

Flipping with Purpose: Beyond Video Instruction



Tuesday, June 11, 2013 - 9:00am-4:30pm at Quinnipiac University

Gary Ackerman

Center for Teaching and Learning
Mount Wachusett Community College

[@garyackermanphd](#)

gackerman@mwcc.mass.edu

<http://mwcc.edu/ctl>





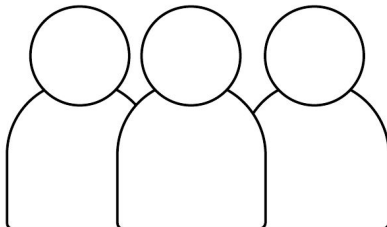
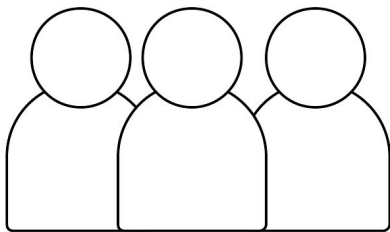
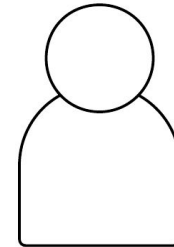
1983

ca. 1983:

Traditional Classrooms

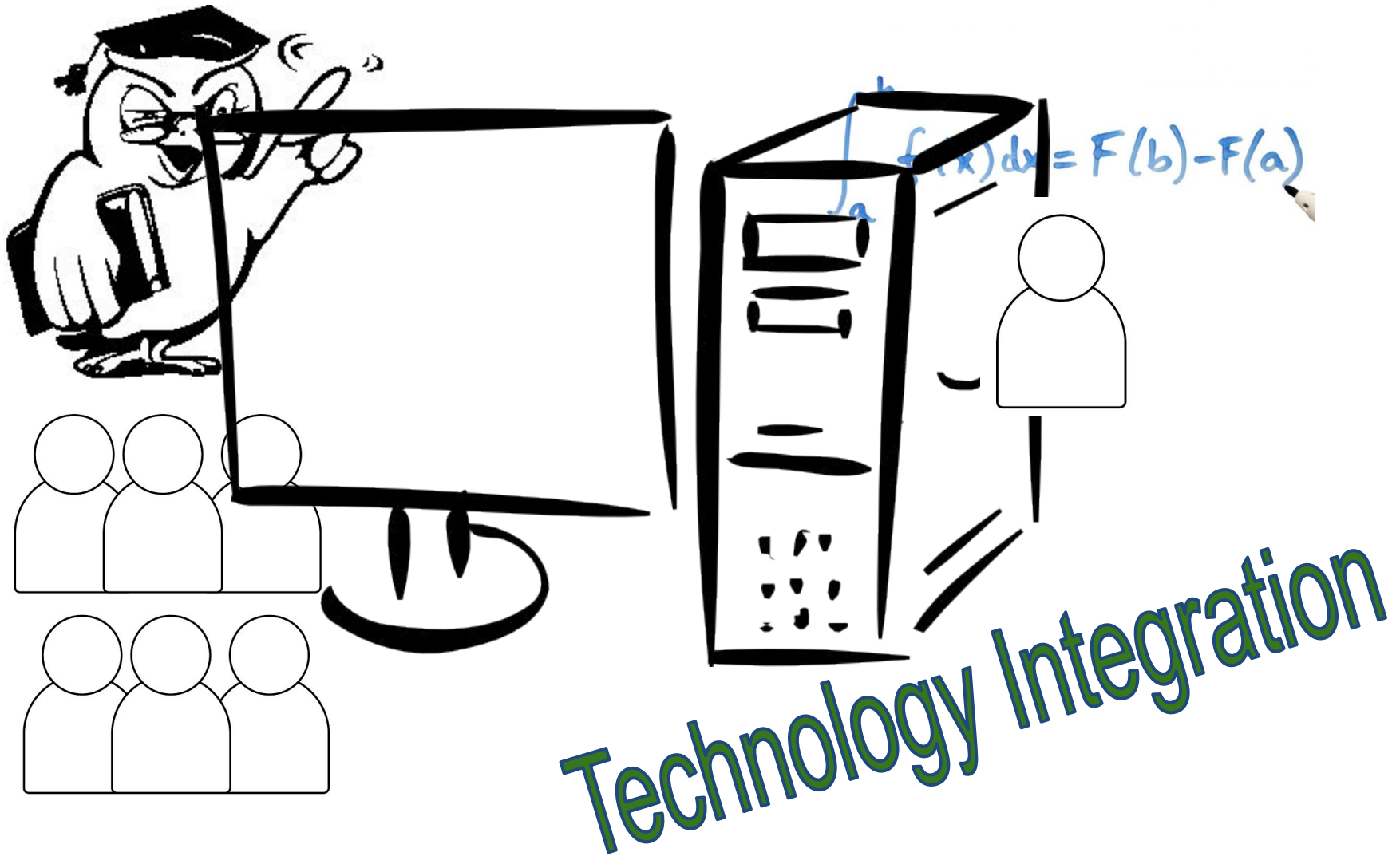


