"I fear not the person who has practiced 10,000 kicks once, but I fear the person who has practiced one kick 10,000 times." - Bruce Lee

**Overview**  Information literacy skills involve complex cognitive processes that require significant time and effort to master. Drawing on the 'deliberative practice' model of expertise development, librarians can implement evidence-based instructional practices for facilitating information literacy learning.
Students must learn to solve information-based problems and must learn transferable search and evaluation strategies."

"Experts are made, not born. This is not to say that intellectual ability and talent do not exist, but that effort, deliberative practice, and feedback from experts are essential to the development of high-level expertise ...

Overall, 30 years of research suggests that intelligence and talent provide initial advantages, but that high levels of expertise are due primarily to sustained, systematic effort."

Deliberative practice over an extended period of time increases the abilities, talents, and skills that lead to expertise. Increased competence increases engagement.

"It is virtually impossible to become proficient at a mental task without extended practice." - Daniel Willingham

On the deliberative practice model, abilities and talents are improved through effort and feedback - they are cultivated and dynamic, not fixed and pre-defined.

Thus, with the right kind of practice, we can improve our abilities within domains to develop mastery.

What makes practice deliberate?

**Learner Attention & Intention**
Learners improve with intentional and dedicated effort toward skill mastery.

**Keep Instruction Brief and Targeted**
Consider background knowledge so that tasks can be understood after a brief period of instruction.

**Feedback**
Should be immediate so learners have knowledge of the results of their efforts, their strengths, and areas for growth.

**Repeated Exposure**
Learners should repeatedly perform the same or similar tasks to refine and reinforce understanding.

---

<table>
<thead>
<tr>
<th></th>
<th>Growth Mindset</th>
<th></th>
<th>Background Knowledge</th>
<th></th>
<th>Expert Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wanting to improve one's skills requires a belief that talent is not fixed but changeable through deliberative practice. How can I create an environment where learners prioritize the process of learning and skill development over innate talent and ability?</td>
<td>3</td>
<td>Comprehension depends on background knowledge. So how can we discover students' background knowledge of information literacy skills in order to appropriately scaffold our instructional activities to maximize learning?</td>
<td>5</td>
<td>Skill acquisition requires feedback from experts. How can we provide students with meaningful point of need expert feedback on information literacy skills?</td>
</tr>
<tr>
<td>2</td>
<td>Deliberative practice requires the motivation to improve one's skills. So how can we make information literacy really matter to learners so that they see the value of improving these skills?</td>
<td>4</td>
<td>How can I structure my learning environments so that students have the time and opportunity for meaningful, intentional practice of high-order information literacy skills?</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>3</td>
<td>---</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>---</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>---</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>---</td>
<td></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>


