Games, Simulations and Learning Capabilities Presentation

XXXXXXX Training Team

2-28-11

What we will discuss today…

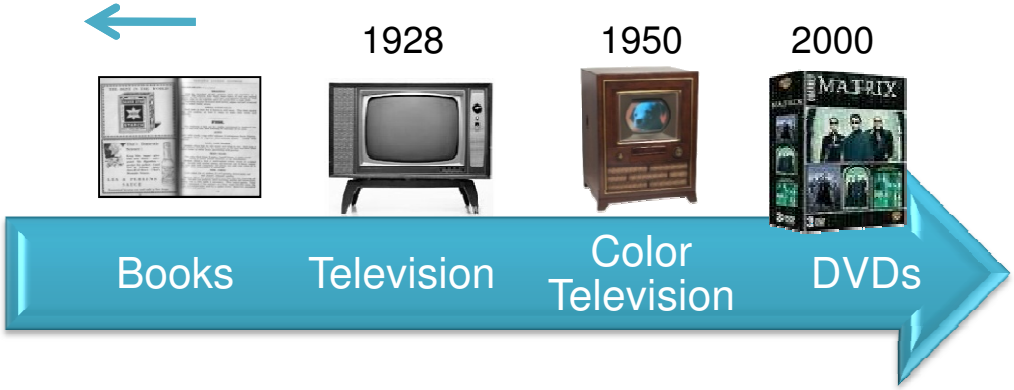
- A little background
- Instructional approach/design
  - Interactivity
  - Methods
  - Complexity
- GameWare
  - Technical stuff
  - Complexity
- Demonstrations
- Discussions

First, a little background…

Who we are dealing with?

An arsenal of consumer electronics

Do we understand who we are dealing with?



Game Knowledge

The average game player is age 34

(26% of gamers are over age 50)