$$\int_a^b f(x) dx = F(b) - F(a)$$



ca. 2000:

Traditional Classrooms



1983

Computer literacy

Edutainment

Coding

Tech

Integration

**Teach via
tech**

2013

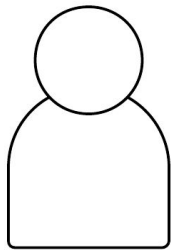
**Personalized
systems**

Gaming

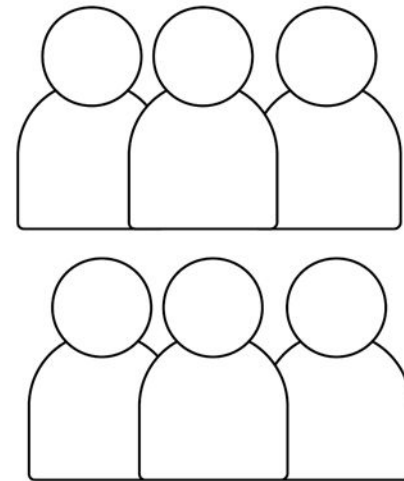
**Internet
safety**

Terms as meaningless as "flipped classrooms"

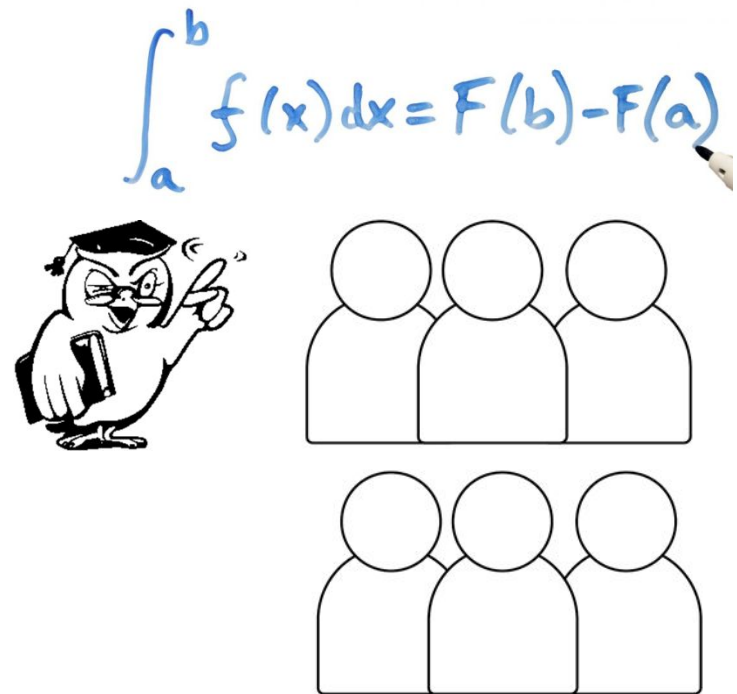
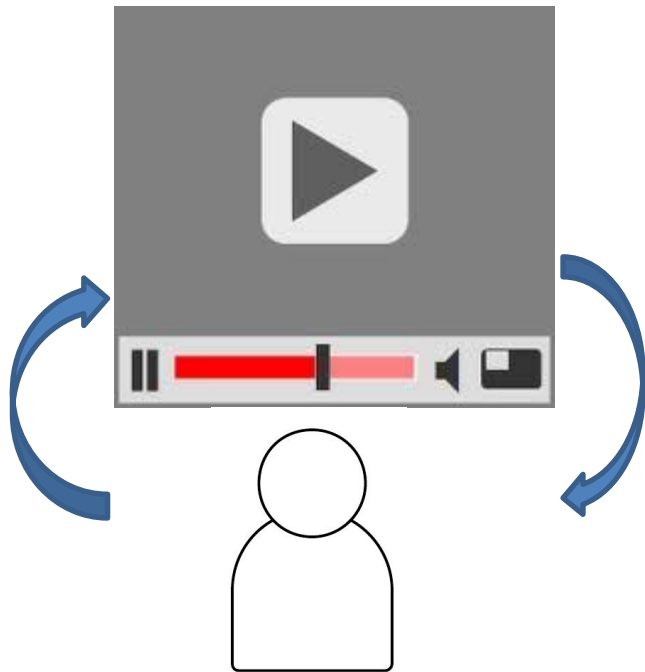
Since 2010: “Flipped Classrooms”




