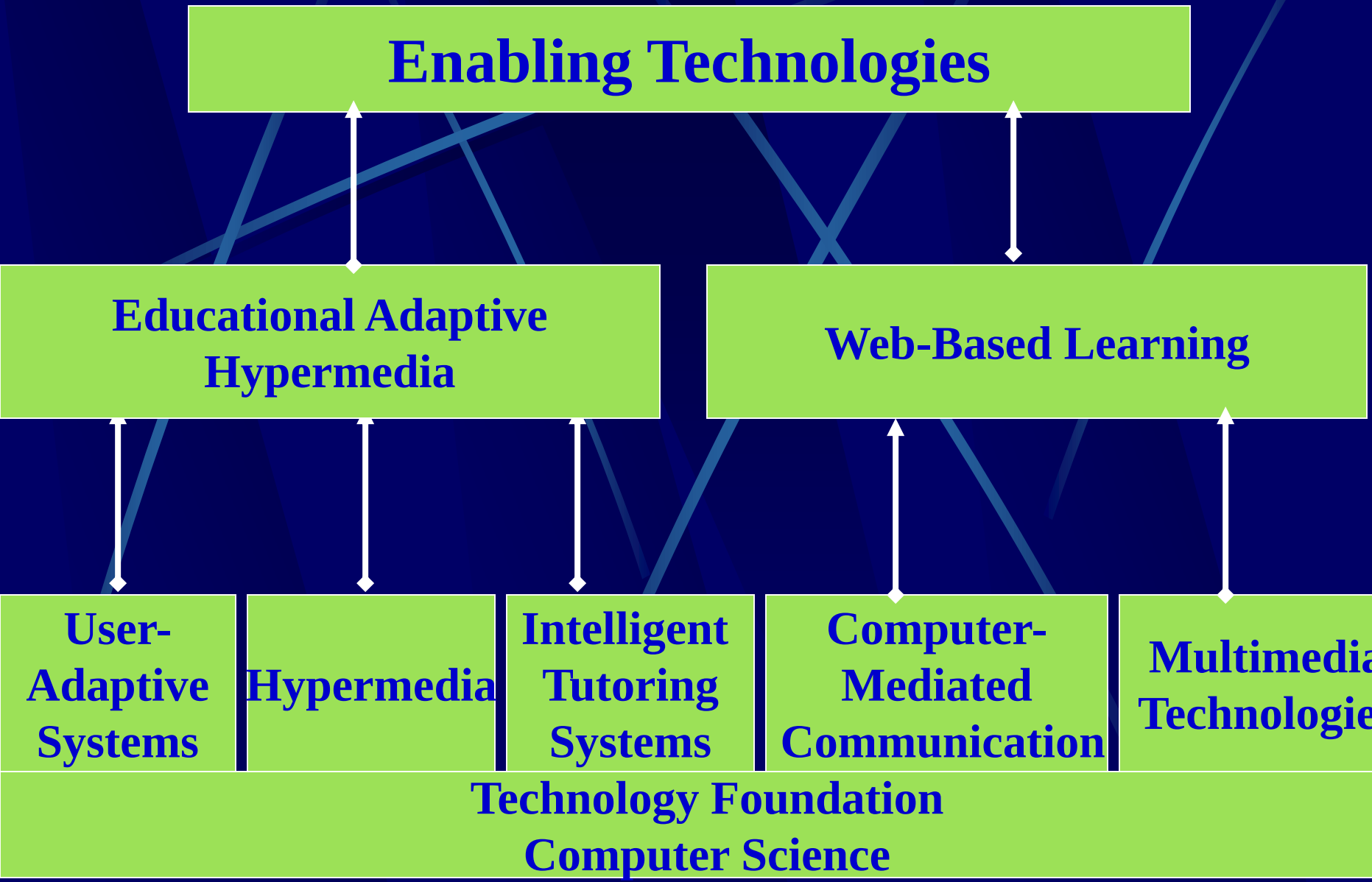
What is E-Learning?