http://www.theesa.com/facts/pdfs/ESA_Essential_Facts_2010.PDF

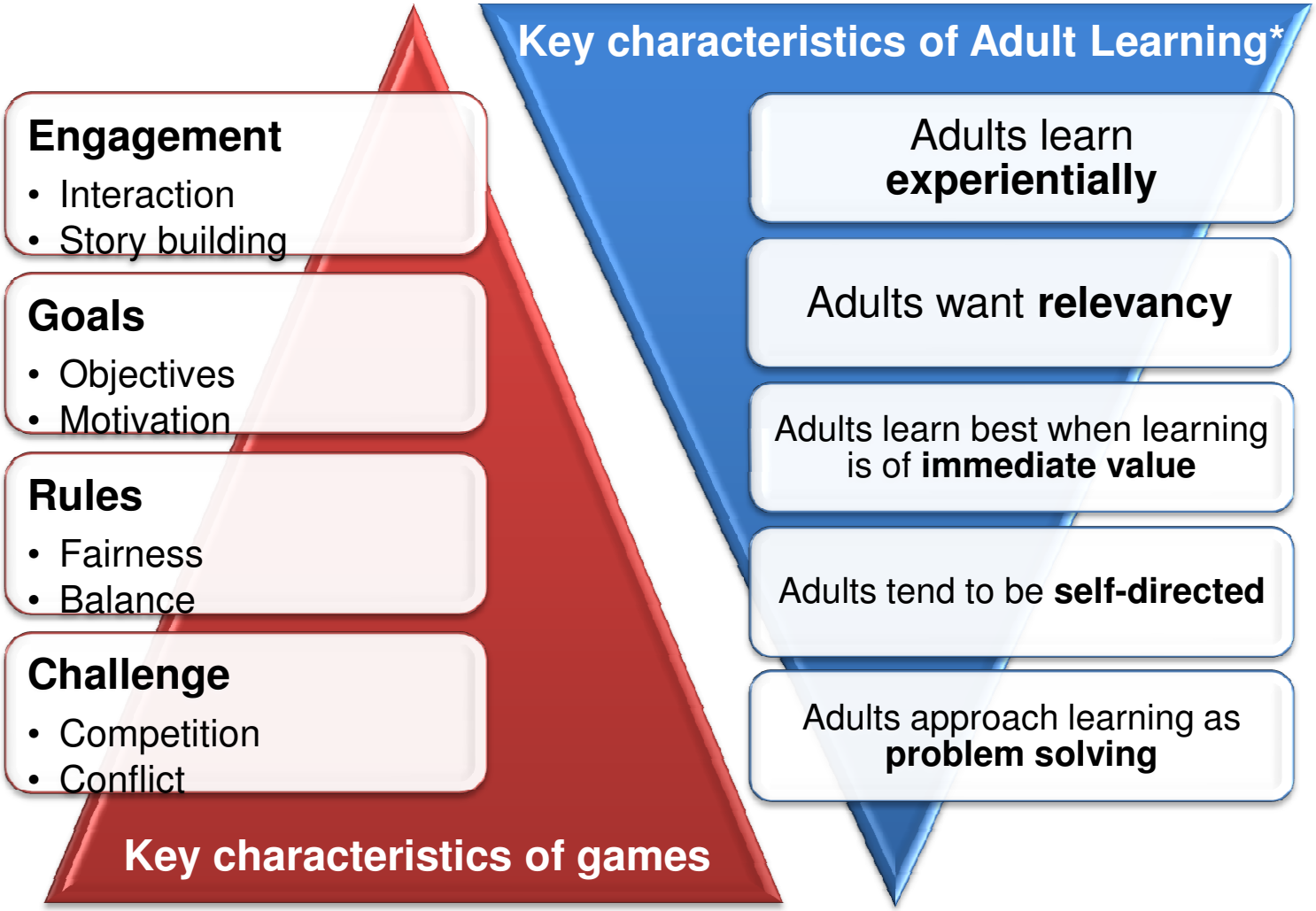
Game Knowledge

53% of American Adults play video games

20% play everyday

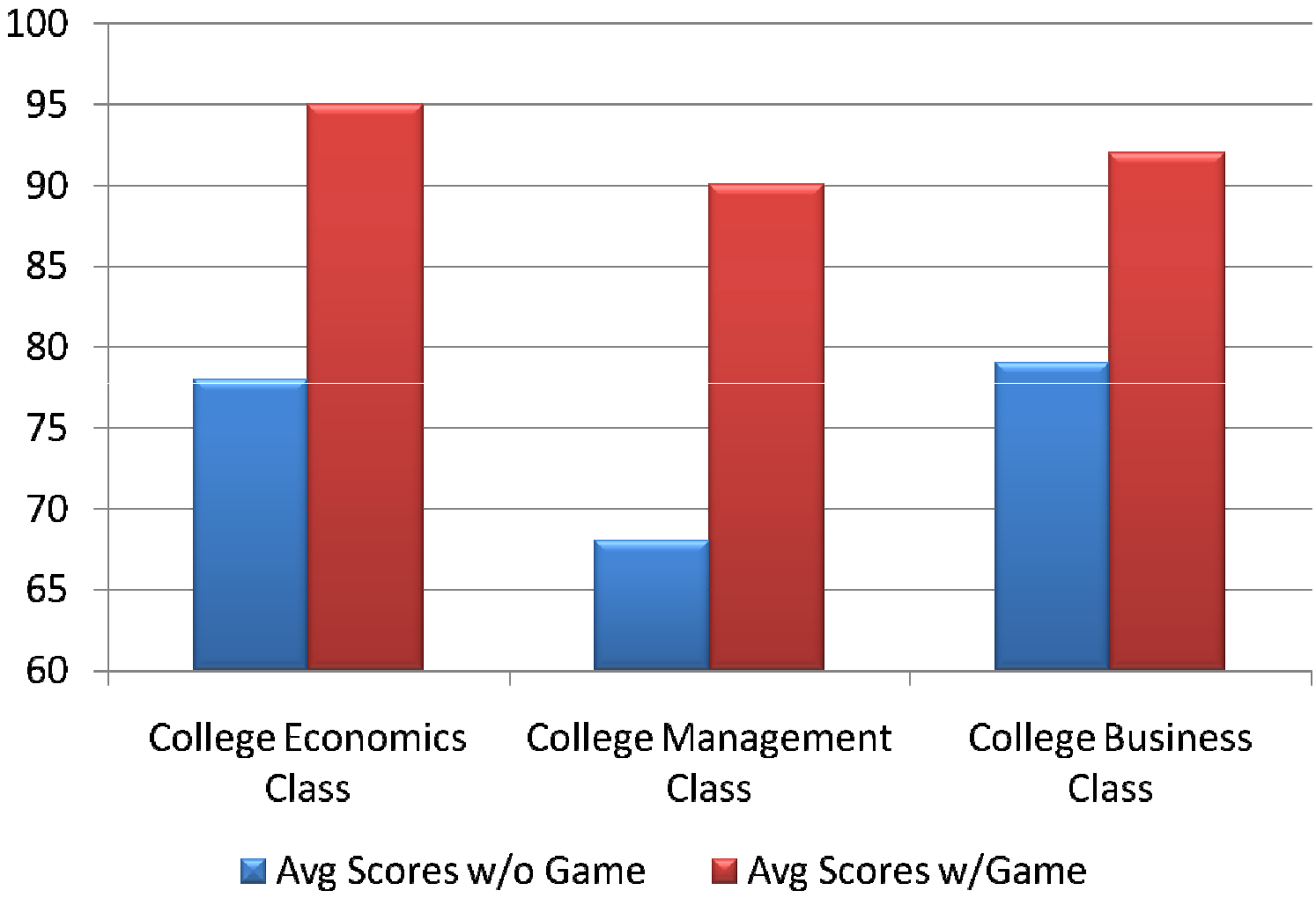
http://www.pewinternet.org/Reports/2008/Adults-and-Video-Games/1-Data-Memo/01-Overview.aspx

