

Architecting System Performance; Course Didactics

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Abstract

The didactics behind a course like Architecting System Performance is a challenge, because the learning goals relate mostly to attitude and ways of thinking. At the same time, the material covers methods, techniques, tools, and concepts, which may lure participants in mechanistic approaches. Core in the didactic approach is reflection. This presentation offers some "thinking models" to assist reflection.

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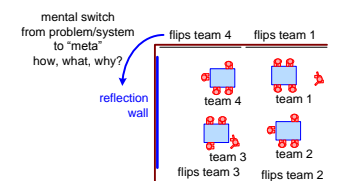
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October 3, 2016

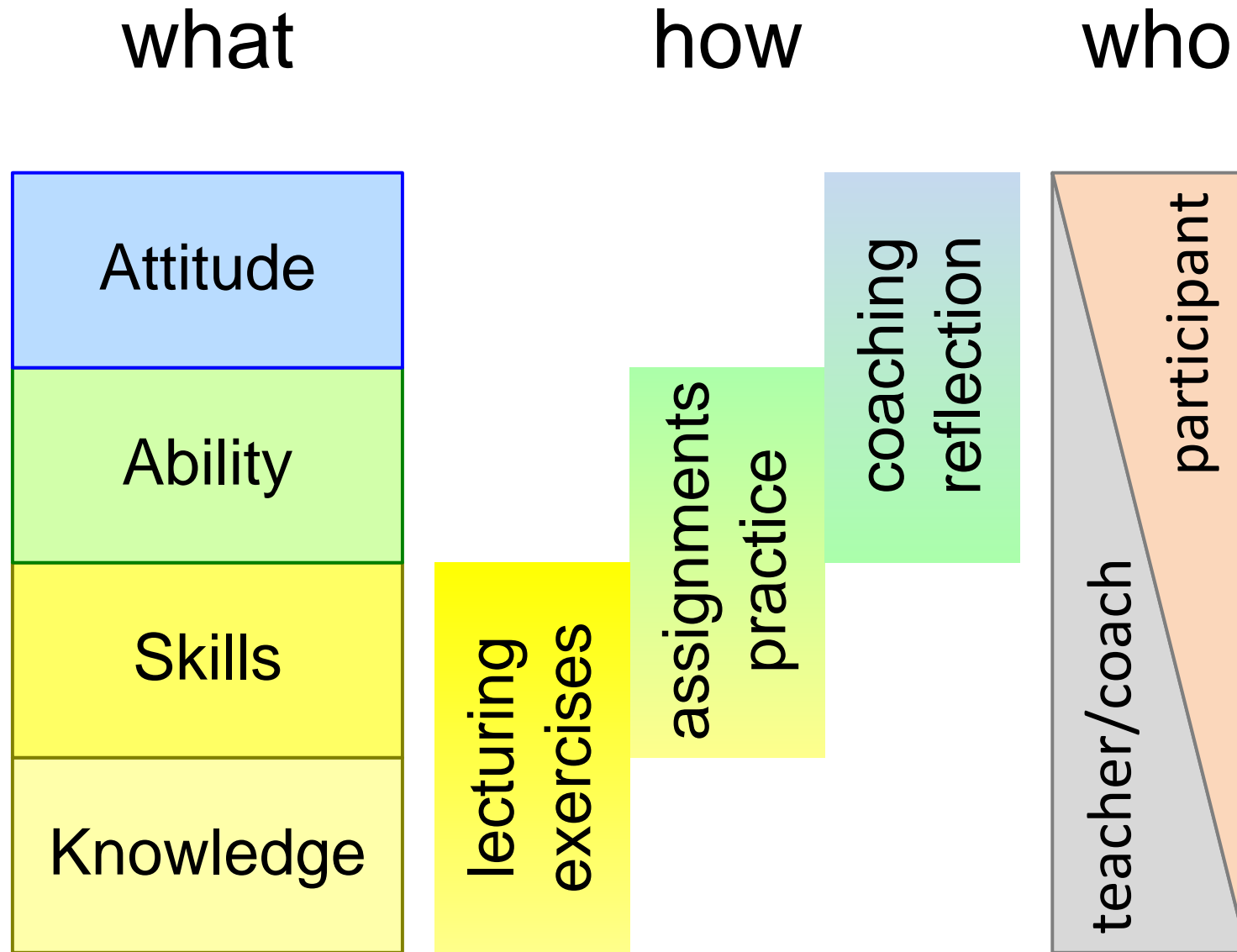
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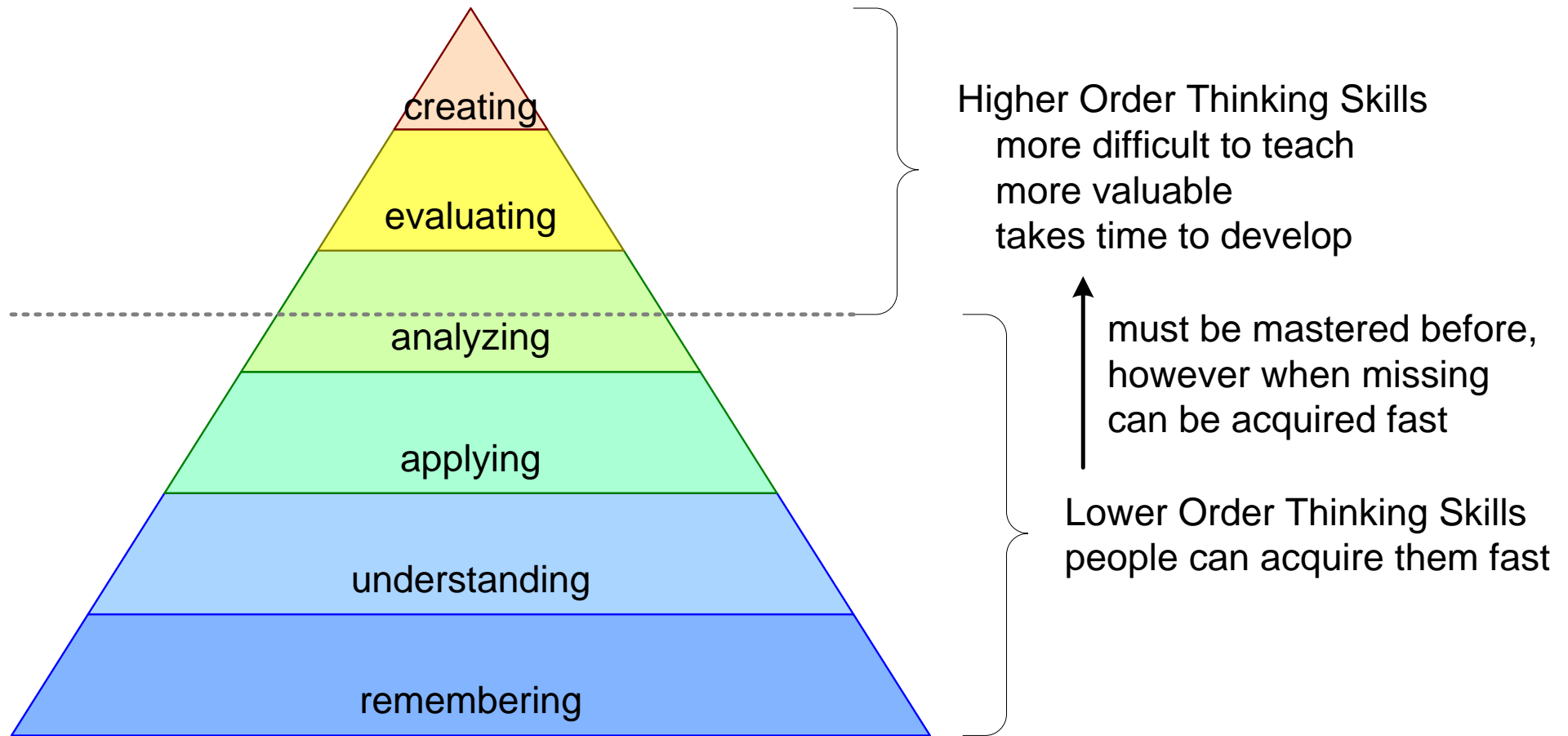
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Competence Requires Various Learning Styles



Bloom's Taxonomy and Higher Order Thinking Skills



Course Assumption:

This course focuses on Higher Order Thinking Skills.