"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

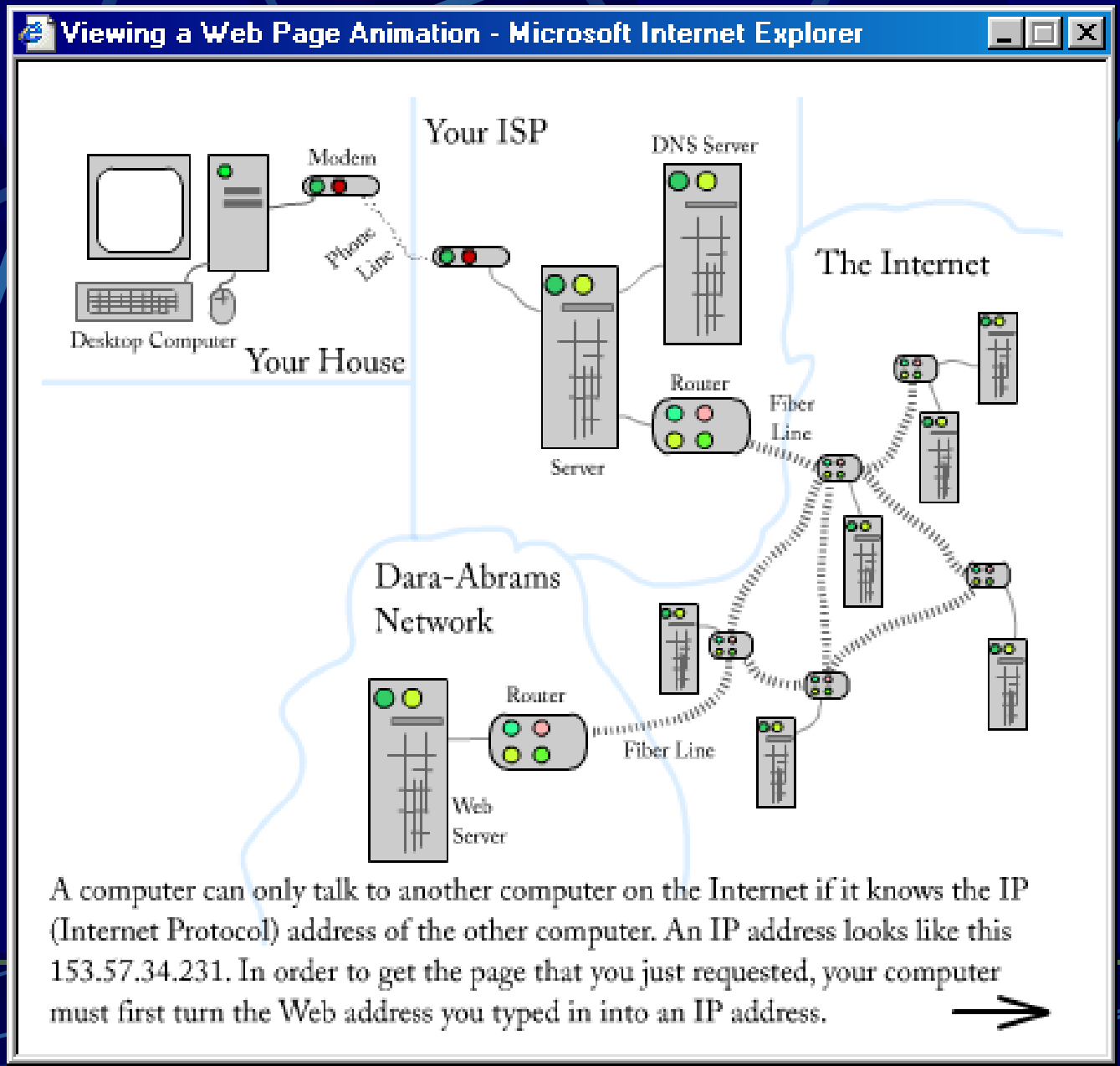
- Face-to-Face (F2F)
- Online Learning
- Move to 7 X 24 learning experience
- Structured discussions supplement class session
- Encourages quiet students to participate
- Opportunity for reflection
- Build & apply knowledge incrementally



