



THE PRACTICE OF INSTRUCTIONAL IMPROVEMENT: IMPROVEMENT, (INFRA)-STRUCTURE, & INSTRUCTION

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Abstract

In this presentation, I argue that research and development work on sustainable school improvement and school effectiveness must engage the practice of instructional improvement. To make this argument, I do three things. First, I argue that research and development work in the area of school improvement and school effectiveness must attend to the how and the why of school improvement, not just the what. To engage with the 'how' and the 'why', we have to study the practice of instructional improvement. I examine the entailments of framing practice as a social, situated, and distributed activity. Second, in an effort to explicate the relationship between human interactions and situation (what I refer to as infrastructure), I explore the case of organizational routines and formal organizational positions. Third, arguing that the research and development work on the practice of instructional improvement must be anchored in instruction (i.e., teaching and learning), I consider the entailments of taking instruction seriously in our research and development work.

A. Introduction

School improvement and school effectiveness have garnered attention around the globe from policymakers, researchers, practitioners, and philanthropists. Over the past half-century, scholars have generated a considerable body of empirical knowledge on school improvement and school effectiveness – some of which is informing contemporary efforts to improve schools. This work has been conducted in several sub-fields within education, including school administration and leadership, school organizations, policy implementation, learning sciences, and so on.

In my presentation today I urge us to grasp the opportunity provided by the interest of policymakers, philanthropists, and practitioners. I will argue that one way in which we can do this, as a community engaged in research and development work on sustainable school improvement and school effectiveness, is to engage seriously and systematically with the *practice of instructional improvement*. My presentation is organized like this: First, I argue that research and development work in the area of school improvement and school effectiveness must attend systematically to the *how* and the *why* of school improvement, not just the *what*. To engage with the 'how' and the 'why', we have to study the practice of



instructional¹ improvement. Second, in order to explore the entailments of my situated and distributed framing of instructional improvement practice, I explore relations between human interactions and organizational (and system) infrastructure using the case of organizational routines and formal organizational positions. Third, arguing that the research and development work on the practice of instructional improvement must be anchored in instruction (i.e., teaching and learning), I consider the entailments of taking instruction seriously in our research and development work.

Focusing on The *Practice* of Instructional Improvement²

My central argument in this presentation is that research on school improvement should be, at least in part, about studying the practice of instructional improvement in schools and education systems.³ Researching practice, whether in the classroom or schoolhouse, involves more than telling tales or relaying stories *about* practice. We need to develop some taken-as-shared understanding of what we mean by practice and marshal some conceptual tools to frame our research. Explicit frameworks guide our data collection and focus our data analysis as researchers. It is one of the things that distinguishes our work from journalism. Theoretical, empirical and indeed practical frameworks are like scaffolding, allowing us to access and focus in on particular aspects of the phenomena under investigation.⁴ Frameworks give us access to some aspects of a phenomenon while leaving other aspects in the background.

We can frame practice in a variety of ways. Many frameworks, either implicitly or explicitly, equate practice with the actions or behaviors of individual organizational members and, by extension, as a function of their knowledge and skills. I find frameworks that focus on individual actions or behaviors limiting for studying practice for various reasons, a discussion of which is beyond the scope of my presentation.

Instead, in studying practice I favor conceptual frameworks that foreground the *social*, *situated*, and *distributed* aspects of practice. Such frameworks have their theoretical roots in areas such as micro-sociology, socio-cultural activity theory, and distributed cognition, and they foreground interactions, not just individual actions.⁵ Teachers, school leaders, and school stakeholders act in school organizations and systems, but do so in relation to one another and others. Framing practice in this way means we have to acknowledge and grapple with two issues in our research:



- We shift from an exclusive focus on the actions of individuals to the web of *interactions* among school staff and school stakeholders as mediated by aspects of the situation. In this framing, practice is *emergent* because while individuals may, more or less, plan to act in particular ways, it is often difficult if not impossible to anticipate how others will react. Improvisation is inevitable if we frame practice in this way and as a result, we *cannot* design instructional improvement practice, we can only *design for* that practice.
- School staff and stakeholders do not interact directly with one another: their interactions are mediated by aspects of the situation, both proximal (e.g., the grade level meeting, school norms) and distal (e.g., national standards, state or national student assessments) aspects. In this framing, the situation as instantiated in practice both defines and is defined by practice. Aspects of the situation – physical, normative, cognitive, regulative – define practice from the inside by framing and focusing interactions among school staff and stakeholders as they engage in the work of instructional improvement. At the same time, in these interactions among school staff and stakeholders, aspects of the situation are reproduced and sometimes transformed.

