Fixsen, Dean and Blase, Karen and Van Dyke, Melissa (2012) From Ghost Systems to Host Systems via Transformation Zones. [Report],

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U.S. Department of Education

Arne Duncan
Secretary of Education

Office of Vocational and Adult Education

Brenda Dann-Messier
Assistant Secretary

Division of Adult Education and Literacy

Cheryl Keenan
Director

March 2012

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This report is available on the Department’s website at: http://www.lincs.ed.gov.

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Over the past two centuries social reformers and educators have worked hard to include children from disadvantaged families, girls, racial and ethnic minorities, children with special needs, and young adults into an education system open to all. This was a struggle, and now a free and appropriate public education (FAPE) is available for all children from birth through high school graduation and beyond.

As a result of these struggles to include all children, current education systems are legacy systems. They are the fragmented remains of different times and a wide variety of approaches to reforming education. There is no ill will implied in this statement. Systems often have their beginnings in this piecemeal manner. The goals were inclusion and equality, and the effectiveness of the overall system was anticipated but was not the main focus of the reform efforts.

In the new millennium, the focus is shifting. Given the lack of improvement in education outcomes in the United States over the past decades, the emphasis now is on a free, appropriate, and effective public education system. The purpose of this Brief is to outline the convergence of advances in implementation, organization change, and system reinvention science and practice. The confluence of these fields is lighting the way for effective and efficient changes in large education and human service systems.

**Implementation**

We encourage readers to review the OVIE Brief *Implementing Literacy Programs to Improve Student Achievement* for background information on implementation science and best practices. That document summarizes the formula for success:

*Effective education practices X Effective implementation methods = Effective student outcomes*

As suggested in this formula for success, if teachers and staff do not fully and effectively use evidence-based education practices and other innovations then students will not benefit. Effective implementation practices are designed to support teachers as they engage in these new ways of providing education.

As a field, we are learning that implementation principles are like gravity: implementation factors are present and working all the time whether we intend them to be or not. We can take advantage of implementation components and use them purposefully to benefit students, or we can ignore them and take our chances with the inconsistent and sometimes undesirable learning trajectories we create in education environments (Blase et al., 2005; Fixsen et al., 2005; Greenhalgh et al., 2004).

**Organization Change and System Reinvention**

Current systems are ideally suited to produce current outcomes. If we want to produce different outcomes, the system will need to change (e.g. Brinshaw, Kowal, & Hassel, 2008). Systems exert powerful influences. Some influences are intended, others are unintended. Some influences are constructive, others sometimes are harmful. A few things about State and Federal education systems are becoming clearer:

1. Systems were developed in a piecemeal fashion over many decades.
2. Systems are in a constant state of change.
3. Current systems are ill suited to produce future intended outcomes.
4. Systems share many characteristics across education, human services, and other disciplines.
5. No one knows how all the system components work, individually or in relation to one another.
Given the power of the status quo, the work of changing organizations (e.g. schools, districts) and systems (e.g. State, Federal) must be thoughtful. Past attempts to change education often have produced less than desired outcomes and unintended side effects. For example, Manna (2008) reviewed the evaluation literature on federal education policies and their outcomes over the last five decades. Manna observed that, “federal education policies have made positive contributions, but usually they fall short of reaching their ambitiously-stated goals. [In addition] more federal involvement in elementary and secondary education has provided students and teachers with important opportunities or guarantees while simultaneously contributing to a complex and fragmented regulatory environment that federal, state, and local officials struggle to manage.”

1. Current education systems were not designed to support implementation of evidence-based practices and other innovations.
   a. Consequently, innovations are used in spite of the current system functions, roles, and structures.
   b. This is called the ghost system because innovations operate behind the scenes and do not last very long.
2. The goal is to reinvent the education system.
   a. In the future (starting now!) innovations will be initiated and sustained because of repurposed system functions, roles, and structures.
   b. This is called the host system because innovations will be fully supported and will thrive in hospitable organization and system environments.

The experiences of the past 50 years indicate that the status quo needs to change to better support evidence-based practices and other innovations in education.

1. Reinvention of education systems involves:
   a. Defragmenting current systems and
   b. Aligning system functions, roles, and structures more precisely with implementation supports for teachers
   c. In order to achieve desired outcomes for students.

The difficulty arises when trying to decide what to keep, what to change, and what to eliminate in order to support new and more effective programs and practices. This is the work done in a Transformation Zone.

