SAMR In The Upper Secondary School

Ruben R. PuenteDura, Ph.D.
Goals

Focus

Models

Technology
Augmenting Human Intellect & Learning Capacity

21st Century Learning

One-to-One Technologies
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

Podcasts on iTunes U: http://tinyurl.com/aswemayteach
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Pedagogy

Content

Technology

PK

PCK

CK

TPK

TPCK

TCK

TK

AACTE (Eds.) The Handbook of Technological Pedagogical Content Knowledge for Educators. New York: Routledge, 2008.
<table>
<thead>
<tr>
<th>Social</th>
<th>Mobility</th>
<th>Visualization</th>
<th>Storytelling</th>
<th>Gaming</th>
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<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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SAMR In Practice I:
Chemistry
Understanding Science: How Science Works

EXPLORATION AND DISCOVERY
- Making observations
- Asking questions
- Finding inspiration
- Exploring the literature

Gathering data
- Hypotheses
- Expected results/observations
- Actual results/observations

Interpreting data
- Supportive, contradictory, surprising or inconclusive data may...
  - ...support a hypothesis.
  - ...oppose a hypothesis.
  - ...inspire revised/new hypothesis.
  - ...inspire revised assumptions.

TESTING IDEAS
- Gathers data
- Interprets data

BENEFITS AND OUTCOMES
- Develop technology
- Address societal issues
- Build knowledge
- Satisfy curiosity
- Solve everyday problems

COMMUNITY ANALYSIS AND FEEDBACK
- Feedback and peer review
- Replication
- Discussion with colleagues
- Publication
- Coming up with new questions/ideas
- Theory building

New technology
Practical problem
Curiosity
Personal motivation
Serendipity
Surprising observation
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Information Literacy and Cultural Tourism
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