$$\int_a^b f(x) dx = F(b) - F(a)$$



Advantages: “Flipped Classrooms”



“Flipped” & Traditional Classrooms

New  Known



$$\int_a^b f(x) dx = F(b) - F(a)$$

Part I: Six Models

Face-to-face / Blended / Online

Improve Extant Practices

Known  **New**

Part II: Tips & Habits

Check-ACE-Preview

Check students'
understanding of
outside-of-class
instruction

Activities to apply, connect and extend
instruction

Preview
out-of-class
instruction

**Out of class
instruction**

- Most like "flipped classrooms"
- Loose connection between video and ACE
- ACE is key

Check-ACE-Preview

Check students' understanding of outside-of-class instruction

Activities to apply, connect and extend instruction

Preview out-of-class instruction

Out of class instruction

Check-ACE-Preview

Check students' understanding of outside-of-class instruction

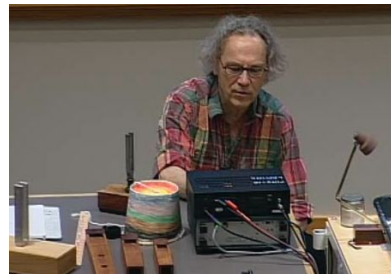
Activities to apply, connect and extend instruction

Preview out-of-class instruction

Out of class instruction

Sound... can we measure?

Here is what Walter will say...



Design the experiment...

Formative assessment...

Check-ACE-Preview

Check students'
understanding of
outside-of-class
instruction

Activities to apply, connect and extend
instruction

Preview
out-of-class
instruction

**Out of class
instruction**

Check-ACE-Preview

Check students'
understanding of
outside-of-class
instruction

Activities to apply, connect and extend
instruction

Preview
out-of-class
instruction

**Out of class
instruction**

ACE: Cognitive Apprenticeships

Project-Based Learning
Healthy Test Preparation

Research

Design

Case Studies

Simulations

Games

Data Analysis

Data Collection

Model Data Collection

Data Collection

Data Analysis

- "Drudgery" of collection is done independently
- Model the simulation
- Time for analysis