We assume

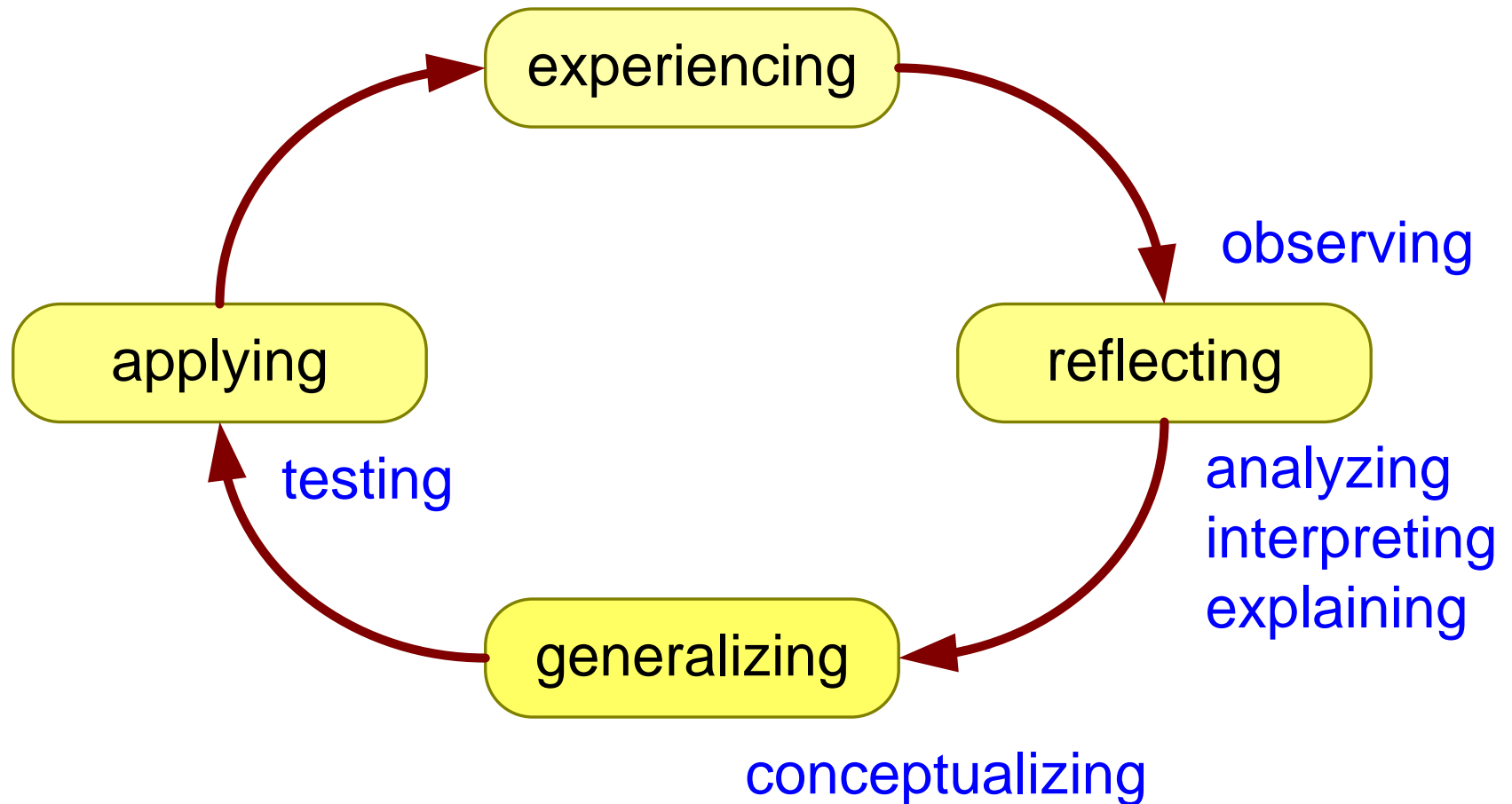
that you have appropriate knowledge

and

that you are able to find and absorb

required specific knowledge fast.

