Assembling the Puzzle:
Five Tech Pieces for Education – Day 2

Ruben R. Puente, Ph.D.
**Substitution**
Tech acts as a direct tool substitute, with no functional change

**Augmentation**
Tech acts as a direct tool substitute, with functional improvement

**Modification**
Tech allows for significant task redesign

**Redefinition**
Tech allows for the creation of new tasks, previously inconceivable

**Enhancement**
Transformation
<table>
<thead>
<tr>
<th>Social</th>
<th>Mobility</th>
<th>Visualization</th>
<th>Storytelling</th>
<th>Gaming</th>
</tr>
</thead>
<tbody>
<tr>
<td>200,000 years</td>
<td>70,000 years</td>
<td>40,000 years</td>
<td>17,000 years</td>
<td>8,000 years</td>
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</tbody>
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Session 3: Mobility and Digital Storytelling
Intimacy
The SAMR Ladder: Questions and Transitions

• **Substitution:**
  • What will I gain by replacing the older technology with the new technology?

• **Substitution to Augmentation:**
  • Have I added a feature to the task process that could not be done with the older technology at a fundamental level?
  • How does this feature contribute to my design?

• **Augmentation to Modification:**
  • How is the original task being modified?
  • Does this modification depend upon the new technology?
  • How does this modification contribute to my design?

• **Modification to Redefinition:**
  • What is the new task?
  • Will it replace or supplement older tasks?
  • How is it uniquely made possible by the new technology?
  • How does it contribute to my design?
Digital Storytelling
Narrative sources; Narrative constraints

Pictorial vocabulary; Narrative transitions; Text/image integration

CDS Seven Elements; Montage structures

Narrative structures; Narrative flows

Ludic elements

Image Assembly → Sequential Art → Moving Image → Interactive Media → Interactive Fiction

Infinite Canvas

Narrative flows

CDS Seven Elements

Montage structures

Narrative transitions; Text/image integration

Pictorial vocabulary

Narrative constraints

Narrative sources;
The Game

There are no panels in the sequence yet.

Click on a panel to add it to the sequence:

Draw new panels
Reset the sequence
Mail this sequence to a friend
Five-Card Nancy message board
Are you ready to play Five Card flickr?

As of Jun 12 2012, 04:44:48 am EDT there have been 6448 Five Card Flickr Stories created from the pool of 3967 flickr photos tagged with "flicrflickr".

Pick an image to add it to your story.

flickr photo credits: (1) bionicteaching | (2) Serenae | (3) Serenae | (4) Serenae | (5) Serenae |
Meaning and the Camera Frame
The Power of the Center(s)

http://hippasus.com/resources/viscomp/index.html
The Rule of Thirds
Lines of Direction
Leading the Action
Common Shots

• Big Close-Up

• Close-Up

• Medium Shot

• Long Shot
Scott McCloud: Two Frameworks
This is the realm of the art object, the picture plane, where shapes, lines and colors can be themselves and not pretend otherwise.

Below me, the area described by these 3 vertices—“reality,” language and the picture plane—represents the total pictorial vocabulary of comics or of any of the visual arts.
THE UNITED STATES CONSTITUTION was adopted by the Second Continental Congress in 1789 and ratified in 1788.

Why was it so important?

PUT UP MY HER KEYS AND SMILE.

AND THE CAPTAIN’S MIGHTY SHOW MISSILES TO INTENDED TARGET. BRICK WALL! CRACK!

GRIM-FACED, DARINGLY COOLED HIS LOLLYPOP.

NO?

I FEEL SO BAD!

STILL ANOTHER OFFICIAL IS THE MONTAGE WHERE EVERYONE IS TREATED IRREGULARLY.

HAPPY!

HAPPY!

GENERAL SPEAKING, THE MORE IS SAID WITH WORDS, THE MORE THE PICTURES ARE PREPARED AND EXPLORING AND JUICE VERA.

INTERDEPENDENT COMBINATIONS AREN’T ALWAYS AN EQUAL BALANCE.

TELL BILL YET?

REALLY? THAT’S GREAT!

WE MADE IT BACK. ALL NEGATIVE.

