Engagement by Design

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Every student deserves a great teacher, not by chance, but by design.
This is the hinge point – a year’s worth of growth for a year in school.
Retention: $d = -0.13$

Small group learning: $d = 0.49$

Study Skills: $d = 0.59$

Repeated Reading: $d = 0.67$

Collective Teacher Efficacy: $d = 1.57$

Teacher-Student relationships: $d = 0.72$

Teacher

\[
\begin{align*}
  x - 8 &= 17 \\
  8 + x - 8 &= 17 + 8 \\
  x &= 25 \\
\end{align*}
\]

\[
\begin{align*}
  G + \frac{5}{3} &= \frac{52}{3} \\
  G + \frac{1}{3} &= \frac{33}{3} \\
\end{align*}
\]
• Teachers know what students need to learn
• Teachers communicate learning intentions to students

• Teachers and students understand success criteria
The established purpose focuses on student learning, rather than an activity, assignment, or task.
Specific
Measurable
Attainable
Relevant
Timed
WHY?
Three Questions

What am I learning today?

Why am I learning this?

How will I know that I have learned it?
• Teachers know what students need to learn
• Teachers communicate learning intentions to students

• Teachers and students understand success criteria
Sara explained the writing rubric, used reasoning to argue her status, and conveyed a set of experiences about writers at each level.
Exit Slips

1. I'm Just learning (I need more help)
2. I'm Almost there! (I need more practice)
3. I OWN it! (I can work independently)
4. I'm a Pro! (I can teach others)
“Goldilocks” Challenge: $d = 0.74$
Surface \rightarrow \text{Skill and Concept Development}
Deep Surface

Connections, relationships and schema to organize skills and concepts

Skill and Concept Development
Surface

Deep

Transfer

Skill and Concept Development

Connections, relationships and schema to organize skills and concepts

Self-regulation to continue learning skills and content, applying knowledge to novel situations
What Works When Timing is Everything
Surface Learning is IMPORTANT
Ways to Facilitate **Surface** Learning

- Leveraging prior knowledge \( (d=0.65) \)
- Vocabulary techniques (sorts, word cards, etc.) \( (d=0.67) \)
- Reading Comprehension Instruction \( (d'=0.60) \)
- Wide reading on the topic under study \( (d=0.42) \)
- Summarizing \( (d=0.63) \)
Reading Volume Still Matters
STUDENT A

• 20 MINUTES PER DAY
• 1,800,000 WORDS PER YEAR
• SCORES IN THE 90\textsuperscript{TH} PERCENTILE ON STANDARDIZED TESTS
STUDENT B

- 5 MINUTES PER DAY
- 282,000 WORDS PER YEAR
- SCORES IN THE 50TH PERCENTILE ON STANDARDIZED TESTS
STUDENT C

• 1 MINUTE PER DAY
• 8,000 WORDS PER YEAR
• SCORES IN THE 10\textsuperscript{TH} PERCENTILE ON STANDARDIZED TESTS
Deep Learning is Also Important
Ways to Facilitate **Deep Learning**

- Concept mapping ($d=0.60$)
- Class Discussion ($d=0.82$)
- Questioning ($d=0.48$)
- Metacognitive strategies ($d=0.69$)
- Reciprocal teaching ($d=0.74$)
Deep learning approaches don’t work any better at developing surface learning than surface learning strategies work to develop deep understanding.
Without more complex tasks, students will not deepen their learning.
Task complexity should align with the phase of learning.

RIGOR IS FOR EVERYONE!
# Difficulty v. Complexity

<table>
<thead>
<tr>
<th>Difficulty</th>
<th>Complexity</th>
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</thead>
<tbody>
<tr>
<td>• A measure of <strong>effort</strong> required to complete a task.</td>
<td>• A measure of the <strong>thinking, action, or knowledge</strong> that is needed to complete the task.</td>
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<tr>
<td>• In assessment, a function of how many people can complete the task correctly.</td>
<td>• In assessment, how many different ways can the task be accomplished.</td>
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A graph illustrating the relationship between strategic thinking, fluency, stamina, and complexity, with axes labeled 'Easy' and 'Hard' on the horizontal axis and 'More Complex' and 'Less Complex' on the vertical axis.
The right approach, at the right time, for the right type of learning.