This framing has several entailments for studying the practice of instructional improvement and indeed for development work on instructional improvement. Two examples come to mind. First, research on school improvement that focuses exclusively on the actions of individuals is insufficient to generate robust and reliable empirical accounts of the practice of instructional improvement. Second, school improvement development efforts that focus chiefly on improving the human capital of individuals (e.g., the school principal, the instructional coach) are unlikely to contribute to meaningful improvements in the core technology of schooling - instruction.

Interactions & Infrastructure: Organizational Routines, Formal Positions, etc.

In my framing of instructional improvement practice, I have afforded a central place to aspects of the situation. Further, I have offered a rather strange account of the relations between aspects of the situation and human interactions, one in which the situation defines interactions among school staff and stakeholders and at the same time the human interactions define the situation. In an effort to make this strange relationship more concrete, I want to dwell on relations between interactions and aspects of the situation. In doing so I underscore the importance of a design perspective for research and development work on school improvement.⁶



Aspects of the situation such as formal positions, organizational routines, rules, regulations, and so on focus and center on who, what, and how school staff and stakeholders interact with one another. In doing so, they define everyday practice in school and education systems, including teaching practice and instructional improvement practice. These aspects of the situation do not simply “influence” what individuals do or plan to do from the outside in; rather, they do so from inside everyday practice. Aspects of the situation enable some types of social interactions about some things while inhibiting or constraining other types of interactions and discussion about other things.⁷ In this way, aspects of the situation, more often than not taken for granted and thus unnoticed and unacknowledged by those in the situation and often by those observing it, fundamentally define practice for good, bad, and indifference.

I consider two aspects of the organizational infrastructure in my presentation, but here I will dwell on one: Organizational routines. Organizational routine refers to “a repetitive, recognizable pattern of interdependent actions, involving multiple actors”.⁸ Organizational routines are staples in schools and include teacher evaluations, teacher hiring, school improvement planning, grade-level meetings, and student assemblies. They have something of a bad rap in organizational theory and school reform literature, blamed for inertia and opposition to improvement efforts. Recent work, however, suggests that organizational routines can also be critical in transforming business as usual in organizations such as schools.⁹

There are both pragmatic and conceptual reasons for using organizational routines (and infrastructure more broadly) to frame research on instructional improvement practice. From a pragmatic standpoint, some research suggests that organizational routines are an important mechanism in school-level efforts to improve schools.¹⁰ Further, organizational routines have featured prominently in external efforts to transform work practice in schools. For example, organizational routines are a key feature of many Comprehensive School Reform (CSR) models.¹¹ Similarly, policymakers often mandate that schools implement particular organizational routines (e.g., school improvement planning, walkthroughs, lesson study) in an effort to improve schools. Organizational routines also have several conceptual affordances with respect to the study of school improvement practice. First, routines frame and focus our attention on the *interactions* among school staff, getting us beyond behavior of any one individual. Second, organizational routines focus our attention on “patterned” activity, rather than unique occurrences.¹² Focusing on patterns of interaction is critical both to understanding current practice and *efforts to improve*



that practice in schools. Third, organizational routines enable us to examine relations between social structure and agency as a dialectical: Using an organizational routine frame, we are less likely to attribute change or constancy in practice *entirely* to either the proactive decisions of school heroes and heroines *or* to their reaction to social structure. Instead, practice is viewed as taking form in the interactions among school staff – interactions that are only possible because of a social structure (e.g., organizational routines, language, and so on), a social structure that in turn is maintained and sometimes transformed through everyday interactions among school staff.

Conceptually we can think of organizational routines as having both *ostensive* and *performative* aspects and the relations among the two are critical in understanding school improvement. Building on Latour's analysis of power, we can frame organizational routines as existing in principle (i.e., their ostensive aspect) and in practice (i.e., their performative aspect).¹³ The *ostensive aspect* refers to "the ideal or schematic form of a routine ... the abstract, generalized idea of the routine".¹⁴ For example, the ostensive aspect of organizational routines such as 'learning walks' or 'walkthroughs' more or less outline who should participate in a walk and how often, the steps involved in performing a walk, what data should be considered during classroom visits, how participants should deliberate about their observations, among other things. Viewed from the ostensive aspect, organizational routines are part of the formal structure, just like formally designated positions (e.g., teacher, assistant principal) or formal documents (e.g., school improvement plans). The *performative aspect* of organizational routines refers to "specific actions, by specific people, in specific places and at specific times. It is the routine in practice".¹⁵ In co-performing an actual learning walk or walkthrough, participants in a particular school have to improvise. For example, as they negotiate the diagnostic meanings of particular pieces of student writing or mathematics work in a particular classroom, the ostensive script offers only broad guidance (e.g., avoid evaluative statements), requiring participants to improvise.

