Gaming the System

A4LE LearningSCAPES
Atlanta, October 2017
Evelyn Rousso, AIA
Garrett Burtner, AIA
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.
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
What is Game-Based Learning?
What is Game-Based Learning?

- Game
- Gamification
- Game Mechanics
What is Game-Based Learning?

- Player Types
- Learning with Games
- Gamification of Lessons
What kind of games?

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

- Analog
- Digital
- Individual
- Group
- Local
- Networked
Puzzle
She would have died had she been alone.
Word Games
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

#### Killers
Defined by:
A focus on winning, rank, and direct peer-to-peer competition.
Engaged by:
Leaderboards, Ranks

#### Achievers
Defined by:
A focus on attaining status and achieving preset goals quickly and/or completely.
Engaged by:
Achievements

#### Socialites
Defined by:
A focus on socializing and a drive to develop a network of friends and contacts.
Engaged by:
Newsfeeds, Friends Lists, Chat

#### Explorers
Defined by:
A focus on exploring and a drive to discover the unknown.
Engaged by:
Obfuscated Achievements
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 21\textsuperscript{st} Century life skills.
  
  » “Serious” games can address real world wicked problems.
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
» Project-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!)
<table>
<thead>
<tr>
<th>Traditional Methods</th>
<th>Modern Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher as Leader</td>
<td>Teacher as Mediator &amp; Facilitator</td>
</tr>
<tr>
<td>Learning from Textbooks</td>
<td>Learning By Doing</td>
</tr>
<tr>
<td>Learning through Recitation, Explanation, Examination</td>
<td>Learning through Experimentation</td>
</tr>
<tr>
<td>Study is Systematic &amp; Didactic</td>
<td>Study through Dialogue &amp; Participation</td>
</tr>
<tr>
<td>Focus on Academic Achievement</td>
<td>Cultivate the Whole Student; Intellect, Social, Emotional</td>
</tr>
</tbody>
</table>
How does this affect school design?

- All of these approaches are:
  - Integrated
  - Experiential
Furniture

Collaborative areas support teams and small group lessons.

Lounge seating with privacy screens offers locations for rejuvenation and solace.

Layout supports sightlines to multiple locations within the classroom.

Choice and control are prevalent for students and instructors alike, allowing them to choose the best space for the activity at hand.
Furniture

- Variety of Seating
- Surfaces with Power
- High Back provides Privacy
- Display for Sharing
- Informal Seating
- Stand Up Stations Touchdowns
Hellerup School, Copenhagen, Arkitema Architects
Vittra Schools, Stockholm, Sweden, Rosan Bosch

Elements of 21st Century Classroom Design

- Whiteworks & bulletin boards lowered for students to reach & work together.
- Organize supplies within students’ reach. Assign class jobs to share responsibilities for resources.
- Designate a place for students to gather as a whole group for mini-lessons & wrap-up, separate from their workspace. Keep a mobile cart nearby to easily project from your laptop.
- Add casters to student chairs & tables to give them flexibility in where they choose to work.
- With throw pillows, bean bags, video game chairs, etc. make comfortable places for students to work & think independently or in cozier groups.
- Absent: sticker charts, card-turning pockets, names on whiteboards, & other unnecessary extraneous motivators.
- Add a touch of MakerSpace with a Maker space in the back of the room. A shelf, pegboard, & a workbench make a great start!
- Carefully curate your classroom library. Include picture books (even for older students) & a variety of levels & genres. Read as much of it as possible.

Classroom Design Piktochart by Mary Wade
Houses/Teams

Ryan Middle School, Fairbanks, Alaska, MCG Architects, Brain Spaces & USKH
Goals

• Whole Student
• Interactive
• Accessible/Inclusive

Objectives

• Collaboration
• Growth Mindset
• Independent Thinking
• Communication Skills
• Flexibility
• Multiple Scales
• Display & Presentation; virtual & real time
• Variety
• Embrace Technologies (old & new)
• Organized Storage

Design Principles
Get out your Smartphone!

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

Set up a user name and let’s begin!

Time for a Quiz!
Now let’s play a game!
We measure architecture through our bodies, therefore health shall be reflected in the building experience.”

- MCG Team