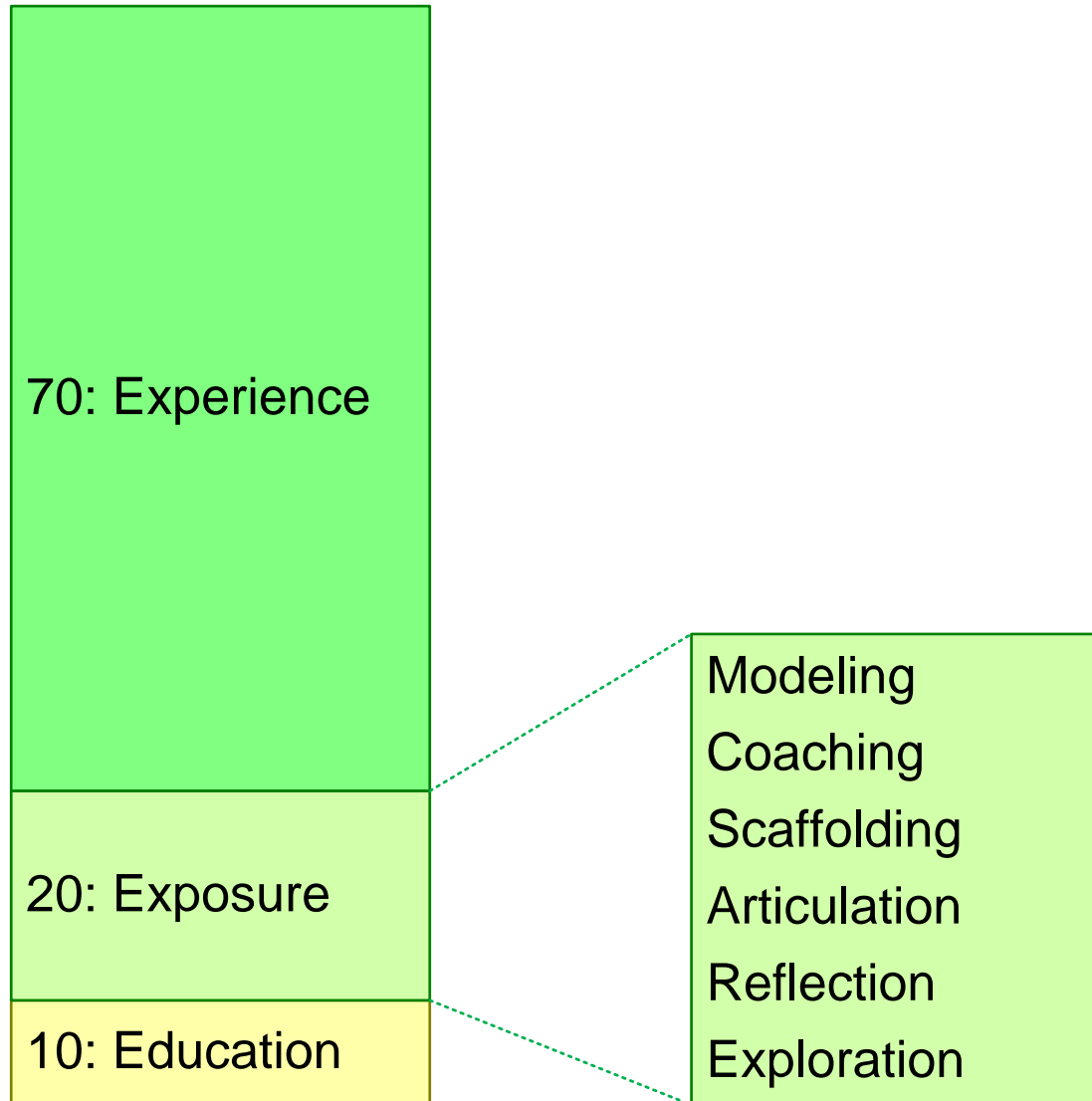
Problem-Based Learning Using Reflection



source: Kolb's learning cycle
<http://www.infed.org/biblio/b-explrn.htm>

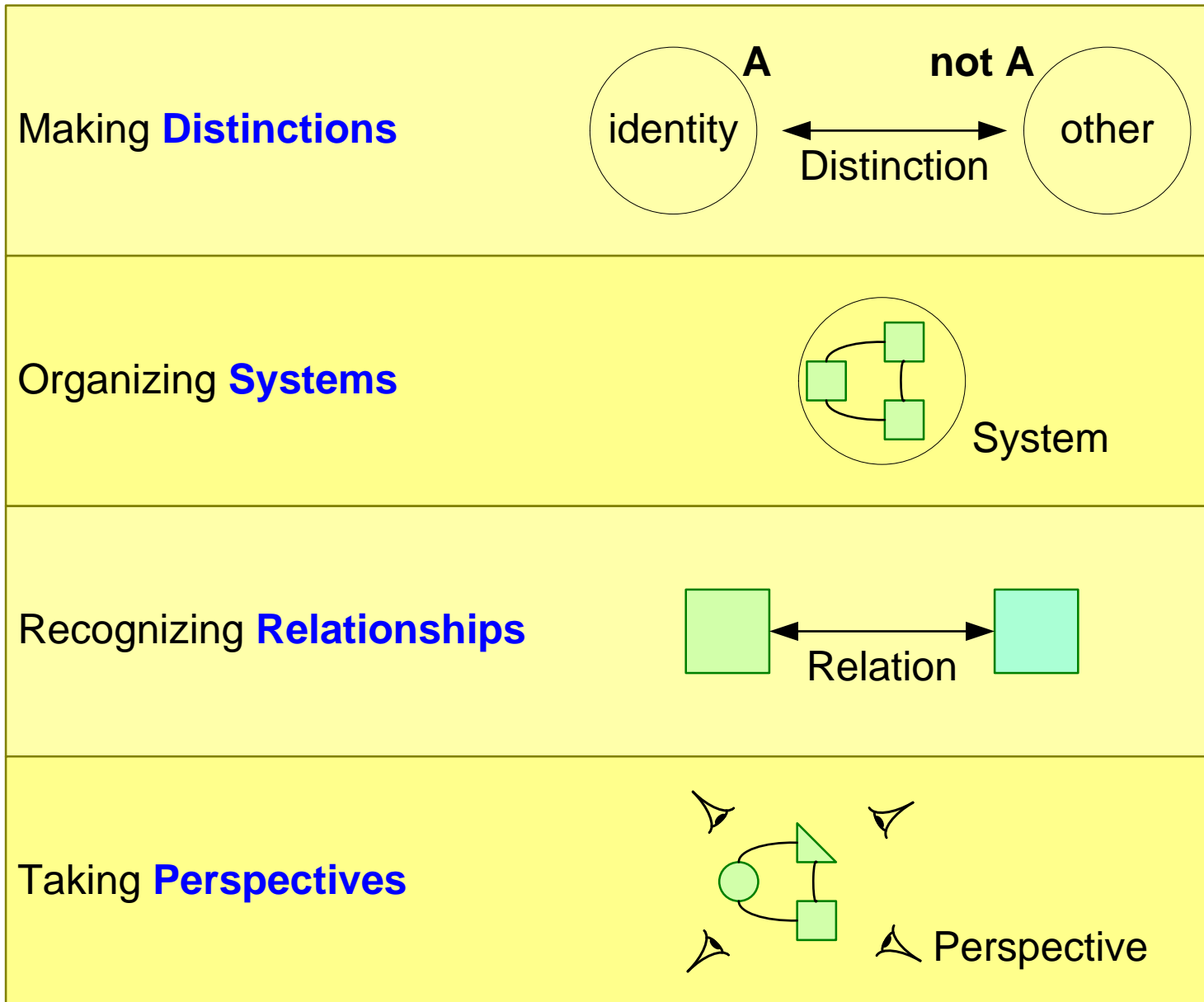
Role of Experience in Learning

70:20:10 learning model



