Changing Hearts, Minds, and Behavior: Can Implementation Science Offer Any Clues?

The Wing Institute Annual Summit

Bridging the Cultural Divide

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Co-Directors

National Implementation Research Network
FPG Child Development Institute
University of North Carolina at Chapel Hill

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nirn National Implementation Research Network

With Appreciation

To go fast you go alone, to go far you go with others. Our thanks to:

- The NIRN Team
- The PBIS Center and the Regional Resource Centers
- The GII Group and GIC Committees
- Universities and Foundations
- OSEP and other Federal Agencies and State Partners
- SEA, Districts, and Schools
- Service Providers and Local Agencies
- Purveyors and Intermediary Groups
- Implementation and Intervention Researchers
- Students, families, teachers, and communities

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The Conversation Today

The Conversation Today
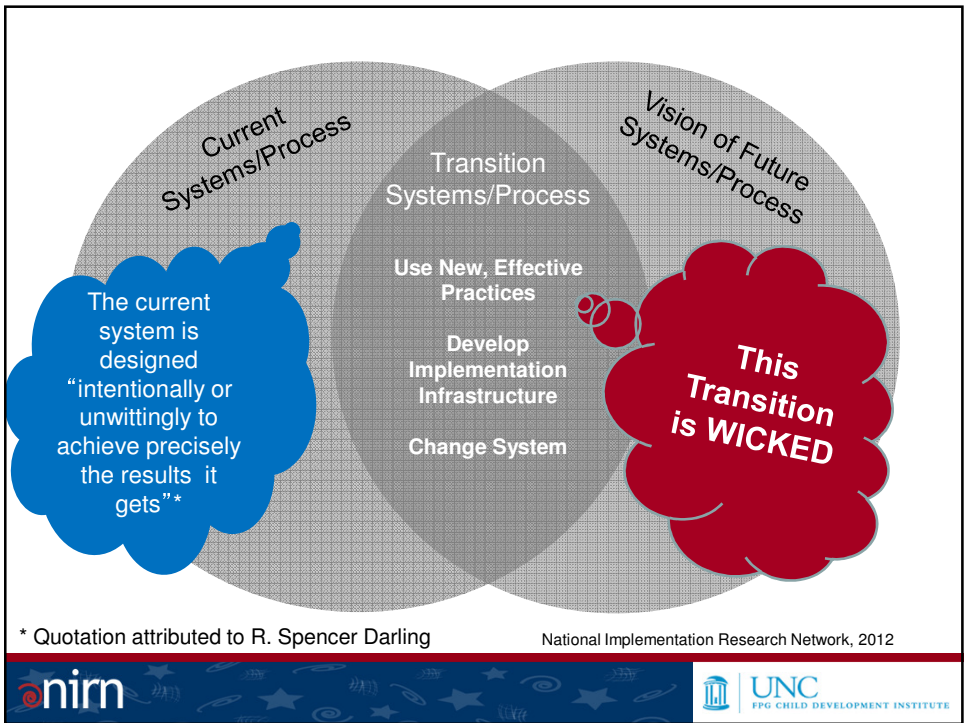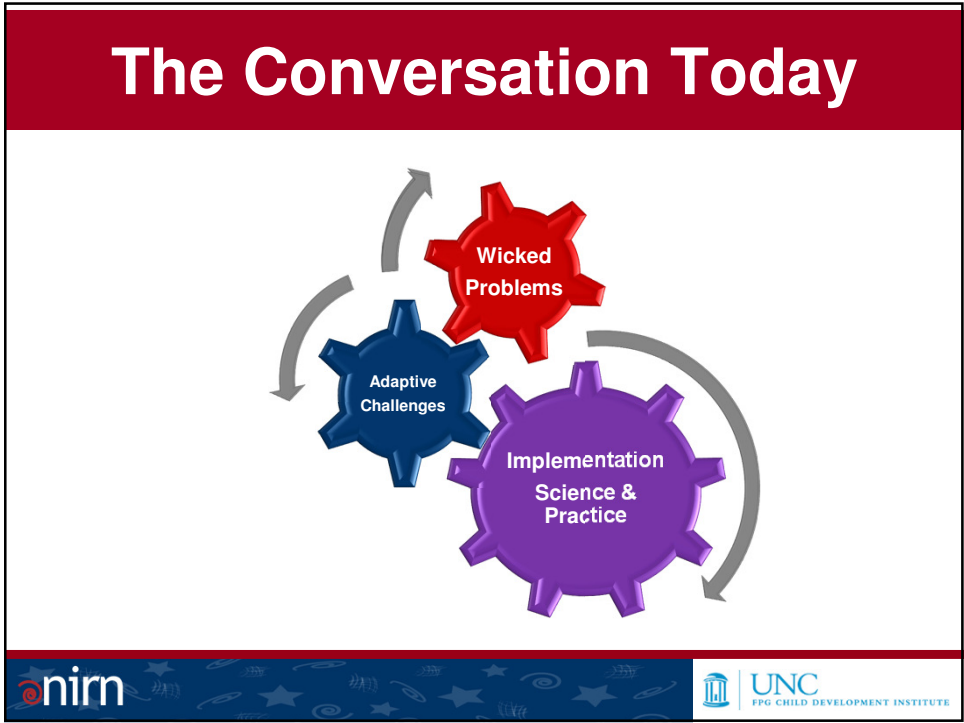
Change Challenges

- Tame Problems
  - Often complicated (e.g. safety of nuclear generators, air traffic control)
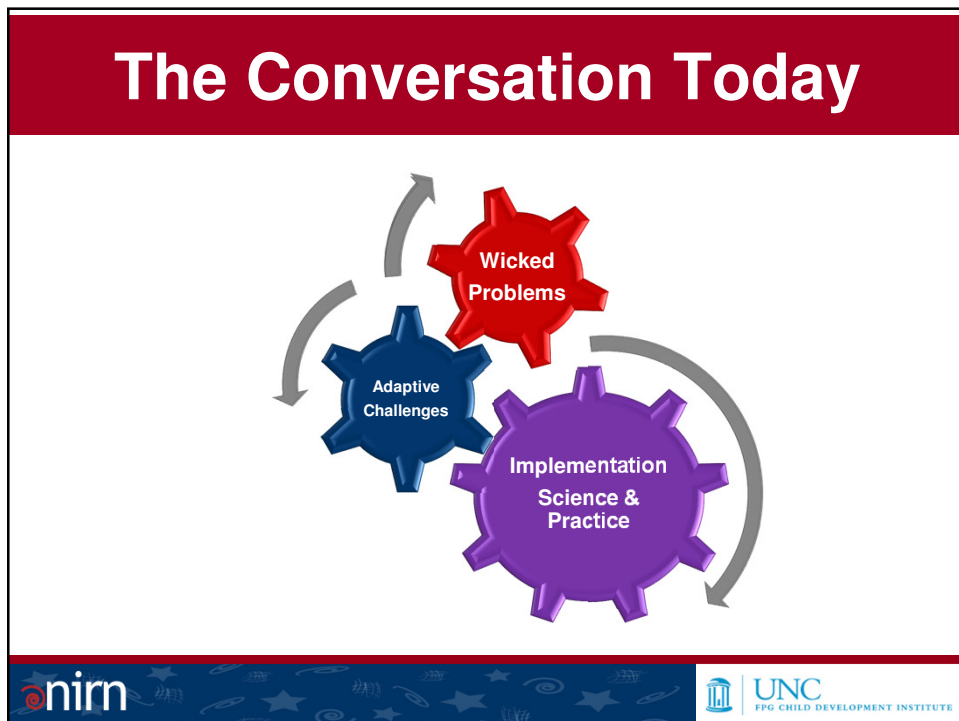
- Wicked Problems
  - They are <u>messy, devious, and fight back when you try to "solve" them</u>

