Evelyn Rousso, AIA
Garrett Burtner, AIA
Session Outline

- 10 Min - Intro to Game-Based Learning
- 10 Min - Current Approaches and Practitioners
- 5 Min – Quiz!
- 20 Min - Group Activity
- 15 Min - Report out and Discussion
Learning Objectives

- To gain an understanding of Game-Based Learning concepts and practices.
- To understand how Game-Based Learning is being applied in current curriculums.
- To consider how school and classroom design can support Game-Based Learning.
- To explore how the process of design itself may be gamified to improve outcomes for learning environments.
What is Game-Based Learning?
What is Game-Based Learning?

- **Game** - a form of play or sport, especially a competitive one played according to rules and decided by skill, strength, or luck.

- **Gamification** - Applying typical elements of game playing (e.g., point scoring, competition with others, rules of play) to other areas of activity.

- **Game Mechanics** - The basic structural elements that make a game a game. Experience Points, Levels and Leveling Up, Boss Challenges, Achievements and Badges, Free Play (Sandbox), Special Events, Replay.
What is Game-Based Learning?

- **Bartle’s Player Types** — Defines 4 different main types of gamers by their primary motivations: Achievers, Socializers, Explorers and Killers.

- **Game-Based Learning** — An educational approach that incorporates game play into the curriculum.
  
  » Learning with games
  
  » Gamification of lessons
What kind of games?

- Quiz/ Bingo
- Puzzle
- Quest
- Sandbox
- Word Game
- Simulation

- Analog
- Digital
- Individual
- Group
- Local
- Networked
Quiz/ Bingo

Back to School Prepositions Bingo 1
She would have died had she been alone.
Sandbox
Simulations & Simulators
What makes GBL effective?
What makes GBL effective?

- It’s Fun? – Yes, but...
- It’s Engaging
  - Choice
  - Collaboration
  - Connection
  - Challenge/Competition
  - Communication

“Don’t confuse fun and engagement.”
- Marylee Tung, Kindergarten Teacher
What makes GBL effective?

Gardner’s Theory
What makes GBL effective?
What makes GBL effective?

Bartle’s Taxonomy of Player Types
What makes GBL effective?

- **It’s Low Risk**
  - Embrace of failure
  - Replay again and again
  - Growth mindset
What makes GBL effective?

- It’s Relevant

  » Most young people play games.

  » Game skills mirror 21st Century life skills.

  » “Serious” games can address real world wicked problems.
How does this affect school design?
How does this affect school design?

- GBL is among a host of techniques reshaping schooling.

  - Case-based learning
  - Challenge-based learning
  - Community-based learning
  - Design-based learning
  - Game-based learning
  - Inquiry-based learning
  - Land-based learning
  - Passion-based learning
  - Place-based learning
  - Problem-based learning
  - Proficiency-based learning
  - Service-based learning
  - Studio-based learning
  - Team-based learning
  - Work-based learning
  - Zombie-based learning (look it up!)
How does this affect school design?

- All of these approaches are:
  - Integrated
  - Experiential
<table>
<thead>
<tr>
<th>Traditional (Authoritarian) methods</th>
<th>Modern methods</th>
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</thead>
<tbody>
<tr>
<td>Teacher-centred</td>
<td>Student-centred</td>
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<tr>
<td>Text book-centred</td>
<td>Learning by doing extra-curricular, co-curricular and out-of-the-classroom activities</td>
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<tr>
<td>Learning through recitation, explanation and examination (rote)</td>
<td>Learning socially, psychologically, naturally, experimentally and logically</td>
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<tr>
<td>Teacher is conspicuously in control and focuses on the content of the textbook</td>
<td>Teacher is mediator and facilitator</td>
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<tr>
<td>Study is systematic and through didactic method</td>
<td>Study through dialogue, participation and interactive communication</td>
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<tr>
<td>Allow for competition, mastery, habit and accuracy in learning</td>
<td>Allow for holistic and conceptual education</td>
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</tbody>
</table>
The New Open School

Hellerup School, Copenhagen, Arkitema Architects
The New Open School

Vittra Schools, Stockholm, Sweden, Rosan Bosch
Re-think the Box

Fuji Elementary School, Tokyo, Takaharu Tezuka
Fuji Elementary School, Tokyo, Takaharu Tezuka
Adaptable

The Atelier, Bengaluru, India, Biome Environmental Solutions
Neutral Spaces
Variety of Spaces & Environments

Epping Views Primary School, Australia, Gary Pucksand
Variety of Spaces & Environments

Pacific High, Sitka, Alaska, MCG Architects
The Active Classroom
The Active Classroom

Odegaard Library & Learning Commons, Seattle, Miller Hull
Furniture
Time for a Quiz!

Get out your Smartphone!

Go to https://kahoot.it/#/

Set up a user name and let's begin!
Now let’s play a game!
“We measure architecture through our bodies, therefore health shall be reflected in the building experience.”

- MCG Team