Game and learning characteristic are complimentary



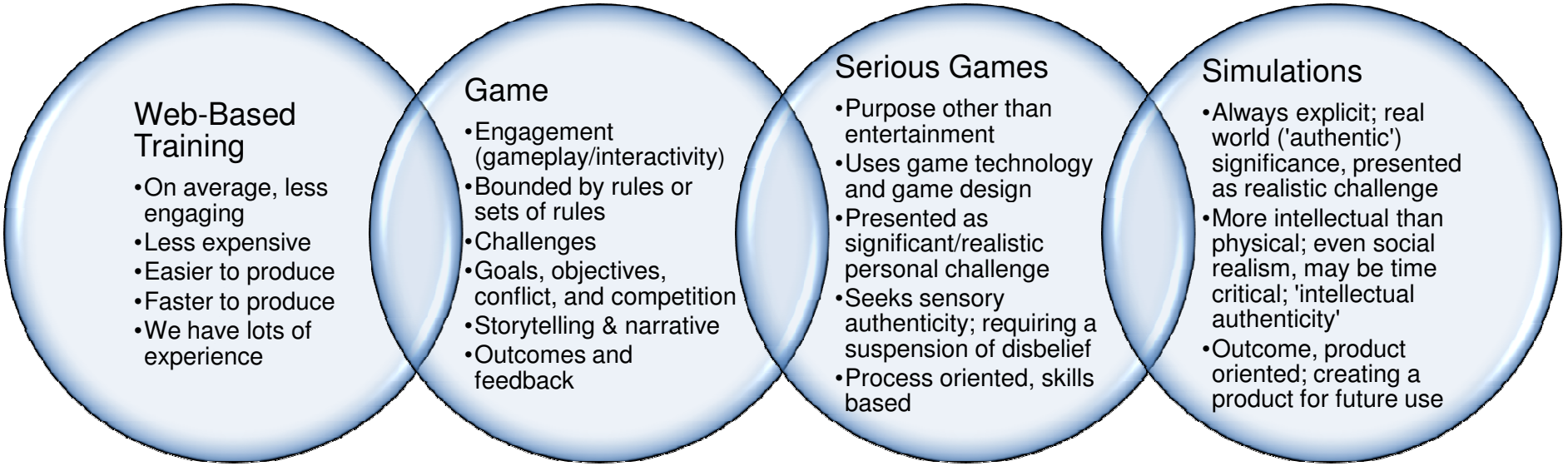
*Knowles, M. S. (1970). *The modern practice of adult education: From pedagogy to andragogy*. Englewood Cliffs: Prentice Hall.

