

# Policy, School Administration, & Teaching: Implementation and Infrastructure

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# Ideals: Visions for Teaching & Learning

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- Intellectually Rigorous Instruction:
  - Balancing principled and procedural knowledge
  - Engaging students in ‘authentic’ disciplinary processes
  - Intellectually rigorous instruction for all students
- Realizing the ideals in classrooms:
  - Academic tasks
  - Classroom discourse

# Changing Educational Policy Sector

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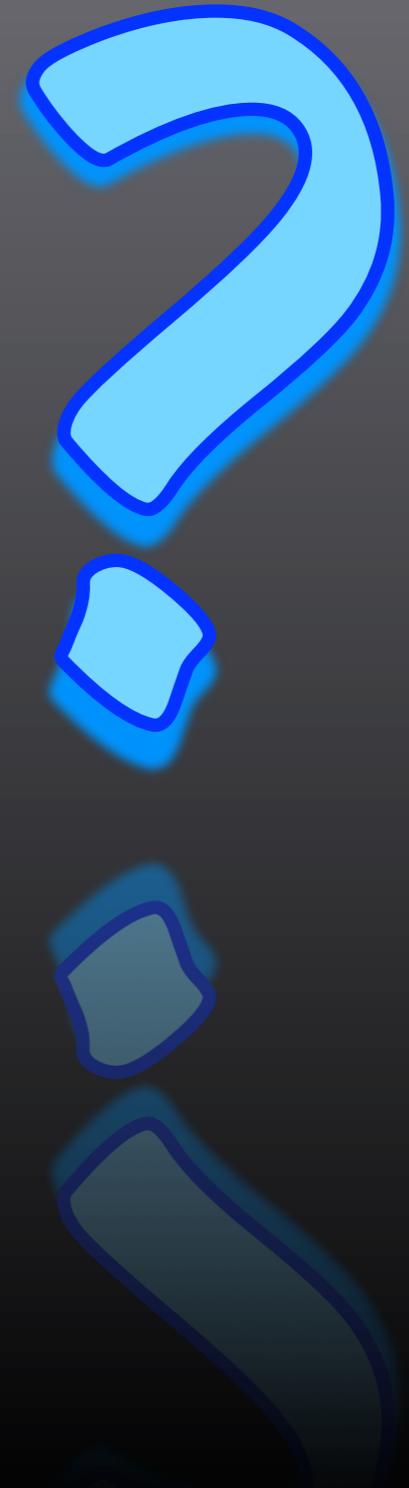
- Local, state, and federal policymakers focus on instruction.
- Policy discourses and texts press for –
  - standards
  - test-based accountability
  - monitoring and measuring individual & organizational performance using student achievement tests
  - instructional transparency and surveillance
  - choice

(Fuhrman, Goertz, & Weinbaum, 2007; Mehta, under review; Rowan, 2006)

# Today's Questions

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- *How* do schools respond to changing policy discourses and texts?
- *How do policy ideals* become embedded in local school systems and schools?



# Anchoring the Work

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# The Good, the Bad, & the Ugly

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- Re-classify students to shape the student testing pool (Abedi, 2004; Cullen & Reback, 2006; Robinson, 2011)
- Increase students' caloric intake on testing days (Figlio, 2002)
- Run test prep drills (Diamond & Spillane, 2004)
- Redirect resources to math and reading (Ladd & Selli, 2002)
- 'Bubble kids' (Booher-Jennings, 2005)

# Some Research Lessons on Policy Implementation

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- Policy getting inside the schoolhouse and beyond the classroom door
- Local school districts & schools as policy-making entities
- Locals *construct* understandings about instruction from policy
- District policymakers *and* school leaders not only *sense-makers* but also '*sense-givers*' from and about policy
- Locals *negotiate* the meanings of policy and their entailments for classroom instruction in local practice

# A View from the Past

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- Classroom instruction loosely coupled or decoupled from:
  - the school's formal administrative structure
  - government policy
- School administration buffering instruction from external scrutiny

(Bidwell, 1965; Meyer & Rowan, 1978; Weick, 1976)

# Coupling/Decoupling/Recoupling

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Organizations are made up of interdependent components that are more or less responsive to, and more or less distinctive from, each other (Bidwell, 1965; Meyer & Rowan, 1977; Weick, 1976; Orton & Weick, 1990)

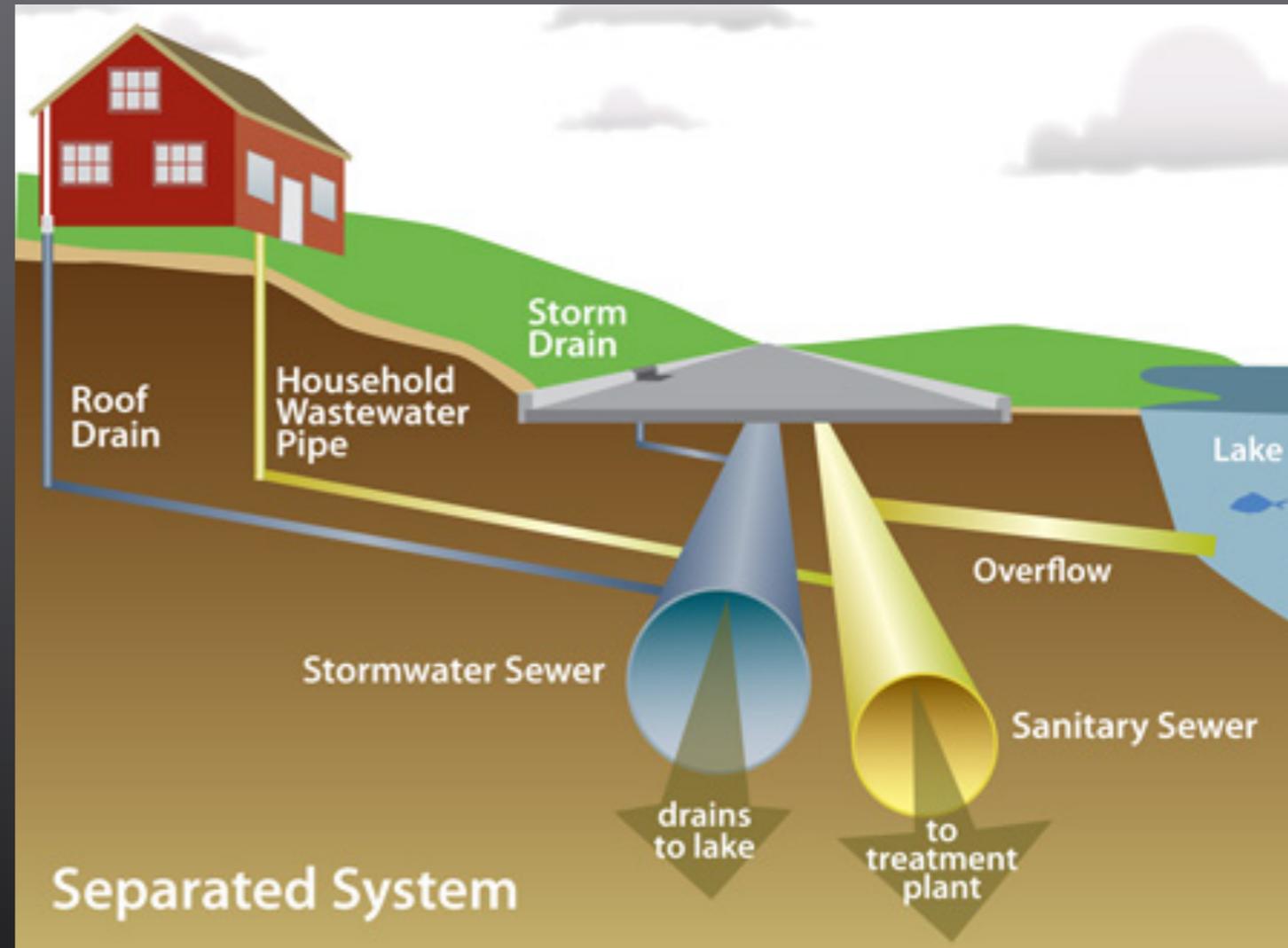
Coupling as a process rather than a static feature of [school] organizations (Orton & Weick, 1990; Hallett & Ventresca, 2006)

# Overview

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- School **infrastructure redesign** central in school leaders' efforts at coupling government policy with school administrative practice and with instruction
- School leaders and teachers negotiate the meanings of instructional policy in designing and performing **organizational routines**
- In doing so school leaders reach beyond formal **positional authority** to deploy various ***persuasion tactics***
- Recognizing the centrality of **organization and system infrastructure** design and redesign for policy implementation

# System and Organizational Infrastructure





# Assertions

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# Papers

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- Spillane, J. P., Parise, L. M., & Sherer, J. Z. (2011). Organizational routines as coupling mechanisms: policy, school administration, and the technical core. *American Educational Research Journal*, 48(3), 586-620.
- Spillane, J. P., & Anderson, L. M. (under review). Policy, practice, and professionalism: Negotiating policy meanings in practice in a shifting institutional environment.
- Sherer, J. Z., & Spillane, J. P. (2011). Constancy and change in school work practice: Exploring the role of organizational routines. *Teachers College Record*, 113(3).
- Spillane, J. P., Lowenhaupt, R., Hallet, T. (under review). Institutions in school administrative practice: The role of rhetorical sequences in negotiating between 'competing' logics.

