The iPad in Practice: Designing Flows and Ladders for the Classroom

Ruben R. PuenteDura, Ph.D.
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Ruben R. Puentedura, *As We May Teach: Educational Technology, From Theory Into Practice*. (2009)
### Bloom's Taxonomy: Cognitive Processes

<table>
<thead>
<tr>
<th>Anderson &amp; Krathwohl (2001)</th>
<th>Characteristic Processes</th>
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</table>
| **Remember**                | • Recalling memorized knowledge  
                            |  • Recognizing correspondences between memorized knowledge and new material |
| **Understand**              | • Paraphrasing materials  
                            |  • Exemplifying concepts, principles  
                            |  • Classifying items  
                            |  • Summarizing materials  
                            |  • Extrapolating principles  
                            |  • Comparing items |
| **Apply**                   | • Applying a procedure to a familiar task  
                            |  • Using a procedure to solve an unfamiliar, but typed task |
| **Analyze**                 | • Distinguishing relevant/irrelevant or important/unimportant portions of material  
                            |  • Integrating heterogeneous elements into a structure  
                            |  • Attributing intent in materials |
| **Evaluate**                | • Testing for consistency, appropriateness, and effectiveness in principles and procedures  
                            |  • Critiquing the consistency, appropriateness, and effectiveness of principles and procedures, basing the critique upon appropriate tests |
| **Create**                  | • Generating multiple hypotheses based on given criteria  
                            |  • Designing a procedure to accomplish an untyped task  
                            |  • Inventing a product to accomplish an untyped task |

The EdTech Quintet
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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

SOCIAL

PLACE

MOMENT

Infinite Canvas
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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.”

Example #1: Science
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Example #2: ELA
Brief Lecture or Group Discussion (~10 minutes)

ConcepTest (~1-2 minutes)

- Fewer than 30% of students answer correctly
  - The instructor revisits and explains the concept

- Between 30-75% of students answer correctly
  - Peer Discussion: students try to convince each other (~2-3 minutes)
    - ConcepTest (~1-2 minutes)

- More than 75% of students answer correctly
  - The instructor explains remaining misconceptions

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Example #3: History
Does the question represent an important issue to historical and contemporary times?

Is the question debatable?

Does the question represent a reasonable amount of content?

Will the question hold the interest of students?

Is the question appropriate given the materials available?

Is the question challenging for the students you are teaching?

What organizing historical concepts will be emphasized?


Bruce Lesh, "Why Won’t You Just Tell Us the Answer?" Teaching Historical Thinking in Grades 7-12. Stenhouse Publishers. (2011)
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The development of Matthew Boulton and James Watt’s firm to manufacture steam engines accelerated the adoption rate of the technology.

(Image Source: http://www.geograph.org.uk/photo/2275221 - Photo by Chris Allen)
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