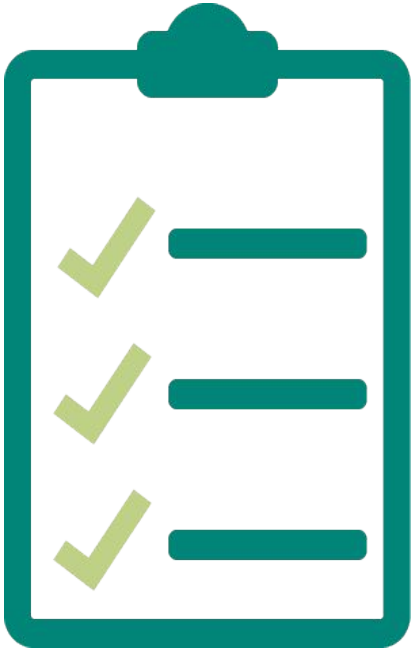
Number Sequence Simulation

Objectives

- Understand the role of documentation when testing
- Articulate the importance of theories, making predictions, iterative testing, and collecting data
- Describe how networks can accelerate learning



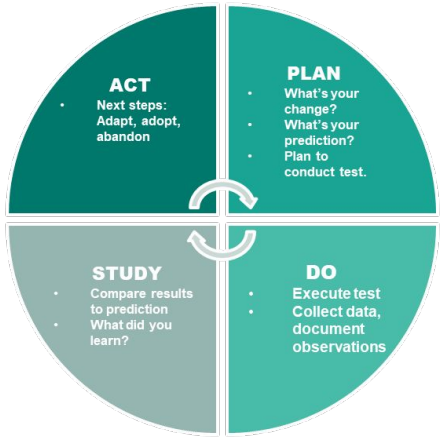
New Instructional Practice Simulation

We have a virtual deck of cards that incorporates a new instructional practice. The practice (**represented by a sequence of numbers**) holds substantial promise for improving student learning.

Each team will **develop a method to predict the numbers on the cards** and then implement the instructional practice in their entire network.

How will we learn?

Act:
Are we ready to implement?

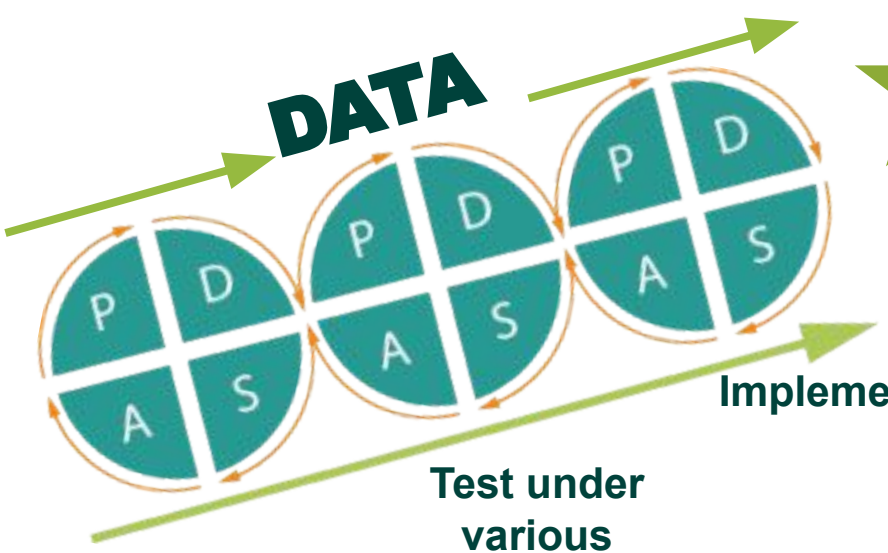


Plan:
Testing "strategy"
Hunch/theory
Predict the next number

Study:
Evaluate prediction
Is your theory still useful?

Do:
Receive the next number and record data

What size of test?



Changes that actually result in improvement

Implementation

Test under various conditions

Understanding/ Collecting Data

Initial hunches and ideas

Scale vs. Payoff in Improvement Resources*

Strategy	Strategy Succeeds	Strategy Fails
Understand	Typically Small Loss	Typically Small Loss
Test Change	Small Gain	Loss Varies Depending on Scope of Test/Failure
Implement	Modest to Strong Gain	Large Loss

* We define Improvement Resources generally to include things such as monetary funds, will within the organization, time, will, etc.

Scale vs. Payoff in Improvement Resources

Gain/Loss assessments depend on the strategy you committed to in that cycle. You start with 200 "IR units."

<table>
<tr><th>Strategy</th><th colspan="4">Gain or Loss</th></tr>
<tr><td>Understand</td><td colspan="4">Prediction Correct OR Incorrect: - 10</td></tr>
<tr><td>Test</td><td colspan="4">Prediction Correct: + 10
Prediction Incorrect:
<table><tr><th>miss by <2</th><th>miss by 2-4</th><th>miss by >4</th></tr><tr><td>-20</td><td>-30</td><td>-40</td></tr></table></td></tr>
<tr><td>Implement</td><td colspan="4">Prediction Correct: + 30
Prediction Incorrect: - 80</td></tr>
</table>

NUMBER SEQUENCE CARDS

2

3

8

21

22

23

66

67

68

202

203

606

607