Results of three studies show it can work

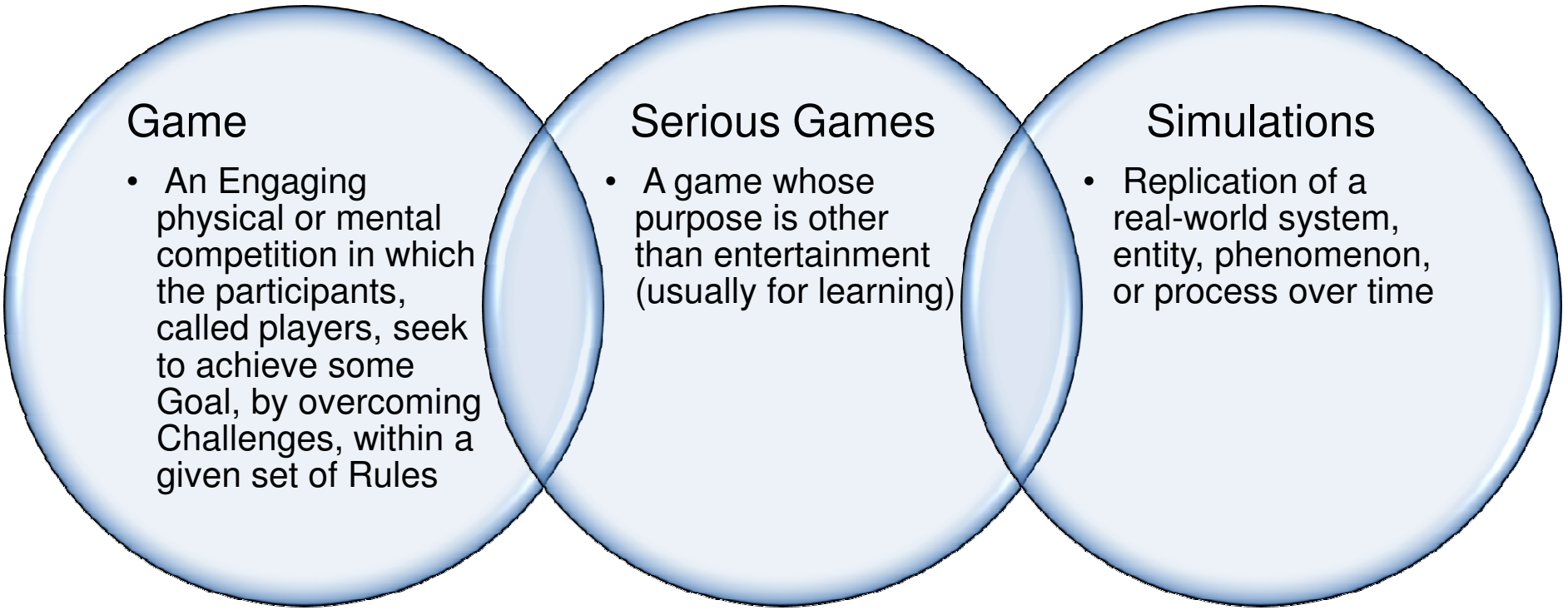


Blunt, R. (2007). Does Game-Based Learning Work? Results from Three Recent Studies. *Interservice/Industry Training and Simulation Education Conference (I/ITSEC) 2007* (pp. 2007 Paper No. 7172 Pages 1 - 11). Orlando, FL: National Training and Simulation Association.

