

# Lecture 3: Digital Game-based Learning

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# Last Lesson Review



# Mobile & Ubiquitous Learning

what is mobile learning?

- mobility
- mobile technology

What is ubiquitous learning?

- pervasive computing
- context awareness
- most adaptability

Some professional words

- handheld computer
- portable device
- digital divide
- didactic teaching
- educational tranformation
- .....

Some key sentences

- Mobile learning supports the learning process rather than being integral to it.
- Technology is something to understand not something to fear.

# Learning Objectives

- Know the definition, history of DGBL
- Know the difference between DGBL and traditional learning
- Know the characteristics of learning games
- Master professional words about digital game-based learning



# Reading Materials



# Reading 1

- *Digital game-based learning*

- <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&ved=0CEcQFjAF&url=http%3A%2F%2Fwww.learnnc.org%2F1p%2Fpages%2F4970&ei=7-JXUL2jEZKfiQeUsoDwAw&usg=AFQjCNFCZItTzUlbow2UwbZGj6qUthlBg&sig2=syZzh-m1vvbyJk0yRh2fQ>

# Definition

- Digital game-based learning (DGBL) is an instructional method that incorporates educational content or learning principles into video games with the goal of engaging learners. Applications of digital game-based learning draw upon the constructivist theory of education.

# Benefits

- Digital game-based learning has the potential to engage and motivate students and offer custom learning experiences while promoting long-term memory and providing practical experience.
- The interactive nature of video games stimulates learning and encourages participants to challenge new topics or knowledge.
- Video games can help students develop computer skills **that** they may need in a society **that** continues to develop technologically.



# Consideration in selecting games

- Students' age, characteristics, gender, competitiveness, and previous gaming experience.
- **The game's target age level.**
- **Special needs.** Would students with disabilities be left out?
- **Gender and racial diversity.** In its choice of characters, language, or situations, does the game offend or slight any particular group of students?
- **Number of players.** How many students can play at one time? Will too many be left sitting on their hands?
- **The role of the teacher.**—Passive observer or active participant?

# Reading 2

- *Game-Based Learning What it is, Why it Works, and Where it's Going*

– *<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=9&cad=rja&ved=0CFgQFjAI&url=http%3A%2F%2Fwww.newmedia.org%2Fgame-based-learning--what-it-is-why-it-works-and-where-its-going.html&ei=7-JXUL2jEZKfiQeUsuDwAw&usg=AFQjCNEFlv47eOKrrnY01KezoqwMWv13Zw&sig2=P0ZRaBWcX3kqOmWqGm1stg>*

- Good game-based learning applications can draw us into virtual environments that look and feel familiar and relevant. According to Dr. Susan Ambrose, director of Carnegie Mellon's Eberly Center for Teaching Excellence, this is motivational because we can quickly see and understand the connection between the learning experience and our real-life work.

# Game-based Learning vs. Traditional Training

	<b>Traditional Training (lectures, online tutorials)</b>	<b>Hands-on Training</b>	<b>Game-based Learning</b>
<b>Cost-effective</b>	X		X
<b>Low physical risk/liability</b>	X		X
<b>Standardized assessments allowing student-to-student comparisons</b>	X		X
<b>Highly engaging</b>		X	X
<b>Learning pace tailored to individual student</b>		X	X
<b>Immediate feedback in response to student mistakes</b>		X	X
<b>Student can easily transfer learning to real-world environment</b>		X	X
<b>Learner is actively engaged</b>		X	X

# Professional Words



- Educational game: 教育游戏
- Edutainment technology: 娱教技术
- hands-on learning: 做中学, 实践性学习
- Storyline: 故事情节
- Instructional method: 教学方法
- Video games: 电子/视频/互动游戏

- Digital immigrant: 数字移民
- Role-playing: 角色扮演
- Non-violent games: 非暴力游戏
- Special-needs groups: 特殊群体
- Engaging game: 迷人的游戏

# Educational Game Demos





# Crayon Physics

- Download
  - <http://www.kloonigames.com/download.php?file=crayon.zip&mirror=1>
- Watch on Youtube
  - [http://www.youtube.com/watch?feature=player\\_embedded&v=QsTqspnvAaI](http://www.youtube.com/watch?feature=player_embedded&v=QsTqspnvAaI)



# Quest Atlantis

- Game website
  - <http://questatlantis.org/>
- See a video
  - <http://questatlantis.org/#88>



# Summary



# Can you recall what we learn today?

- DGBL is an instructional method that incorporates educational content or learning principles into video games with the goal of engaging learners.
- DGBL has the potential to engage and motivate students and offer custom learning experiences while promoting long-term memory and providing practical experience.
- **Characteristics of a good learning game include** continuous challenge, interesting storyline, flexibility and immediate rewards.

- To learn more, please see also
  - <http://edugame.pku.edu.cn:8080/index.html>



**北大教育游戏研究网**

Center for Educational Game Research of PKU

# Homework



- Activity 1: Professional Words Test
  - <http://lcell.bnu.edu.cn/do/testTask?action=visitTestFromLa&laId=1656&testId=343>
- Activity 2: Paragraph Translation
  - <http://lcell.bnu.edu.cn/do/bbsPost?action=detail&postId=3382>

## *Please Remember*

- *Education is not the filling of a pail, but the lighting of a fire.*

— — *William Butler Yeats*



*Any question, please contact me:*

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\* Actions speak louder than words \*