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Change Challenges

- Tame Problems
  - Often complicated (e.g. saf generators, air traffic contr

- Wicked Problems
  - They are <u>messy, devious, a when you try to "solve"</u>

"Managers [or leaders] are not confronted with problems that are independent of each other, **but with dynamic situations that consist of complex systems of changing problems that interact with each other**. I call such situations messes. . . . Managers [or leaders] do not solve problems, they manage messes.
-- Russell Ackoff, operations theorists.

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The "Cultural" Landscape

Zone of Complexity:
Wicked Problems &
Adaptive Challenges Live Here

Anarchy

Far from Agreement

Agreement

Complicated

Close to Agreement

Simple

Complicated

Close to Certainty

Far from Certainty

Certainty

Ralph Stacey, 2002

The Conversation Today

Wicked Problems

Adaptive Challenges
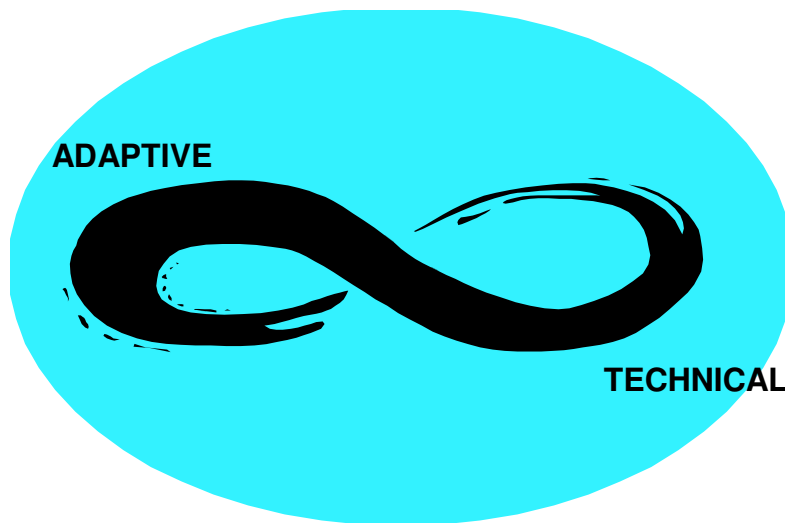
Implementation Science & Practice
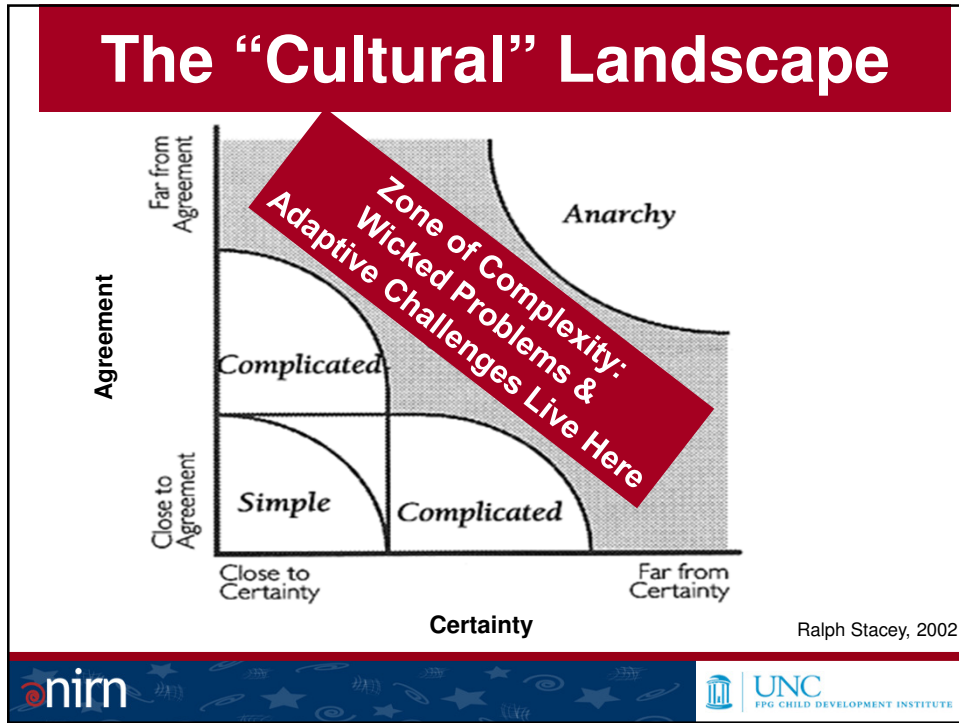
Right Strategy for the Cultural Challenge

- Different cultural challenges call for different strategies
  - Technical Strategies for Technical Challenges
  - Adaptive Strategies to Address Wicked Problems

- According to Ron Heifetz and his colleagues at Harvard's Kennedy School of Government, one of the biggest mistakes "leaders" make is to incorrectly identify the type of challenge they are facing
  - Using technical approaches for adaptive issues (and vice versa)

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Managing the Polarity of the Work

ADAPTIVE

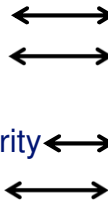**TECHNICAL**

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Examples

Technical

- Funding scholarships
- Building hospitals

- Increasing border security
- Developing malaria vaccine within a malaria-infected region

Adaptive

- Reforming public education
- Providing affordable healthcare

- Immigration reform
- Achieving 80% vaccination rates

Adapted from Heifetz, R. A., Kania, J. V., & Kramer, M. R. (2004).