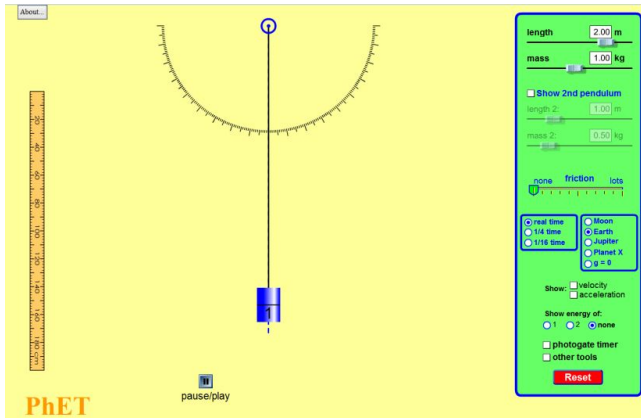
Data Collection

Model Data Collection

Data Collection

Data Analysis

Known



New



Pendulum data ☆

File Edit View Insert Format Data Tools Help All changes saved in Drive

	A	B	C	D
1	Length of the pendulum (m)	Time for 10 swings (s)		
2				
3				
4				
5				
6				
7				
8				

$$T = 2\pi\sqrt{\frac{L}{g}}$$

Reflection

ACE Activity

Reflection

Knowledge Building

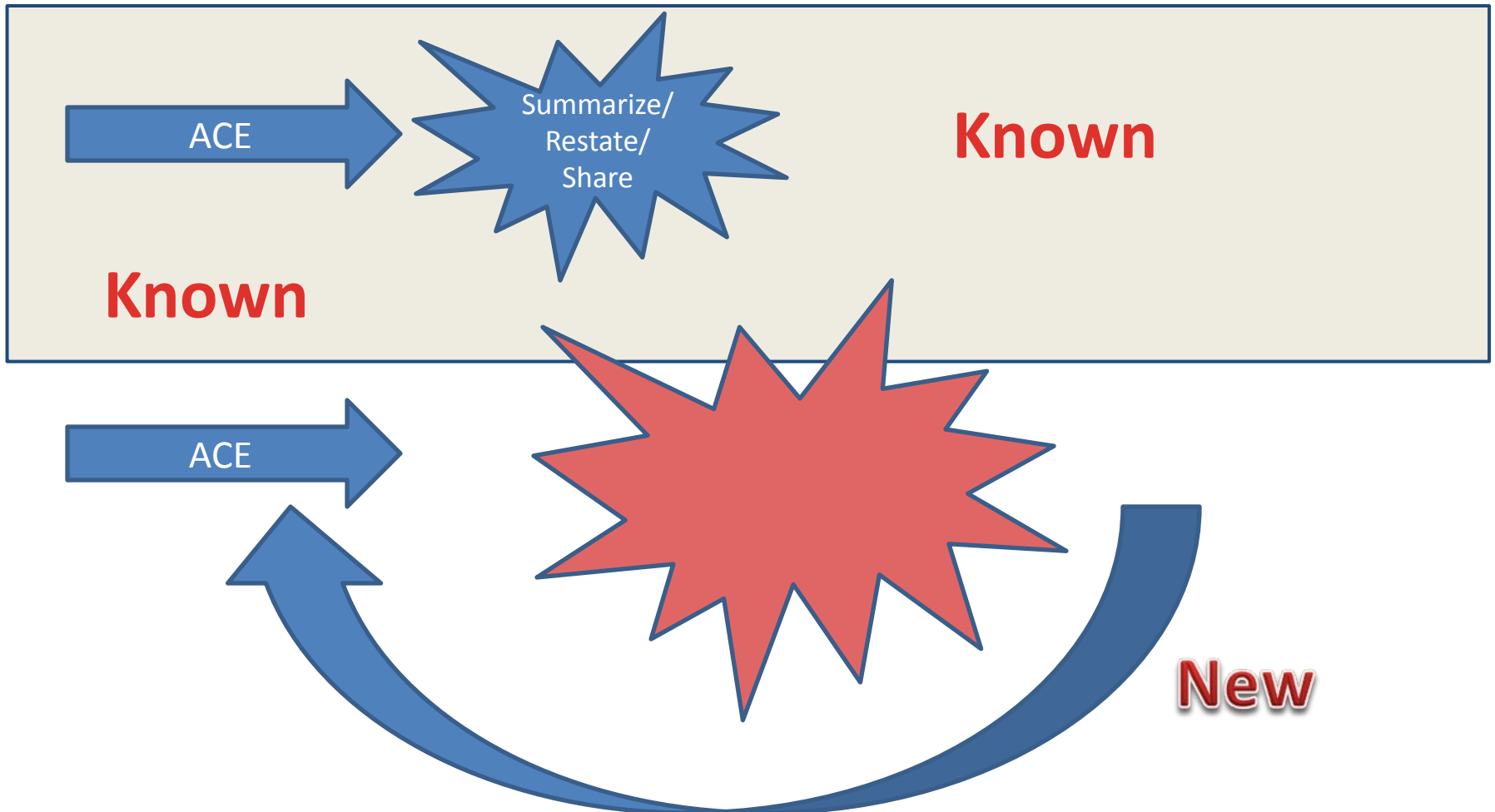
- ACE is loud
- Scaffold the reflection
- Close the loop