Continuum between WBT, games, serious games, and simulations

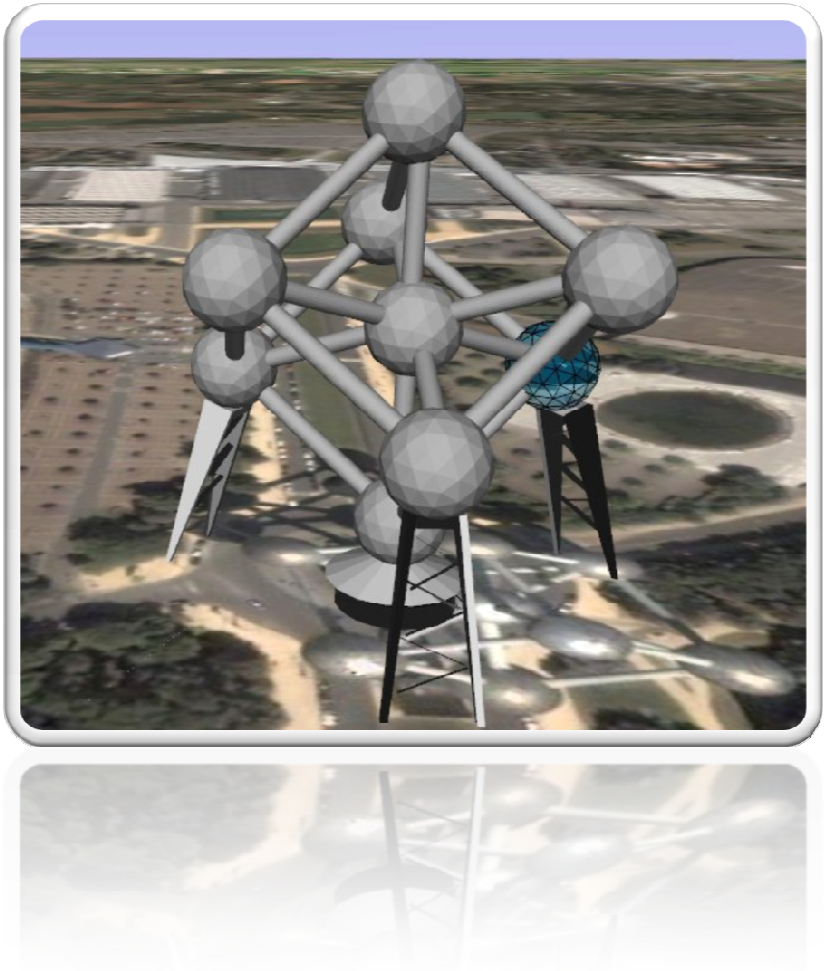


Continuum between games, serious games, and simulations



Terms

- Verification: Did we build it to specifications?
- Validation: Were the specifications right?
- Accreditation: Does it meet my learning needs?
- Fidelity: How real does it act?
- Resolution: How real does it look?
- Cost: How expensive is it for what I need?



These terms drive the discussion…

- The discussion should start with "what's the instructional need?"

