First thoughts...

• What are your first thoughts when considering using games in the classroom?

• Have any of you experienced a class with games as a learning tool?

• Why do you think more classrooms aren’t incorporating games into learning?
Benefits

• Motivational Perspective
• Cognitive Perspective
• Socio-cultural Perspective
• Learning Style Perspective
Motivational Perspective

• “Fun and enjoyment cause learners to be more relaxed, motivated and willing to learn”

• Malone & Lepper intrinsic motivation theory: challenge, fantasy, control, curiosity, cooperation, recognition and competition
Cognitive Perspective

- “Learning should be an active process based upon concrete experience” - Piaget 1964
- Game can present near real-life contexts of situations and contexts (Situated learning)
- Mini-games vs complex-games
Socio-Cultural Perspective

- Human Competitors, online games, gaming systems, chat systems, group missions
- Does not need to be face-to-face or even take place in schools
# Learning Styles

<table>
<thead>
<tr>
<th>Learning styles</th>
<th>Typical methods</th>
<th>Serious game for a course</th>
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<tbody>
<tr>
<td>Visual (Spatial)</td>
<td>Pictures, images, and spatial understanding; Mind maps; replaces words with pictures.</td>
<td>Non-player characters (NPC), background, images, texture, environment, sprites, and characters, etc.</td>
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<tr>
<td>Aural (Auditory-musical)</td>
<td>Sound and music; Rhyme in learning; Sound recordings to provide background.</td>
<td>Narratives, background music, interactions, sound effects.</td>
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<tr>
<td>Verbal (Linguistic)</td>
<td>Techniques involving speaking and writing.</td>
<td>Read and playback (recording lectures), storytelling, cut scene, narratives, role playing, etc.</td>
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<tr>
<td>Physical (Kinesthetic)</td>
<td>Body, sense, and touch; focus on sensations.</td>
<td>Feasible using Wii and Kinect.</td>
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<tr>
<td>Logical (Mathematical)</td>
<td>Logic, reasoning, and systems; extract key points from list.</td>
<td>Puzzle, mini games, AI, quizzes, etc.</td>
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<tr>
<td>Social (Interpersonal)</td>
<td>Prefer to learn in groups or with other people.</td>
<td>Multiplayer online (may require different quest for characters).</td>
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Ok if they’re so great....

- Many educational games are lacking in quality
- Most popular genre of games in schools are drill and practice
Education in Games vs. Games in Education

• “Education in Games’ - educational use of existing commercial games

• “Games in Education” - designing learning games with underlying pedagogy for specific curricula
VISOLE

- Virtual Interactive Student-Orientation Learning Environment
- Phase 1 - Multi-disciplinary Scaffolding
- Phase 2 - Game Based Learning
- Phase 3 - Reflection and Debriefing
Phase 1 Multi-disciplinary 
Scaffolding

• Teachers act as cognitive coaches to activate students learning motive and assist students to gain some high-level abstract knowledge in a multi-disciplinary framework
Phase 2: Game Based Learning

• Deploys an online multi-player interactive game portraying a virtual world

• Scenarios become dominating motivator

• Missions/problems are generative and open-ended
Phase 3 - Reflection and Debriefing

• Students write down what they’ve learned (K-10)

• Students analyze with professor and discuss how what they’ve learned can apply.

• Is professor directed (Older students)
Conclusion and Discussion

• In your class/future class, would an appropriate game enhance your teaching?

• What reservations would you have about using a game in the classroom?

• Any other questions or comments?