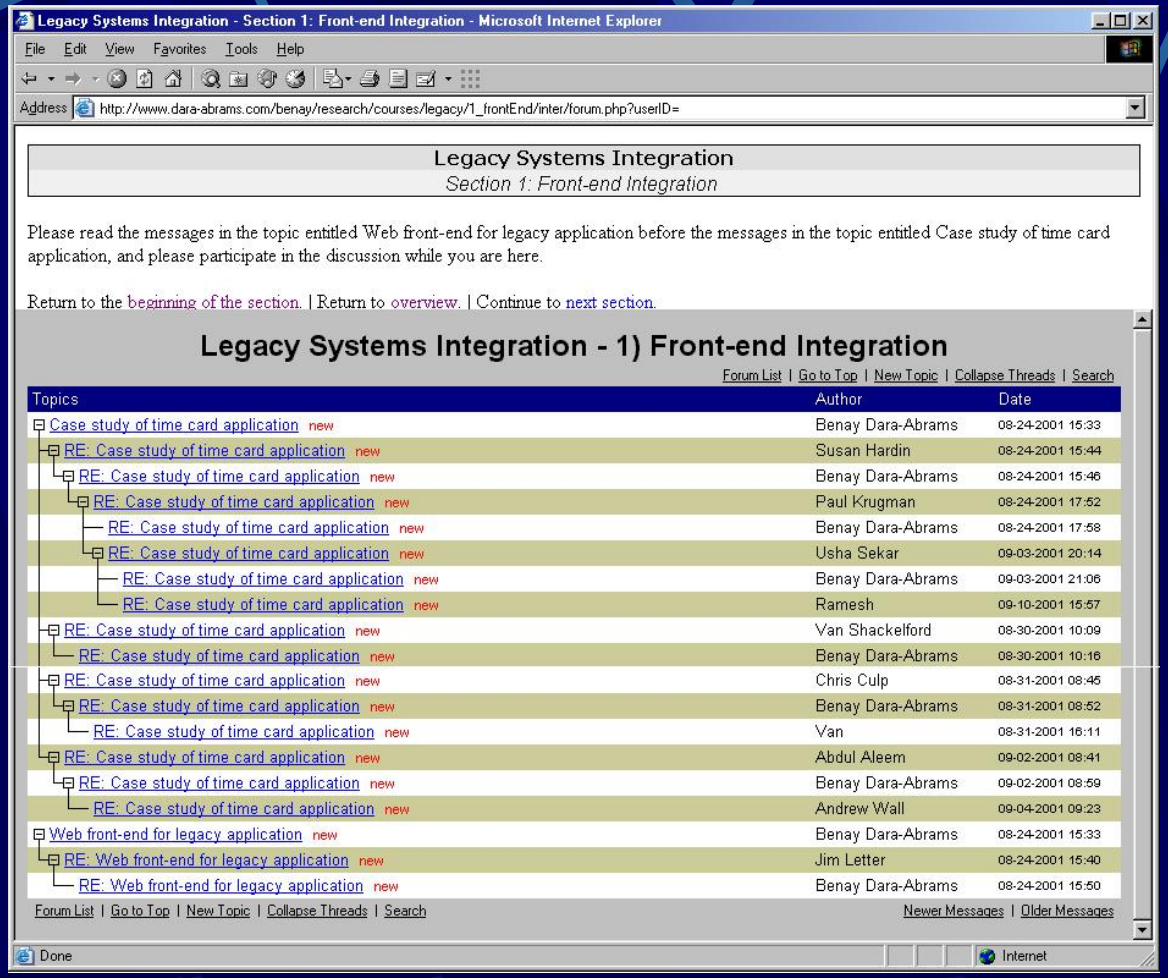
Explanation Variants

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

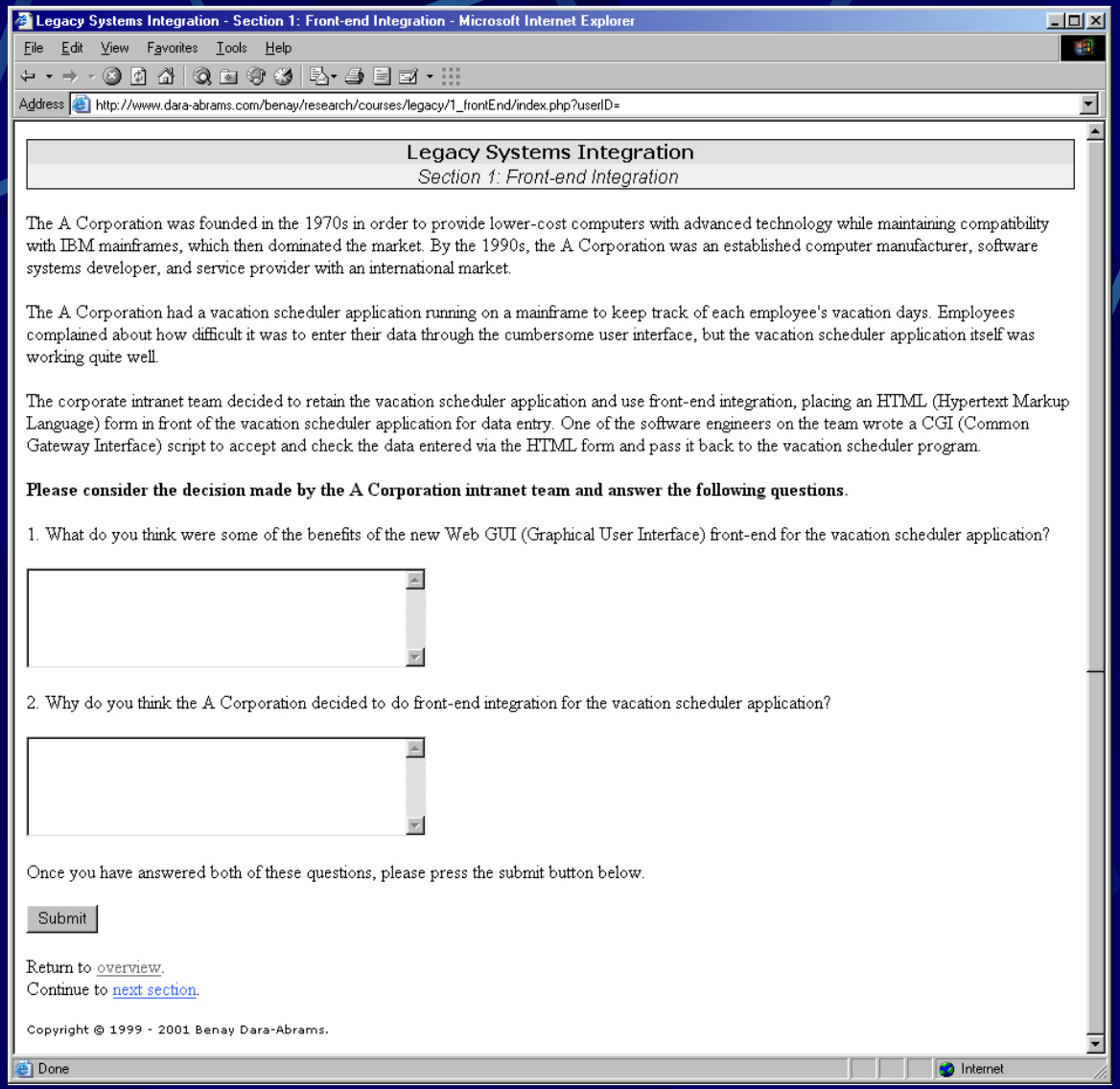
Spatial and Musical



Interpersonal



Intrapersonal



Discussions and Cases

- Interpersonal Intelligence
- Problem-Based Learning
- Question to consider during the week – History
- Students take turn moderating discussion
- Develop own cases – IT Management
- Analyze cases – Harvard Business Review – High-Tech Marketing

Student Cases

- The Slow Contract
- Doing Job Right Can Put You Out of Job
- Wrong side Politics
- Cross-Country Micromanagement
- Dog Eat Dog
- Red Dragon Power Play
- Robin Hood Gone Wrong
- Fast Track to Tell All
- Network Engineer who couldn't network
- Sales Position that was Sold
- Star Telemarketer
- Quality Holdout
- Which Coast Advertising?
- Work Process Improvement
- What's Your Priority?

Effective Technology-Enabled Learning

- Effective Learning Experience
- Each Individual Student
- Multiple Entry Points
- Multiple Representations
- Reach Anyone, Anyhow
- Integrate theory, educational methodologies, and enabling technologies

Thank You

- More information
  - http://www.brainjolt.com/
- Research Papers
  - http://www.brainjolt.com/term/
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