

Game and Learn:

An Introduction to Educational Gaming

4. Games and Learning

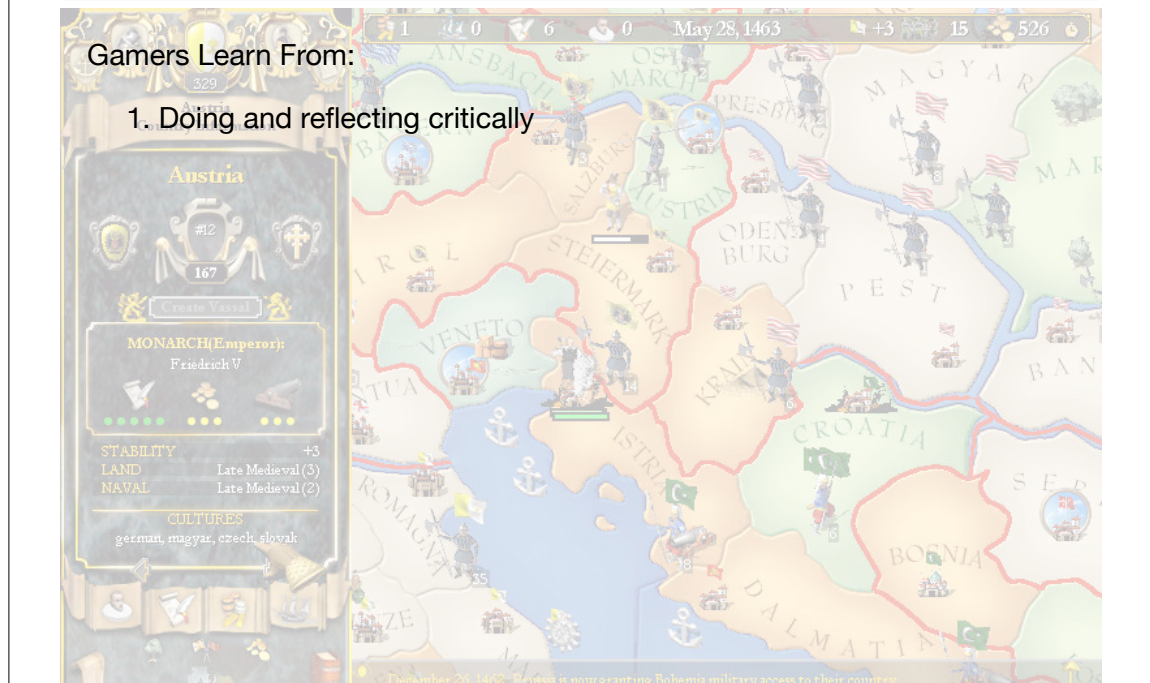
Ruben R. Puentedura, Ph.D

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

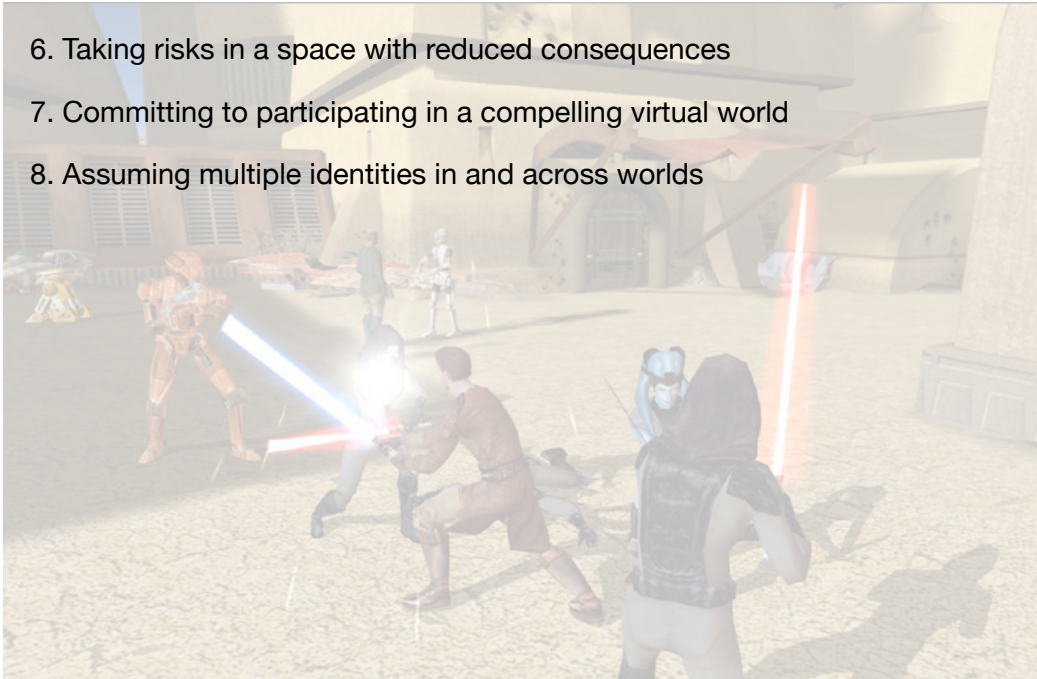


Symbolic Systems Example: *realMYST*



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

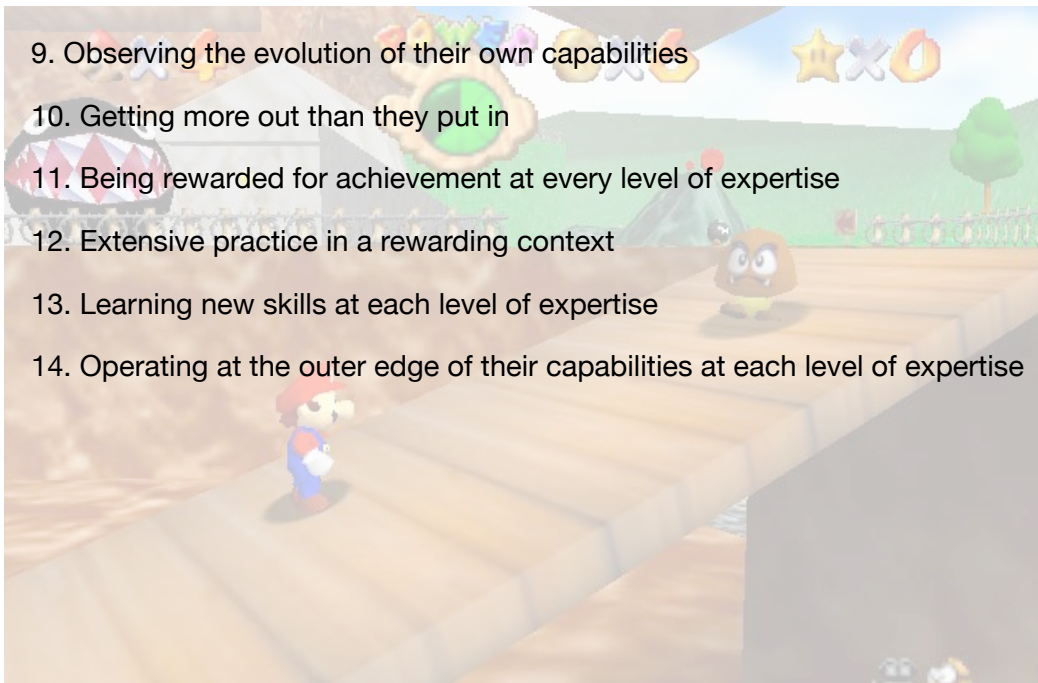


Worlds and Identities Example: *Fable II*



