From the Present Into the Future: Four (+1) Paths

Ruben R. Puenteudura, 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
Social Computing
Conversations Surrounding Production/Consumption Media Sharing Sites

Creation in the Conversation Blogs and Wikis

Conversations Based on Shared Creation Shared Documents Sites
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Creation in the Conversation Blogs and Wikis

Conversations Based on Shared Creation Shared Documents Sites
I was privy to part of the series. The idea, if I read thirty minutes mostly just great verses (Symposium fame) started the (it was a great accomplishment. My colleague Coleridge, a great lover) Eric Lorenzen has kept the tradition going with panache, and with deep devotion.

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Creation in the Conversation
Blogs and Wikis
Conversations About Conversations
Social Network Sites

Conversation as Continuous Partial Attention
 Distributed IM

Conversations Mapping the Terrain
Shared Bookmark Sites
Conversations Surrounding Production/Consumption Media Sharing Sites

Creation in the Conversation Blogs and Wikis

Conversations Based on Shared Creation Shared Documents Sites

Conversations Mapping the Terrain Shared Bookmark Sites

Conversation as Continuous Partial Attention Distributed IM

Conversations About Conversations Social Network Sites
Digital Storytelling
The Game

The sequence so far:

Click on a panel to add it to the sequence:
We stumbled back to the apartment shortly before dawn. Sometimes every 20 yards...

Judy gave me her keys and smiled.

My head feels like a smashed pumpkin.

Is this the same summer of my youth?

How do I feel like my new threads, babe?

Perhaps, the most common type of word-picture combination is interdependent. Where words and pictures go hand in hand to convey an idea that neither could convey alone.

Meanwhile...

Did anyone see you?

This is all I need to stop him.

"And just guess who drove up in Bob's truck an hour later!"

"I ask you, does this guy look like a cop to you?"

"Any more?"

On my God!

"After college, I pursued a career in high finance."

He's lying,

Not very well.

INTERDEPENDENT COMBINATIONS AREN'T ALWAYS AN EQUAL BALANCE. I thought, and may fall, anywhere between Types One and Two.

Generally speaking, the artist is said with pride, that more pictures can be paired to go exploring and vice versa.

PP PP
Educational Gaming
Formal Definition of Play (Salen & Zimmerman)

“Play is free movement within a more rigid structure.”
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.”
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
Worlds and Identities

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
Effectiveness of Games in Education (Mayo 2009)

<table>
<thead>
<tr>
<th>Game</th>
<th>Topic</th>
<th>Audience</th>
<th>N (study size)</th>
<th>Learning outcome over lecture</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimenxian/Evolver</td>
<td>Algebra</td>
<td>High school</td>
<td>193</td>
<td>7.2%</td>
<td>(37–39)</td>
</tr>
<tr>
<td>Geography Explorer</td>
<td>Geography</td>
<td>College</td>
<td>273</td>
<td>15 to 40%</td>
<td>(40)</td>
</tr>
<tr>
<td>NIU Torcs</td>
<td>Numerical methods</td>
<td>College</td>
<td>86</td>
<td>2× more time spent on homework, much more detailed concept maps</td>
<td>(10–11)</td>
</tr>
<tr>
<td>River City</td>
<td>Ecology/biology</td>
<td>Middle/high school</td>
<td>≈2000</td>
<td>15 to 18%, on average</td>
<td>(13)</td>
</tr>
<tr>
<td>Supercharged!</td>
<td>Electrostatics</td>
<td>Middle school</td>
<td>90</td>
<td>+8%</td>
<td>(41)</td>
</tr>
<tr>
<td>Virtual Cell</td>
<td>Cell biology</td>
<td>College</td>
<td>238</td>
<td>40%, on average</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Table 1. Learning outcomes of several games compared to lecture on same material.
Visualization and Simulation
CHART

Shewing at one View

The Price of the Quarter of Wheat,

& Wages of Labour by the Week,

from

The Year 1565 to 1821.

By

WILLIAM PLAYFAIR.
Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Ouvrage par M. Minard, Inspecteur Général des Ponts et Chaussées.

Paris, le 20 Novembre 1869.

Les nombres d'hommes présent sont représentés par la longueur de segments colorés à raison d'une millimètre pour dix mille hommes ; ils sont de plus étroits en hautes des gorges. Le rouge indique les hommes qui s'étaient en Russie, le noir ceux qui en sortaient. Les renseignements qui ont servi à tracé la carte ont été pris dans les ouvrages de M. M. Christie, de ligor, de Terroux, de Chambry et le journal insulaire de Toulon ; plus exactement depuis le 28 Octobre.

Fait mieux faire juger à l'œil la diminution de l'armée, j'ai supporté que les corps de Prise, d'Assi, au Maréchal Davoust, qui avaient été détachés sur Minsk et Moldavie, avec le prince Osterhout et Wielbek, avaient toujours marche avec l'armée.

TABLEAU CRHAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.
The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.
The blue wedges measured from the centre of the circle represent area for the deaths from Preventible or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes.
The black line across the red triangle in Nov. 1854 marks the boundary of the deaths from all other causes during the month.
In October 1854, & April 1855, the black area coincides with the red; in January & February 1855, the blue coincides with the black.
The entire areas may be compared by following the blue, the red & the black lines enclosing them.
Postscript: The Lively Sketchbook
My name is
Ernest Miller Hemingway

Born on a July 21, 1899.
My favorite authors are Edgar Allan Poe and W. H. Auden.
My favorite flowers are lilies, daisies, and tulips.
My favorite spots are Okoboji and Saranac Lake.

Les Deux Magots

A Moveable Feast
Sketches of the Author's Life in Paris in the Twenties
Ernest Hemingway
My RSS Feed

WEDNESDAY, JUNE 9, 2010

Media Fluency?: NITLE Summit
In late March of this year I was privileged to speak...

Assessment in a Web 2.0 Environment
I agree in principle that we who work in education...

Gratitude and clarifications
First, my thanks to everyone who responded to my...

Changing lives
I keep running into the same wall from different directions...

Another bootstrapping experience
Today’s the second day we’ll meet. Already the activity...

A happy birthday
Today the father of interactive computing, the thin...

"In Our Time" podcast series on the Internet
There’s a new set of four episodes from BBC Radio...

Acadia

Acadia
Maine, USA

The scenery in Acadia is amazing this time of year!
• Ubiquity
• Intimacy
• Embeddedness
Resources

Preface:

Social Computing:
• Note: all Social Computing websites are linked directly from the screenshot on their respective slides.

Digital Storytelling:
• Pilar Utrilla et al., “A palaeolithic map from 13,660 calBP: engraved stone blocks from the Late Magdalenian in Abauntz Cave (Navarra, Spain)”. Journal of Human Evolution 57.2: 99-111. (2009)
• Five-Card Nancy: http://www.7415comics.com/nancy/

Educational Gaming:
• Young Chimps Play, by Jonny White: http://www.flickr.com/photos/jonnyw/282283374/
• Mayo, M.J. “Video Games: A Route to Large-Scale STEM Education?” Science, Vol. 323, No. 5910 (2 January 2009)

Visualization and Simulation:
• Gapminder Desktop. Online at: http://www.gapminder.org/
• In the Air. Online at: http://www.intheair.es/

Postscript: The Lively Sketchbook:
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