# Research Approach: Study Sites

School	Student Enrollment	Low Income	Black	White	Hispanic	Asian	Limited English
Adams	1,021	97%	100%	0%	0%	0%	0%
Baxter	1,127	66%	7%	47%	22%	24%	38%
Kosten	1,569	73%	8%	40%	19%	34%	48%
Kelly	261	90%	100%	0%	0%	0%	0%

# Research: Data Collection

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School	Interviews	Observations of Organizational Routines
Adams	93	39
Baxter	48	25
Kosten	62	56
Kelly	16	11

# Research Approach: Data Analysis

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- *Phase 1:* in-depth school cases
- *Phase 2:* closed coding of interviews using HyperRESEARCH (e.g., organizational routines, roles and responsibilities, policy)
- *Phase 3:* closed coding of field-notes & meeting transcripts using NVivo (e.g., technical core, policy)
- *Phase 4:* open and closed coding of 22 meeting transcripts from Adams School (e.g., policy, professionalism, social tactics). (Kappa ranged from 0.70 to 0.95)

# Assertion # 1

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School leaders worked at aligning their school's organizational infrastructure with government policy and with instruction by (re)designing organizational routines.

School leaders designed these organizational routines to promote *standardization, accountability, & monitoring of instruction.*

FRAMES SCRIPTS TOOLS WORK  
POLICIES PROCEDURES STRUCTURE  
CONCEPTS POSITIONS  
ORGANIZATIONAL  
ROUTINES  
REGULATIONS PROTOCOLS  
POLICIES ROUTINES CONCEPTS  
STRUCTURE ORGANIZATIONAL  
FRAMES RULES POSITIONS  
TOOLS PROGRAMS WORK SCRIPTS RULES  
SCRIPTS PROCEDURES  
NORMS  
CONCEPTS  
FRAMES  
TOOLS  
STRUCTURE  
PROGRAMS  
RULES  
PROCEDURES  
STRUCTURE  
ORGANIZATIONAL  
RULES  
POSITIONS

# Organizational Routines

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- **Organizational Routines:** “repetitive, recognizable patterns of interdependent actions carried out by multiple actors” (*Feldman & Pentland, 2003*)
  - **Ostensive Aspect:** ideal form – general idea or script of the routine
  - **Performative Aspect:** routine in practice in particular places, at particular times
- **Improving Practice** in the interaction of the ostensive and performative aspect of organizational routines.
- Concerns about the organizational routine construct – rigid, mundane, mindless, explicitly stored (M. Cohen, 2007)

# Designing Organizational Routines

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- **Adams School:** Breakfast Club, Grade level meetings, Teacher Talk, Teacher Leaders, Five-Week Assessment, Literacy Committee, and Mathematics Committee
- **Baxter School:** Cycle Meetings, Leadership Team Meetings, Literacy Committee, Math/Science Committee
- **Kosten School:** Report Card Review, Grade Book Review, Lesson Plan Review, Faculty Meetings, Grade Level Meetings
- **Kelly School:** Skill Chart Review, Professional Development

# Organizational Routines at Adams School

Routine	Functions	Tools	People
Five Week Assessment	<ul style="list-style-type: none"> <li>-Formative evaluation</li> <li>-Teacher Accountability</li> <li>-Monitor Instruction</li> <li>-Teacher Development</li> </ul>	<ul style="list-style-type: none"> <li>-Standardized Tests</li> <li>-Standards</li> <li>-Student Assessments</li> </ul>	<ul style="list-style-type: none"> <li>-Language Arts Coordinator</li> <li>-Assistant Principal</li> <li>-Principal</li> <li>-Teachers</li> </ul>
Breakfast Club	<ul style="list-style-type: none"> <li>-Teacher Development</li> <li>-Build Professional Community</li> </ul>	<ul style="list-style-type: none"> <li>-Research Articles</li> </ul>	<ul style="list-style-type: none"> <li>-Teachers</li> <li>-Language Arts Coordinator</li> <li>-Principal</li> </ul>
School Improvement Planning (SIP)	<ul style="list-style-type: none"> <li>-Identify Instructional Priorities &amp; Resources</li> </ul>	<ul style="list-style-type: none"> <li>-Previous Year SIP</li> <li>-District Guidelines</li> <li>-Test Score Data</li> </ul>	<ul style="list-style-type: none"> <li>-Principal</li> <li>-Administration</li> <li>-Teachers (approved LSC)</li> </ul>
Classroom Observations	<ul style="list-style-type: none"> <li>-Teacher Development</li> <li>-Monitor Instruction</li> <li>-Accountability</li> </ul>	<ul style="list-style-type: none"> <li>-School Protocol,</li> <li>-District Protocol</li> </ul>	<ul style="list-style-type: none"> <li>-Principal</li> <li>-Assistant Principal</li> </ul>
Real Men Read	<ul style="list-style-type: none"> <li>-Student Motivation and Support</li> </ul>	<ul style="list-style-type: none"> <li>-Books</li> </ul>	<ul style="list-style-type: none"> <li>-Language Arts Co-ord.</li> <li>-Assistant Principal</li> <li>-Principal</li> <li>-Community Members</li> </ul>

# The Five Week Assessment

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“We were just kind of casually saying that for the majority of teachers they all work very hard, but some of them get very low results when it comes to these achievement tests ... So this [Five Week Assessment] was a way to find out ‘Are they learning?’ ”

(Literacy coordinator)

(Literacy coordinator)

“The [standardized] tests ... didn’t give us much information about what we could do to improve our scores because we received the results well after we could do anything about it. We thought that a more frequent assessment ... would tell us where the children were”

“The Five Week Assessment enabled teachers to see assessment as a tool for letting them know what they need to work on in the classroom. That was the goal.”

(Principal Williams)

# The Five Week Assessment

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“We’re still doing the Five Week Assessment, once that assessment is completed and graded and has been graphed and given back to the teachers, then we come back together with the teachers, with the grade levels and talk about the progress that was made. This last, well the 15th week results were not as well as we expected. ... So we had a meeting with every grade level and we just talked about the results of the test”

(Principal Robinson, 2002)

**DESIGNED**  
Formal positions, organizational routines as represented in formal documents and accounts

Designed vs. Lived Organization

**LIVED**  
Organization as experienced in day-to-day life of organizational members

## Assertion # 2

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School leaders created organizational routines *with* which and *within* which they worked at recoupling policy, administration, and instruction.

Policy featured both indirectly and directly in the *performance* of organizational routines as:

- School staff performed locally designed routines that more or less mirrored external policy in form and function
- Staff negotiated with policy in making decisions about instruction in performance of organizational routines

# Organizational Routine by Topic, by Grade

	<b>Adams</b>	<b>Baxter</b>	<b>Kosten</b>	<b>Kelly</b>
<b>Policy</b>	72%	67%	80%	73%
<b>Instruction</b>	100	88	93	82
<b>Instruction &amp; Policy</b>	72	67	73	73
<b>Language Arts</b>	62	62	24	46
<b>Math</b>	36	10	17	36
<b>Science</b>	17	10	7	9

# Organizational Routines: Performative Aspect

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Ms. Sally then switched the topic of discussion to a uniformed spelling program for the grade. She raised the point that it was important for the grade "to be following a sequence for instruction for phonics." Ms. Jill also wants to bring in one of her own favorite books into the curriculum which she claims has a "consistent format which is the most important because the students are missing a range of words. ... Ms. Dalia then raised the point that she would be concerned that the grade would not be following the standards of the Illinois State in reference to the [Jill's] book. [Grade Level Meeting at Baxter, 10/28/99]

Ms. Jones [mathematics teacher leader] remarks, "I don't too much worry about this one [kind of] question. But now if it's four or five questions [about the same content on the state test] I target in on that and I make sure my kids know that..." [Annual Kick-off Faculty Meeting at Adams, 8/31/01]

# Organizational Routines as Local Proxies for Policy: The Five Week Assessment

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First I would like to say congratulations to grade levels—all grade levels made some improvements from the Five Week Assessments to the Ten Week Assessment which is a reflection of your time and commitment to getting students to learn ... Third through fifth [grade students need to work on their] abilities to write descriptive words ... Probably lacking in vocabulary, ability to pick out details from the story. [Grade Level Meeting]

They [students] did a good job identifying the problem and solution of the story ... Which leads me to middle school. Problem and solution didn't always match ... this is truly a concern ... Little trouble determining the important information in the story. Questions most missed were vocabulary questions ... I have a packet with lessons on teaching vocabulary. I'll pass it around and if you want me to make you a copy, put your name on the green sticky note [Literacy Committee Meeting, Field Notes, 11/06/00]

# Five Week Assessment: Performative Aspect

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It [the Five Week Assessment] is first of all so Miss Richards, Miss Andrews and Miss Wilmington can see how the school is doing in general. That's one of the purposes. And we get an idea of how we're gonna do on our [state] standardized test. But the main point of the assessments are for teachers; that's what they're really for. They're for you, so you can see what is happening in your classroom and you can see where the students seem to be struggling and you can think about what you need to do and discuss what you need to do to help them.

