SAMR, the EdTech Quintet and 21C Learning

Ruben R. Puente, Ph.D.
Augmenting Human Intellect & Learning Capacity

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**
<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeframe</th>
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<tbody>
<tr>
<td>Social Mobility</td>
<td>200,000 years</td>
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<tr>
<td>Mobility</td>
<td>70,000 years</td>
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<tr>
<td>Visualization</td>
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<tr>
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</tr>
<tr>
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[Images of artifacts corresponding to each category]
Learning Environments

Contextual Search
Augmented Reality

Cloud Resources
Mobile Tools

Sensors
Recorders
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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

Infinite Canvas

SOCIAL

PLACE

MOMENT
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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.”
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Resources

- TPCK - Technological Pedagogical Content Knowledge. Online at: http://tpack.org