https://en.wikipedia.org/wiki/Cognitive_apprenticeship

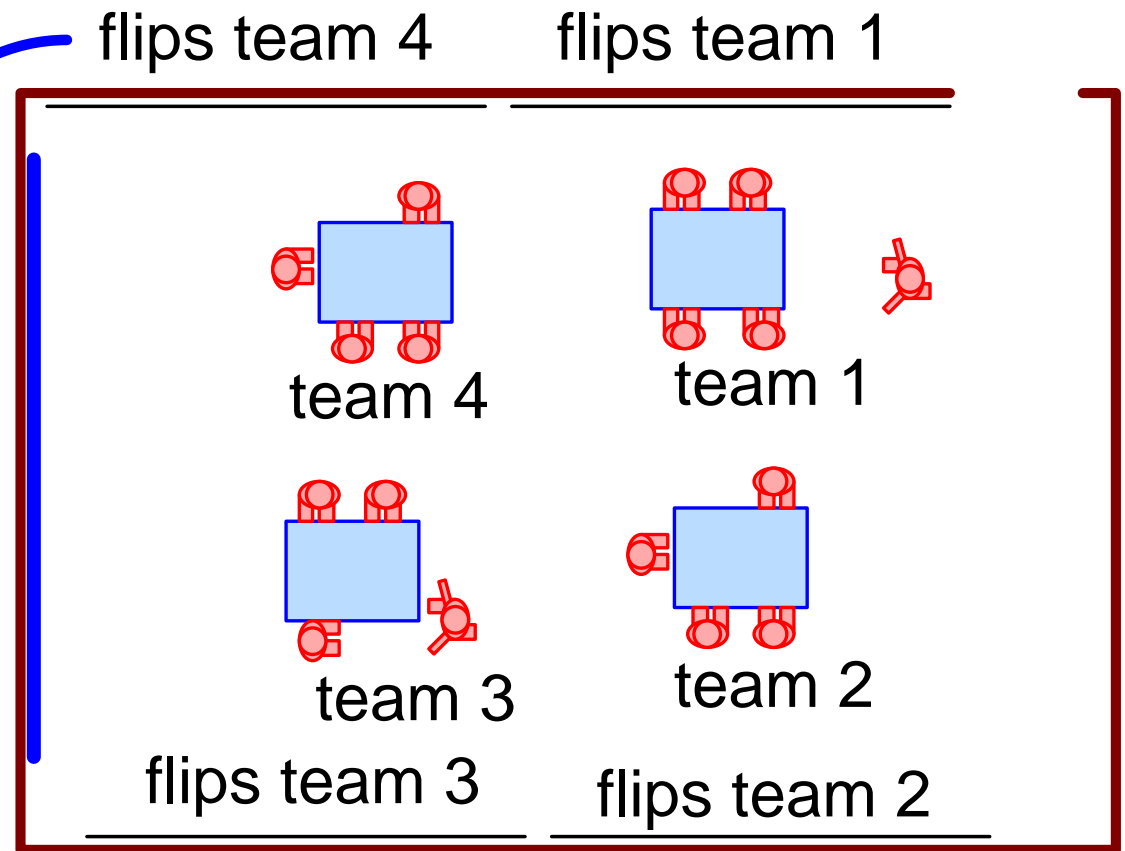
DSRP Model



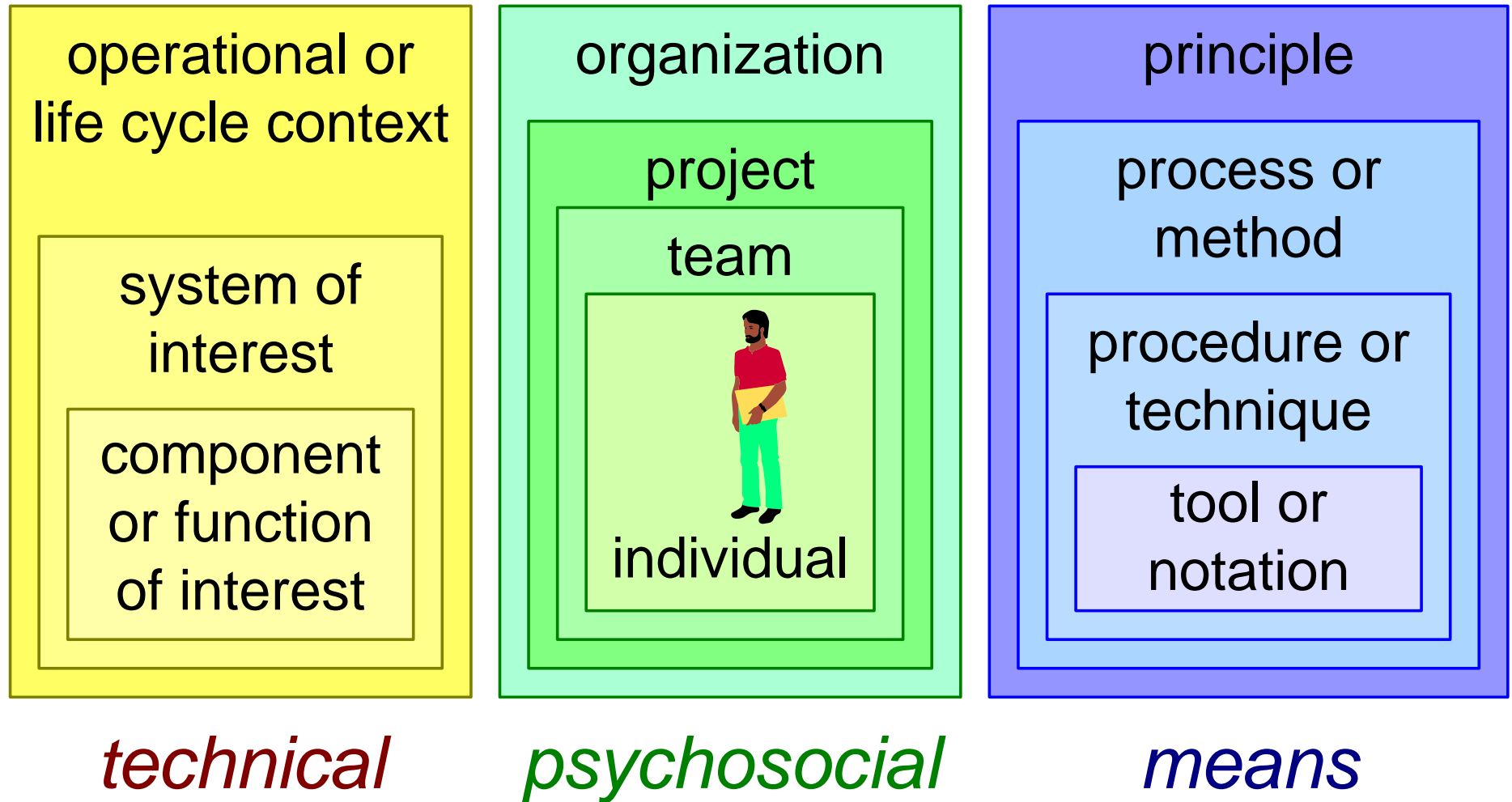
Separate Reflection Wall

mental switch
from problem/system
to "meta"
how, what, why?

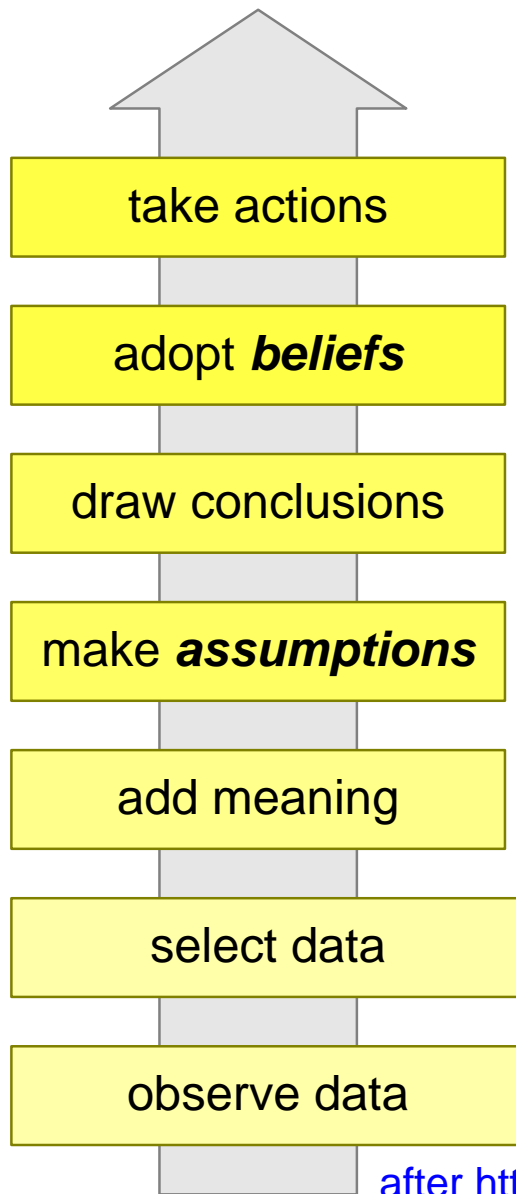
reflection
wall



Scope and Topic of Reflection



The Role of Assumptions and Beliefs in Thinking



The “Ladder of Inference” originally proposed by Chris Argyris and developed by Peter Senge and his colleagues [The Fifth Discipline Fieldbook] illustrates how these biases can be built into our thinking.
<https://pivotalthinking.wordpress.com/tag/ladder-of-inference/>

reflexive loop

beliefs influence
what we observe

[after https://pivotalthinking.files.wordpress.com/2011/11/plain-inference.png](https://pivotalthinking.files.wordpress.com/2011/11/plain-inference.png)