[Grade Level Meeting, 11/01/02]

# A Historical View from the Field

Everybody did absolutely their own thing as far as literacy. Some people used the Basal series ... we had different Basal series going in the building. A lot of people were going to a literature-based instruction. Nobody ever talked to each other. It was just - everybody went into their own room, closed the door and did their own thing."

(Baxter Teacher)

(Kosten Teacher)

"There may be four classes at a grade level and they did not even talk. They did not have a clue at what was going on in each other's classrooms ..."

(Adams Principal)

When I first started in 1991 [the principal] was very, very laid back, and we had a lot of creative teachers in this school, and you pretty much were able to do what you needed to do and use your creativity and kind of go with your own flow more or less."

## Assertion # 3

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Transforming the school infrastructure by designing and implementing new organizational routines met with resistance from staff and the ongoing maintenance of these routines required school leaders to appeal to formal *authority* and to use various *persuasion tactics* to get teacher cooperation.

# Pushback in Practice: The Kosten Case

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Mrs. Koh began “Kosten is a good school. The former administration did a good job, but we can’t take it for granted. Society is changing.” She continued, “We are putting those preventative resources in place. Why should we wait for a disaster?” Then she told the teachers, “You’ve got to have higher expectations, ... a teacher quickly interjected, “But our scores are going up.” Mrs. Koh responded, “But our students are changing, and we want to insure that everyone is going up.” But then another teacher responded with a different interpretation: “We’re getting more and more kids now with problems at home. There’s no discipline in the household, and I can model things here, but if they don’t get it at home...” (Field notes).

Koh tells them the school needs to do something to improve reading, because their scores are down “1.3” on the IOWA tests. In contrast, the reading scores at the other neighborhood school are at 70, “I have to go over there.” Teacher—“I’ll go with you,” and “They must be teaching to the test” because the two schools are “servicing the same population” (Field notes).

# Authority and Persuasion

Tactic	% routines code found in	Total # of code uses	Average code use per routine	% of overall coding
Aligning	86% (19)	280	12.7	57%
Other Oriented	64% (14)	199	9.1	40.4%
<b>Authority</b>	<b>82% (18)</b>	<b>195</b>	<b>8.9</b>	<b>39.6%</b>
Brokering	73% (16)	154	7.0	31.3%
Agenda Setting	86% (19)	145	6.6	29.5%
Asserting In-group	68% (15)	92	4.2	18.7%

# Tentative Summary

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- School leaders transformed their organizational infrastructure, (re)designing organizational routines that embedded emerging institutional 'logics' - standardization, accountability, monitoring, transparency.
- These organizational routines also embodied particular representations of instruction and how to improve instruction.
- In practice, these routine were not purely symbolic involving decision-making about substantive technical matters, selectively coupling the technical core with administrative practice and policy.
- School leaders worked at getting teacher cooperation by appealing to formal/positional *authority* and by using various social tactics to *persuade* teachers

# Assertion # 4

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- School and system infrastructure matters, shaping interactions about instruction among school staff.
- Infrastructure redesign can transform interactions among school staff about instruction shaping - who talks to whom about what.

# Two Studies of School Staff Social Networks

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## “Cloverville” Study

One urban, midsized district in the southeastern United States.

30 participating schools, K-6

Principal Questionnaire (PQ) and School Staff Questionnaire (SSQ)

Survey responses collected in Spring '05 and '07.

## NebraskaMATH Study

One mid-sized district in Nebraska.

14 participating schools, K-6

School Staff Questionnaire (SSQ)

Survey responses collected in Spring '10, '11, & '12 (and again in '13).

# Social Network Instrument

Screen Shot from SSQ – Math Advice Questions Page 1

## School Staff Survey



NORTHWESTERN  
UNIVERSITY

During THIS SCHOOL YEAR, to whom have you turned for advice or information about teaching Mathematics? Please write full first and last names, and give a brief description of that person's role or position. You do not need to fill all the spaces.

I have not sought advice from anyone.

Name
Jim Spillane
James Pustejovsky
Virginia Pitts
Cindy Sigal

Role
principal
6th grade teacher
math coordinator
roommate - also a teacher

# Why Focus on Advice and Information Interactions?

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Social relations as source of resources such as trust, expertise, opportunities for joint sense-making, and incentives for innovation.

On-the-job interactions are associated with the transfer of advice and information – essential in the development of new knowledge.

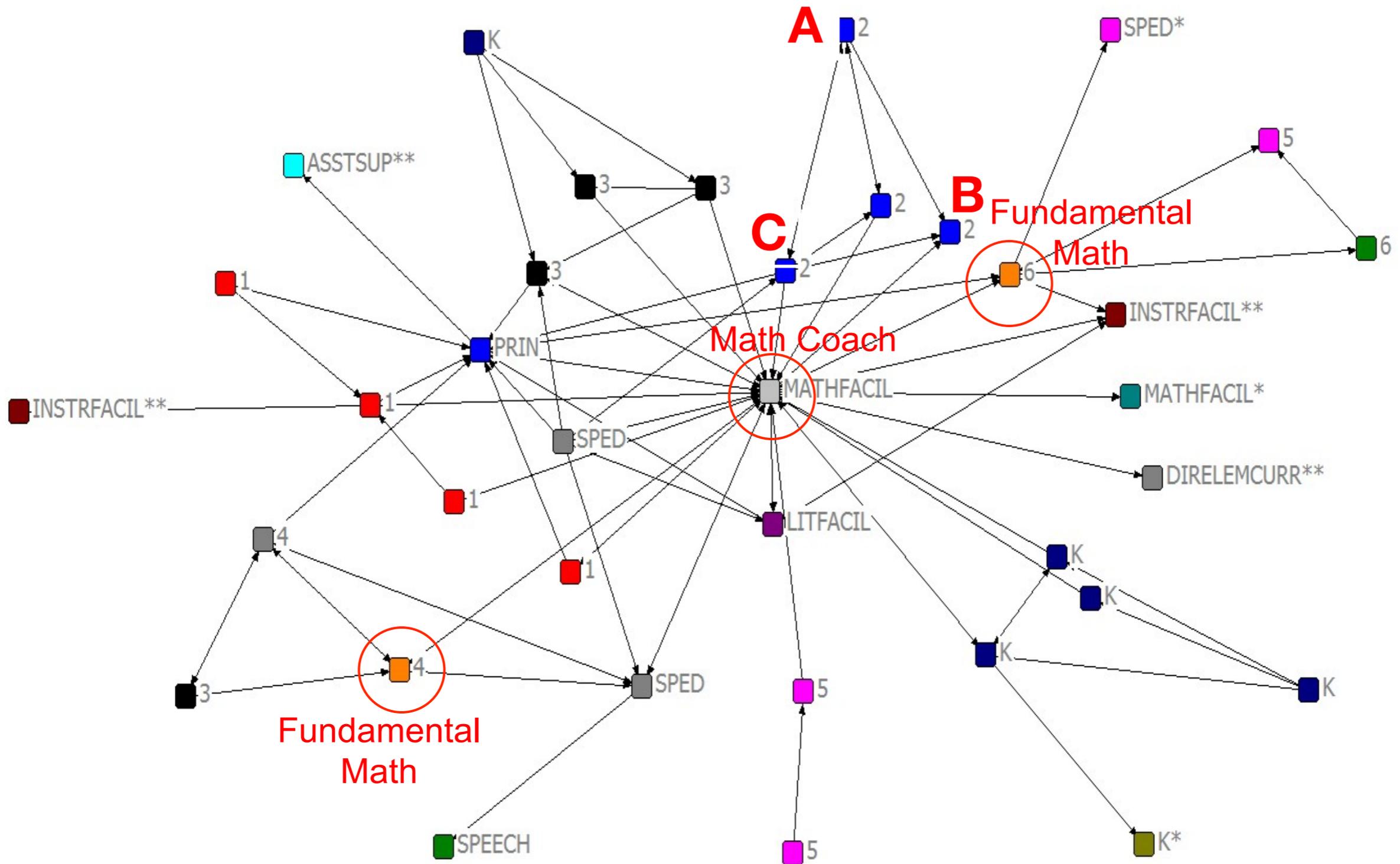
# Network Centrality Measures

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- Degree centrality
  - In-degree = the number of people who sought out an actor for advice or information
  - Out-degree = the number of people that actor sought out for advice or information
  - Betweenness centrality = the extent to which an actor links two other actors in the network
- A measure of **brokering**