**Transformation Zone**

It is impossible to make significant change simultaneously and successfully in all parts of a system. The Institute of Medicine examined these issues and concluded that, “Inducing major change in large organizations is much more difficult than simple behavioral changes because organizations themselves are problematic. Additionally, most organization designs are outdated and do not reflect current environments, requiring more comprehensive organizational change” (Chao, 2007).

To initiate and manage systems change, Implementation Teams begin their work in a Transformation Zone. A Transformation Zone in education is 3 or 4 geographically contiguous districts that together include 50 or more schools. The goal is to work with the districts in the Transformation Zone to develop an infrastructure for implementation that will have the capacity to improve student outcomes statewide.

The Transformation Zone is critical to initiating changes at practice, organization, and system levels. Changes can be initiated in a few schools and districts, errors can be detected and corrected rapidly, facilitators and barriers can be identified and strengthened or eliminated, and implementation supports can be established in buildings and districts.
The smaller scale afforded by the Transformation Zone allows capacity to be developed and transformative changes to be made while limiting unintended negative outcomes. This process is very different from typical pilot tests, demonstrations, or exhortations to use innovations. The Transformation Zone, while limited in size, is sufficiently large to ‘disturb the system’. A ghost system will not be possible, in part because the work in the Transformation Zone is thoughtfully monitored. Attention to what is working and what is not working helps limit harm, and focuses on developing supports needed to assure intended outcomes. The whole process is done with an eye on defragmenting the system, removing barriers to effective outcomes, and creating the capacity to make use of a variety of evidence-based approaches and other innovations statewide.

The result of the work in a Transformation Zone is a clear view of the components of the formula for success:

1. The innovative education practices are clearly identified and operationalized,
2. The implementation methods to support those education practices are developed, and
3. The intended results have been achieved for students.

The use of the Transformation Zone to defragment and align system functions to create a host system is the work of system reinvention methods.

**System Reinvention**

As Chao noted, effective and sustainable changes at the practice level require changes in organization and system supports for the education innovations and for the new implementation infrastructure. These changes are worked out at the school, District, and State level in the Transformation Zone before expanding to the rest of the State.

Challenges to using education innovations fully and effectively in every school statewide are anticipated. The exact nature of those challenges and their solutions are more difficult to predict. The adaptive challenges arise...
as an Implementation Team begins helping teachers and staff members make full and effective use of evidence-based programs or other innovations in their interactions with students.

As challenges to uses of the innovation arise, these issues are brought to the attention of district leaders or, if needed, the State Management Team. Monthly meetings with these Executive Management Teams are essential to making the organization and system changes needed to support and sustain effective Implementation Teams and effective education practices for all students. In this way, systemic barriers are removed and facilitators are strengthened to support improved student outcomes.

The first adaptive challenges are dealt with in a constructive way as a result of activities in the Transformation Zone. As the Transformation Zone expands to include more districts, new challenges will arise resulting in more changes to the current systems. As this process continues, the system itself is reinvented to more precisely and functionally support evidence-based interventions and implementation supports within districts and the entire State education system. This is in contrast to effective innovations changing to fit the current system and often ‘adapting out’ the functional components that make them effective.

As implementation capacity expands and adaptive issues are resolved, the Transformation Zone soon encompasses all districts in the State and the ghost system has become a host system for continual improvement of education outcomes for generations to come.

**Summary**

Student outcomes can be improved statewide with greater effectiveness and increased efficiency.

An infrastructure for implementation can be established to support the successful uses of multiple evidence-based programs or other innovations statewide. This infrastructure is designed to bring together and build on the strengths of current siloed efforts related to Statewide System of Support, school improvement efforts aimed at low performing schools, and the work of various initiatives designed to improve reading, writing, arithmetic, behavior, and social responsibility.
Making transformative changes in education has risks that are inherent in any change process. The activities within a Transformation Zone can mitigate the risks while building capacity to improve education substantially.

With due diligence and consistent leadership support, a State can move from a ghost system to a host system within 5 to 7 years. This may seem like a long time, but what initiatives began 7 years ago? What statewide benefits have been created for students from those initiatives? Can we do better in the next 7 years?

**References**


**About the Authors**

Dr. Dean Fixsen is Research Professor, Co-Director and founding member of the National Implementation Research Network (NIRN). Dr. Karen Blase is Research Professor, Co-Director and founding member of the National Implementation Research Network (NIRN). Melissa Van Dyke is Director of Technical Assistance Services at the National Implementation Research Network (NIRN), The University of North Carolina at Chapel Hill.