

## Using Technology to Promote and Assess Active Learning

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### Objectives

- At the end of this participants should be able to:
  - Describe technology options to support active learning
  - Choose appropriate tool to support a pedagogical goal
  - Relate specific social media tools to Bloom's taxonomy verbs

### First

- What is "Active Learning?"

### Active Learning

- LCME definition
  - A medical education program must include instructional opportunities for **active learning and independent study** to foster the skills necessary for lifelong learning
    - ... self-assessment on learning needs; the independent identification, analysis, and synthesis of relevant information; and the appraisal of the credibility of information sources. Medical students should receive explicit experiences in using these skills, and they should be assessed and receive feedback on their performance.

### Active Learning Redux

- Bonwell and Eison (1991) in their report for the Association for the Study of Higher Education
  - "(Students) must **read, write, discuss, or be engaged in solving problems**. Most important, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation. Within this context, it is proposed that strategies promoting active learning be defined as instructional activities involving students in doing things and thinking about what they are doing."

### "Flipping the classroom"

- **Flip teaching** (or flipped classroom) is a form of blended learning which encompasses any use of technology to leverage the learning in a classroom, so a teacher can spend more time interacting with students instead of lecturing.

## Example

- Define a discrete concept
  - “passing a vehicle,” not “driving a car”
- Define the learning objective
  - “identify when it is safe to pass”
  - “illustrate scenarios where passing is not allowed”

## Objective-activity-tool

- “Identify when it is safe to pass”
  - Traditional: Lecture or reading with quiz
  - Cutting edge: Game that shows safe and unsafe passing opportunities with student deciding whether to pass
  - Opportunity: Online learning module with in-class clicker exercise

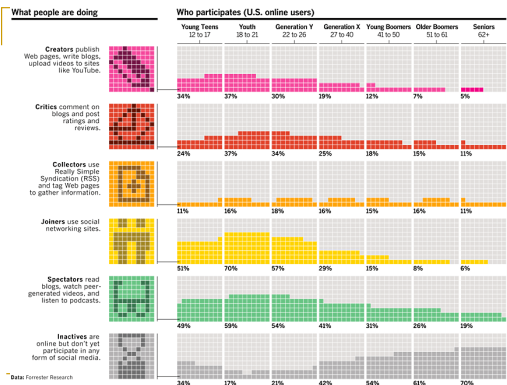
## Objective-activity-tool

- “Illustrate scenarios where passing is not allowed”
  - Traditional: Small group where facilitator directs conversation
  - Cutting edge: Immersive environment where a student must design a roadway that is unsafe for passing
  - Opportunity: Have students post news report (story/picture/video) of unsafe passing scenario to wiki

## Bloom’s Taxonomy



## Social Media Landscape 2012

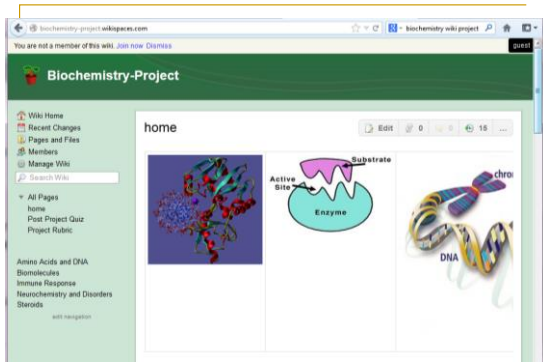


## Tools in the cloud – Social Media

- Wiki
- Blog
- Social Bookmarking

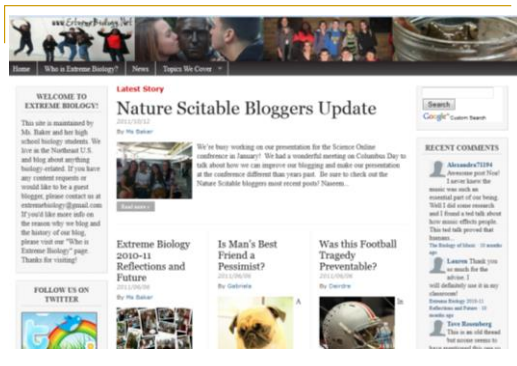
## Wikis

- Web-based application that is used to create collaborative content
- Many to many relationship
- Applications include Pbwiki, WikiSpaces
- Designed around content
- Used for group projects, knowledge base
- Grading Rubric: group grade, individual contribution, collaboration



## Blogs

- Web-based application that allows easy content publication and commenting
- Usually a one to many relationship
- Applications include: Blogger, WordPress, Tumblr, Weebly
- Posted/design chronologically
- Used for journals, lab notebooks
- Grading Rubric: Collaboration, contribution, timeliness



## Social Bookmarking

- Web application that allowing for the aggregation of web references – usually news articles
- One to many relationship
- Applications include: Reddit, Digg, CiteULike
- Uses: Peer experts, virtual journal club, literature review
- Grading Rubric: peer evaluation, expert assessment