$$C_B(n_i) = \frac{\sum_{j < k} g_{jk}(n_i)}{g_{jk}}$$

# Advice and Information Interactions



# Formal Organizational Structure & Advice & Information Interactions

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- Teachers more likely to seek advice from others of **same gender and race**.
- **Prior tie** strongly associated with having a current tie.
- **Formal** leaders more likely to provide advice or information.
- Teachers in the **same grade** were more likely to receive or provide advice or information
- Teachers more likely to seek advice about a subject from teachers who reported **more PD** in that subject.

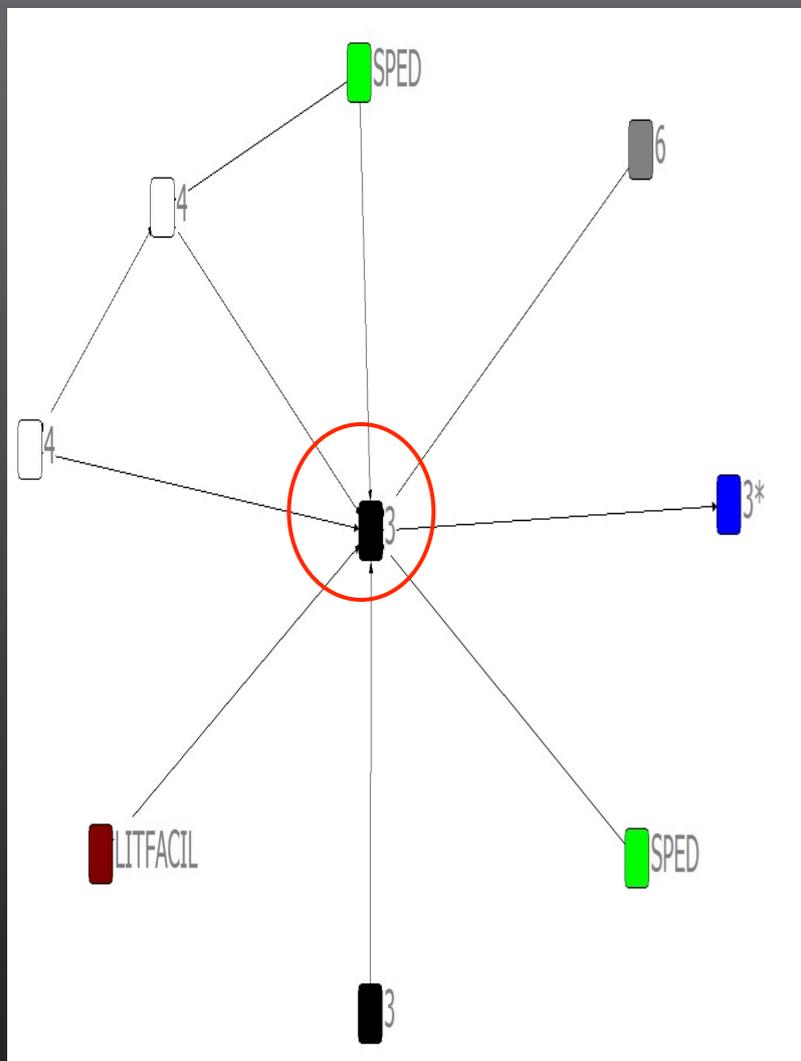
Spillane, J. P., Kim, C. M., & Frank, K. A. (2012). Instructional advice and information seeking behavior in elementary schools: Exploring tie formation as a building block in social capital development. *American Educational Research Journal*.

# District Infrastructure Design for Teacher Leadership

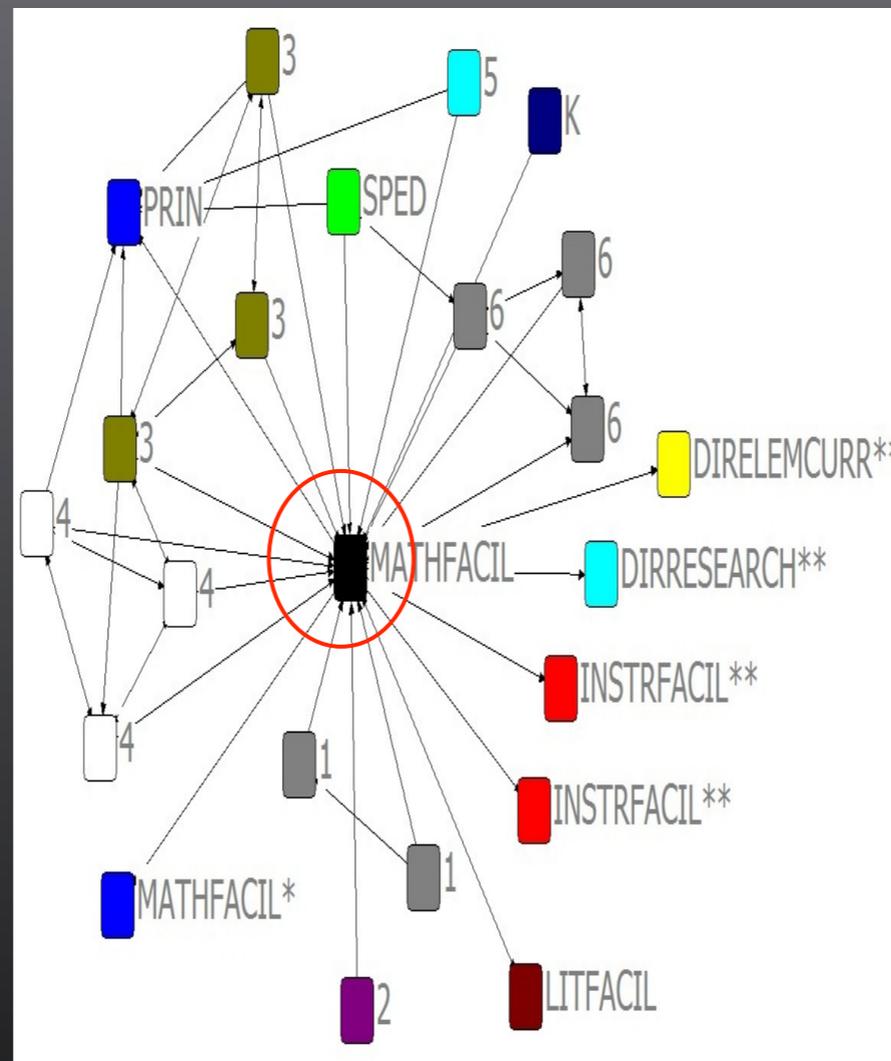
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- Infrastructure for mathematics instruction
  - New Inquiry-Based Elementary School Mathematics **Curriculum**
    - **Resource and material** adoption (Investigations)
    - State **standards** alignment
    - Unit **assessment** development
- Infrastructure (re)design for teacher leadership
  - District-wide and school specific **organizational routines** (e.g., arrays, toolbox, PLCs).
  - Math **Coaches** in some schools
  - **Professional development** in math for select teacher leaders

