FIRES IN THE MIND
What Students Can Tell Us About Motivation and Mastery

presented by Kathleen Cushman
and the students of What Kids Can Do

What does MASTERY look like?

- Playing chess
- Doing scientific research
- Speaking a foreign language
- Cooking
EXERCISE 1
Do people get to be experts because they are born with talent? Or do they get there by practice?

The Big Research Questions
INBORN ABILITY? OPPORTUNITY?
AFFINITY? COACHING?
EFFORT? PRACTICE?
The Practice Project

- Ask youth about their expertise
- Youth ask adults about their expertise
- Think together about expert habits & process
- Transfer to new areas

Getting Started • Keeping at It

- Watching an expert
  - Spark of interest — noticed!
  - Opportunity to explore
- Practice with a coach
  - Small successes
  - Meaningful context
Getting Started • Keeping at It

Value x Expectation = Motivation

What makes us keep at it?

• Steady and satisfying work (often with others)
• The hater or the motivator
• The thrill of competition
• The sheer fun of it
• The moments you know that you know it
Not just any practice ... 
DELIBERATE practice

Deliberate Practice

“I draw what I like”
“I draw what’s hard to me”

“You go step by step”
“You take your time”
EXERCISE 2
How would you describe your own process when you are practicing something?

What is Deliberate Practice?
- Has an express purpose
- Involves attention
- Is geared to the individual
- Involves rehearsal
- Leads to new knowledge & skills . . .
  . . . that lead to even more complex knowledge & skills
Deliberate Practice in the Classroom

Express purpose

Math work that helps solve everyday problems

Deliberate Practice in the Classroom

Express purpose

Involves attention

Putting facts to use in history and geography

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Deliberate Practice in the Classroom

Express purpose
Involves attention
Geared to the individual

Reading and writing that connects to interests and needs

Deliberate Practice in the Classroom

Express purpose
Involves attention
Geared to the individual
Involves repetition or rehearsal

Preparing to perform or present in public
Deliberate Practice in the Classroom

Express purpose
Involves attention
Geared to the individual
Involves repetition or rehearsal
Leads to new knowledge or skills

Always asking what you still don’t know

Deliberate Practice in the Classroom

• Considering different perspectives
• Looking for evidence
• Noticing why information matters
• Connecting knowledge to other knowledge
• Asking “what if . . . ?”
### Is homework deliberate practice?

<table>
<thead>
<tr>
<th>Deliberate practice ...</th>
<th>But with homework ...</th>
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</thead>
<tbody>
<tr>
<td>Has an express purpose</td>
<td>We don’t know the point</td>
</tr>
<tr>
<td>Is geared to the individual</td>
<td>It's the same for everybody</td>
</tr>
<tr>
<td>Involves attention and focus</td>
<td>We can do it without thinking</td>
</tr>
<tr>
<td>Requires repetition or rehearsal</td>
<td>It’s just repeating something</td>
</tr>
<tr>
<td>Requires careful timing</td>
<td>We don’t have enough time to do it</td>
</tr>
<tr>
<td>Leads to new skills</td>
<td>We don’t use it for anything</td>
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</tbody>
</table>

### EXERCISE 3

What are you currently asking your students to practice?

How are you asking them to practice it?
What does it take to get really good?

Looking at student strengths

Asking the experts

Value x Expectation = Motivation

Deliberate practice