RETHINKING HOW YOU PRESENT INFORMATION

UPPER MERION AREA HS
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Teaching
AS TEACHERS, WE ASSUME...

- WE KNOW CONTENT

- WE CAN TRANSFER THAT CONTENT TO OUR STUDENTS BY PRESENTING IT TO THEM
AS TEACHERS, WE ASSUME...

- WE TEACH CONTENT
- WE TRANSFER CONTENT TO OUR STUDENTS BY PRESENTING IT TO THEM

BUT IS THIS AN ACCURATE PICTURE?
We present information, but are they really getting it?

Produced by the Harvard-Smithsonian Center for Astrophysics. 1997.
THE PROBLEM WITH THIS PICTURE

- IT'S NOT A SIMPLE TRANSFER

- HOW CAN WE ENSURE (AS FAR AS POSSIBLE) THAT THEY RECEIVE THE CONTENT?
To create illusions is to engage in disinformation design, to corrupt optical information, to deceive the audience.

Thus the strategies of magic suggest what not to do if our goal is truth-telling rather than illusion-making.

Magic

David Copperfield Illusion DVD 2000

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MAGIC - THE OPPOSITE OF TEACHING

- DON'T TELL THEM WHAT YOU'RE DOING OR WHY
- ERASE ALL CONTEXT
- THINGS COME OUT OF NOWHERE
- DON'T REPEAT
- DON'T ALLOW TIME FOR REFLECTION
- DON'T ADJUST BASED ON AUDIENCE FEEDBACK
Several of the classic texts of magic advocate two primary principles for successful illusion-making, suppressing context and preventing reflective analysis.

[...]

These techniques of disinformation design, when reversed, reinforce strategies of presentation used by good teachers.

MAGIC - THE OPPOSITE OF TEACHING

- TELL THEM WHAT YOU'RE DOING AND WHY
- GIVE CONTEXT
- TELL A STORY (SEGUE)
- REPEAT YOURSELF
- ALLOW TIME FOR REFLECTION
- COLLECT & USE AUDIENCE FEEDBACK
Think about what goes into a good health care experience...
TELL THEM WHAT YOU'RE DOING AND WHY

- SHARE YOUR TEACHING STRATEGIES

- TELL THEM WHY YOU DO IT THE WAY YOU DO

- TELL THEM ABOUT PAST EXPERIENCES WITH STUDENTS

- IF YOU'VE CHANGED THE WAY YOU DO THINGS, TELL THEM
Give context

Delaware Ave, Philadelphia, PA in 1905
Source: Phillyhistory.org
GIVE CONTEXT

- THE POWER OF THE DATA PROJECTOR IS IN VISUALS & BIG, BOLD IDEAS

- THEY'VE ONLY WALKED THE PLANET 14-18 YRS; THEY HAVE NO CONTEXT FOR MUCH OF WHAT WE TALK ABOUT

- GIVE THEIR IMAGINATION SOMETHING TO CHEW ON

- MULTIMEDIA PRESENTATION VS INTERACTIVE LEARNING
Why Airfoils Work

The truth is that the 3rd Law of Motion and the Bernoulli Effect are both relevant.

It is true that air is forced down (downwash), but this is mostly due to a speeding up of the air on top of the wing, which is a Bernoulli Effect phenomenon.

The effect is so pronounced, that air passing over the wing actually passes around the wing in a shorter time than air passing under the wing.

Source: me
Science Misconceptions Power Point, 2005

ABOUT PRESENTATION SLIDES...

- THE PROBLEM OF BULLETS

- "I WON'T INSULT YOU BY READING THE SLIDE..."

- IS WHAT'S ON THE SLIDE FOR YOU OR FOR YOUR AUDIENCE?
Stories grab people

Ira Glass on Storytelling #1

http://www.youtube.com/watch?v=n7KQ4vkiNUk
TELL A STORY; USE SEGUES

- THE HUMAN MIND IS ADAPTED TO STORIES

- USE ANECDOTES

- PERSONAL STORIES WORK WELL

- THINK ABOUT THE BIG (YEAR-LONG) STORY OF WHAT YOU TEACH

- SEGUE, NOT "ONE DAMN THING AFTER ANOTHER"
Why you should repeat yourself

Ever had a student ask a question that you just answered, not five seconds ago?

Of course, we all admit that no one (not even teachers) could possibly pay attention 100% of a 48 minute period. But that automatically means that at any given time, there is a chance that someone is not paying attention.

Go ahead --- try what you think are reasonable numbers and see what happens.

The moral of the story is that if teachers are going to lecture, they should expect to repeat themselves!

USE WHOLE NUMBERS, PLEASE

On average, each student pays attention 75% of the time  
(with ○ no decay, ○ slow decay, or ○ rapid decay.)

Size of class:    25

http://www.mrmont.com/teachers/attentionindex.html
I was an ingenious and resourceful teacher, clever about thinking up lesson plans and demonstrations and motivating devices[...] And I only very slowly and painfully - believe me, painfully - learned that when I started teaching less, the children started learning more.

- John Holt *Learning All the Time*

Taking time to reflect and engage material would only slow students down and adversely affect grades.

- Denise Pope *Doing School*
  (Yale University Press, 2003)
Content Indigestion

Food - 2002-05-05
Photo courtesy PDPhoto.org
TAKE TIME TO REFLECT

- SMALL SCALE: STUDENTS TAKE NOTES

- TAKING NOTES IS HELPFUL (DON'T HAND OUT COMPLETE NOTES)


- LARGE SCALE: INCORPORATE, NOT REVIEW ACTIVITIES, BUT DIGESTING ACTIVITIES

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Regulating instruction based on student feedback

Dylan Wiliam
PDE School Talk: Smart Investment
linked at: http://www.portal.state.pa.us/portal/server.pt?open=512&objID=4228&&PageID=440536&mode=2
COLLECT & USE STUDENT FEEDBACK

- CREATE STUDENT ENGAGEMENT
- ELECTRONIC CLICKERS, CARDS, WHITEBOARDS, QUIA
- DIAGNOSTIC QUESTIONS
- USE THEIR ANSWERS TO DECIDE WHICH TO DO:
  (1) GO ON
  (2) RE-TEACH
  (3) TEACHABLE MOMENT