

Game Based Learning

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What is Game-Based Learning? Past, Present, and Future

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Contents

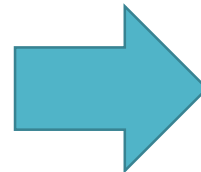
1. Learning with Games: Then and Now
2. About This Article
3. Four Types of Games for Learning
4. Three Models of GBL and Implications for Learning
5. Transforming a Textbook-Learning Culture with Games
6. Designing 21st CC Games

1. Learning with Games: Then and Now

The year 2003

“Maverick and unconventional” milestone year for social media and the information age.

- published *“What Video Games Have to Teach Us About Learning and Literacy”*.
- The term “digital native” coined.
- Google had emerged.
- One year later, Web 2.0 began
- Facebook and social media launched.



Today

“would not be surprised” Instead, students look for clarification.

- (Recent survey) 55% of nearly 700 teachers have students play games at least weekly (Takeuchi & Vaaala, 2014).
- Clarifications on GBL are vital
“What are their views on learning?”
“What are their views on GBL?”

2. About This Article

In this article

- maintain that GBL should be conceptualized toward the transformation of a textbook learning culture.
- articulate for types of games for learning and three models of GBL.
- pinpoint the future design direction.

3. Four Types of Games for Learning

Games for Learning	Major Design Constructs	Characteristics
Motivation games	Motivation theories, content theories, etc.	The fun element attracts researchers and practitioners to use them, but it is often equivocal if students are really learning when they feel motivated in a GBL setting.
Drill and practice games	Behaviorism	Their alignment with traditional schooling practice makes them a popular choice for practitioners, but they don't really teach important concepts.
Content mastery games	Behaviorism, Cognitive Science, Instructional Design	They can be textbook killers, as they are more appealing and can be more effective ways to learn 20th century literacies.
21st CC games	Cognitive Science, Sociocultural Learning Theories	They hold the potential to transform the mainstream learning, and it is the very reason they are misaligned with mainstream learning.

4. Three Models of GBL and Implications for Learning

GBL Models	Relationship with learning	Relationship with Schooling
GBL as a learning approach driven by game technologies.	Learning takes place as the result of game play.	More suitable for self-directed learning
GBL as a learning approach driven by both game technologies and corresponding pedagogies	Learning takes place as the result of game play and associated activities.	Most popular GBL model in schools, but there is a need to advance teachers; design expertise.
GBL as a pedagogical approach informed by game design concepts.	Learning takes place in gamified learning activities.	A promising GBL model for schools but there is a need to advance teachers' design expertise.

5. Transforming a Textbook-Learning Culture with Games

√ Textbook-learning culture

- The mainstream education systems have been designed to maximize efficiency of basic content mastery—a much needed 20th century literacy.
- It enculturates key stakeholders - students, parents, teachers, school leaders, and policy makers- to believe that content mastery equates to learning.

√ The Transformative Power of Disruptive Technologies

- In the age of web 2.0 and 3.0, high-quality content is now freely available on YouTube, MOOCs, blogs, Wikipedia, etc.
- In this flat new world, one's ability is not defined by what he or she knows but placed on constructing knowledge, solving problems, collaborating with others, organizing activities, and manage communities (Jan & Tan, 2013).

GBL emerges from the recognition that content mastery is insufficient, though still important.

However, using games simply for motivation, drill and practice, and basic content mastery underestimates what GBL can be and do for education.

6. Designing 21st CC Games

The challenge is: how do we design good GBL, and how do we conceptualize the new learning”



√ may pose a challenge such as demystifying the disappearance of an insect in a rain forest.
√ demands that players, role-playing as a team of entomologist, collect and interpret data, identify relevant evidence, and jointly develop hypothesis in order to solve the mystery.

⇒ This designed context can be modeled based on authentic rain forest studies so that the context, activities, and challenges can be authentic.

6. Designing 21st CC Games

√ **Teachers as a designer**

- There is a need for teachers to understand how learners develop higher-order thinking skills and soft skills in a designed context.
- Teachers are more like game designer than content expert and will have to learn to think like learning-context designers.
- This is an area that requires much more substantial research.

√ **Quest for a Learning Paradigm Shift**

- As the shift of learning paradigm must occur within the current incompatible paradigm.
- The contradictions are most noticeable when good game storm the classroom.
- Perhaps this is why GBL is often taken up for motivation, and drill and practice.
- They don't rock the boat; but the boat may not be traveling in the right direction.

Q&A