Lecture 4: Computer-supported Collaborative Learning
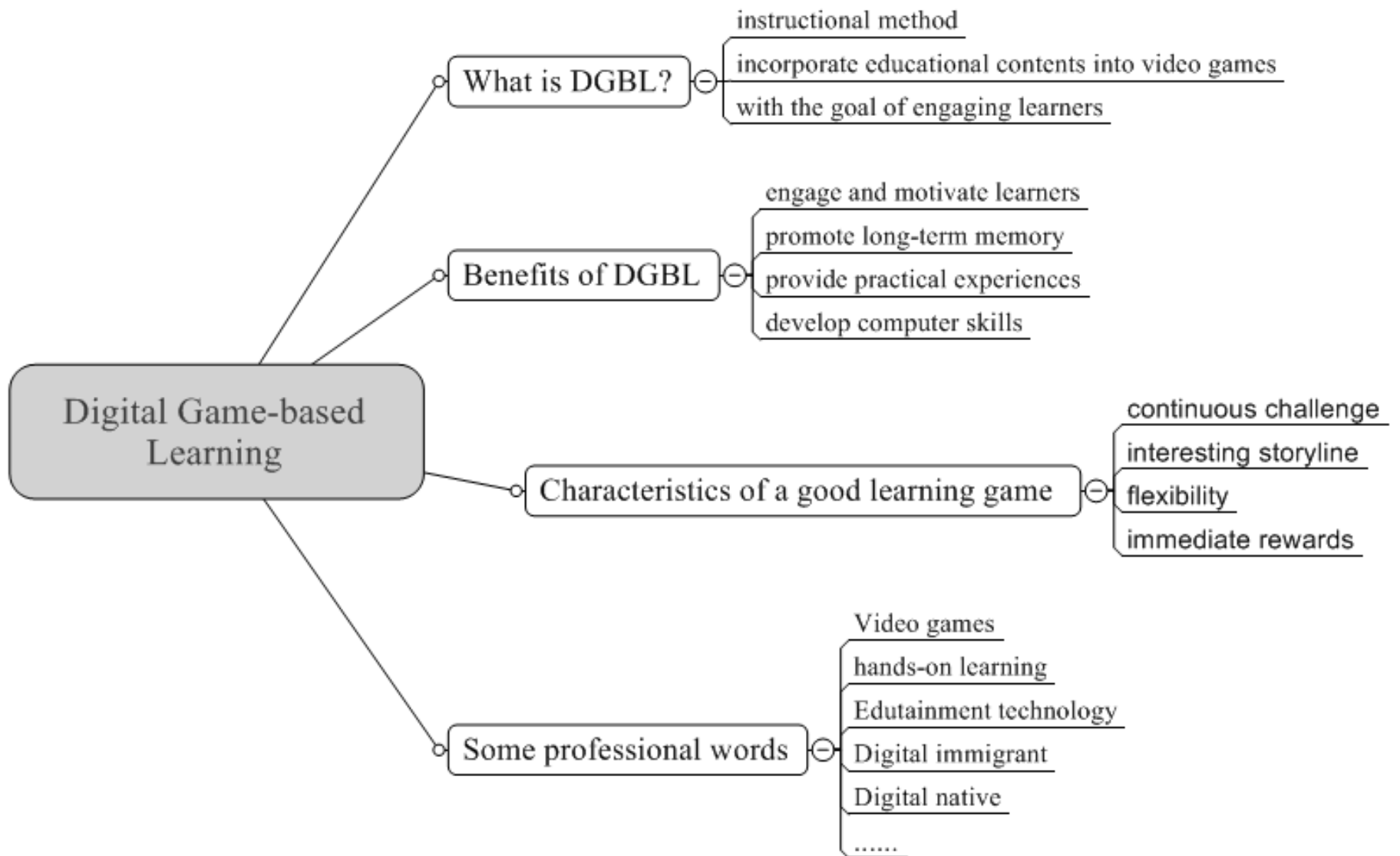
Dr. Xianmin Yang

School of Information and Communication

Jiangsu Normal University

Last Lesson Review

Digital Game-based Learning

What is DGBL?
- instructional method
- incorporate educational contents into video games
- with the goal of engaging learners

Benefits of DGBL
- engage and motivate learners
- promote long-term memory
- provide practical experiences
- develop computer skills

Characteristics of a good learning game
- continuous challenge
- interesting storyline
- flexibility
- immediate rewards

Some professional words
- Video games
- hands-on learning
- Edutainment technology
- Digital immigrant
- Digital native
- ......

Learning Objectives

- Know the definition of CSCL
- Know the history, theories and concerns of CSCL
- Know the benefits and limitations of CSCL
- Master professional words about CSCL

Reading Materials

Reading 1

- *Computer-supported collaborative learning*
  - http://lcell.bnu.edu.cn/do/uploadres?action=down&resourceId=16491&filePath=/upImages/sgresource/20120925145615/Computer-supported%20collaborative%20learning.docx

Definition & Characteristics

- Computer-supported collaborative learning (CSCL) is a <u>pedagogical approach</u> wherein learning takes place via <u>social interaction</u> using a computer or through the Internet.

- This kind of learning is characterized by the <u>sharing and construction of knowledge</u> among participants using technology as their primary means of communication or as a common resource.

History

- In the 1970s as cognitivism gained traction with educators, designers began to envision learning technology that employed artificial intelligence models that could adapt to individual learners.