Technical

Technical Challenges

- Funding scholarships
- Building hospitals
- Increasing border security
- Developing malaria vaccine

within a malaria-infected region

Heifetz, Leadership without Easy Answers, 1996

Technical

Technical Challenges

- Perspectives are aligned (views, values)
- Definition of the problem is clear and agreed upon
- Solution and implementation of the solution is relatively clear, although may be complicated
- There can be a "primary" locus of responsibility for *organizing* the work

Technical Responses

- Use established norms/ goals
- Define problems
- Provide solutions
- Clarify roles and responsibilities
- Assign tasks
- Manage conflict
- Maintain order

Heifetz, Leadership without Easy Answers, 1996

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Adaptive

Adaptive Challenges

- Reforming public education
- Providing affordable healthcare
- Immigration reform
- Achieving 80% vaccination rates

Heifetz, Leadership without Easy Answers, 1996

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Adaptive

Adaptive Challenges

- Legitimate, yet competing, perspectives emerge
- Definition of the problem is less clear
- There are different perspectives on the "issue" at hand
- Solution and implementation are unclear and require learning
- Primary locus of responsibility is not a single entity or person

Adaptive Responses

- Get on the Balcony
- Identify the Adaptive Challenge
- Regulate Distress
- Maintain Disciplined Attention
- Give the Work Back to the People
- Protect All Voices

Heifetz, Leadership without Easy Answers, 1996

What's the Way Forward?

Shifting Gears:
Ideas About a Way Forward

Taming Wicked Problems

Engaging in Adaptive Strategies

Using Implementation Science & Best Practices

Shifting the Frame

From what works to improve educational outcomes, and socio-emotional outcomes to….

What works to improve
- ❑ **Practices of well-intentioned teachers, staff, administrators, school boards, district staff and state departments of education**
- ❑ **Organizational structures and functions**
- ❑ **The decision-making of funders and policy makers**

Why Shift the Frame?

Because no matter how much we know, children and students can not benefit from interventions, supports, and services that they do not receive.
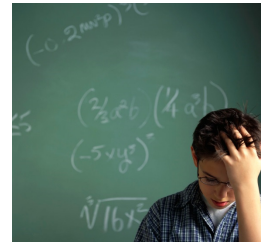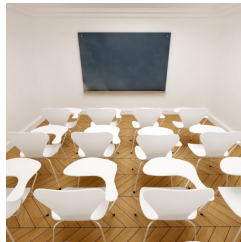
Implementation Science

Review and synthesis of the implementation research and evaluation literature (1970 – 2004)

•Multi-disciplinary

•Multi-sector

•Multi-national

+ Ongoing reviews of the literature

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).

HTTP://NIRN.FPG.UNC.EDU

Implementation Science - What Do We Know?

Experimental Data Show These Methods, When Used Alone, <u>Are Insufficient</u>:

- **Diffusion/ Dissemination of information**
- **Training**
- **Passing laws/mandates/regulations**
- **Providing funding/incentives**
- **Organization change/reorganization**

Data: 5% to 15% Realize Intended Outcomes

NECESSARY BUT NOT SUFFICIENT

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If we want a better return on our investment, what might we do?

Active Implementation Frameworks

EFFECTIVE & USABLE INTERVENTIONS
- What works? What are educators saying and doing to improve outcomes for students?

| | Effective & Usable Interventions |

STAGES
- What steps lead to successful implementation?

DRIVERS
– *What critical levers help make this change?*
– *What are key elements of a functional infrastructure?*

TEAMS
- Who takes responsibility for and helps guide the change process and scale-up?

IMPROVEMENT CYCLES
- How can we create more hospitable environments, efficiently solve problems and get better?

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Active Implementation Frameworks

EFFECTIVE & USABLE INTERVENTIONS
- What works? What are educators saying and doing to improve outcomes for students?

STAG Use Data About Effective
- What Implementation Processes

DRIVERS
_ Attend to Adaptive Challenges

TEAMS
- Who takes responsibility for and helps guide the change process and scale-up?

IMPROVEMENT CYCLES
- How can we create more hospitable environments, efficiently solve problems and get better?

Effective & Usable Interventions

Stages

Drivers

Teams

Cycles

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Active Implementation Frameworks

WHEN

Implementation Stages

HOW

Improvement Cycles

WHAT

Effective & Usable Interventions

HOW

Implementation Drivers

WHO

Implementation Teams

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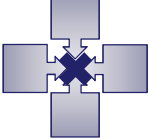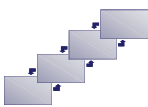
Usable Intervention Criteria

1. **Clear** <u>**description**</u> **of the program**
   - **Philosophy, values, principles**
   - **Inclusion – exclusion criteria**

2. **Identified** <u>**core intervention components**</u> **(aka, active ingredients, essential functions)**

3. <u>**Operational definitions**</u> **of core intervention components (what practitioners do, say)**

4. **Practical** <u>**performance/fidelity assessment**</u>
   - **Highly correlated (0.70+) with desired outcomes**

Blase and Fixsen, 2013

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What is "it"?

- **About 18% of outcome studies (N= 1,200+) assessed the independent variable ("it")**

   – **About 7% linked essential components (fidelity) to outcomes (we know what produces desired outcomes)**

Moncher & Prinz, 1991;Gresham, et al., 1993; Dane & Schneider, 1998; Durlak & DuPre, 2008

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Usable Intervention Criteria

Most evidence-based "interventions" do not meet usability criteria

Educators use interventions (<u>not</u> standards for rigor)

Scaling for socially significant benefits requires usable interventions

What's the Way Forward

Practice Profiles

- Each **Critical Component** is a heading

- Each level of implementation specifies the **activities** necessary **to operationalize** that Critical Component

Drastic Mutation

Critical Component	Ideal Implementation	Acceptable Variation	Unacceptable Variation	Unacceptable Variation
Critical Component 1: Description	**Description of implementer behavior**			

Hall and Hord, 2010, Implementing Change: Patterns, Principles, and Potholes (3rd Edition) and Adapted from work of the Iowa Area Education Agency

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Practice Profiles and Adaptive Challenges

Developing 'practice profiles' after receiving information on best practices

❑ Surfaces adaptive challenges

❑ Creates an organized forum for improving 'agreement' among diverse stakeholders

Adaptive Strategies

✓ Gives the Work Back to the People

✓ Maintains Disciplined Attention

✓ Creates ownership and reduces feelings of incompetence, disloyalty, and loss

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Active Implementation Frameworks

