Thinking About SAMR: Two-Pass Ladders

Ruben R. Puente, Ph.D.
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Modification
Tech allows for significant task redesign

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

Substitution
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Ruben R. Puentedura, As We May Teach: Educational Technology, From Theory Into Practice. (2009)
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Extended Thinking

Strategic Thinking

Skills and Concepts

Recall and Reproduction

Webb, Norman L. Depth-of-knowledge levels for four content areas. (2002)
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Skills and Concepts
Examine the leaves - are they crisp and fresh, or do they show wilting?
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<thead>
<tr>
<th>Social</th>
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<th>Gaming</th>
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</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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Learning Environments

Contextual Search/Augmented Reality
Sensors/Recorders
Mobile Tools
Cloud Resources

The Curiosity Amplifier
The Lively Sketchbook

Narrative sources; Narrative constraints

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

Narrative structures; Narrative flows

Ludic elements

Infinite Canvas

TIME

PLACE

SOCIAL

CONNECTION
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.”

<table>
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<th>The EdTech Quintet – Associated Practices</th>
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Building a SAMR Ladder

• Four steps:
  • Select a unit of instruction
  • Redesign the intro to the unit (basic knowledge, materials) at the S level
  • Redesign the development of the unit at the A, M levels
  • Redesign/create a student culminating experience for the unit at the R level
Why Build a Ladder?

• Only one of many possible approaches to redesigning a unit of instruction using SAMR

• Particularly well-suited to “first efforts” in technology-based curricular redesign

• Some advantages in this context:
  • Proximity to existing practice
  • Sustainability of effort
  • Option for gradual implementation
Three Questions (and Followups)

• Which unit of instruction would you like to redesign?
  • Why?

• What did you do before in this unit that worked?
  • Why did you do it?

• What would you like to change or replace?
  • Why?
The Two-Pass Ladder – Pass 1

- Redesign at the S/A levels, using one of Technology, Pedagogy, or Content as your driver:
  
  - S: Go for low-hanging fruit, e.g.
    - access to resources
    - coordination of social environments
    - basic approaches to information management
  
  - A: Go for enhancing what you chose in S, e.g.
    - curation of resources
    - organization of peer discussion/instruction experiences
    - information analysis and visualization
The Two-Pass Ladder – Pass 2

• Now, redesign at the M/R levels for a different driver (from Technology, Pedagogy, or Content), but in light of the first pass driver:
  
  • M: Go for defining extended experiences in student exploration/creation that leverage the choices made for A
  
  • R: Go for student agency, allowing them to build their own exploration/creation using the experiences developed at M
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Choosing the First SAMR Ladder Project: Three Options

· Your Passion:
  · If you had to pick one topic from your class that best exemplifies why you became fascinated with the subject you teach, what would it be?

· Barriers to Your Students’ Progress:
  · Is there a topic in your class that a significant number of students get stuck on, and fail to progress beyond?

· What Students Will Do In the Future:
  · Which topic from your class would, if deeply understood, best serve the interests of your students in future studies or in their lives outside school?
Determining SAMR Level: Questions and Transitions

- **Substitution:**
  - What is gained by replacing the older technology with the new technology?

- **Substitution to Augmentation:**
  - Has an improvement been added to the task process that could not be accomplished with the older technology at a fundamental level?
  - How does this feature contribute to the design?

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

- **Modification to Redefinition:**
  - What is the new task?
  - Is any portion of the original task retained?
  - How is the new task uniquely made possible by the new technology?
  - How does it contribute to the design?