Integrating Information Technology and PBL

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Active Learning Objectives

Courses should:
1. Be student-centered and encourage students to “learn to learn.”
2. Provide opportunities to think critically and to analyze and solve problems.
3. Assist students in developing skills in gathering and evaluating information.
4. Provide experience working cooperatively in teams and small groups.
5. Help students acquire versatile and effective communication skills.
6. Offer a variety of learning experiences.
7. Apply technology effectively where it will enhance learning.

Information Technology Objectives

Students should:
1. engage in electronic collaboration.
2. use and create structured electronic documents.
3. do technology-enhanced presentations.
4. use appropriate electronic tools for research and evaluation.
5. use spreadsheets and databases to manage information.
6. use electronic tools for analyzing quantitative and qualitative data.
7. identify major legal, ethical, and security issues in information technology.
8. have a working knowledge of IT platforms.

Adapted from Technology Across the Curriculum, George Mason U.

Overlap of Active-Learning Objectives and Instructional Technology Objectives

Organizing the Course

Web Sites and Web Pages

Syllabus

Groups

Student Reports and Projects

Utilizing Online Resources
Examples of supporting information that can be linked from an online syllabus:

1. Instructor’s instructional philosophy
2. Detailed course objectives (both content and process)
3. General education curriculum goals
4. Motivation and description of PBL
5. Problem solving process and strategies
6. Roles and responsibilities of students, peer tutors, and instructor
7. List of frequently asked questions about PBL and working in groups
8. Forms for assessment of individual performance in groups
9. Some thoughts on grading
10. Anonymous suggestion box and responses to suggestions
11. Academic Services Center
12. Policies on academic dishonesty and responsible computing
Using Online Resources to Support a PBL Course

Old thinking:
The web is full of misinformation and biased representation
Stay away!

New thinking:
Engage and develop critical thinking skills.
The Internet Challenge!

Using a Course Web Site to Organize a PBL Course

Utilizing Online Resources

Web Sites and Web Pages

Ingredients for writing problems

Information for solving problems

Inspiration for designing problems

Utilizing Online Resources

Web Sites and Web Pages

Creating images with scanners, digital cameras

Background facts from networked databases

Borrowing images from other sites

Utilizing Online Resources

Web Sites and Web Pages

Information for solving problems

Evaluating online resources critically

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Inspiration for designing problems

Background facts from networked databases

Film and TV sites for scripts and characters

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