Stages of Implementation

INITIAL IMPLEMENTATION

INSTALLATION

FULL IMPLEMENTATION

EXPLORATION

2 - 4 Years

Stages of Implementation

Fixsen, Naoom, Blase, Friedman, & Wallace, 2005
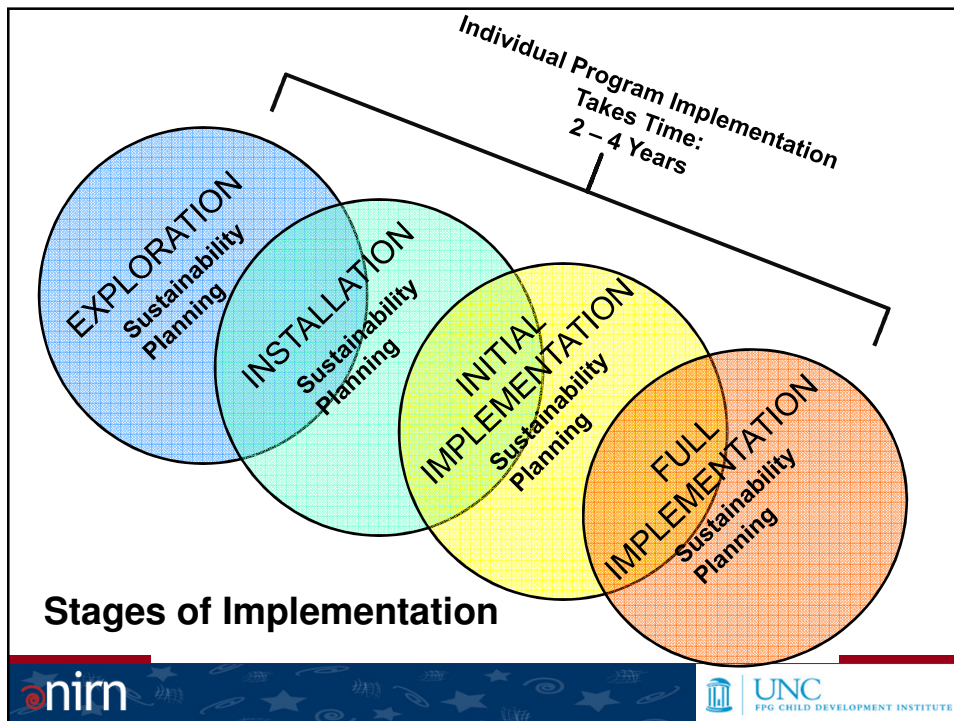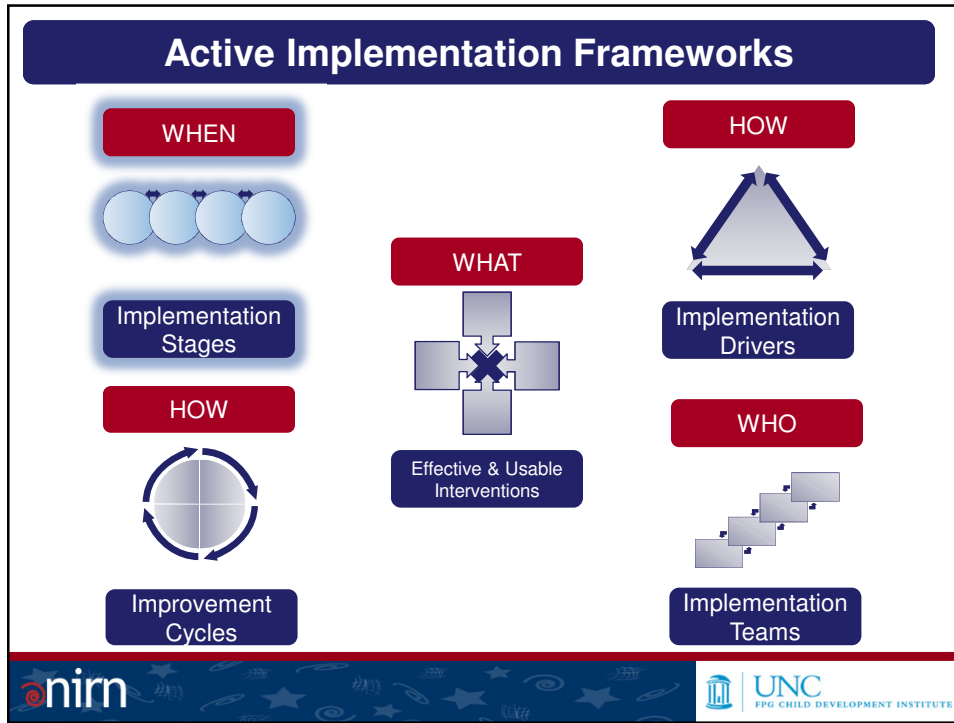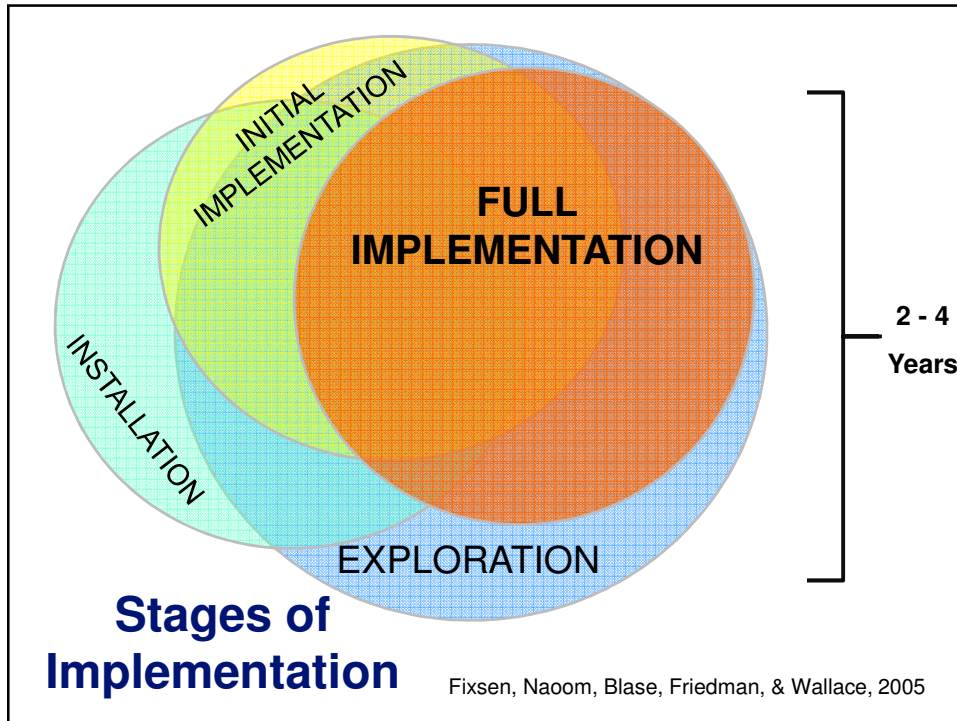
Stages of Implementation

