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

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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
The Conversation Today

Wicked Problems

Adaptive Challenges

Implementation Science & Practice

The Conversation Today

Woman walking a tightrope with a bull below her.
The current system is designed "intentionally or unwittingly to achieve precisely the results it gets".*

* Quotation attributed to R. Spencer Darling

Use New, Effective Practices
Develop Implementation Infrastructure
Change System

This Transition is WICKED

The Conversation Today

Wicked Problems
Adaptive Challenges
Implementation Science & Practice

Current Systems/Process
Vision of Future Systems/Process

Transition Systems/Process

Goals for Today’s Session

Change Challenges

• Tame Problems
  – Often complicated (e.g. safety of nuclear generators, air traffic control)

• Wicked Problems
  – They are messy, devious, and fight back when you try to “solve” them

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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 theorist.
The “Cultural” Landscape

Zone of Complexity: Wicked Problems & Adaptive Challenges Live Here

Certainty

Adaptive Challenges

Implementation Science & Practice

Wicked Problems

The Conversation Today
Goals for Today’s Session

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)

Managing the Polarity of the Work
### Examples

<table>
<thead>
<tr>
<th>Technical</th>
<th>Adaptive</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Funding scholarships</td>
<td>• Reforming public education</td>
</tr>
<tr>
<td>• Building hospitals</td>
<td>• Providing affordable healthcare</td>
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<tr>
<td>• Increasing border security</td>
<td>• Immigration reform</td>
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<tr>
<td>• Developing malaria vaccine within a malaria-infected region</td>
<td>• Achieving 80% vaccination rates</td>
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</tbody>
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### 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

Adaptive

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

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
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
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Heifetz, Leadership without Easy Answers, 1996

What’s the Way Forward?
Shifting Gears: Ideas About a Way Forward

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

**Implemention Science**

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

- Multi-disciplinary
- Multi-sector
- Multi-national
+ Ongoing reviews of the literature


HTTP://NIRN.FPG.UNC.EDU
Experimental Data Show These Methods, When Used Alone, Are Insufficient:
• 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
What’s the Way Forward

Active Implementation Frameworks

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

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?
Active Implementation Frameworks

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

**STAGES**
- What

**DRIVERS**
- Use Data About Effective Implementation Processes
- 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?
1. **Clear description of the program**
   - Philosophy, values, principles
   - Inclusion – exclusion criteria

2. **Identified core intervention components** (aka, active ingredients, essential functions)

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

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

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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)

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

Most evidence-based “interventions” do not meet usability criteria

- Educators use interventions (not 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

<table>
<thead>
<tr>
<th>Critical Component</th>
<th>Ideal Implementation</th>
<th>Acceptable Variation</th>
<th>Unacceptable Variation</th>
<th>Unacceptable Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Component 1: Description</td>
<td>Description of implementer behavior</td>
<td></td>
<td></td>
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</table>

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

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
Active Implementation Frameworks

- **WHEN**
  - Implementation Stages
- **HOW**
  - Improvement Cycles
- **WHAT**
  - Effective & Usable Interventions
- **HOW**
  - Implementation Drivers
- **WHO**
  - Implementation Teams

Stages of Implementation
- **EXPLORATION**
  - Sustainability Planning
- **INSTALLATION**
  - Sustainability Planning
- **INITIAL IMPLEMENTATION**
  - Sustainability Planning
- **FULL IMPLEMENTATION**
  - Sustainability Planning

Individual Program Implementation Takes Time: 2 – 4 Years

Dean Fixsen & Karen Blase, National Implementation Research Network
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

Fixsen, Naoom, Blase, Friedman, & Wallace, 2005
### 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 (Transtheoretical Model of Change)

### 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?
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

Active Implementation Frameworks

WHAT
Effective & Usable Interventions

HOW
Implementation Drivers

WHO
Implementation Teams

WHEN
Implementation Stages

Improvement Cycles
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
- Help ensure sustainability and improvement at the organization and system levels
- Help guide leaders to use the right leadership strategies for the situation
Competency Drivers Aggravate Adaptive Challenges

**Performance Assessment/Fidelity**
- 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?”

How Competency Drivers Address Adaptive Challenges

Reduce feelings of loss and incompetence
- Ensure that confidence and competence 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
Active Implementation Frameworks

WHAT
Effective & Usable Interventions

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HOW
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WHO
Implementation Teams

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

What Do They Have in Common?
PDSA Cycles: Trial & Learning

**Plan**
- Decide what to do

**Do**
- Do it (be sure)

**Act**
- Make Adjustments

**Study**
- Look at the results

- Cycle
  - Do over and over again until intended benefits realized

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

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
Addressing Adaptive Challenges

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

Systems Trump Innovations

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
Goals for Today’s Session

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

Changing the Culture: Creating an Enabling Context

“‘The fault cannot lie in the part responsible for the repair.’”
Ashby (1956)

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

Addressing Adaptive Challenges

Current Systems/Process

Vision of Future Systems/Future

Transformation Zone

Use New, Effective Practices
Develop Implementation Infrastructure
Change System

Addressing Adaptive Challenges

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

Transformation Zones Address Adaptive Challenges

☑ Make use of an innovation in typical classroom and school settings (operationalize, fidelity, outcomes)
☑ Establish implementation supports (work on practical Drivers and Stages)
☑ Engage leaders in the PEP-PIP improvement cycle to align system components and functions
☑ Create capacity and momentum for larger scale changes
☑ Engage in iterative attempts to improve both practice and the enabling context
Active Implementation Frameworks

WHEN
- Implementation Stages

HOW
- Improvement Cycles

WHAT
- 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
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

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

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...With consistent attention to Wicked Problems and Adaptive Challenges

Shifting Gears

Engaging in Adaptive Strategies

Taming Wicked Problems

Using Implementation Science & Best Practices
See you in Dublin in 2015!

www.globalimplementation.org/gic

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### Thank You for Your Support

- Office of Special Education (OSEP) at DOE (SISEP TA Center)
- Annie E. Casey Foundation (EBPs and Cultural Competence)
- William T. Grant Foundation (Implementation Literature Review)
- Substance Abuse and Mental Health Services Administration (Implementation Strategies Grants; National Implementation Awards)
- Centers for Disease Control & Prevention (Implementation Research)
- National Institute of Mental Health (Research And Training Grants)
- Juvenile Justice and Delinquency Prevention (Program Development And Evaluation Grants)
- Administration for Children and Families (Child Welfare Leadership; Capacity Development Center, Permanency Innovations Initiative)
- Duke Endowment (Child Welfare Reform)
- Kate B. Reynolds Foundation (Healthy North Carolina)

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