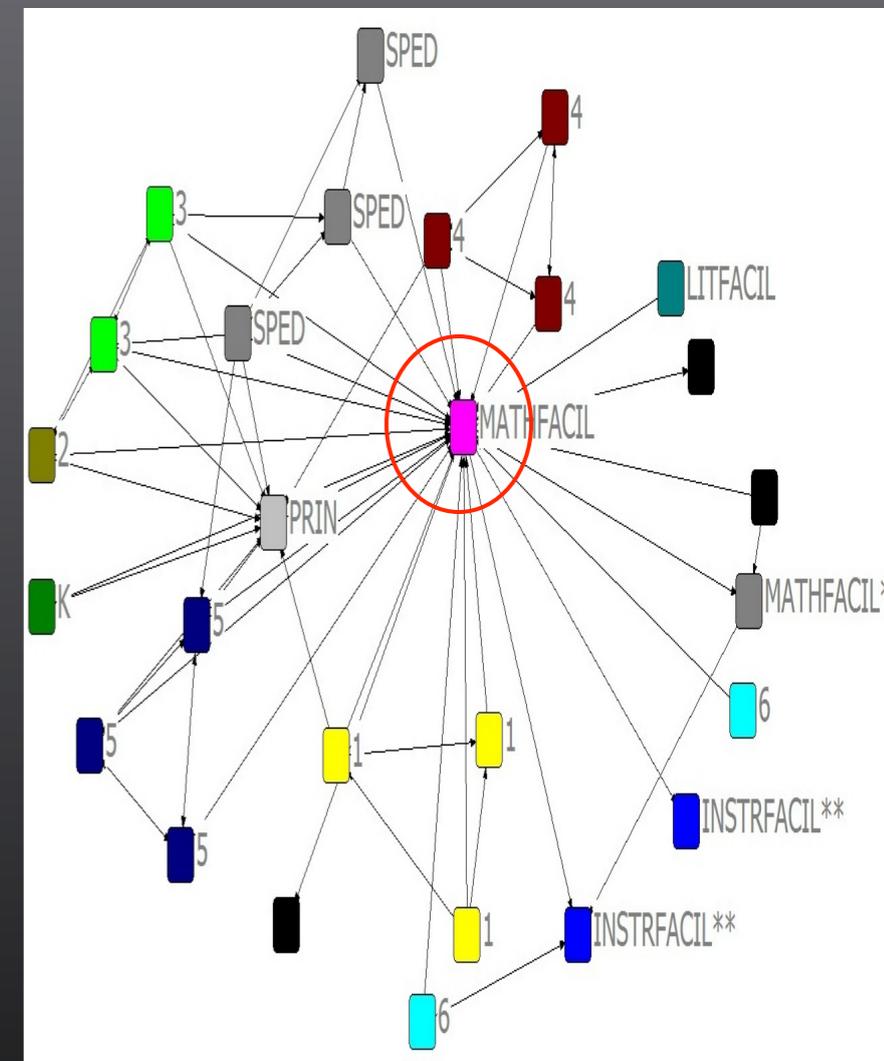
# Math Coach (Emily) Facilitates Staff Interactions



2009-10



2010-11



2011-12

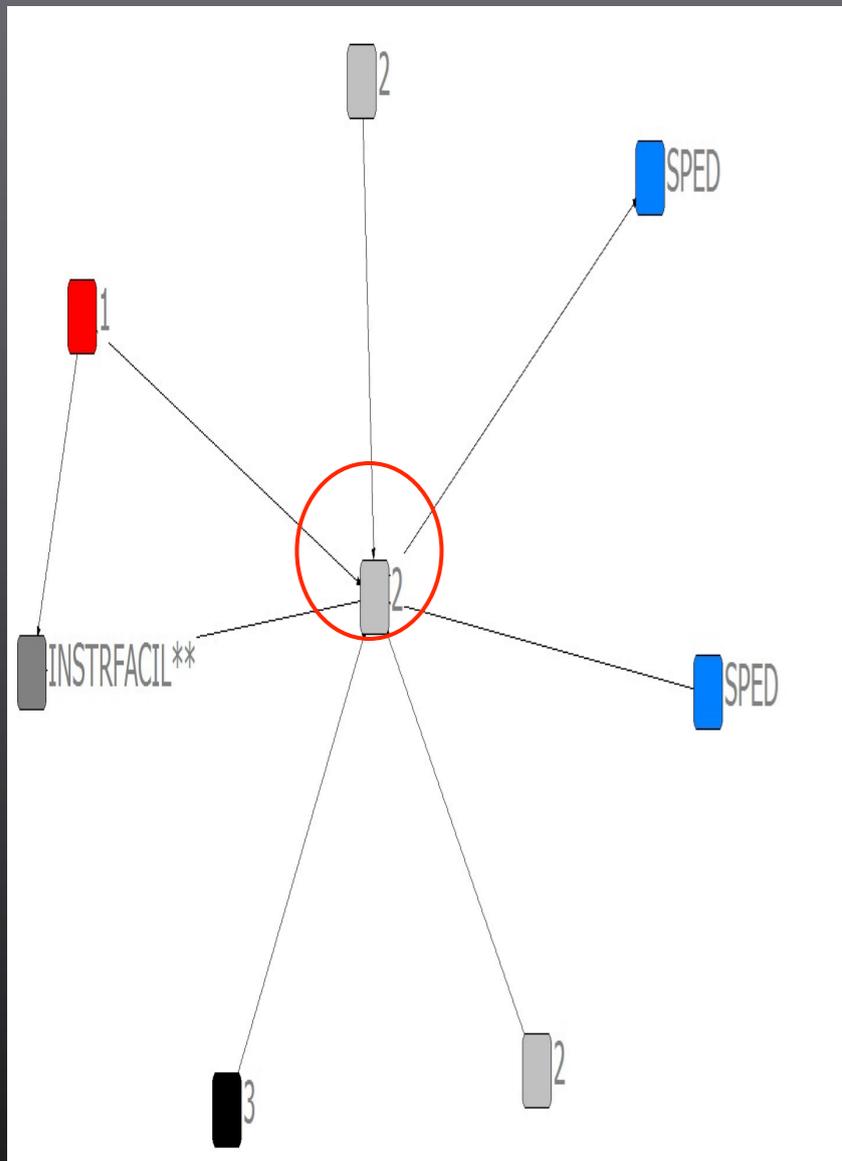
# Formal Position Promotes Advice Seeking

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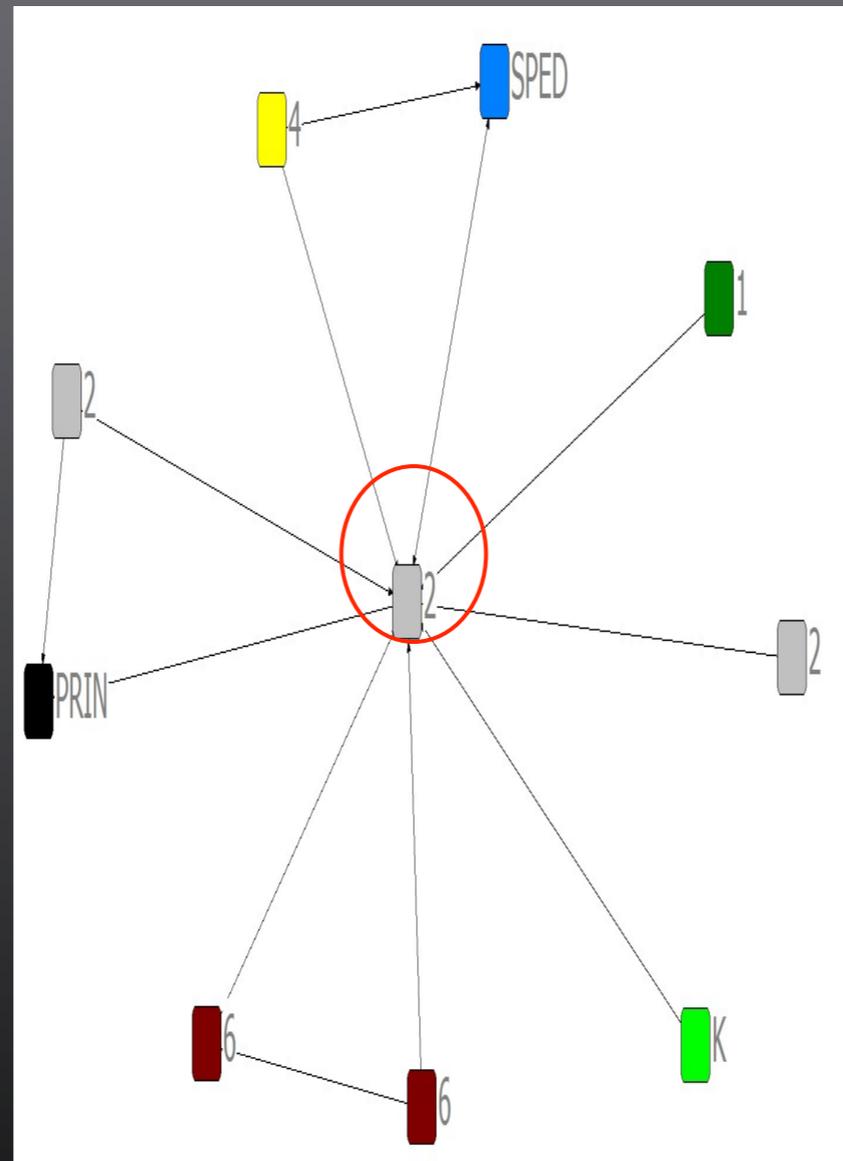
“[Emily] really wasn’t our facilitator [last year], though she was my co-worker, just a third grade teacher. I knew she had a wealth of knowledge, I just wasn’t in [her classroom] when she was teaching math. But, now that she’s moved into this math facilitator position, that’s different... She’s been trained in it. And, she’s gone to school for it and she’s a great coach. She knows a lot about math and I trust her that she has a lot of, a wealth of knowledge... She’s the go-to person.”