➢ **You don't get to skip any!**

➢ **If you make a judgment about "effectiveness" too early you might be making a mistake.**

➢ **Different stages for multiple initiatives**

    ➢ **"Where are we now with this initiative?"**

➢ **Stage-based activities will need to be "revisited" – important!**

    • **New teachers, new students, new families, new principals, new District administrators, new legislators and staffers, new Federal partners**

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Stages: Adaptive Challenges and Wicked Problems

Exploration Stage

- Build 'requisite variety' into Implementation Teams – meaningful collaboration
- Develop more consensus on the 'problem' which shapes the choice of solutions
- Consider multiple factors in choosing a 'solution' – fit, feasibility, strength of evidence, resources required, competing innovations, readiness for use in a typical classroom setting, expert help, capacity to implement well
- Considering these multiple factors can send you back to 'defining the problem'
- Create and support 'readiness' at every level (Transtheortical Model of Change)

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Transtheoretical Model of Change

- Stage-matched "interventions" outperform action-oriented "interventions"
- Stage-matched principles can be generalized to organizational change
- Stages:
  - Precontemplation
  - Contemplation
  - Preparation
  - Action
  - Maintenance
- If forced to take action before they are prepared, what happens?

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Match Change Process to Stage

PreContemplation
• Consciousness Raising – we have a problem here
• Dramatic Relief – pain is coming but so is success
• Environmental Re-evaluation – change can have a + impact on env.

Contemplation
• Self-Reevaluation – Change can be important to MY happiness

Preparation
• Self-Liberation – Believing the change will work - commitment

Action/Maintenance
• Contingency Management – Finding rewards for new ways of work
• Helping Relationship – Making use of offered support
• Counter–Conditioning – Learning new behaviors and new ways of thinking
• Stimulus Control – **Change** the environment to support new behavior
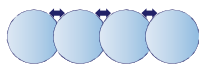
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Active Implementation Frameworks

WHEN

Implementation Stages

HOW

Implementation Drivers

WHAT

Effective & Usable Interventions

HOW

Improvement Cycles

WHO

Implementation Teams

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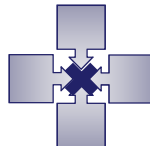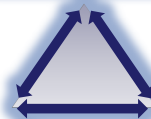
"IMPLEMENTATION DRIVERS"

Common features of successful supports to help make full and effective uses of a wide variety of innovations

Implementation Drivers

Reliable Benefits

Consistent and Competent Use of Innovations

Help to develop, improve, and sustain practitioners' competence and confidence to implement effective practices

Competency Drivers

Organization Drivers

Integrated & Compensatory

Help ensure sustainability and improvement at the organization and system levels

Leadership Drivers

© *Fixsen & Blase, 2008*

Help guide leaders to use the right leadership strategies for the situation

Competency Drivers Aggravate Adaptive Challenges

Performance Assessment/Fidelity

Drivers

• Experience with the 'blame game'

• Union issues

Selection

• *"I come to you as a teacher with my own pedagogy."*

• Schools have their complement of teachers, there is no opportunity to select a 'match'

Training

• *"I come to you as a teacher with a constructivist view."*

• *"Training is an offensive term – I am not a dog!"*

Coaching

• *"We don't share the same pedagogy so how is your feedback relevant to me?"*

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How Competency Drivers Address Adaptive Challenges

Reduce feelings of loss and incompetence

▪ Ensure that confidence and competence

Drivers

are developed, supported, increased

over time

▪ Integrated, so that more coherence occurs for the educator

▪ Compensatory, recognizing that professional growth is different for each educator – non-linear, not lock step

▪ The Competency Drivers are 'accountable' for fidelity not the teacher

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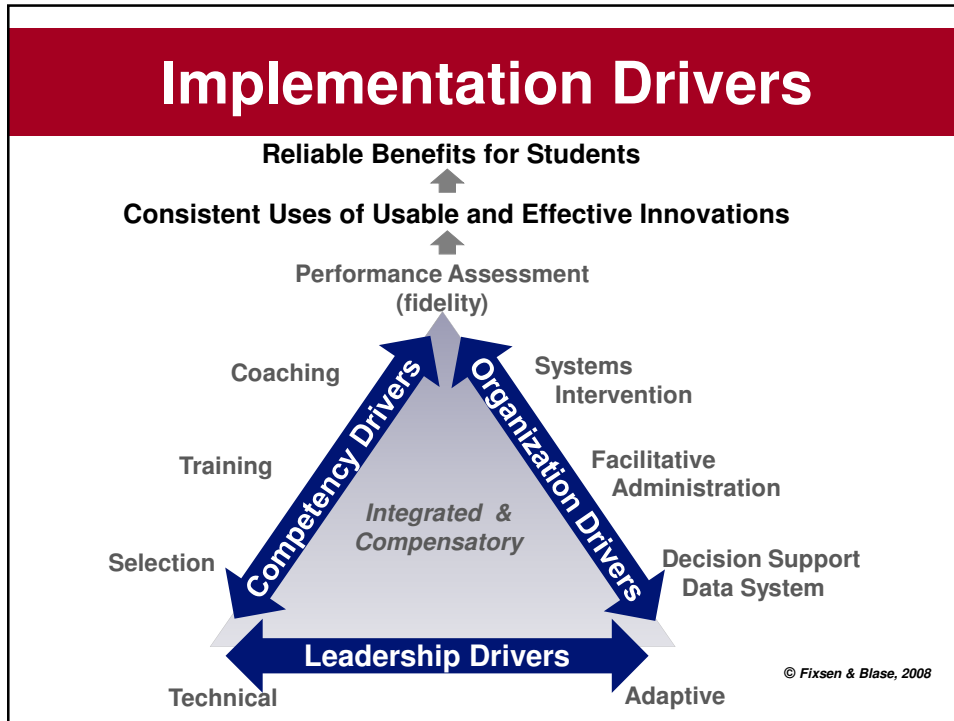
HOW

