Organizational Coherence in the context of School Improvement: The Development of a Coherence Framework

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Abstract

Coherence is an organizational property describing the extent that a school coordinates its resources, systems, and processes with a collective focus on improving student outcomes. This paper reports the development of a coherence framework that describes the practices and outcomes required to coherently implement a designed improvement strategy. We discuss the concept of coherence, and then draw on the organizational and educational literature to propose a framework in which leadership practices guide the crafting of organizational practices which cohere with the adopted reform strategies. The outcome of these combined practices is a shared enacted theory of improvement. The framework and its associated measurement rubric provide specific guidance for researching and promoting coherent school improvement through designed initiatives.
Purpose

This paper describes the development of a coherence framework specifying the leadership and organizational practices necessary for the coherent implementation of a designed improvement strategy in a high school context. The term coherent is used here to describe schools that integrate improvement strategies into their routines, systems, interactions and tools, both inside and outside the classroom. These connections embed reform strategies into the social, human and technical memory of the school creating greater likelihood of sustained student outcomes (Bishop, Berryman, Wearmouth, & Peter, 2012; Newmann, Smith, Allensworth, & Bryk, 2001; Timar & Chyu, 2010). A designed improvement strategy is one developed by a provider external to the school that specifies a set of “educational practices that can be replicated in many school settings” (Rowan, Correnti, Miller, & Camburn, 2009, p. 11). Often these strategies are intended to help educators reduce inequities in the engagement and achievement of students from different social groups (Borman, Hewes, Overman, & Brown, 2003).

Developing sufficient coherence to sustain a reform effort is a considerable challenge: only a quarter to a third of schools develop sufficient levels of coherence to support sustained improvement (Bishop et al., 2012; Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Newmann et al., 2001). Despite these challenges, research provides guidance about how schools can embed their reform strategies. This paper aims to identify the component practices required for coherence around an initiative and to define outcomes that signal the extent to which coherence has been accomplished. The framework is specified at a level of detail that enables educators and researchers to use it to evaluate and improve the coordination and coherence of a reform effort.
Theoretical framework

Authors agree that organizational coordination is not a rigid alignment of structures, processes and rules, but a dynamic, forming and reforming of social practices over time (Honig & Hatch, 2004; Jarzabkowski, Lê, & Feldman, 2012). In this account, coordinating routines develop as teachers and leaders interact to accomplish a task or goal. Successive efforts to coordinate around a task create an abstract ostensive version of the routine that is shared amongst organizational members. This routine is used as a template to simplify future efforts to achieve the same goal or task (Feldman & Pentland, 2003).

When practices are coherent, the result is improved organizational outcomes, such as shared understandings about the sequence of tasks, collective and individual accountabilities, and agreement around quality outcomes (Jarzabkowski et al., 2012). For instance, Newmann et al. (2001) studied instructional program coherence and found social practices which involved teachers in the selection and ongoing refinement of common curriculum, assessments, materials and resources enhanced organizational outcomes including teacher ownership of instructional improvement and maintenance of group instructional resources. However, when teachers worked autonomously, instructional program coherence suffered.

Coordination of new improvement strategies occurs simultaneously by enacting existing mechanisms, and generating new ones that fit better with the strategy (Jarzabkowski et al., 2012; Spillane, Parise, & Sherer, 2011) and make clearer links to student outcomes. Accordingly, school leaders must question how well existing routines coordinate the reform strategy. This is one of the multiple roles leaders perform in supporting and expecting coherence such as using school-wide goals and strategies to simplify decision-making, linking disparate initiatives and making choices to build bridges or buffer relationships with external stakeholders (Honig & Hatch, 2004). In summary, leaders are essential catalysts for coherent organizational practices. Theirs is a balancing act: setting expectations and holding
their team to account while supporting them by establishing the conditions that enable effective performance (Elmore, 2004; Mintrop, 2012).

Figure 1 portrays the ‘theory of action’ for how coherence, when wrapped around a designed improvement strategy, increases the likelihood of improved student outcomes in high schools. On the left-hand-side, leaders catalyze improvement by setting the tone, through their behavior and actions, about the requirement for organizational coherence. The middle of the diagram portrays the designed school improvement initiative interacting with organizational practices that enhance coherence and sustain the reform strategy. This model assumes that schools using coherent organizational practices to implement and sustain an improvement strategy are more likely to obtain improved organizational outcomes, such as more teachers demonstrating exemplary practices in the designed strategy, and that such organizational outcomes are a prerequisite for improved student outcomes.

![Coherence Framework Diagram](image)

*Figure 1. A theory of action for how coherent leadership and organizational practices wrap around a designed improvement strategy to improve organizational and student outcomes*

**Methods**

Initially the literature search focused on peer-reviewed journals and aimed to identify whole-school models of the leadership and organizational practices required to coherently
implement a designed improvement strategy. Few studies met these criteria and so the search was widened to include broader sources and frameworks for coherence between schools and districts or states.

