SAMR: A Brief Introduction

Ruben R. Puentedura, Ph.D.
Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

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

Substitution
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Enhancement

Transformation
Marzano:
Six Steps to Effective Vocabulary Instruction

Step 1: The Teacher Provides a Description, Explanation, or Example of the New Term
Step 2: Students Restate the Explanation of the New Term in Their Own Words
Step 3: Students Create a Nonlinguistic Representation of the Term
Step 4: Students Periodically Do Activities That Help Them Add to Their Knowledge of Vocabulary Terms
Step 5: Periodically Students Are Asked to Discuss the Terms with One Another
Step 6: Periodically Students Are Involved in Games That Allow Them to Play with the Terms

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Gersmehl: 
Teaching Geography – Four Cornerstones

• Location
  • Position in space

• Condition
  • Mix of natural & artificial features that give meaning to a location

• Links
  • Connections between places

• Region
  • Formal region: group of places with similar conditions
  • Functional region: group of places linked together by a flow
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Kiva - Loans that change lives

Choose a Borrower

Featured Categories

Start-ups
Give a boost to entrepreneurs starting brand new businesses.

Rural Communities
Reach borrowers in very remote regions of the world.

Youth
Give young entrepreneurs the tools they need to realize their dreams.

2,024 loans available
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<table>
<thead>
<tr>
<th>Study</th>
<th>SAMR Classification</th>
<th>Description</th>
<th>Effect Size</th>
</tr>
</thead>
</table>
| **Algebra I**  
*Effectiveness of Cognitive Tutor Algebra I at Scale*, by John F. Pane, Beth Ann Griffin, Daniel F. McCaffrey, Rita Karam | S to A | S: Computerized algebra drills, some tied to real-world scenarios  
A: Tools for basic visualization; adaptive response to student progress | $\approx 0.2$  
50th perc. $\rightarrow$ 58th perc. |
| **Earth Science**  
*Using Laptops to Facilitate Middle School Science Learning: The Results of Hard Fun*, by Alexis M. Berry, Sarah E. Wintle | A to M | A: Interactive tools for concept exploration and visualization  
M: Narrated animation as final project | $\approx 0.6$  
50th perc. $\rightarrow$ 73rd perc.  
($\approx 1.4$ a month later)  
(50th perc. $\rightarrow$ 92nd perc.) |
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Sources for OS X Apps

All of the SAMR ladder screenshots are linked to websites and sources for the apps used. Since many of these apps are iPad-only, I have listed below equivalents for OS X, linked to their corresponding sources:

**Vocabulary Instruction:**

**Geography:**
- Gapminder: http://www.gapminder.org

**Literature:**
- Wordle: http://www.wordle.net
- Google Forms: https://support.google.com/drive/topic/1360904

**Math:**
- Wolfram Alpha: http://www.wolframalpha.com


Hippasus

Blog: http://hippasus.com/rrpweblog/
Email: rubenrp@hippasus.com
Twitter: @rubenrp

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