Open Pedagogy

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Themes of CT²

- Guiding and modeling critical thinking
- Foster critical self reflection
- Foster group reflective dialogue
- Develop new learning experiences
Bloom’s Taxonomy

- **REMEMBERING**
  - Find or remember info:
    - list, find, name, identify, locale, describe, memorize, define

- **UNDERSTANDING**
  - Understanding & making sense out of info:
    - interpret, summarize, explain, infer, paraphrase, discuss

- **APPLYING**
  - Use info in a new (but similar) form:
    - use, diagram, make a chart, draw, apply, solve, calculate

- **CREATING**
  - Use info to create something new:
    - design, build, plan, construct, produce, devise, invent

- **EVALUATING**
  - Critically examine info & make judgments:
    - judge, critique, test, defend, criticize

- **ANALYZING**
  - Take info apart & explore relationships:
    - categorize, examine, organize, compare/contrast
A Novel Approach to Teaching
Encourage Students to:

2. Learn and demonstrate understanding through information creation.
3. Shape the public knowledge commons of which they are a part.
4. Show agency, communication, choice of expression in learning and ownership over their learning experiences.
Critical Pedagogy

“Habits of thought, reading, writing, and speaking which go beneath surface meaning, first impressions, dominant myths, official pronouncements, traditional cliches, received wisdom, and mere opinions, to understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or discourse.” (Shor, 1992: 129)
Constructivism

• People construct meaning from their experiences and reflection
• Inquiry based, real life learning
• Learner self direction
• Collaborative learning
• Personal growth
Rejection of the banking model of education
Example 1.

Traditional Education:

• Instructor gives students exams and asks them to answer questions.

Open Pedagogy:

• Having students create and peer review exam questions and answers to them as a way to help them gain a deeper understanding of concepts learned in class.
Example 2.

Traditional Education:
• Instructor gives students core readings for course

Open Pedagogy:
• Students examine why core readings are core.
• They develop a bibliography that explains that role.
• Subsequent classes update the bibliography, adding perspective to the original readings.
• Adding readings they believe are now core and describing why for the next group of students.
Student Motivation

• “Renewable” as opposed to “disposable” assignments

• Student controlled learning environments
Simple Examples:

- Multiple Choice Questions
- Collaborative syllabus design
- Student application of knowledge to real world situations
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• Open License:
  • Document that lets people use or modify a work for free.
  • Allows copyright owners to set permissions and restrictions on how their works can be used.
  • Response to current academic publishing.
5 Rs

• **Retain**- make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
• **Reuse**- use the content in a wide range of ways (e.g., in a class, on a website, in a video)
• **Revise**- adapt, adjust, modify, or alter the content itself (e.g., translate into another language)
• **Remix**- combine the original or revised content with other material to create something new (e.g., a mashup)
• **Redistribute**- the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy to a friend)
Open Educational Resources

Books/Textbooks
- openstax
- Open Textbook Library
- BCcampus OpenEd

Online Courses/Courseware
- MIT OpenCourseware
- Open Yale courses
- JHSPH Open Courseware
- edX

Videos and Images
- vimeo
- flickr
- edu
- OPEN i
- DPLA

Supplementary Materials
- PHET Interactive Simulations
- Engineering Simulations for Learning
- BioInteractive
- Project Gutenberg
Examples of Digital Open Pedagogy
Web Publishing as a Tool of Teaching

- Student learning and motivation through textbook creation
- Modifying and adding perspectives to existing OER
- Example: *The Open Anthology of Earlier American Literature*, edited by Robin Derosa
Science, Technology and Society

CHAPTER 17

The First Transcontinental Railroad

KELLY MOYER

INTRODUCTION

The highly-acclaimed sociologist, Steven Fuller, describes the progress of science and technology as a singular event that changed society at the time that it was introduced. The Ford Company began using a form of computer simulations reflecting both the economy and the company overall to determine the best possible technological advancements and how to best improve quality for components and revenue for the business ("Innovations 200 Years," 2015).

The Ford Motor Company has continued to make great strides in further developing Ford's initial assembly line into a powerful base for the automobile industry.

Throughout history, societal circumstances have necessitated the development of more significant technologies related to warfare. Within the medieval period (500-1500 AD), some of the most important technological innovations were the advancements in armor worn on the battlefield. While the invention of chainmail provided the medieval era, it’s important to consider its impact on warfare leading into the centuries it influenced (Figure 1). Although (Figure 1) can be simply described as a silent mode of retaining metal rings designed to protect the wearer from cuts and столече, its improvements went beyond simply forming methods, the diameter of the interlocking rings became smaller, and the armor more effective. The reason for this being that as the smaller diameter of the rings, the more evenly distributed a weapon would be to them apart. The true result of this advancement was that it formed many millennia to adopt their weapon designs ever since. From specialized Insight weapons, weapons designed more options for piercing in the mediates, thanks armor technology took another step forward with the development of fully plated armor (Figure 2). The optical variability and durability of this new armor theme a large variety of adaptations in weapon style, combat style, and battle maneuvers, making it one of the most significant advancements of the medieval period.

EXERCISES

QUESTION 1: THINK ABOUT IT:

In what ways did the discovery of the tetanus bacteria lead to new scientific advancements?

1. Development of new antibiotics to fight bacteria
2. Improved use and regulation of tetanus vaccines
3. The formulation of antibiotic-resistant bacteria
4. Vaccinations

a) 1, 2, 3
b) 1, 2, 4
c) 1, 3, 4
d) All of the above

QUESTION 2: SHORT ANSWER - FAST TREATMENTS

In what ways have tetanus treatments changed from before the development of tetanus vaccines? How are modern treatments better than those before the discovery of Tetanus?

5. Multiple Choice - Think About It:

What has been the greatest side effect of antibiotics on society and the path to developing Tetanus?

a) Development of new antibiotics
b) Increased resistance to antibiotics
c) Improved treatment of infections
d) None of the above
Wiki Teaching

• Teach your students how to edit Wikipedia articles.
• Students make direct contributions to public knowledge.
• Students engage with and understand the politics of editing, including how “truth” is negotiated by those who have access to the tools that shape it.
Personal Cyberinfrastructures

- Turning students into bloggers
- Create their own personalized learning architecture and manage their own data, collaboration etc.
- Decide how public or private these are
- Learn how to license their information
- Learn information sharing
How can I do this?

Why would I want to do this?
Ask Yourself:

1. What do you want your students to remember ten years from now?
2. What activity will help them to remember it?
3. How much time do you have for this activity?
4. What skills will students need to complete the assignment?
Best Practices:

• **Offer a clear description of the assignment:** Allow students to become familiar with activity.

• **Build trust:** Be explicit about the goals and purpose of the open assignment and provide clear guidelines for what is to be developed.

• **Give examples:** Offer detailed examples on what the outcome will be.

• **Provide scaffolds for learning:** Divide the assignment into steps and offer opportunities for feedback after each step so that students are supported in building and improving their work.
Libraries is Here to Help:

Yang Wu
Resources to Get Started
Web Publishing Tools
Open Pedagogy Activities

Anne Grant (Instruction Coordinator)
Web Publishing/Teaching Strategies

John Morgenstern (Director, Clemson University Press)
Copyright Support
Open Pedagogy is not hard!

Ithaka S+R US Faculty Survey 2018
10,919 faculty members
48% want to take advantage of Open Pedagogy
Thank You!
Questions/Comments