E19.2176
Simulations and Games for Education

Jan L. Plass, ECT

Overview
- Learning from Educational Games
  - Literacy vs. Education vs. Training... vs. Fun?
  - Features and affordances for learning
- Elements of Game Design

Educational Games

Educational Games

Meaningful Play (experiential schemas)
**Educational Games**

---: Play-Definition (Huizinga)
  - irrational
  - a cultural factor in life
  - the direct opposite of seriousness
  - free - a voluntary activity, superfluous
  - not ordinary or 'real' life

---: Play-Definition (Suits, philosopher)
  - activity
  - voluntary
  - goal-oriented
  - rules prohibit more efficient in favor of less efficient means
  - Acceptance of rules

---: Play-Definition (Callois, philosopher)
  - Agón: competitive play (chess, sports, contests, ...)
  - Alea: chance-based play
  - Mimicry: role playing, make-believe play
  - Ilinx: playing with physical sensation of vertigo

---: Play of Experiences (Salen & Zimmerman)
  - Concentration and Auditory Discriminations
  - Visual Scanning and Motor Responses
  - Perceptual Patterns of Learning

---: Core Mechanics
  - Essential play activity
  - Experiential building blocks of player interactivity
  - Moment-to-moment activities of player, repeated
  - Involves hardware input device
Educational Games

- Play of Pleasure (LeBlanc)
  - Sensation
  - Fantasy
  - Narrative
  - Challenge
  - Fellowship
  - Discovery
  - Expression
  - Submission

Group Activity

- Play a Game! (20 min., Groups of 3–4)
  - Play a game as assigned by the instructor:
    - Consider the rules of play
    - Do you think the game has an educational value? Describe!
    - What would you change to make it more educational?

Educational Games

- Literacy vs. Education vs. Training... vs. Fun?

Introduction

- Definitions
  - Literacy
  - Education
  - Training

Introduction

- Learning and Literacy (Gee, 2006)
  - All games are educational
  - Game design is applied learning theory
  - Games as richly defined, goal-driven problem spaces
Introduction

- Literacy (Gee, 2006)
  - Situated Learning Matrix–Experience
    - Goals
    - Interpretation
    - Feedback
    - Explanation
    - Practice
    - Social Interaction

Introduction

- Learning and Literacy (Gee, 2006)
  - Models and Modeling
  - Simulations
  - Distributed intelligence
  - Motivation and Ownership
  - Emotion
  - Situated Meaning

Group Activity

- Review your game play. (10 min., Groups of 3-4)
  - Revisit the game play in the first group activity:
    - How were Situated Learning elements implemented?
    - How could the game be improved to better implement them?

Class Activity

- Games for Learning
  - What should a definition include?
    - ??
    - ??
    - ??
    - ??

Educational Games

- Elements of Educational Game Design
Out of Class Activity

- **Play a game!**
  - Play a computer/console game of your choice
  - Write one paragraph reflecting on your experience

- **Make a game!**
  - Continue the development of your game for presentation in the next class meeting