The literature on frameworks was supplemented with a search in peer-reviewed journals for more specific evidence about the operation of specific coherence processes and organizational outcomes. This search was based on key words derived from the framework and the literature on coherence and coordination. Key words included: goal setting, organizational alignment, strategic resourcing, capability development, student engagement, caregiver engagement, professional learning communities, instructional coherence and organizational learning. Key words were also searched in combination when necessary to achieve more precise search results. The literature was used to elaborate the high-level framework and define rich indicators for coherence.

**Data sources**

Table 1 presents the five coherence frameworks that were identified in the literature search. For each framework, the columns describe the purpose of the framework, the evidence used to develop it and its key dimensions. In the purpose column a distinction is made between coherence frameworks and school improvement frameworks. Coherence frameworks are based on organizational theory about the best ways of coordinating activity around improvement. School improvement frameworks describe a broader set of organizational features, including some coordinating practices, differentiating high and low performing schools. For example, we have categorized Bryk et al.’s (2010) essential supports framework as a school improvement framework because it includes both coordinating practices (e.g. extent of collaboration amongst teachers) and other features of high performing schools (e.g. extent that teachers apply particular instructional pedagogies in a classroom).
The Table 1 *purpose* column presents the different contexts for each model (elementary, middle, high school and district coherence) and distinguishes between whole-school and instructional program models. Instructional program models were included because they provided rich exemplars of high school senior leader and teacher leader practices leading to improved teaching and learning.

The *basis for development* column shows that all frameworks drew on the research literature in their area and some, but not all, have not been tested empirically. The PELP Framework and Internal Coherence frameworks were developed primarily to support practitioner development. The *framework dimensions* column shows the variety of concepts used to define and/or measure coherence in the literature. Closer reading of the dimensions and supporting literature revealed commonalities that were used to develop this paper’s coherence framework.
### Table 1

**Summary of the coherence frameworks in the education literature**

<table>
<thead>
<tr>
<th>Framework and Authors</th>
<th>Purpose</th>
<th>Basis for development</th>
<th>Framework dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Supports for Improvement (Bryk et al., 2010)</td>
<td>Whole-school improvement framework for elementary schools</td>
<td>The key research output from Chicago’s decentralized school reform longitudinal study on a broad range of indicators at 401 elementary schools over seven years. The essential supports are the factors differentiating high and low performing schools.</td>
<td>(1) Instructional guidance (2) Parent, school and community ties (3) Professional capacity (4) School learning climate (5) Leadership as a driver for change</td>
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<tr>
<td>Goals, Pedagogy, Institutions, Leadership, Spreading, Evidence, Ownership (GPILSEO) model (A. R. Bishop et al., 2012; R. Bishop, O’Sullivan, &amp; Berryman, 2010)</td>
<td>Whole-school coherence framework for high schools</td>
<td>Developed in New Zealand during the Te Kotahianga project as a guide for 33 leaders implementing a culturally responsive pedagogy. The model describes a list of essential classroom, school and system level elements required to sustain and spread the reform. Based on evidence from the project and a review of the school improvement and change leadership literature.</td>
<td>(1) Goals focusing on improving student participation and achievement (2) Developing a new pedagogy in depth (3) Developing new institutions and structures (4) Developing leadership that is responsive and proactive (5) Spreading the reform to include others (6) Evidence of the progress of the reform (7) Taking ownership</td>
</tr>
<tr>
<td>Public Education Leadership Project (PELP) Framework (Childress, Johnson, Grossman, &amp; Elmore, 2007)</td>
<td>District-level coherence framework</td>
<td>Tool developed to support district leader professional development by the PELP. Based on the business and education literatures and strongly influenced by the business perspective on organizational alignment. The model was refined based on feedback from District leaders.</td>
<td>(1) Instructional core (2) Theory of change (3) Strategy (4) Culture (5) Structure (6) Systems (7) Resources (8) Stakeholders (9) Environment</td>
</tr>
<tr>
<td>Internal Coherence Framework (SERP Institute, 2012)</td>
<td>Coherence around instructional improvement across classrooms for middle and elementary schools</td>
<td>A set of practices, beliefs and processes that support improvements in instructional practice. The assessment protocol and tools were developed on the basis of the literature on organizational learning, accountability, collective efficacy, effective teams and shared practice literature. The protocol has been field-tested and developed in 21 low performing schools in Boston.</td>
<td>(1) Instructional Leadership (2) Organizational Structure and Process (3) Leadership for Learning (4) Collective understanding of effective practice (5) Efficacy and accountability</td>
</tr>
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### Purpose

Coherence around instructional program for elementary schools

### Basis for development

Developed based on longitudinal research over three years in 222 schools, including 11 in-depth field studies, plus a literature review focusing on “learning, motivation, organizational productivity and school effectiveness” (p. 299). Measures include survey items and a 4-point scale rubric for detailed analysis of instructional program coherence.