Implementation Drivers

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Implementation Teams
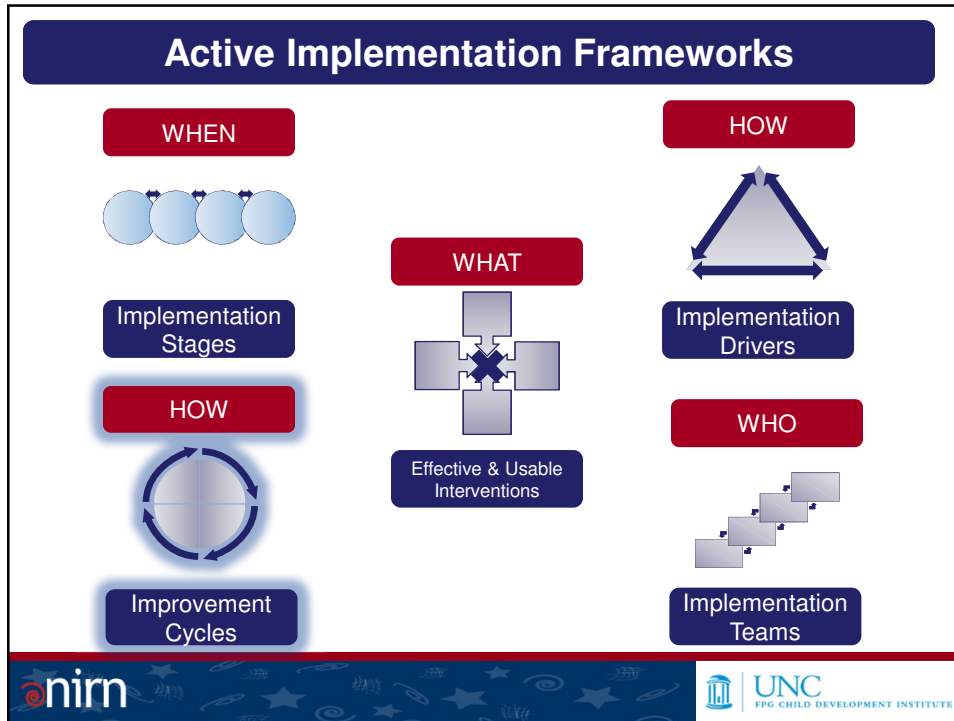
What Do They Have in Common?

❑ **Policy to Practice to Policy Cycles**
❑ **Transformation Zones**
❑ **Rapid Cycle Teams**
  ❑ **Problem-solving**
  ❑ **Practice Improvement**
❑ **Usability Testing**

PDSA Cycles: Trial & Learning

Plan
Decide what to do

Cycle
Do over and over again until intended benefits realized

Act
Make Adjustments

Do
Do it (be sure)

Study
Look at the results

Shewhart (1924); Deming & Juran (1948); Six-Sigma (1990)

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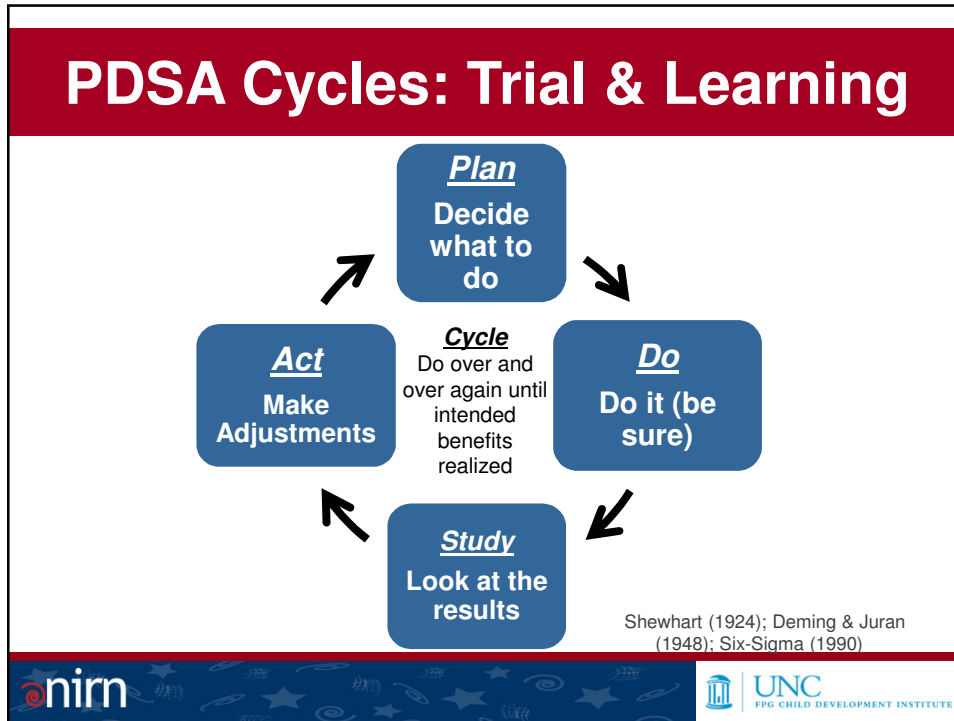
Why Improvement Cycles Help

- It's a hallmark of a "Learning Culture"
- Learning is required to address adaptive challenges
- Avoid having the "perfect" become the enemy of the good
- In a complex environment the "solution" will change the problem – Need to see what "emerges" from implementation
- Re-solve the problem
- "Next right steps" can be identified

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Addressing Adaptive Challenges

❑**Policy to Practice to Policy Cycles**
❑Transformation Zones
❑Rapid Cycle Teams
   ❑Problem-solving
   ❑Practice Improvement
❑Usability Testing

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Systems Trump Innovations

Existing System

The current system is designed "intentionally or unwittingly to achieve precisely the results it gets"*

**Effective Innovations
Are Changed to
Fit The System**

**Existing System Is
Changed To Support
The Effectiveness Of
The Innovation**

Effective Innovation

Policy ⟷ Practice Feedback Loops

Policy- Practice Feedback Loops
- **Policy that enables practice (PEP)**
- **Practice that is informed by policy (PIP)**