Together, the ostensive and performative aspects incorporate the organizational routine by design and in use (and by extension other aspects of the situation). Importantly, conceptualizing routines as both ostensive and performative allows us to explore relations between structure and human agency in practice. As part of the social structure, the ostensive provides a broad script that enables and constrains everyday instructional improvement practice. But, it is in the particular performances of the routine that school staff and stakeholders have the potential to exercise some agency in shaping the particulars of the routine in practice at a particular time and place. The emergent nature of practice coupled with the



abstract nature of ostensive scripts so they are applicable in multiple places and times, school staff have to improvise in their co-performance of organizational routines. Sometimes these improvisations can contribute to changes in the ostensive aspect. I consider several examples in my presentation from my research in schools in an effort to explicate the relationship between the ostensive and the performative aspects.

The Entailments of Engaging with Instruction

Next I turn to instruction - the core technology of schooling - as an essential consideration in investigations of instructional improvement. Such an acknowledgement involves much more than studying the *effects* of school improvement efforts on instruction, though that is important. Similarly, this call out to instruction involves more than studying the correlates, or those factors associated with more or less effective schools, though that too is important. Instruction is not simply a dependent variable in the work of school improvement; it is both the object and the subject of the work. It is an important explanatory variable, not just an outcome variable, for research on school improvement.

With some notable exceptions, instruction has not featured prominently in school improvement research, reflecting in part the segmentation of education research: Scholarship and scholars are divided up by neat specializations that often do not map easily onto the work of improving instruction. Some research student learning, often in one subject such as mathematics or science, others study teaching, often in a particular school subject, others study school leadership or school organizations, still others study education policy and education systems. I could go on. Such specializations are in many respects inevitable in the academy, but they bring their share of challenges for research and development work on instructional improvement. While work in the instructional leadership tradition put teaching on the map in school improvement research, it offered limited insights into how this work was actually accomplished – the practice of instructional improvement – and how the school subject might matter in the work.¹⁶

Treating teaching as a potentially important explanatory variable in our research on instructional improvement necessitates getting away from views of teaching as a monolithic or unitary practice. Taking teaching seriously in researching the practice of instructional improvement, we have to develop more sophisticated and nuanced conceptualizations of teaching. Teaching is a multi-faceted and complex practice. At least four aspects of teaching are important to research on the practice of instructional



improvement:

- Teachers don't just teach. They teach mathematics, science, language, and so on. Regardless of whether they are subject specialists, secondary schoolteachers, or generalists, the subject matters in how teachers think about teaching and efforts to improve it. If teachers' conceptions of teaching differ by school subject, then the practice of instructional improvement is also likely to differ depending on the subject. Indeed, recent research documents differences in the practice of leading and managing school improvement in schools and school systems depending on the school subject.¹⁷
- Commentators sometimes debate whether teaching is a craft or a technical practice. But, teaching is neither inherently a craft nor a technical practice. Rather, teaching is socially constructed or defined, and how it is defined varies across place and time. The manner in which teaching is defined in an education system at a particular time has implications for how the practice of instructional improvement is likely to be organized in that system. For example, if teaching is defined more as a craft, then we might hypothesize that the work of instructional improvement is likely to be lead and managed more organically or by the profession, whereas if teaching is defined more as a technical activity, it is more likely to be managed by school administrators and policymakers. Of course, in many education systems – perhaps most – teaching is more often than not defined as a hybrid of these 'ideal' types.¹⁸
- Teaching is a social practice. It is co-produced by teachers and students in interaction with, and on, particular materials including both the instructional material (e.g., mathematics, science) and curricula.¹⁹ This framing of teaching is in stark contrast with popular images of the practice and indeed with the images put forth in many policy documents. Acknowledging the social nature of teaching practice has entailments for how we study and develop the practice of instructional improvement. On a somewhat basic level, it suggests various pathways by which instructional improvement practice might connect with teaching practice. Too often we dwell on relations between school improvement efforts and teachers. However, if we see teaching as a co-production we unearth numerous other pathways worth investigation. For example, school improvement efforts might connect with teachers, students, or with materials – all key elements of teaching practice. Or, school improvement efforts might connect with different combinations of teachers, students, and materials, such as



an organizational routine designed to improve teaching that simultaneously engages both teachers and students.