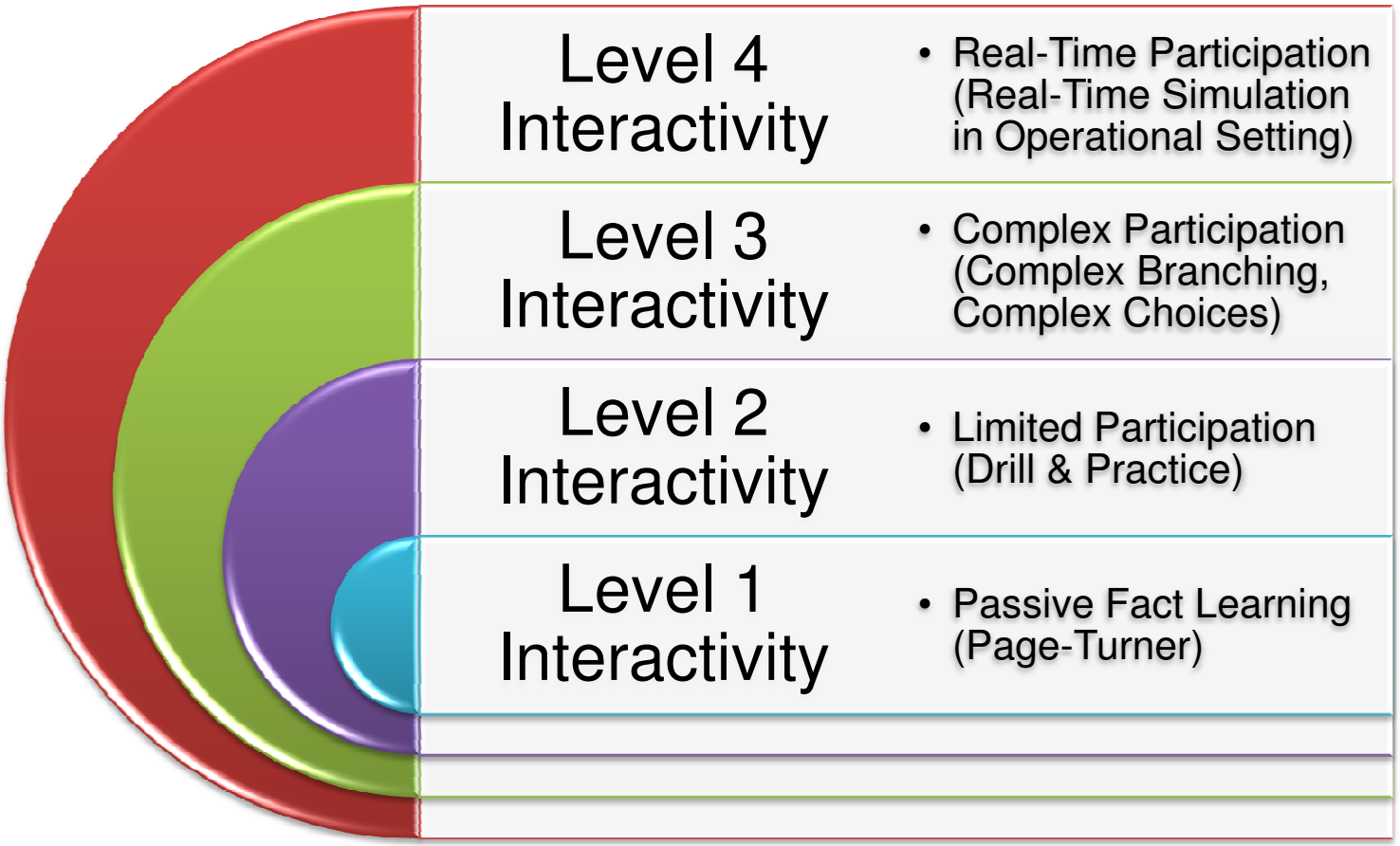
Instructional Approach/Design

What are the "kinds" of cognitive learning? Bloom tells us…

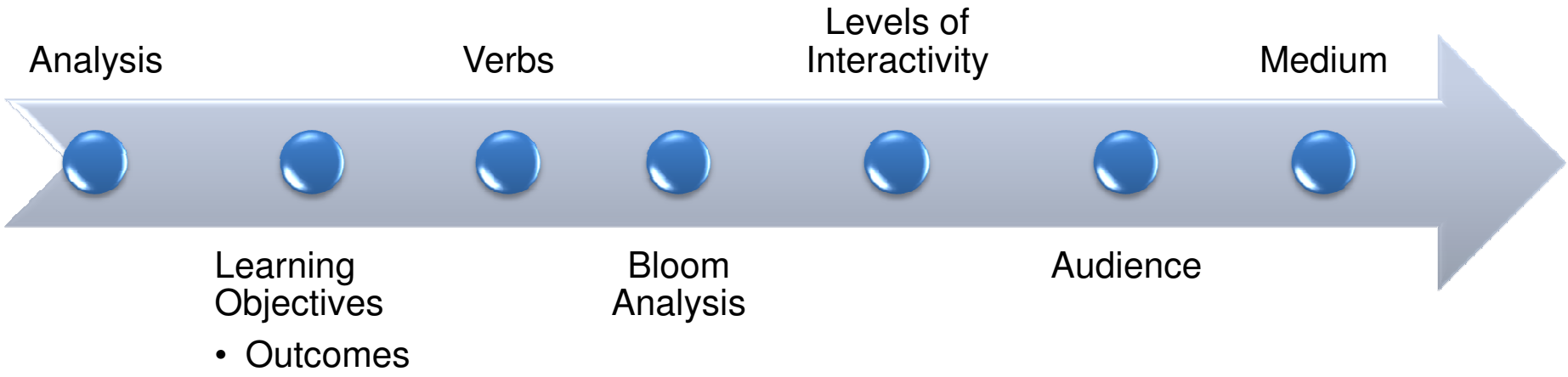
Creating	•arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, write
Evaluating	•appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate
Analyzing	•analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, distinguish, examine, experiment, question
Applying	•apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write
Understanding	•classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate
Remembering	•arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state