Angie, Special Education

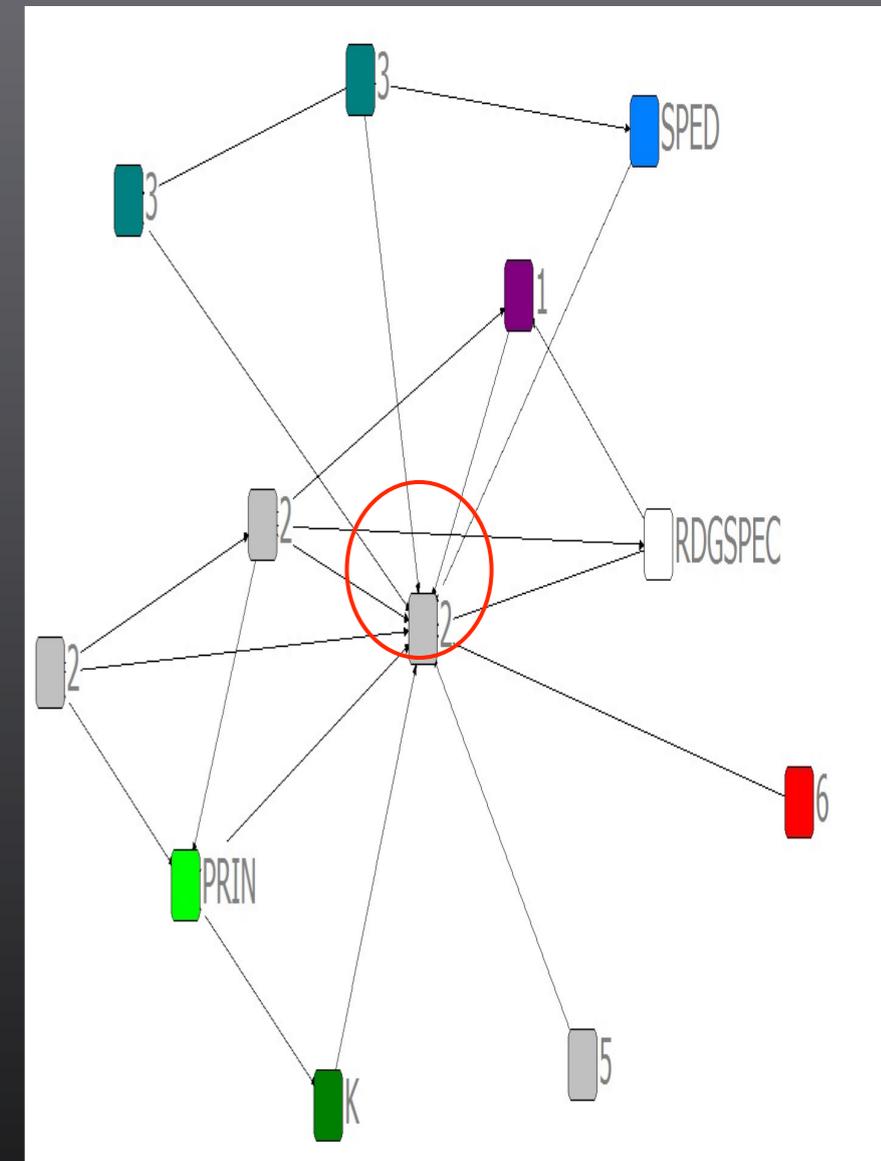
# Professional Development Case (John)



2009-10



2010-11



2011-12

# Training Also Serves as a Marker of Expertise

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Karen (1<sup>st</sup> grade)

“Because he’s a second grade teacher....He’s kind of become the math person to see because he’s taken this extra training that nobody else in the building has done, and I know that he’s interested in math so, he’s just one that I’ve gone to that I know focuses very heavily on, I like his beliefs and the way that he has his room set up and the way that he carries himself.”

# Infrastructure Redesign Promoted Advice and Information Seeking in Mathematics

Average In-Degree for Teachers Leaders and Other Teachers, Auburn Park School District

	2009-10	2010-11	2011-12
Toolbox Members (6)	1.60	2.80	2.67
Fundamental Math Participants (9)	4.33	6.00*	6.00
Math Coaches (3)	6.33	16.33**	18.00
Other Teachers (256)	1.54	1.60	1.36

\*p<.05; \*\*p<.01

# Infrastructure Redesign Promoted Brokering in Mathematics

Average Betweenness for Teacher Leaders and Other Teachers, Auburn Park School District

	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>
Toolbox Members (6)	5.00	75.80*	48.86
Fundamental Math Participants (9)	32.44	144.33*	115.42
Math Coaches (3)	38.67	248.67**	222.97
Other Teachers (256)	10.85	24.81*	11.90

\*p<.05; \*\*p<.01

# Teacher Leadership as a Coupling Mechanism

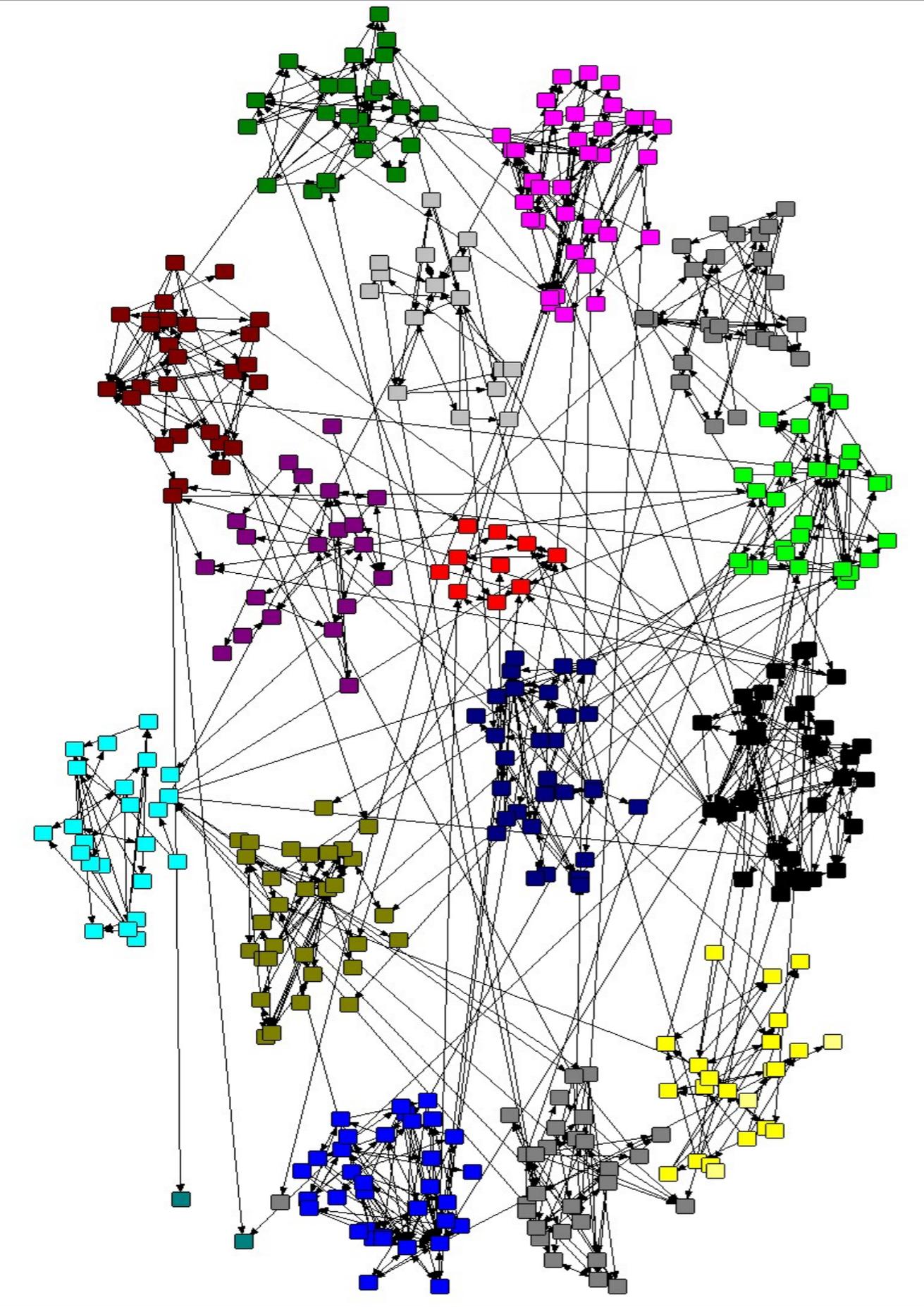
Change in Teachers' Beliefs about and Reported Practices in Mathematics

