



Ten Research Points for Developing Fast Fish Learners in the Workforce and Workforce Development

1. Active processing is key to deep learning and understanding. You can't "give knowledge" to someone else.
2. Productive struggle is one of the most meaningful ways to make learning robust and sticky.
3. Learners need to engage in unproductive struggle at times in order to learn to recognize it and to realize that they need to change course.
4. Reflection in the form of metacognition (reflecting upon one's thinking and learning processes) is one of the most important things that we can do to enhance learning. However, metacognition cannot timeshare with thinking. It requires a serial process of thinking then reflecting and so on or a full metacognitive pause for analyzing one's thinking.
5. Research shows that when learners know the rationale for specific learning moves, they are much more likely to apply them and to recall them over time.
6. There are general learning principles that apply to all minds, but all minds are not the same and equity in learning environments requires making space for their differences.
7. Learners who are introduced to Fast Fish Framing are more likely to report engaging in moves that fit with Fast Fish Learning.
8. Learners who are adept at transferring knowledge from one situation to another are often strong analogical reasoners. They can "get to the bones" of how things are similar.
9. The most effective learners understand that they have embodied minds. They are alert to and manage their feelings as a core part of thinking and learning. They assess when they are backing away because something is hard, frustrating, puzzling, etc. They have ways of stepping away from the problem and circling back with new emotional stamina, insights, or approaches.
10. Effective learners use their social network to support their learning. They use others' minds well.

