Game and Learn: 
An Introduction to Educational Gaming 
4. Games and Learning 

Ruben R. Puente, Ph.D.

Learning from Games
Active Learning

Gamers Learn From:
1. Doing and reflecting critically

Active Learning Example: *Europa Universalis III*
Symbolic Systems

2. Appreciating good design and its principles
3. Seeing interrelations within and across symbolic systems
4. Mastering game symbolic systems
5. Relating the game world to other worlds

Symbolic Systems Example:
realMYST
Worlds and Identities

6. Taking risks in a space with reduced consequences
7. Committing to participating in a compelling virtual world
8. Assuming multiple identities in and across worlds

Worlds and Identities Example:

*Fable II*
Development of Capabilities

9. Observing the evolution of their own capabilities
10. Getting more out than they put in
11. Being rewarded for achievement at every level of expertise
12. Extensive practice in a rewarding context
13. Learning new skills at each level of expertise
14. Operating at the outer edge of their capabilities at each level of expertise

Development of Capabilities Example:
Super Mario Galaxy
Experiential Learning

15. Interacting experimentally with the game world
16. Finding multiple approaches to a solution
17. Discovering meaning from experience
18. Understanding texts experientially and contextually
19. Understanding the interconnections among texts that define them as a family
20. Constructing meaning from the intersection of multiple media
21. Understanding how information and knowledge are stored in the game environment
22. Leveraging intuitive and tacit knowledge

Experiential Learning Example:
SimCity 2000
Developing Skills

23. Practicing in simplified game subdomains
24. Tackling later problems via generalizations of earlier ones
25. Seeing early on concentrated samples of generalizable skill sets
26. Acquiring basic skills that apply to a range of games
27. Receiving information on-demand and just-in-time
28. Experimenting with only a minimum of explicit instruction
29. Transferring, modifying, and adapting earlier learning to later problems

Developing Skills Example:
*Legend of Zelda - Ocarina of Time*
Cultural Models

30. Reflecting safely about their cultural models and assumptions about the world
31. Reflecting safely about their cultural models and assumptions about their learning processes
32. Reflecting safely about their cultural models and assumptions about the workings of a symbolic domain
33. Searching for knowledge in all aspects of the game, in themselves, and in their interaction with the game

Cultural Models Example: Civilization Revolution
Community

34. Sharing their knowledge with other players
35. Forming a distinct community via shared interests in the gaming world
36. Teaching others and modifying the game experience

Community Example:
World of Warcraft
• **Learning from Games:**
  • Prensky, M. “Escape from Planet Jar-Gon Or, What Video Games Have to Teach Academics About Teaching and Writing.” *On The Horizon*, Volume 11, No. 3 (2003)
• Game Videos:
  • Europa Universalis III: http://www.youtube.com/watch?v=9-mEpE1RJkI
  • realMYST: http://www.youtube.com/watch?v=Obyfx3gi2aE
  • Fable II: http://www.youtube.com/watch?v=1CTkUgH8cqc
  • Super Mario Galaxy: http://www.youtube.com/watch?v=c0k03mCdmr0
  • SimCity 2000: http://www.youtube.com/watch?v=nL3FubMdoog
  • Legend of Zelda - Ocarina of Time: http://www.youtube.com/watch?v=JxspGNBMwSg
  • Civilization Revolution: http://www.youtube.com/watch?v=A_ZHTtMv2us
  • World of Warcraft: http://www.youtube.com/watch?v=OZX2raH-Epc

Hippasus

http://hippasus.com/rrpweblog/
rubenrp@hippasus.com

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