- The earliest public workshop directly addressing CSCL was "Joint Problem Solving and Microcomputers" which took place in San Diego in 1983.

- Six years later in 1989, the term "computer-supported collaborative learning" was used in a NATO-sponsored workshop in Maratea, Italy.

- The International Society of the Learning Sciences established a biannual CSCL conference in 1995.

Theories

- Since the field focuses on collaborative activity and collaborative learning, it inherently takes much from contructivist and social cognitivist learning theories.

- There are four crucial themes in collaboration theory: collaborative knowledge building, which is seen as a more concrete term than "learning"; group and personal perspectives intertwining to create group understanding; mediation by artifacts; and interaction analysis using captured examples that can be analyzed as proof that the knowledge building occurred.

Teacher Roles

- Though the focus in CSCL is on individuals collaborating with their peers, teachers still have a vital role in facilitating learning.

- The design should clearly define the learning outcomes and assessments for the activity.

- Proper administration of both resources and expectations is necessary to avoid learner overload.

- Be able to mitigate technical issues for the class.

- Engage in assessment.

Criticism and concerns

- Students or participants need sufficient access to computer technology.

- More demanding than what is necessary for traditional face-to-face classrooms.

- Fake collaboration

- Computers become an obstacle to collaboration rather than a supporter of it

Reading 2

- Benefits and Limitations of CSCL
  - *http://lcell.bnu.edu.cn/do/uploadres?action=down&resourceId=16492&filePath=/upImages/sgresource/20120925145717/Benefits%20and%20limitations%20of%20CSCL.docx*

Benefits

- Collaborative learning is effective in generating positive outcomes not only in academic performance, but also in supporting the affective and social aspects of learning.

- Through collaborative learning, learners can make their knowledge public, test their ideas with others, experience multiple perspectives and move to deeper levels of understanding through collaborative writing, discourse and dialogue.

Benefits

- Ted Panitz

1. Academic benefits
   - o Promotes critical thinking skills
   - o Involves students actively in the learning process
   - o Models appropriate student problem solving techniques
   - o Personalizes large lectures
   - o Motivates students in specific curriculum
2. Social benefits
   - o Develops a social support system for students
   - o Builds diversity understanding among students and staff
   - o Establishes a positive atmosphere for modeling and practicing cooperation
   - o Develops learning communities
3. Psychological benefits
   - o Increases students' self esteem through student centered instruction
   - o Reduces anxiety through cooperation
   - o Develops positive attitudes towards teachers

Two Videos

Teamwork funny — More info — 0:00 / 0:34 — YouTube

Funny Teamwork Very Funny — More info — 0:00 / 0:49 — YouTube

Limitations

- CSCL poses a number of challenges for both the instructor and the student in that it requires a level of comfort and competence in using the tools to support the collaboration.

- It is not appropriate for all learning tasks. Learning problems or tasks must also be complex or challenging enough to warrant a collaborative team effort.

Professional Words

- CSCL（Computer-supported collaborative learning）：计算机支持的协作学习
- CSCW（computer-supported collaborative work）：计算机支持的协同工作
- Online collaborative learning environment：在线协作学习环境

- Social interaction：社会交互
- Collaborative knowledge building：协同知识建构
- Artificial intelligence：人工智能
- Social media technologies：社交媒体技术
- Interaction analysis：交互分析
- Technology-mediated discourse：基于技术的对话
- Mediator：中介者，传递者

An Online Course

An Online Course

- To learn more, please see also
  - http://ows.edb.utexas.edu/site/computer-supported-collaborative-learning-2012

Computer-Supported Collaborative Learning 2012

Syllabus

Module 1

Module 2

Module 3

Module 4

Final Presentation

Handbook

CSCL Blogs

Contact Us

Welcome Message
from Dr. Resta (2:26 min.)

Welcome . . . from Dr. Paul Resta

Welcome to our course on Computer Supported Collaborative Learning (CSCL).

In recent years we have seen the exponential growth of the use of Web 2.0 social networking tools in all aspects of life. Today's students are 'constantly connected' using tools such as blogs, wikis, text-messaging, twitter or hundreds of other social networking tools. Similar trends are taking place in the workplace and today's professionals in business, industry, medicine, science and higher education work online with team members who are located in different cities or even different countries. The fastest growing workspace is the distributed workspace.

Summary

Can you recall what we learn today?

- What is CSCL?
- What characteristics of CSCL has?
- Describe the history of CSCL.
- Understand the teacher's role in CSCL.
- Understand the theories of CSCL.
- Know the benefits and limitations of CSCL.

Homework

- Assignment 1: Professional Words Test
  - http://lcell.bnu.edu.cn/do/testTask?action=visitTestFromLa&laId=1663&testId=344

- Assignment 2: Discussion the diffs between cooperative learning and collaborative learning
  - http://lcell.bnu.edu.cn/do/bbsPost?action=detail&postId=3444

Any question, please contact me:

Xianmin Yang

Ph.D.

Jiangsu Normal University

TEL:15862183989

E-Mail: yangxianmin8888@163.com

Vita:http://lcell.bnu.edu.cn/TeamMember/Yang/index.html

MicroBlog:http://t.sina.com.cn/yangxianmin8888

School of Information and Communication, Jiangsu Normal University

NO 57, Heping Road, Jiangsu Normal University, Xuzhou 221009

∗ Actions speak louder than words ∗