The PDSA cycle in slow motion
- **Monthly or quarterly**
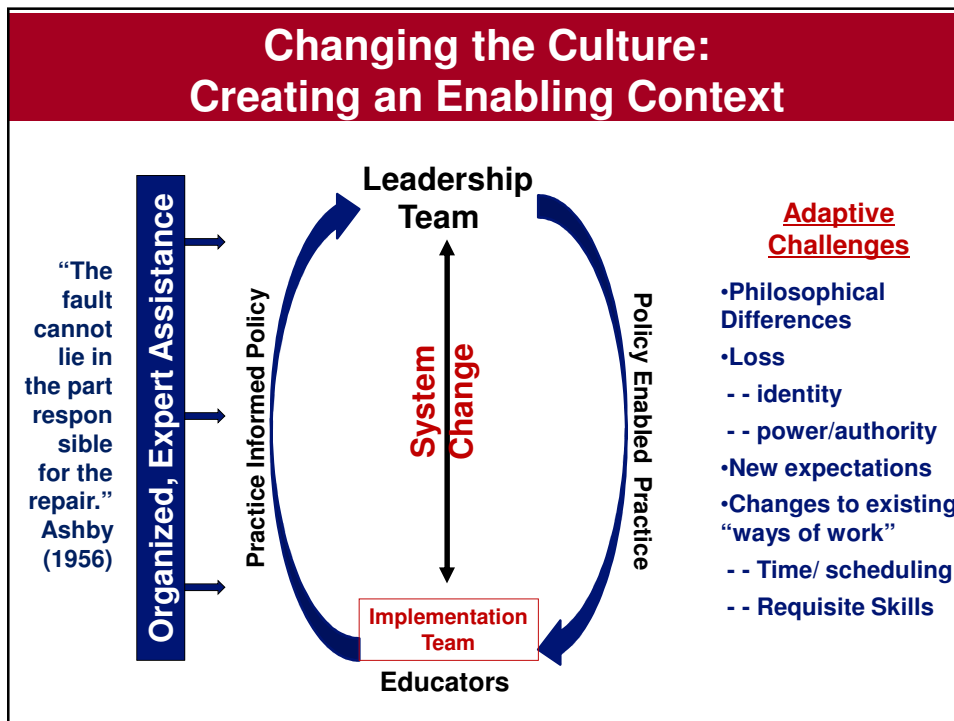
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Changing the Culture: Creating an Enabling Context

Leadership Team

Organized, Expert Assistance

"The fault cannot lie in the part responsible for the repair." Ashby (1956)

Practice Informed Policy

System Change

Policy Enabled Practice

Implementation Team

Educators

Adaptive Challenges
- Philosophical Differences
- Loss
  - - identity
  - - power/authority
- New expectations
- Changes to existing "ways of work"
  - - Time/ scheduling
  - - Requisite Skills

Addressing Adaptive Challenges

❏ Policy to Practice to Policy Cycles
❏ **Transformation Zones**
❏ Rapid Cycle Teams
   ❏ Problem-solving
   ❏ Practice Improvement
❏ Usability Testing

National Implementation Research Network, 2012

Transformation Zones as an Adaptive Strategy

A "vertical slice" of an organization or system

– **Small enough to be manageable**

– **Large enough to include nearly all of the relevant aspects of the current system**

• **We want the system to 'fight back'**
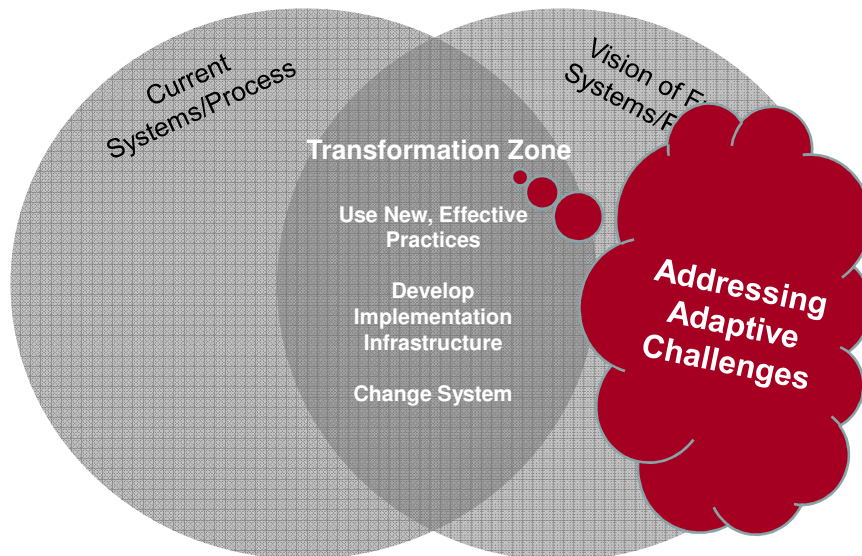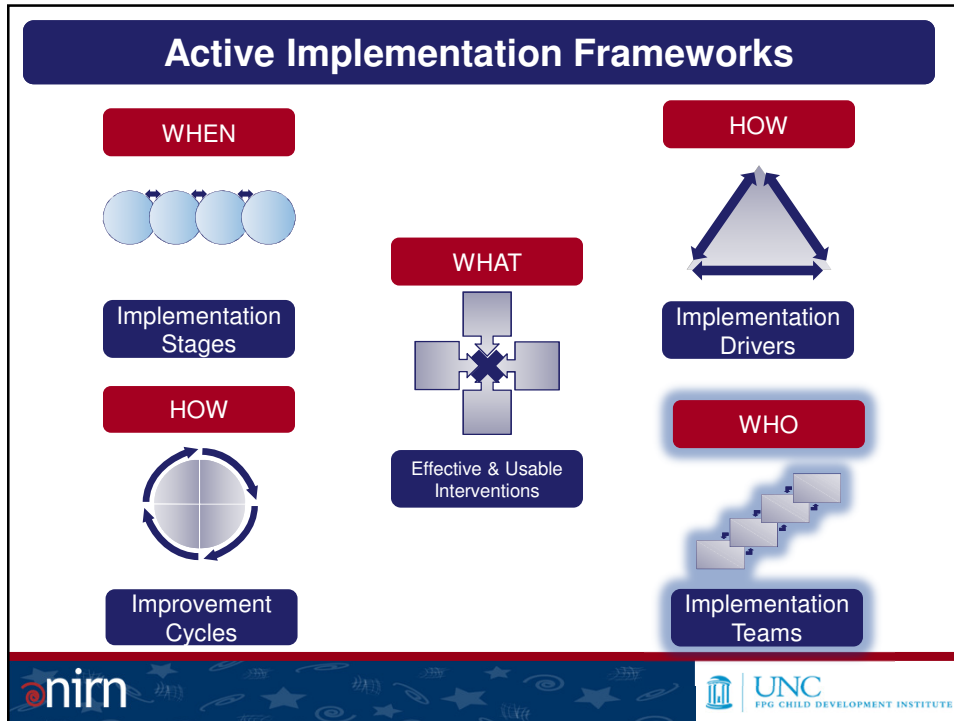
• **We need to uncover the adaptive challenges**

• **We need to address adaptive challenges**

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Transformation Zones Address Adaptive Challenges