Revised Bloom's Taxonomy:
http://projects.coe.uga.edu/epltt/index.php?title=Bloom%27s_Taxonomy#Revised_Bloom.27s_Taxonomy_.28RBT.29

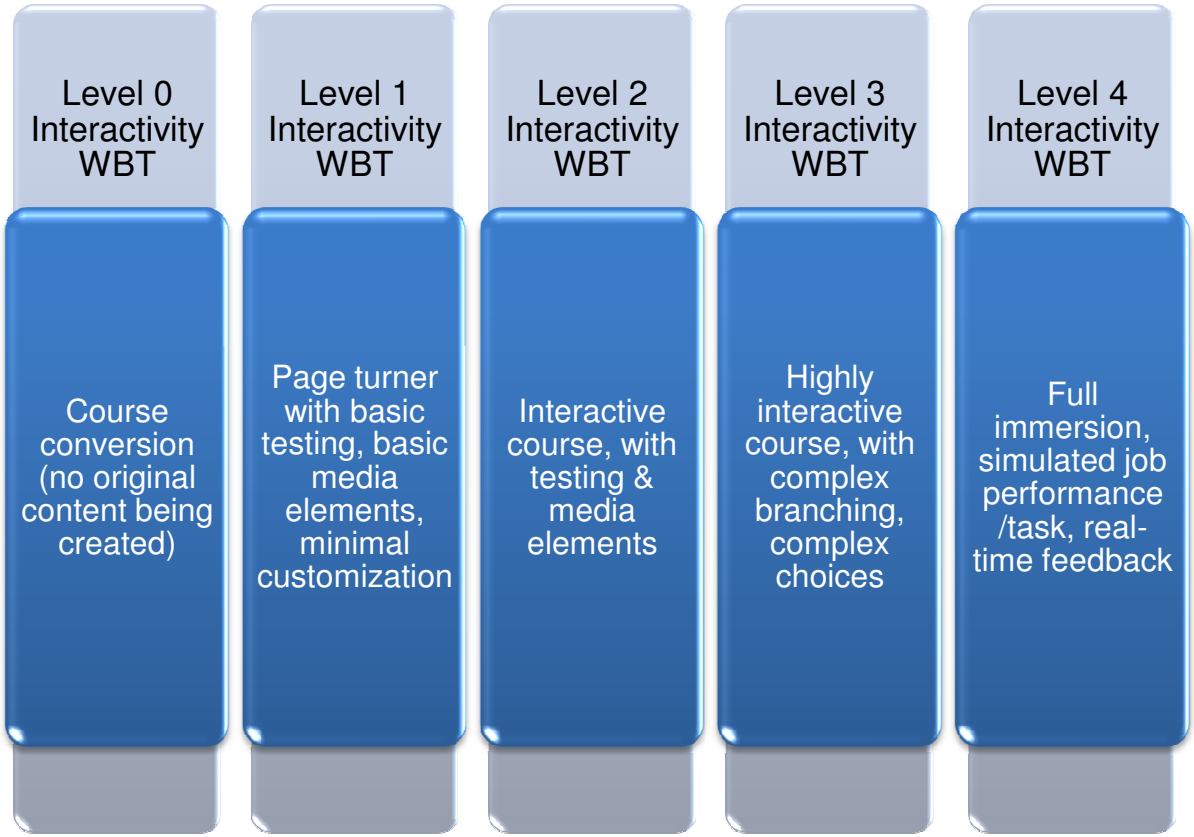
Levels of Interactivity



How you decide on a delivery medium (including games or simulations)