B. Conclusion

My presentation dwells mostly on the school level for various reasons – space and readability chief among them. However, much of what I say about schools can be applied to organizations and organizing at other levels of the ‘education system’ (e.g., local government, state government, federal government) with some adaptation. It can also be applied to ‘extra system’ organizations, increasingly important actors in the education sector. Further, a focus on the practice of instructional improvement, as framed in my presentation, lends itself to a consideration of school improvement that attends to both intra- and inter-organizational practice. This is important because too often our research and development work focuses too narrowly on one level of the education system treating the other levels, if at all, as context or input to the work under study at that level. A system-level approach is necessary in our research and development work so that we go beyond an exclusive focus on any one level of an education system to consider the nature of instructional improvement at different levels and across different levels. We can observe practice at multiple levels, from the statehouse to the schoolhouse, and the day-to-day practice of education systems in which instructional improvement gets worked out often stretches across such levels.

Most of the research and examples I referred to in this presentation are drawn from my research and development work in the U.S., a function of my own intellectual biography. My presentation, however, was intended for an international audience of the sort that ICSEI does such a wonderful job of convening annually. After all, school improvement is a near universal concern and a big and growing business around the world. My core arguments and the conceptual tools I sketch can be applied in research and development work on school improvement around the world. Such application will necessitate some careful *adaptation* to reflect the unique nature and circumstances of the practice of instructional improvement in different countries. These cross-national differences include (but are not limited to) things such as arrangements for governing education, goals of schooling, organization of the education system, and cultural differences. We can learn from work in other countries as long as we are careful in translating lessons about the practice of instructional improvement from one education system to another. Cross-national studies that systematically investigate the practice of instructional improvement across multiple countries simultaneously offer great promise for generating new empirical insights into the



practice of instructional improvement. An important first step in carrying out such work involves getting clear about the core constructs - the conceptual tools - that will focus and frame such work.



Notes

¹ For readability purposes, in this paper I use the term instruction and teaching interchangeably. While I acknowledge that the term instruction has a particular and rather pejorative meaning in some parts of the world, that is *not* the meaning intended here. By instruction I mean school/classroom teaching.

² My most recent thinking about practice, reflected in part in this section, has been greatly informed by a two-year collaboration with Jeannette Colyvas and Judith Warren Little on a paper (in progress) that focuses on how practice is and might be conceptualized in education research.

³ James P. Spillane and Karen Seashore Louis, "School Improvement Processes and Practices: Professional Learning for Building Instructional Capacity," *Yearbook of the National Society for the Study of Education* 101, no. 1 (2002).

⁴ Frank K. Lester, "On the Theoretical, Conceptual, and Philosophical Foundations for Research in Mathematics Education," *ZDM* 37, no. 6 (1995); James P. Spillane, "Data in Practice: Conceptualizing the Data-Based Decision-Making Phenomena," *American Journal of Education* 118, no. 2 (2012).

⁵ Stephen R. Barley, "Coalface Institutionalism," in *The Sage Handbook of Organizational Institutionalism*, ed. Royston Greenwood, et al. (Los Angeles: SAGE, 2008); Edwin Hutchins, *Cognition in the Wild* (Cambridge, MA: MIT Press, 1995); Tim Hallett, "The Myth Incarnate: Recoupling Processes, Turmoil, and Inhabited Institutions in an Urban Elementary School," *American Sociological Review* 75(2010); James P. Spillane and John B. Diamond, *Distributed Leadership in Practice* (New York: Teachers College Press, 2007).

⁶ James P. Spillane, "The Practice of Leading and Managing Teaching in Educational Organisations," in *Leadership for 21st Century Learning: Educational Research and Innovation*, ed. OECD (Paris: OECD Publishing, 2013); Lauren B. Resnick and James P. Spillane, "From Individual Learning to Organizational Designs for Learning," in *Instructional Psychology: Past, Present and Future Trends: Sixteen Essays in Honour of Erik De Corte*, ed. Lieven Verschaffel, et al. (Amsterdam: Elsevier Ltd., 2006).