Development of Capabilities

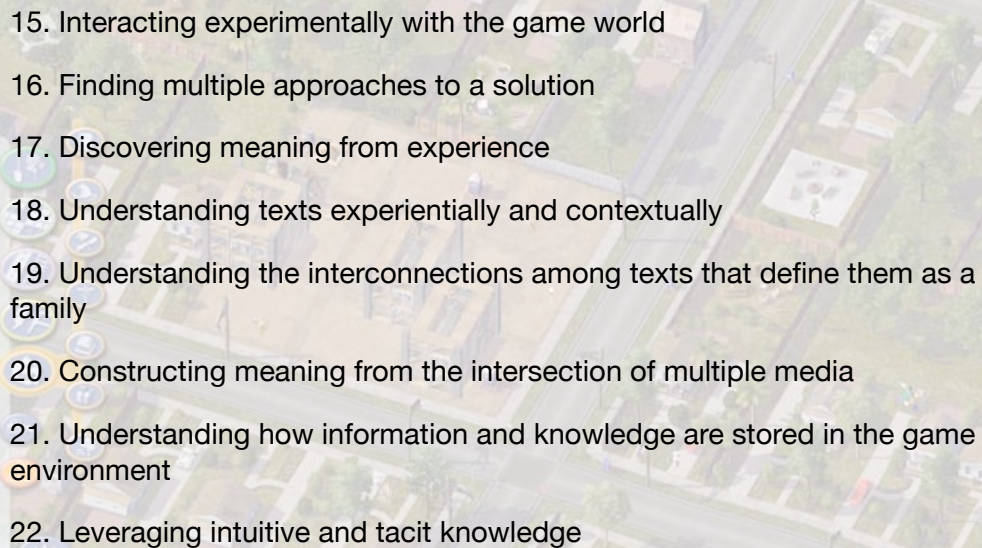
9. Observing the evolution of their own capabilities
10. Getting more out than they put in
11. Being rewarded for achievement at every level of expertise
12. Extensive practice in a rewarding context
13. Learning new skills at each level of expertise
14. Operating at the outer edge of their capabilities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