Reflection

ACE Activity

Reflection

Knowledge Building

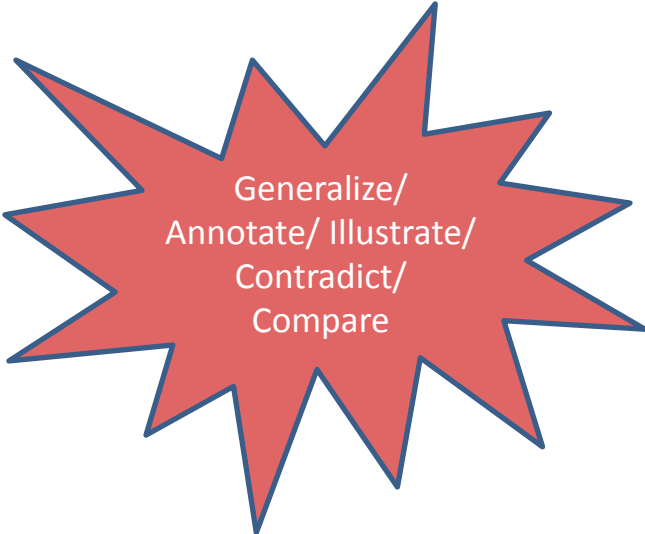


Reflection

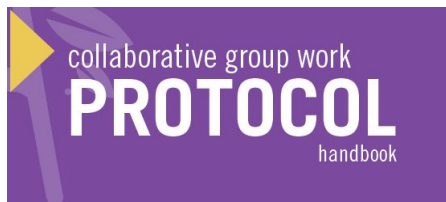
ACE Activity

Reflection

Knowledge Building



Generalize/
Annotate/ Illustrate/
Contradict/
Compare



1) Wicked content

- Multiple defensible answers
- Perspective matters
- Ill-defined
- No rules

2) Original structured articulation

- Protocols
- "Non-Google-text" answers

3) Rethink time or $1 < 3$

- React - Respond to others - Reflect

4) Discussion as source

Experience/ Context

Video/ research/
reading/ surfing

ACE Activity

- "Flipped classrooms"
- Video sets the context for ACE
- ACE is key

Experience/ Context

Video/ research/
reading/ surfing

ACE Activity



Find three
poems...
Rewrite them...



Quest

Class activities-- Preview-ACE-Preview/ ACE, traditional & upside-down classroom instruction

Quest activities-- Independent studies

- Operationally independent threads
- "Connection depends on the connection"

Quest

Class activities-- Preview-ACE-Preview/ ACE, traditional & upside-down classroom instruction

Quest activities-- Independent studies



Design, case studies, ethics, decision-making...

Excel Cases: "Make a spreadsheet to..."

