Modernizing Learning

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The ADL Initiative

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Modernizing Learning
Sae Schatz
OPERATIONAL DEMANDS

60-YEAR CURRICULUM

HUMANS + AI
Modernizing Learning

Industrial Age

Information Age

(future)
• Time-based and episodic
• Assembly line–like
• One-size-fits-all
• Input-focused
• Passive
• Focused on transferring facts and psychomotor skills from experts to students
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- Lifelong continuum
- Interconnected
- Personalized
- Outcome-focused
- Active
- Focused on fostering 21st century competencies
Future Learning Ecosystem

- Lifelong continuum
- Interconnected
- Personalized
- Outcome-focused
- Active
- Focused on fostering 21st century competencies

Integrated Technology
Driven by Data
Learning Science Informed
Formal and informal
Individual and Organizational
385 Pages + References

85 Contributors from academia, education, government, military, non-profits, and industry
- 35 Authors
- 52 SME contributors
- 2 Editors + 4 Editorial Board

4 Sections
The future learning ecosystem—a holistic, lifelong, personalized learning paradigm—represents a contrast to the Industrial Age model of time-focused, one-size-fits-all learning.

**SAMR**

- **REDEFINITION**
  Technology enables new tasks, previously inconceivable

- **MODIFICATION**
  Technology enables significant task redesign

- **AUGMENTATION**
  Technology acts as direct aid

- **SUBSTITUTION**
  Technology acts as direct substitute

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**Example of “watching a video” at various levels of engagement:**

<table>
<thead>
<tr>
<th>PASSIVE</th>
<th>ACTIVE</th>
<th>CONSTRUCTIVE</th>
<th>INTERACTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving</td>
<td>Manipulating</td>
<td>Generating</td>
<td>Dialoguing</td>
</tr>
<tr>
<td>Watching the video, without doing anything else</td>
<td>Actively engaging with the playback, such as rewinding and pausing; taking verbatim notes</td>
<td>Explaining concepts from the video; taking paraphrased notes; contrasting the video to other materials</td>
<td>Debating with a peer about the message in the video; actively analyzing the position of the video in a small group discussion</td>
</tr>
</tbody>
</table>

Example application of Chi and colleagues’ ICAP framework

- **PERSONALIZATION**
  Use a conversational style, not a formal one

- **VOICE**
  Narrate in a friendly human (not machine) voice

- **IMAGE**
  The narrator’s image isn’t needed on-screen
The future learning ecosystem—a holistic, lifelong, personalized learning paradigm—represents a contrast to the Industrial Age model of time-focused, one-size-fits-all learning.

Foundations

- Human-Systems Integration
- Marketing/Consumer Behavior
- User Experience Design
- Instructional Design
- Learning Engineering
- Behavioral Economics/Nudge
PERSONALIZATION
ANALYTICS
Technology
23. A car moves with the arrows in the direction of:

(A) ✓

24. Satellite 1 makes a circular orbit around a planet.
Satellite 2, makes a circular orbit around another planet.
We let \( v \) represent the speed of a satellite.
one of the following choices gives the correct relationship
for the speeds of the two satellites.

(A) \( v_2 = \frac{1}{2} v_1 \) ; \( v_2 = \frac{1}{4} v_1 \)
(B) \( v_2 = 2 v_1 \) ; \( v_2 = \frac{1}{2} v_1 \)
(C) \( v_2 = \frac{1}{2} v_1 \) ; \( v_2 = 2 v_1 \)
23. A car moves with the arrows in the direction of

(A) \( v_2 = \frac{1}{2} v_1 \); \( v_2 = \frac{1}{4} \)

We let \( v \) represent the speed of one of the following choices:

24.
Organization
Recommendations

Organization

Strategic Planning
Recommendations

01
BRIDGE EXISTING SILOS

02
FOSTER FULL-SPECTRUM COMPETENCIES

03
REVEAL AND ENABLE INFORMAL LEARNING
01 BRIDGE EXISTING SILOS

02 FOSTER FULL-SPECTRUM COMPETENCIES

03 REVEAL AND ENABLE INFORMAL LEARNING

04 IMPROVE ASSESSMENT

05 UP-SKILL AND EMPOWER LEARNING PROFESSIONALS

06 PLAN FOR INTEGRATION OF "LEARNING" AND "PERSONNEL"

07 FACILITATE A MINDSET SHIFT

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06 PLAN FOR INTEGRATION OF “LEARNING” AND “PERSONNEL”
07 FACILITATE A MINDSET SHIFT
08 ENABLE LEARNING AT SCALE (TECH AND METHODS)
09 DESIGN FOR CONVENIENCE AND EQUITY OF ACCESS
10 ENSURE LAWS, POLICIES, AND GOVERNANCE KEEP PACE
11 REVEAL AND ENABLE INFORMAL LEARNING
DEMAND + CAPACITY  
COMPREHENSIVE APPROACH  
BLUEPRINT

VISION  
TECHNOLOGY  
LEARNING SCIENCE  
ORGANIZATIONAL COMMITMENT