Paths to Transformation: Putting SAMR and the Horizon Report to Work

Ruben R. Puente, Ph.D.
Massively Open Online Courses

Time-to-Adoption:
One Year or Less

Learning Analytics

Time-to-Adoption:
Two to Three Years

3D Printing

Time-to-Adoption:
Four to Five Years

Tablet Computing

Games and Gamification

Wearable Technology
<table>
<thead>
<tr>
<th>Social</th>
<th>Mobility</th>
<th>Visualization</th>
<th>Storytelling</th>
<th>Gaming</th>
</tr>
</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>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>One Year or Less</strong></td>
<td>Learning Objects</td>
<td>Ubiquitous Wireless</td>
<td>Personal Broadcasting</td>
<td>User-Created Content</td>
</tr>
<tr>
<td><strong>Two to Three Years</strong></td>
<td>Scalable Vector Graphics</td>
<td>Extended Learning</td>
<td>Social Computing</td>
<td>Social Networking</td>
</tr>
<tr>
<td><strong>Four to Five Years</strong></td>
<td>Rapid Prototyping</td>
<td>Intelligent Searching</td>
<td>The Phones in Their Pockets</td>
<td>Mobile Phones</td>
</tr>
<tr>
<td><strong>Multimodal Interfaces</strong></td>
<td>Multimodal Interfaces</td>
<td>Educational Gaming</td>
<td>Educational Gaming</td>
<td>Virtual Worlds</td>
</tr>
<tr>
<td><strong>Knowledge Webs</strong></td>
<td>Knowledge Webs</td>
<td>Social Networks &amp; Knowledge Webs</td>
<td>Augmented Reality and Enhanced Visualization</td>
<td>Massively Multiplayer Educational Gaming</td>
</tr>
<tr>
<td><strong>Context Aware Computing</strong></td>
<td>Context Aware Computing</td>
<td>Context-Aware Computing/ Augmented Reality</td>
<td>Context-Aware Environments and Devices</td>
<td>The New Scholarship &amp; Emerging Forms of Publication</td>
</tr>
</tbody>
</table>
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
**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
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
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
Tech acts as a direct tool substitute, with no functional change
**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**
*Tech acts as a direct tool substitute, with no functional change*
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
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
Tech acts as a direct tool substitute, with no functional change
**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**
Tech acts as a direct tool substitute, with no functional change
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
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)

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

ConcepTest (~1-2 minutes)
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
Tech acts as a direct tool substitute, with no functional change
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
**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
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
Tech acts as a direct tool substitute, with no functional change
**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**
Tech acts as a direct tool substitute, with no functional change
**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**
Tech acts as a direct tool substitute, with no functional change
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
**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**
Tech acts as a direct tool substitute, with no functional change
Resources

• The Horizon Report: all editions online at: http://www.nmc.org/publications
• Horizon Report Wiki: all editions since 2006 online at: http://horizon.wiki.nmc.org/
Hippasus

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

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.