Complexity considerations of WBT courseware…



- Furnished Information
- Subject Matter Expert (SME) access
- Graphics
- Animation
- Audio
- Video
- Messaging
- Storytelling
- Branching
- Testing
- SCORM/508 included

Complexity considerations of Games…

(Level 4 IMI: Full immersion, simulated job performance/task, real-time feedback)

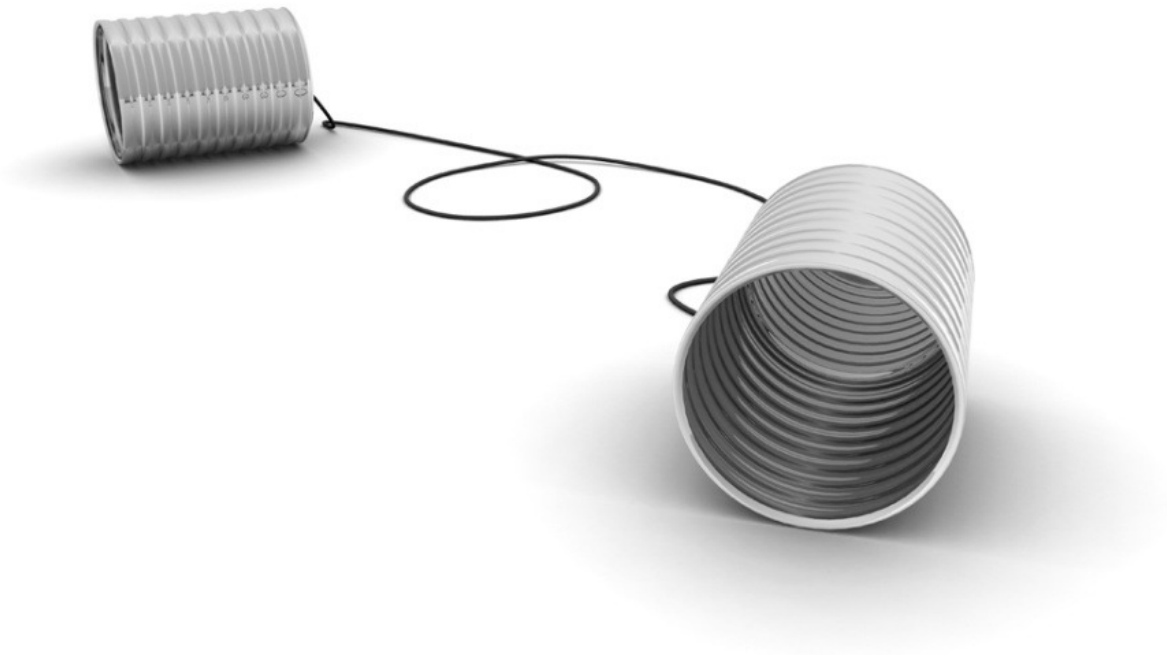
- How much WBT vs. Game
- How much branching (non-linear)
- How much Unity game engine
- Fidelity – how real does it act
- Graphic asset (2D & 3D) needed (amount – reuse within and between projects; level of detail)
- Graphic asset animation & render-work/publishing
- Furnished Information/SME access
- Feedback/testing
- Programming complexity (Functional complexity)
- Programming reuse (between projects)

17:02
MISSION
CULTURE
TRUST
Correctional Feedback
CAT
Your prices are too high.
1
2
3
4

17:02
MISSION
CULTURE
TRUST
Correctional Feedback
CAT
1 Our prices are competitive
2 Our prices are not high
3 We offer the best value
4 Our prices are high, but what if I could show you a way to make more money. Would price matter then?

17:06
MISSION
CULTURE
TRUST
CAT
CAT
1
2
3
4
I like you, but I don’t like your company.

17:06
MISSION
CULTURE
TRUST
CAT
1 It's a great company.
2 I don't like the company either.
3 So tell me more about why you don't like the company.
4

Demonstrations

Discussions…