	2009-10	2010-11	2011-12
<b>Beliefs about Mathematics Instruction</b> Mean (SD)	3.35 (0.5)	3.46*** (0.5)	3.51*** (0.5)
<b>Reasoning and Problem-Solving Practices</b> Mean (SD)	2.39 (0.4)	2.52*** (0.4)	2.64*** (0.5)

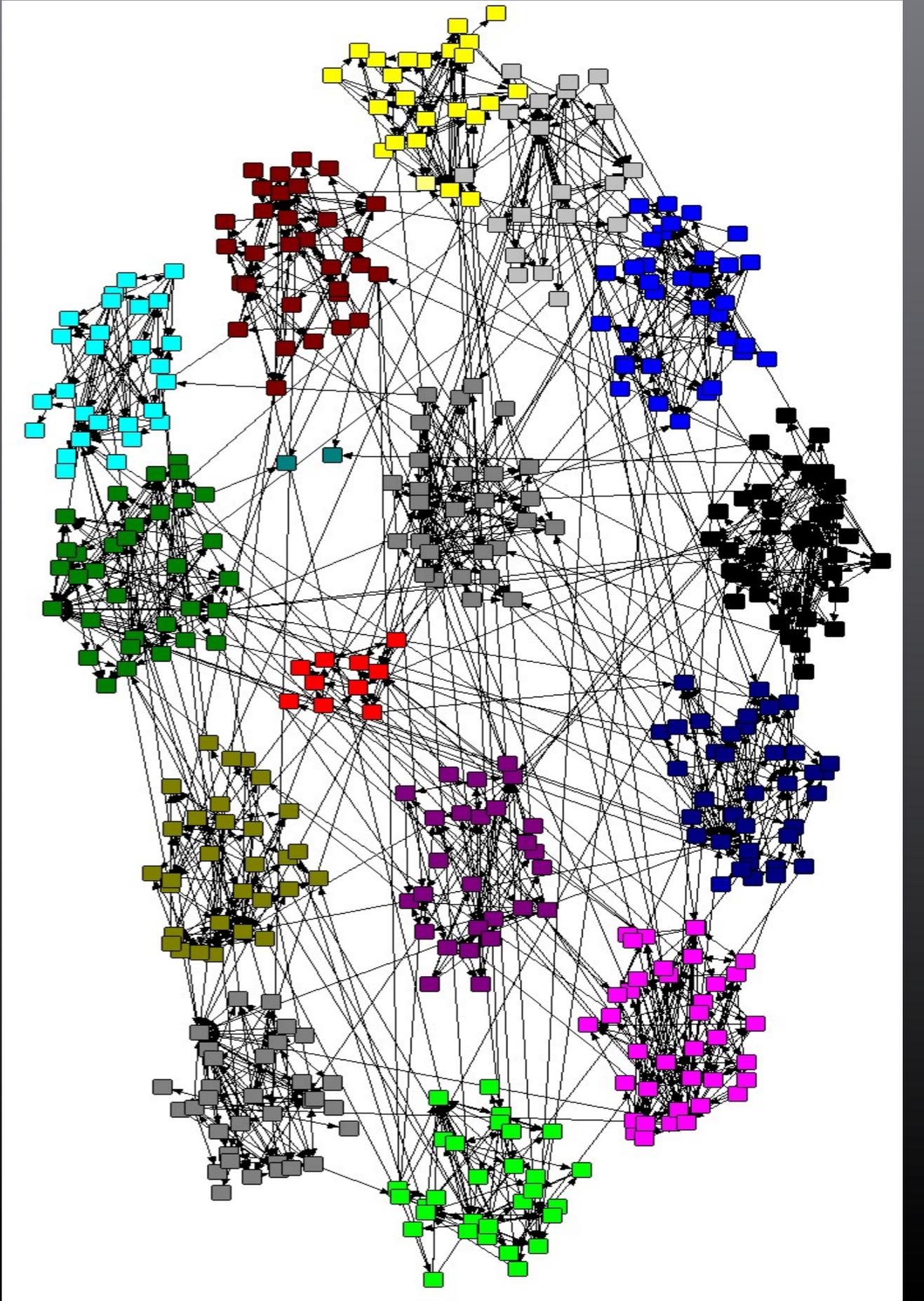
*Notes:* Means are based on teachers from 12 schools with over 70% response rates who responded in every year of the survey. Significant differences are for comparisons to 2009-10.