P

PEPPER

MILK

LIGHT BULBS

INTERDEPENDENT COMBINATIONS AREN’T ALWAYS AN EQUAL BALANCE. THOUGH AND DON’T FALL ANYWHERE ON A SCALE BETWEEN TYPES ONE AND THIS.

LIKE MY NEW BEARD BABE.

IS THIS THE SAME MYSTERIOUS BABE?

AND JUST GUESS WHO DROVE UP IN BOB’S TRUCK AN HOUR LATER?

AND JUST GUESS WHO DROVE UP IN BOB’S TRUCK AN HOUR LATER?

IASK YOU, DOES THIS THING LOOK LIKE A CLOG TO YOU?!!

AND JUST GUESS WHO DROVE UP IN BOB’S TRUCK AN HOUR LATER?

P

PW

PW

P

MEANWHILE.

DO ANYONE SEE YOU?

THIS IS ALL I NEED TO STOP HIM.

AND JUST GUESS WHO DROVE UP IN BOB’S TRUCK AN HOUR LATER?

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Resources

Digital Storytelling

The Lively Sketchbook

The Curiosity Amplifier

Intro Toolkit

Sequential Art
Photo Credits

• iPad in Subway: Takashi M

• YouTube + iPad + Hanalei = Happiness: Wayan Vota

• Parcours-jeu multimedia : Les métiers du musée: Jean-Pierre Dalbéra
Session 4: Educational Gaming
Formal Definition of Play (Salen & Zimmerman)

“Play is free movement within a more rigid structure.”
Vygotsky on Learning

• Zone of Proximal Development (ZPD):
  • Gap between:
    • what a learner can accomplish independently (the Zone of Current Development, ZCD)
    • what they can accomplish with assistance from a “more knowledgeable other” (MKO)
  • “…what a child can do with assistance today she will be able to do by herself tomorrow.”

• This is an iterative process:
  • The ZCD and ZPD change over time;
  • Independent practice is required to close the loop.
Vygotsky on Play and Learning

“...play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself.”
Formal Definition of **Game** (Salen & Zimmerman)

“A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.”
Learning from Games (Gee)
Active Learning

Gamers Learn From:

1. Doing and reflecting critically
Symbolic Systems

2. Appreciating good design and its principles
3. Seeing interrelations within and across symbolic systems
4. Mastering game symbolic systems
5. Relating the game world to other worlds
6. Taking risks in a space with reduced consequences
7. Committing to participating in a compelling virtual world
8. Assuming multiple identities in and across worlds
Development of Capabilities

9. Observing the evolution of their own capabilities
10. Getting more out than they put in
11. Being rewarded for achievement at every level of expertise
12. Extensive practice in a rewarding context
13. Learning new skills at each level of expertise
14. Operating at the outer edge of their capabilities at each level of expertise
Experiential Learning

15. Interacting experimentally with the game world
16. Finding multiple approaches to a solution
17. Discovering meaning from experience
18. Understanding texts experientially and contextually
19. Understanding the interconnections among texts that define them as a family
20. Constructing meaning from the intersection of multiple media
21. Understanding how information and knowledge are stored in the game environment
22. Leveraging intuitive and tacit knowledge
Developing Skills

23. Practicing in simplified game subdomains
24. Tackling later problems via generalizations of earlier ones
25. Seeing early on concentrated samples of generalizable skill sets
26. Acquiring basic skills that apply to a range of games
27. Receiving information on-demand and just-in-time
28. Experimenting with only a minimum of explicit instruction
29. Transferring, modifying, and adapting earlier learning to later problems
Cultural Models

30. Reflecting safely about their cultural models and assumptions about the world

31. Reflecting safely about their cultural models and assumptions about their learning processes

32. Reflecting safely about their cultural models and assumptions about the workings of a symbolic domain

33. Searching for knowledge in all aspects of the game, in themselves, and in their interaction with the game
Community

34. Sharing their knowledge with other players
35. Forming a distinct community via shared interests in the gaming world
36. Teaching others and modifying the game experience
Resources

Some Definitions

Podcasts and Blog

Learning from Games
• Prensky, M. “Escape from Planet Jar-Gon Or, What Video Games Have to Teach Academics About Teaching and Writing.” *On The Horizon*, Volume 11, No. 3 (2003)
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Twitter: @rubenrp

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