⁷ James P. Spillane, *Distributed Leadership* (San Francisco: Jossey-Bass, 2006).

⁸ Martha S. Feldman and Brian T. Pentland, "Reconceptualizing Organizational Routines as a Source of Flexibility and Change," *Administrative Science Quarterly* 48, no. 1 (2003): 311.

⁹ Ibid.; Spillane and Diamond, *Distributed Leadership in Practice*; James P. Spillane, Leigh M. Parise, and Jennifer Z. Sherer, "Organizational Routines as Coupling Mechanisms: Policy, School Administration, and the Technical Core," *American Educational Research Journal* 48, no. 3 (2011); Jennifer Z. Sherer and James P. Spillane, "Constancy and Change in School Work Practice: Exploring the Role of Organizational Routines," *Teachers College Record* 113, no. 3 (2011).

¹⁰ Spillane, Parise, and Sherer, "Organizational Routines as Coupling Mechanisms: Policy, School Administration, and the Technical Core."

¹¹ Donald Peurach, *Seeing Complexity in Public Education: Problems, Possibilities, and Success for All* (New York: Oxford University Press, 2011); Donald Peurach and Joshua L.



Glazer, "Reconsidering Replication: New Perspectives on Large-Scale School Improvement," (in progress).

¹² Rosabeth Moss Kanter, Barry A. Stein, and Todd D. Jick, *The Challenge of Organizational Change: How Companies Experience It and Leaders Guide It* (New York, NY: Free Press, 1992); Herbert Alexander Simon, *Administrative Behavior* (New York, NY: Macmillan, 1976); Edwin O. Stene, "An Approach to a Science of Administration," *The American Political Science Review* 34, no. 6 (1940).

¹³ Bruno Latour, "The Powers of Association," in *Power, Action, and Belief: A New Sociology of Knowledge*, ed. John Law (Boston, MA: Routledge, 1986); Feldman and Pentland, "Reconceptualizing Organizational Routines as a Source of Flexibility and Change."

¹⁴ "Reconceptualizing Organizational Routines as a Source of Flexibility and Change."

¹⁵ *Ibid.*, 101.

¹⁶ Philip Hallinger, "Instructional Leadership and the School Principal: A Passing Fancy That Refuses to Fade Away," *Leadership and Policy in Schools* 4, no. 3 (2005); Philip Hallinger and Ronald H. Heck, "The Principal's Role in School Effectiveness: A Review of Methodological Issues," in *The International Handbook of Educational Leadership and Administration*, ed. Kenneth A. Leithwood (Dordrecht, Netherlands: Kluwer, 1996); "Reassessing the Principal's Role in School Effectiveness: A Review of Empirical Research, 1980-1995," *Educational Administration Quarterly* 32, no. 1 (1996); Ronald H. Heck and Philip Hallinger, "Next Generation Methods for the Study of Leadership and School Improvement," in *Handbook of Research on Educational Administration*, ed. Joseph Murphy and Karen Seashore Louis (San Francisco, CA: Jossey-Bass, 1999); Ronald H. Heck, Terry J Larsen, and George A. Marcoulides, "Instructional Leadership and School Achievement: Validation of a Causal Model," *Educational Administration Quarterly* 26, no. 2 (1990).

¹⁷ James P. Spillane, "Primary School Leadership Practice: How the Subject Matters," *School Leadership & Management* 25, no. 4 (2005); James P. Spillane and Megan Hopkins, "Organizing for Instruction in Education Systems and School Organizations: How the Subject Matters," *Journal of Curriculum Studies* (in press); James P. Spillane and Patricia Burch, "The Institutional Environment and Instructional Practice: Changing Patterns of Guidance and Control in Public Education," in *The New Institutionalism in Education*, ed. Heinz-Dieter Meyer and Brian Rowan (Albany, NY: SUNY Press, 2006); Patricia Burch and James P. Spillane, "Elementary School Leadership Strategies and Subject Matter: Reforming Mathematics and Literacy Instruction," *The Elementary School Journal* 103, no. 5 (2003); Page Hayton and James P. Spillane, "Professional Community or Communities? School Subject Matter and Elementary School Teachers' Work Environments," in *Leadership for Learning: International Perspectives*, ed. John MacBeath and Yin Cheong Cheng (Rotterdam: Sense Publishers, 2008).

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