Collaborative multimedia programming

Independent Java using Codecademy

Worked Examples

Class activities-- Preview-ACE-Preview/ ACE, traditional & upside-down classroom instruction

Worked examples-- accessed on an "as needed" basis

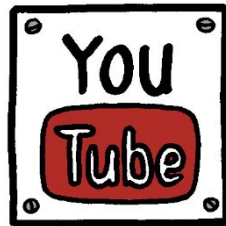
- Modules
- Consistency over sections/ programs
- Find help (commercial or colleagues)

Worked Examples

Class activities-- Preview-ACE-Preview/ ACE, traditional & upside-down classroom instruction

Worked examples-- accessed on an "as needed" basis

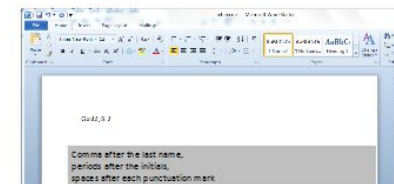
**Collaboratively
curate and
create your
collection**



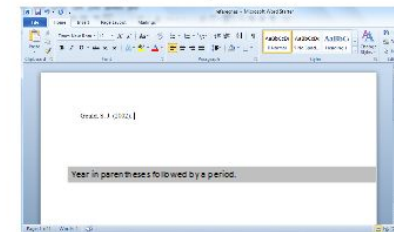
Remember Principles of Multimedia:

User controlled natural voice explaining a graphic and caption is better than text

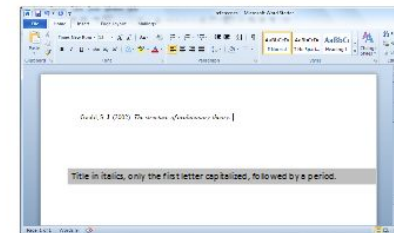
1) Author's last name and initials



2) Year of publication



3) Title



Summary Part I: Six Models

To Proceed "Known to New"

1. Check – ACE –Preview
2. Data Collection
3. Reflection
4. Context/ Experience
5. Quest
6. Worked Examples




Part II: Tips & Habits


Essential Technology - 1 of 3

Well-used *system-wide* virtual classrooms:

- Formative assessments
- "Easy Tests" become Quests
- Management of Worked Examples
- Blogs, Wikis, Discussion Boards for Permanent Reflection
- "Video Everywhere"

Essential Technology - 2 of 3

UploadGary Ackerman





Select files to upload
Or drag and drop video files


Upload HD videos in various formats up to 15 minutes. [Increase your limit.](#)


You must own the copyright or have the necessary rights for any content you upload. [Learn more](#)

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Record

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Create

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Broadcast

Video editor
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- [Mobile Uploads](#)

Tip

- You can upload multiple files at once. [Learn how](#)



Language: English

Country: Worldwide

Safety: Off



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Essential Technology - 3 of 3

The Comment Panel



Record a voice comment with your telephone (free accounts are limited to 3 free phone minutes - 1 hour can be purchased for \$10)

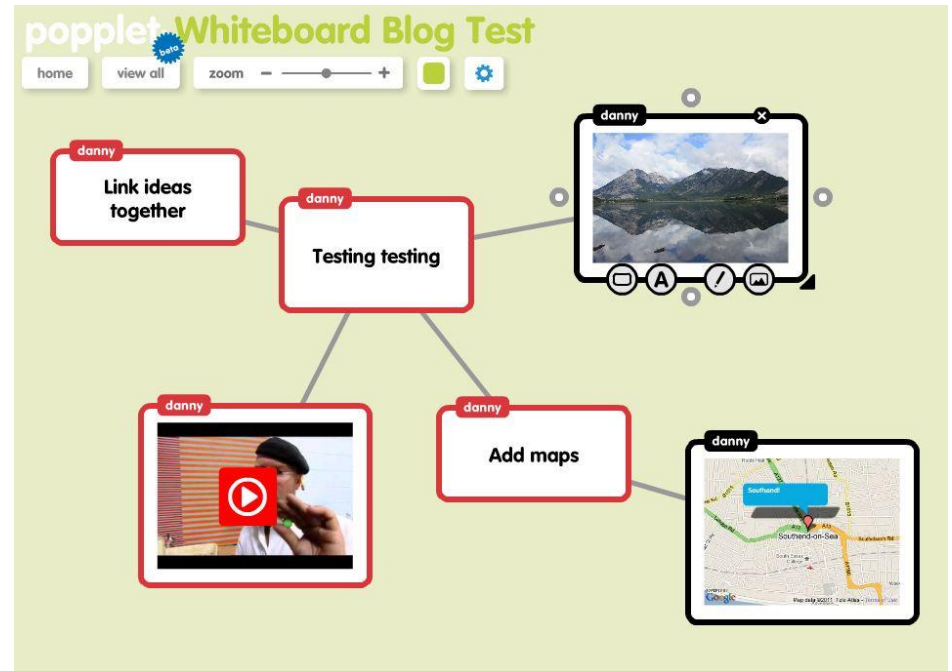
Record a video comment with your web cam