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ ; + $p < .10$

Auburn Park District Math Network



Auburn Park District ELA Network

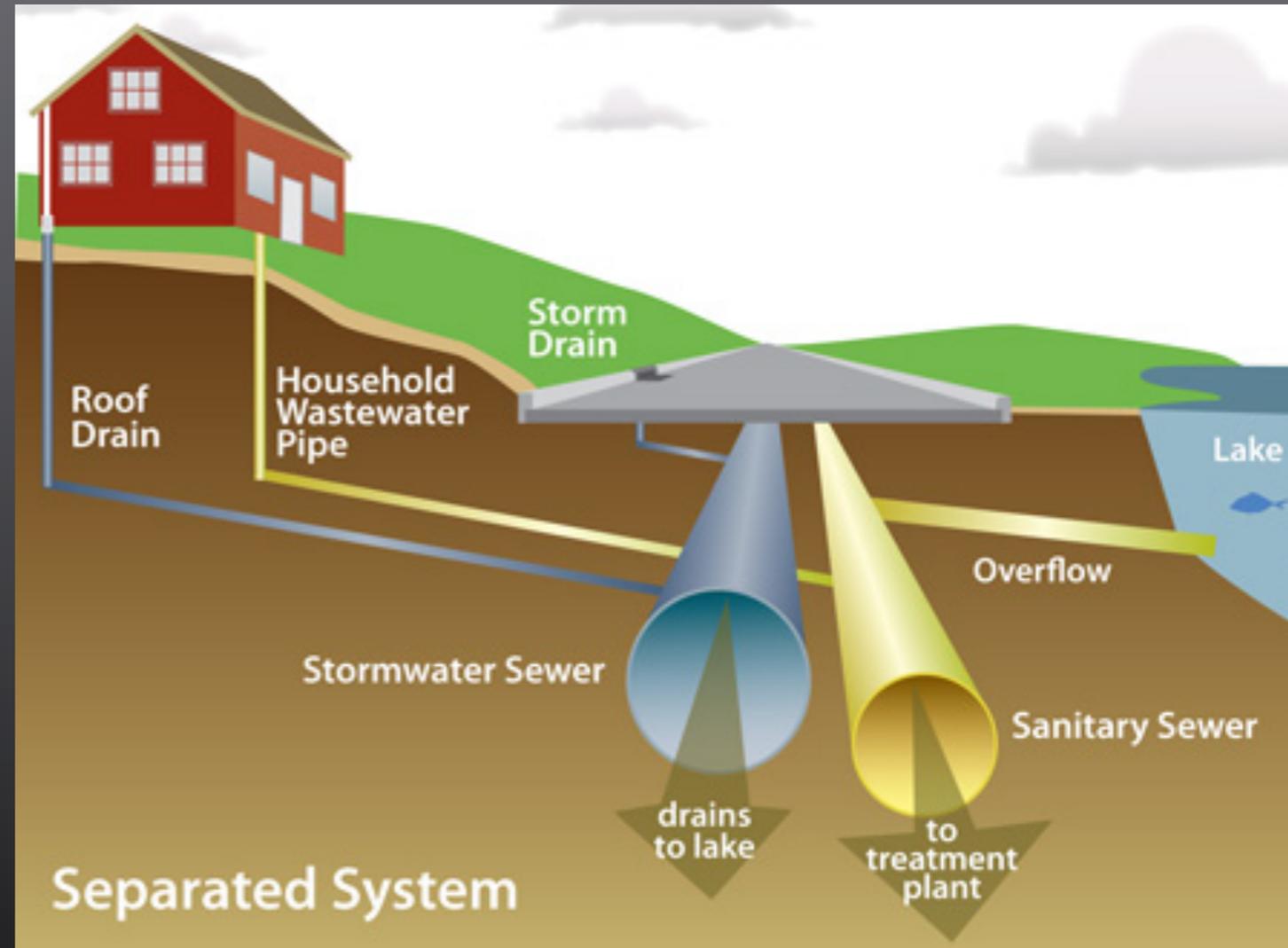
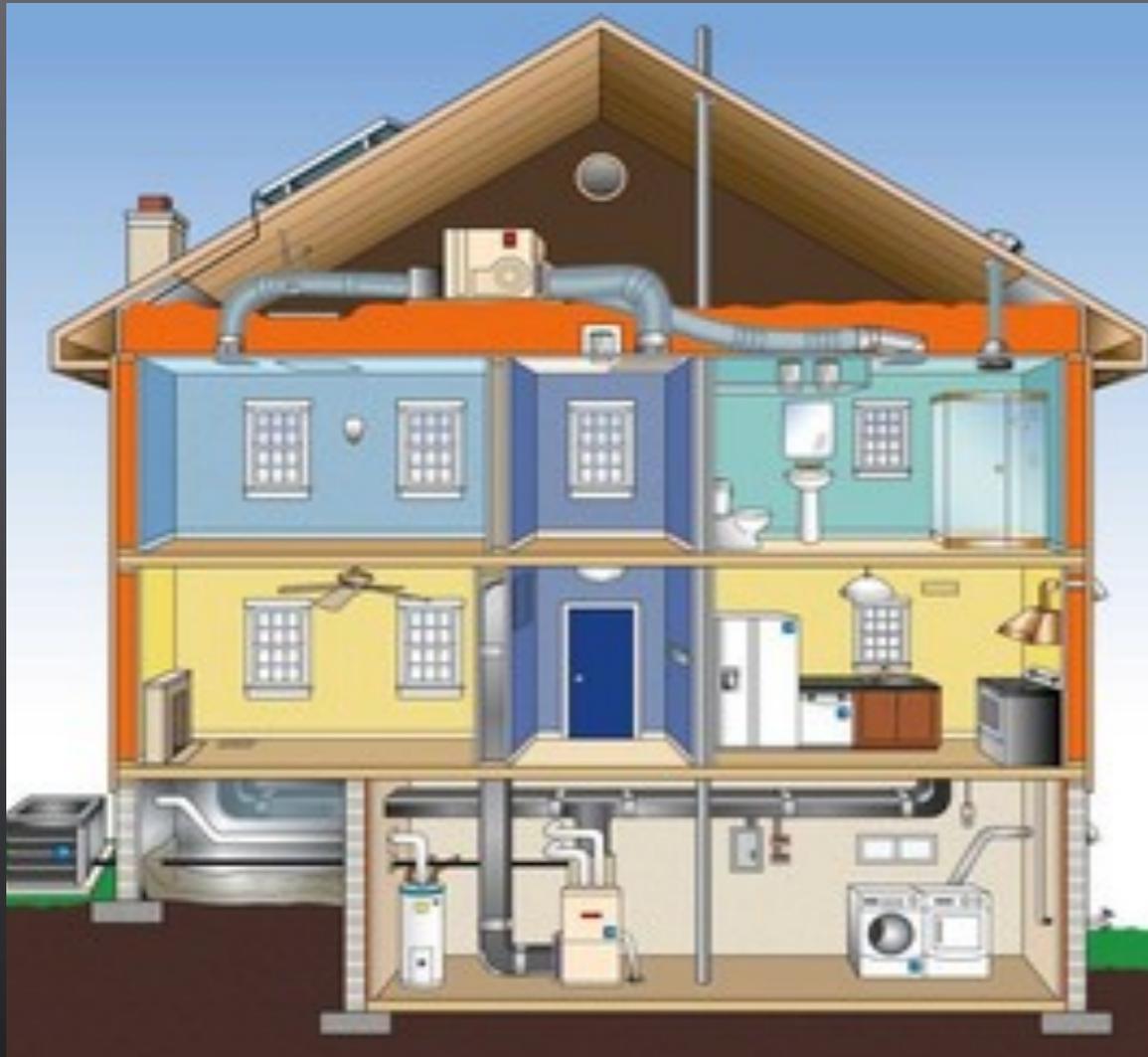


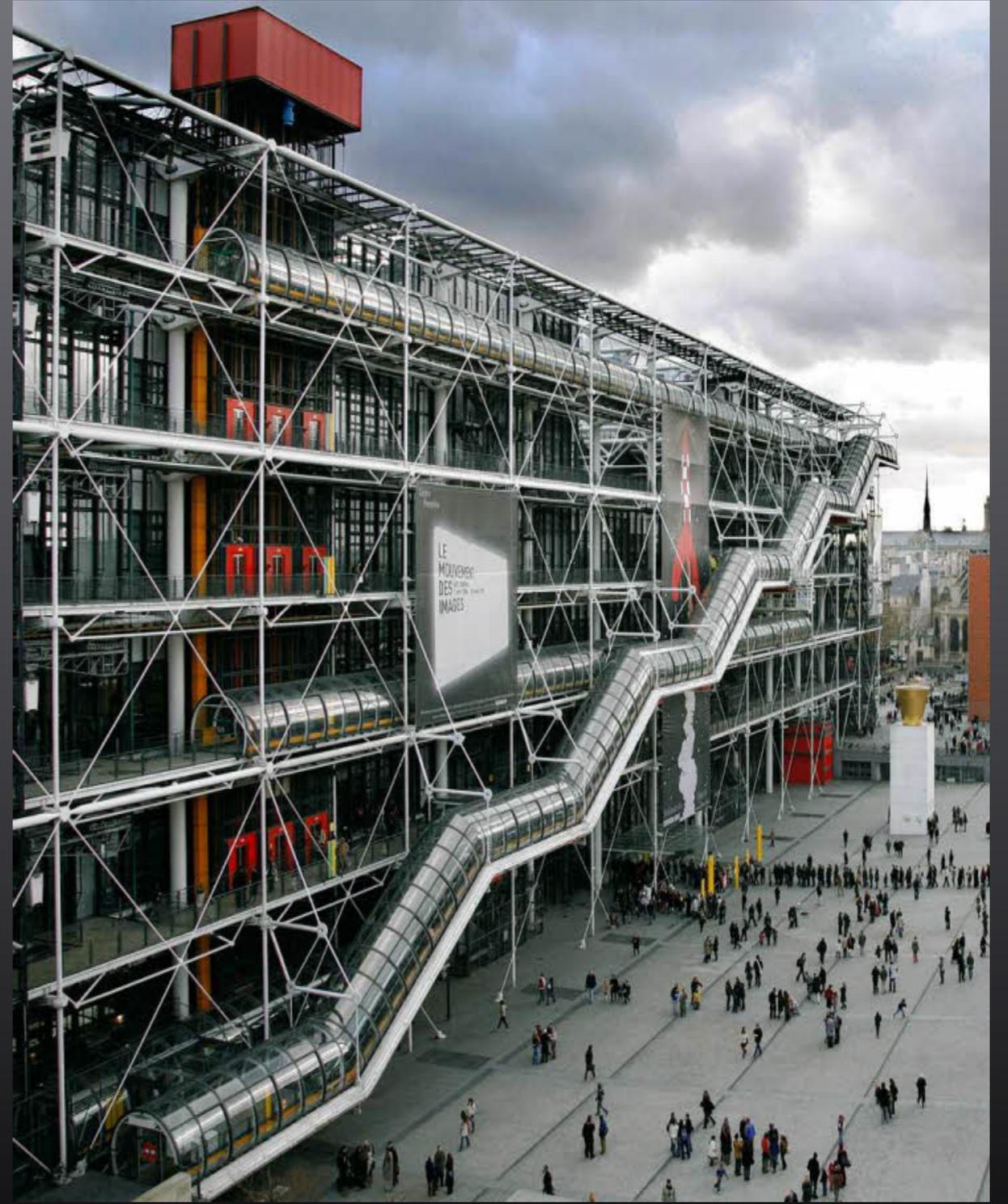
# Conclusion

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- Successful implementation of policy ideals ultimately depends on local practice and practitioners.
- We have to attend not only to classroom practice but also practice at other levels of the education system.
- We cannot design practice, we can only design *for* practice ...
- School and system infrastructure design and redesign are essential in transforming practice ...
- Infrastructure once institutionalized is - "*invisible*" though "*ready to hand*" (Star, 1998).
- Infrastructure invisibility, taken-for-granted, persistence, and reach ...

# System and Organizational Infrastructure







# Conclusion

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- Key Characteristics Shaping Relations between Infrastructure & Practice:
  - *Anchoring in and Alignment with Instruction*
  - *Cognitive adequacy*
  - *Consistency*
  - *Communicability, Corruptibility, and Correctability*
  - *Authority and Power*

**MORE AT:**

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<http://distributedleadership.org/DLS/Presentations.html>

<http://www.principalpolicyresearch.org/>