Development of Capabilities Example: *Super Mario Galaxy*



Experiential Learning

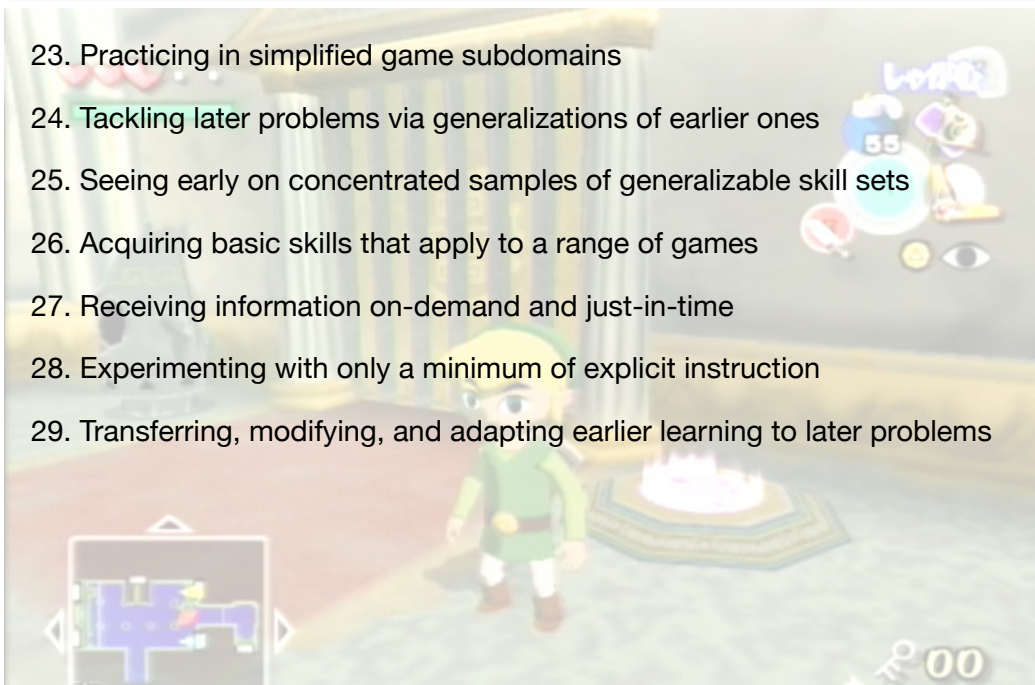
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15. Interacting experimentally with the game world
 16. Finding multiple approaches to a solution
 17. Discovering meaning from experience
 18. Understanding texts experientially and contextually
 19. Understanding the interconnections among texts 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

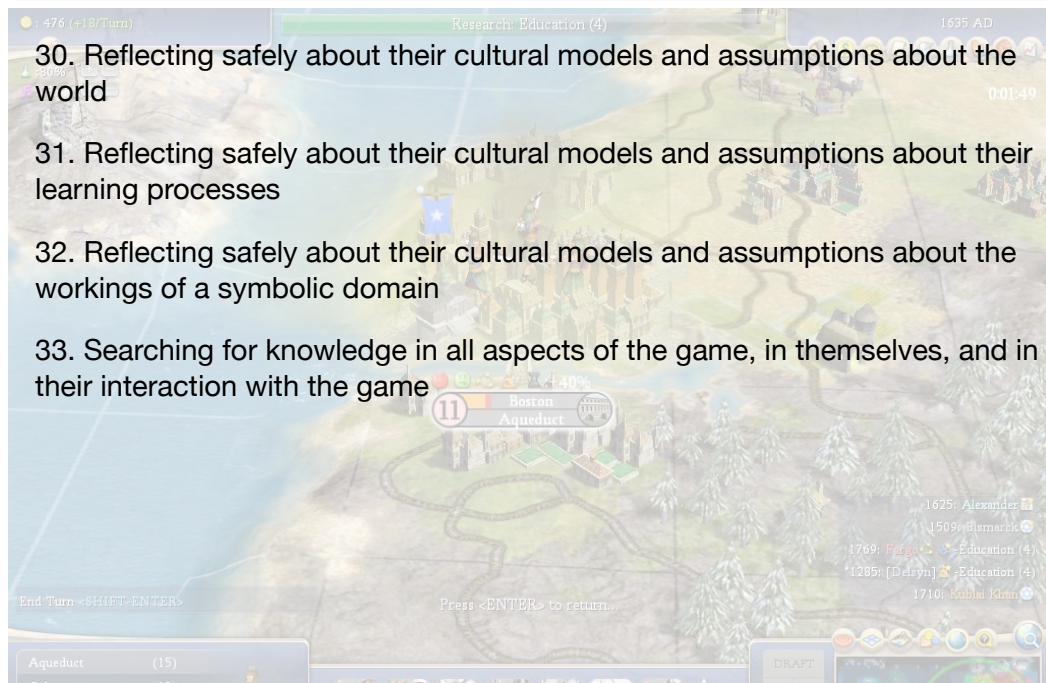
- 23. Practicing in simplified game subdomains
- 24. Tackling later problems via generalizations of earlier ones
- 25. Seeing early on concentrated samples of generalizable skill sets
- 26. Acquiring basic skills that apply to a range of games
- 27. Receiving information on-demand and just-in-time
- 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



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*



Resources Cited

- **Learning from Games:**

- Gee, J.P., *What Video Games Have to Teach Us About Learning and Literacy*. Palgrave Macmillan. (2003)
- 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-mEpE1RJkl>
- *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>

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