### Framework dimensions

1. **A common instructional framework guiding curriculum, teaching, assessment and learning** (alignment across grades and into key student support programs)
2. **Staff working conditions support implementation of the framework** (mutual accountability, selection practices, performance management, professional development)
3. **School allocates resources such as funding, materials, time and staff assignments to advance the school’s common instructional framework**

### Findings

Figure 2 presents our framework defining the organizational and leadership practices, and associated organizational outcomes, likely to be observed in a school that is working coherently to implement a designed improvement strategy. The framework has three concentric circles. The outer circle describes the leadership and organizational practices driving coherence. The middle circle describes the organizational outcomes resulting from coherent leadership and organizational practices. The inner circle, also describes an organizational outcome, *a shared and clear theory of improvement*. The circles are divided into four quadrants, each representing specific sets of organizational practices and outcomes: (a) align strategies to achieve goals; (b) establish conditions for learning and improvement; (c) build caregiver and student engagement; and (d) promote teacher and leader learning and improvement. The outcome in the center of the diagram rests across all four quadrants as it is assumed that a clearer theory of improvement, shared by a greater proportion of teachers and leaders, develops as the practices in the other quadrants are executed. The arrow pointing at
quadrant A, clear and specific goals for student achievement highlights the requirement for improvement strategies to be linked to broader school goals (Robinson, Lloyd, & Rowe, 2008).

**Figure 2.** Coherence practices and outcomes around a designed improvement strategy

To increase the specificity and utility of this framework we developed a rubric defining approximately four indicators for each organizational practice and outcome on a four-point scale (1 = no evidence of coherent practice; 4 = coherent practice almost all of the time). The scoring metric was based on a metric used to measure instructional program coherence (Newmann et al., 2001). Below is a description of the literature that shaped the indicators for the quadrants in Figure 2:
Align strategies to achieve goals

Improvement initiatives sitting in isolation clutter up school reform agendas. The indicators gauge how leaders link initiatives to broader school goals and monitor progress (Timar & Chyu, 2010). They also assess the ways leaders evaluate how initiatives fit together to deliver on student goals, and then make strategic decisions to accept, refuse or adapt initiatives (Hatch, 2001; Timperley & Robinson, 2000).

Establish the conditions for learning and improvement

This coherence practice involves obstacle removal, so that resource constraints and existing processes, systems and tools are aligned with the improvement design (Stringfield, Reynolds, & Schaffer, 2008). Indicators measure the extent that commonly reported obstacles, such as inadequacy of student achievement data and teacher time for individual and group learning, are eliminated and become enablers rather than obstacles (Robinson, McNaughton, & Timperley, 2011; Timperley & Robinson, 2000).

Build caregiver and student support

Messages and expectations need to be aligned across all interactions with caregivers and students to create engagement and build deeper and trusting relationships as a resource for further school improvement (Bishop et al., 2010; Bryk et al., 2010). This indicator recognizes the importance of embedding initiatives in all student and caregiver routines, tools and interactions.

Promote teacher and leader learning and improvement

To achieve outcomes such as teacher efficacy and understanding of exemplary practice, indicators include evidence of teachers performing interdependent work around a few collective priorities associated with the designed improvement. Enabling this are common curriculum, assessment and instructional strategies, and a cohesive package of team
and individual professional learning experiences (Newmann et al., 2001; SERP Institute, 2012; Timperley, 2005).

To date, the trialing of the framework and associated rubric has included a focus group of experienced high school leaders who contributed to indicator selection and revision. Rubric trials will be conducted in 2014 prior to an empirical study of the relationship between coherence and student achievement in a sample of high schools participating in a designed improvement strategy.

Scholarly significance

The problem of creating coherence around reform is a significant theoretical and practical challenge. This paper makes a significant scholarly contribution by bringing together a disparate research base on coherence and coordination which stretches across the organizational, management and educational literatures, and distills it in a way that makes its implications clear for the achievement of coherent reform. Our focus on high schools is important because most of the empirical work on coherence in educational organizations has been conducted in elementary schools (Bryk et al., 2010; Spillane et al., 2011).

The detail of our framework and indicators has benefits for educational leaders and researchers. Detailed indicators at each point on the four-point scale, clearly communicate the leadership and organizational practices required at varying levels of coherence. The descriptors provide educational leaders with tangible next steps on how to develop their coherence around an intervention. In addition, the framework distinguishes between organizational practices and organizational outcomes. Organizational outcomes can be used as leading indicators of progress that are likely to precede student outcome gains. This supports leaders and researchers in determining the impact of leadership practices within shorter timeframes. In summary, the framework provides a research and development tool
that sharpens and refines our descriptions of the practices required to build coherence around a designed improvement strategy.

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References