Record a voice comment with a microphone

Type a comment

Upload a pre-recorded .mp3 audio comment (PRO Accounts Only)

Click here to go to the next slide



Google Drive

Keep everything. Share anything.



<https://drive.google.com>

<http://www.popplet.com>

<http://www.voicethread.com>

Essential Teacher Habits

When using video instruction:

- Vocabulary to reflect others
- Avoid "fixing the mistakes"

Reflect on Practice:

- Improve ACE
- Embrace active learning
- Refine prompts

Telling isn't Teaching

Essential Collegiality

Find and vet resources

Common tagging

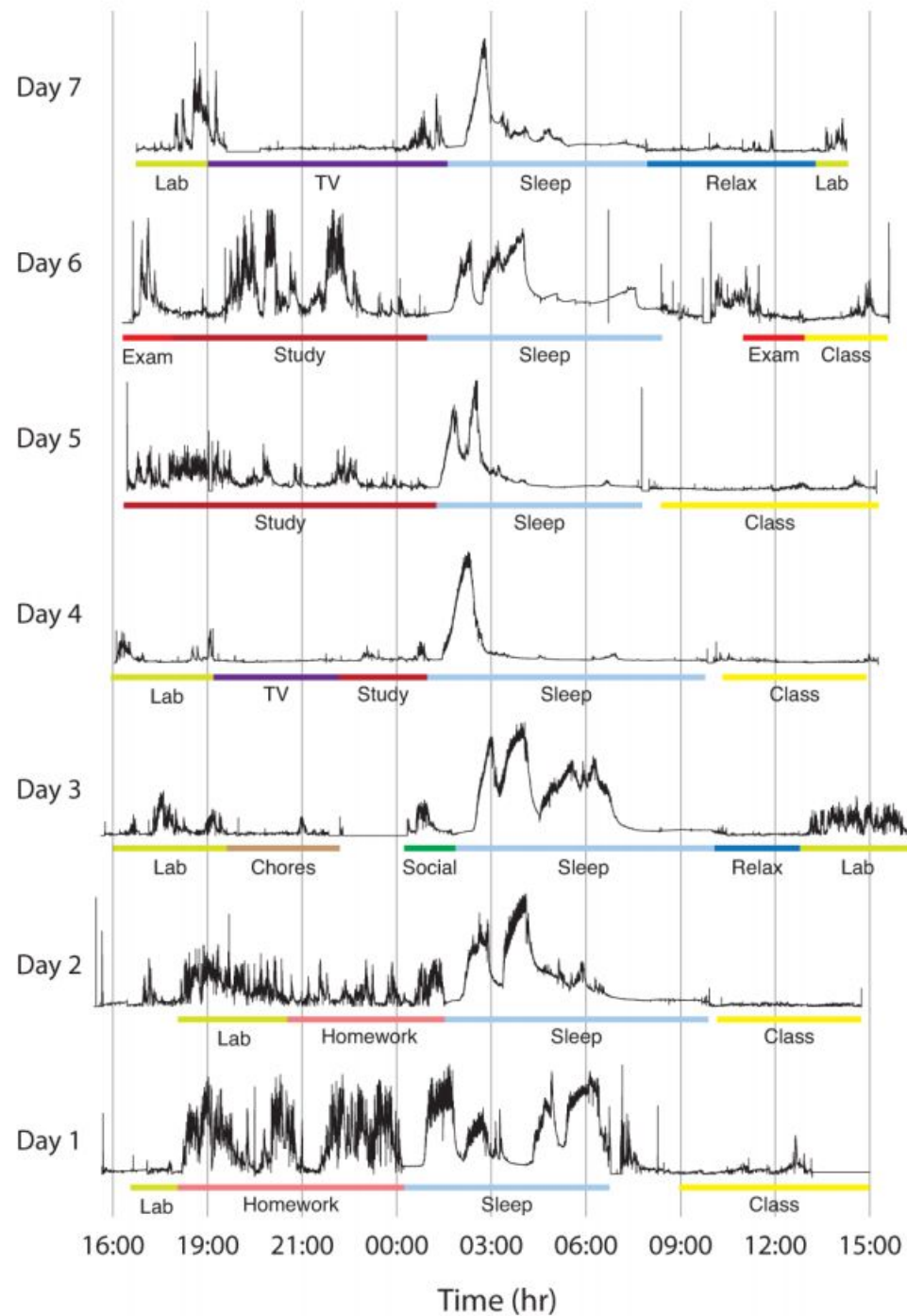