❑ **Make use of an <u>innovation in typical classroom and school settings</u> (operationalize, fidelity, outcomes)**

❑ **Establish <u>implementation</u> supports (work on practical Drivers and Stages)**

❑ **Engage leaders in the PEP- PIP improvement cycle to <u>align system</u> components and functions**

❑ **Create <u>capacity and momentum</u> for larger scale changes**

❑ **Engage in <u>iterative attempts to improve</u> both practice and the enabling context**

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Active Implementation Frameworks

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Effective & Usable Interventions

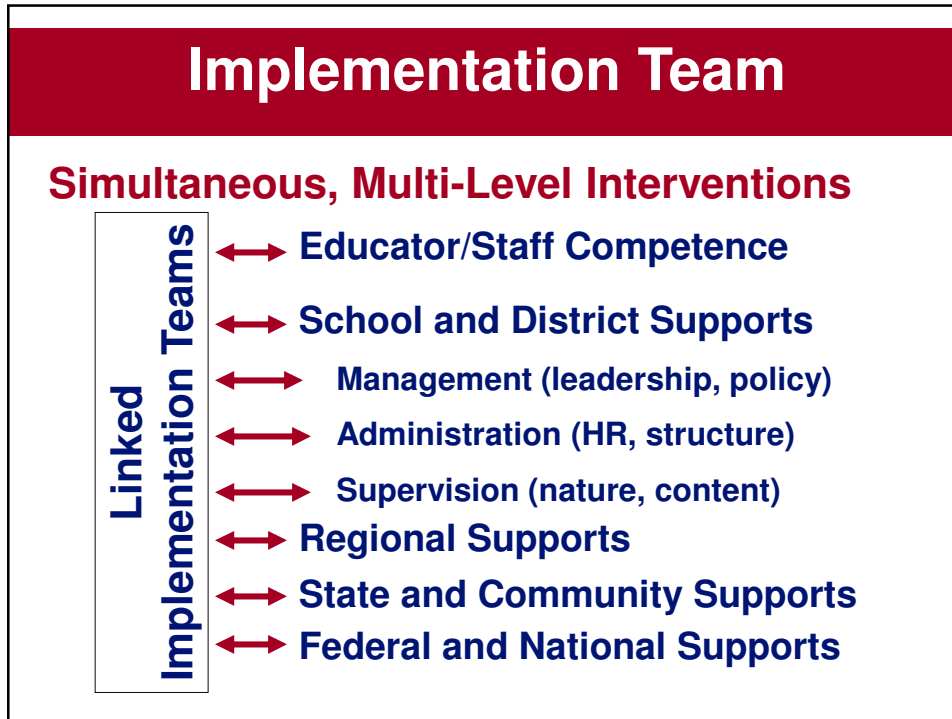HOW

Implementation Drivers

WHO

Implementation Teams

Implementation Team

- **Minimum of three people (four or more preferred) with expertise in:**
  - **Innovations**
  - **Implementation**
  - **Organization change**
- **Tolerate turnover; teams are sustainable even when the players come and go** (Higgins, Weiner, & Young, 2012; Klest & Patras, 2011)

Implementation Team

Simultaneous, Multi-Level Interventions

Linked Implementation Teams

⟷ **Educator/Staff Competence**

⟷ **School and District Supports**

⟷ **Management (leadership, policy)**

⟷ **Administration (HR, structure)**

⟷ **Supervision (nature, content)**

⟷ **Regional Supports**

⟷ **State and Community Supports**

⟷ **Federal and National Supports**

Team Tools for Shifting the Culture

- **Terms of Reference –** *surface adaptive issues*
- **Promote curiosity and** *protect all voices*
  - **Question Brainstorming**
  - **Nominal Group Process**
- **Create Shared Displays to** *maintain disciplined attention*
- **Manage the environment to** *maintain disciplined attention and protect all voices*
- *Manage polarity* **(individual/collective effort, planning/experimenting, technical/adaptive)**

~ Blase & Van Dyke, 2007, Pacanowsky,1995

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Foundation Skills

- Right engagement for the person's "stage of change" (Trans-theoretical Model of Change)
- Roll with Resistance (Motivational Interviewing)
- Importance of giving reasons (Social Psychology)
  - Any reason is better than none
  - Person-centered rationales
- Conceptual Feedback to Name the Big Idea
- Ratio of positive to developmental feedback
- Criterion referenced problem-solving

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What Will It Take to Change Hearts, Minds, and Behavior?

- ❏ Science and Data Related to….
  - ✓ Interventions and Programs
  - ✓ Core Components and Fidelity Correlated with Outcomes
  - ✓ Implementation, Organization, and Systems Change
- ❏ Funded Infrastructure (Drivers)
- ❏ Informed & engaged consumers & communities
- ❏ Linked Teams
  - ✓ Skillful TA, Purveyors, & Intermediaries
  - ✓ Competent and Confident Educators
  - ✓ Supportive Schools, Districts, and States
  - ✓ Engaged families, communities, and stakeholders
- ❏ Increasingly Hospitable & Aligned Systems
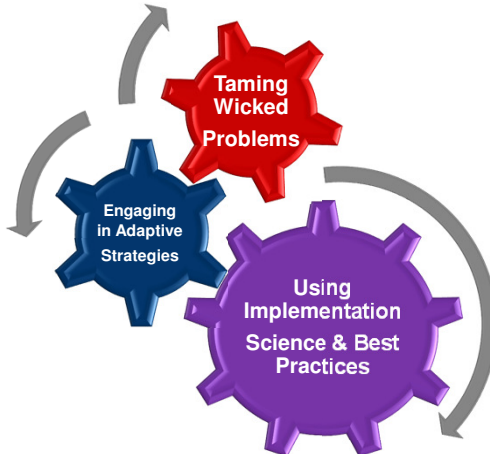- ❏ Leadership at All Levels

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What Will It Take to Change Hearts, Minds, and Behavior?

❑ Science and Data Related to
  ✓ Interventions and Programs
  ✓ Core Components and Fi_____ th Outcomes
  ✓ Implementation, Organi_____s Change
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  ✓ Skillful TA_____ _____mediaries
  ✓ Compet_____ _____ducators
  ✓ Supp_____ _____ricts, and States
  ✓ Eng_____ _____munities, and stakeholders
❑ Increas_____ _____table & Aligned Systems
❑ Leadership_____ _____ll Levels

…With consistent attention to Wicked Problems and Adaptive Challenges

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Shifting Gears

Taming Wicked Problems

Engaging in Adaptive Strategies

Using Implementation Science & Best Practices

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