Learn [EverNote](#) or [SpringPad](#) (or similar tools)

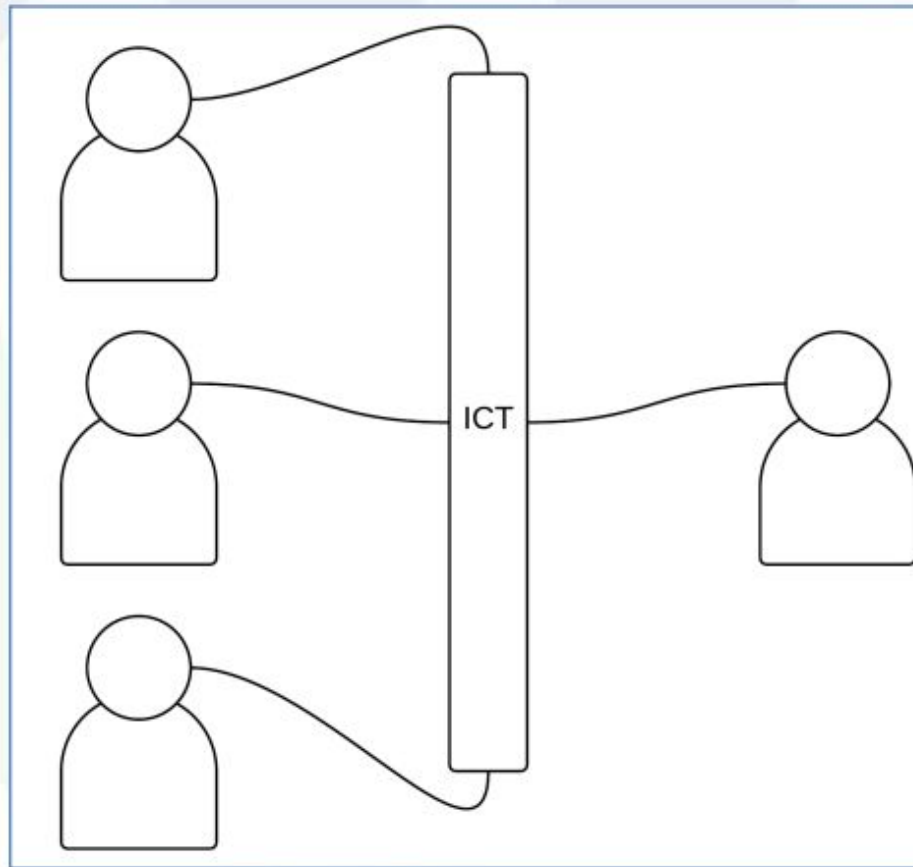
ACE activities

Discussion prompts





The Challenge



- Text-based
- Information-friendly
- Permanent
- Non-intuitive

Resources

ACE-ing Curriculum:

- [Authentic Learning for the 21st Century](#) (from Educause)
- Scardamalia, M., & Bereiter, C. (2006). [Knowledge building: Theory, pedagogy, and technology](#). In K. Sawyer (ed.), *Cambridge Handbook of the Learning Science* (pp. 97-118). New York: Cambridge University Press.
- The Nature of Learning: Using Research to Inspire Practice