

Leading and Managing Instructional Improvement: A Distributed Leadership Perspective

James P. Spillane
Northwestern University

ACEL 2015 Workshop

The Distributed Leadership Studies
<http://www.distributedleadership.org>

Funded by National Science Foundation, Spencer Foundation, Institute for Education Sciences, & Carnegie Corporation

Organization of Workshop

Session One:

Leadership from a Distributed Perspective

Session Two:

A Distributed Leadership Perspective in Practice: The Formal Organization

Session Three:

A Distributed Leadership Perspective in Practice: The Informal Organization

Session Four:

Grappling with the Challenges of Taking a Distributed Leadership Perspective

Leadership from a Distributed Perspective

Session One

Preview/Goals

- **Distinguishing between the *what* and the *how* of school improvement**
- **Figuring out our understanding of leadership**
- **Understanding the essentials of taking a distributed perspective to leadership**

School Leadership: What is it and What About it Seems to Matter?

Key Ingredients of School Improvement

- **School Leadership**
- **Engaging Parents and Community**
- **Professional Capacity**
- **Student Centered Learning Climate**
- **Instructional Guidance**



Leadership & Management Work: *What Matters?*

- **Setting Direction**
- **Human Development**
- **Organizational Development**



Task One: What is Leadership?

- **Write down your definition of leadership.**
- **Discuss your definitions (in small groups), identifying important similarities and differences.**
- **Together write a definition of leadership that reflects the views of group members.**



Leadership

- **[Leadership refers] to the interaction among members of a group that initiates and maintains improved expectations and the competence of the whole group to solve problems or attain goals**
- **[Leadership refers] to people who bend the motivations and actions of others to achieve certain goals; it implies taking initiatives and risks**

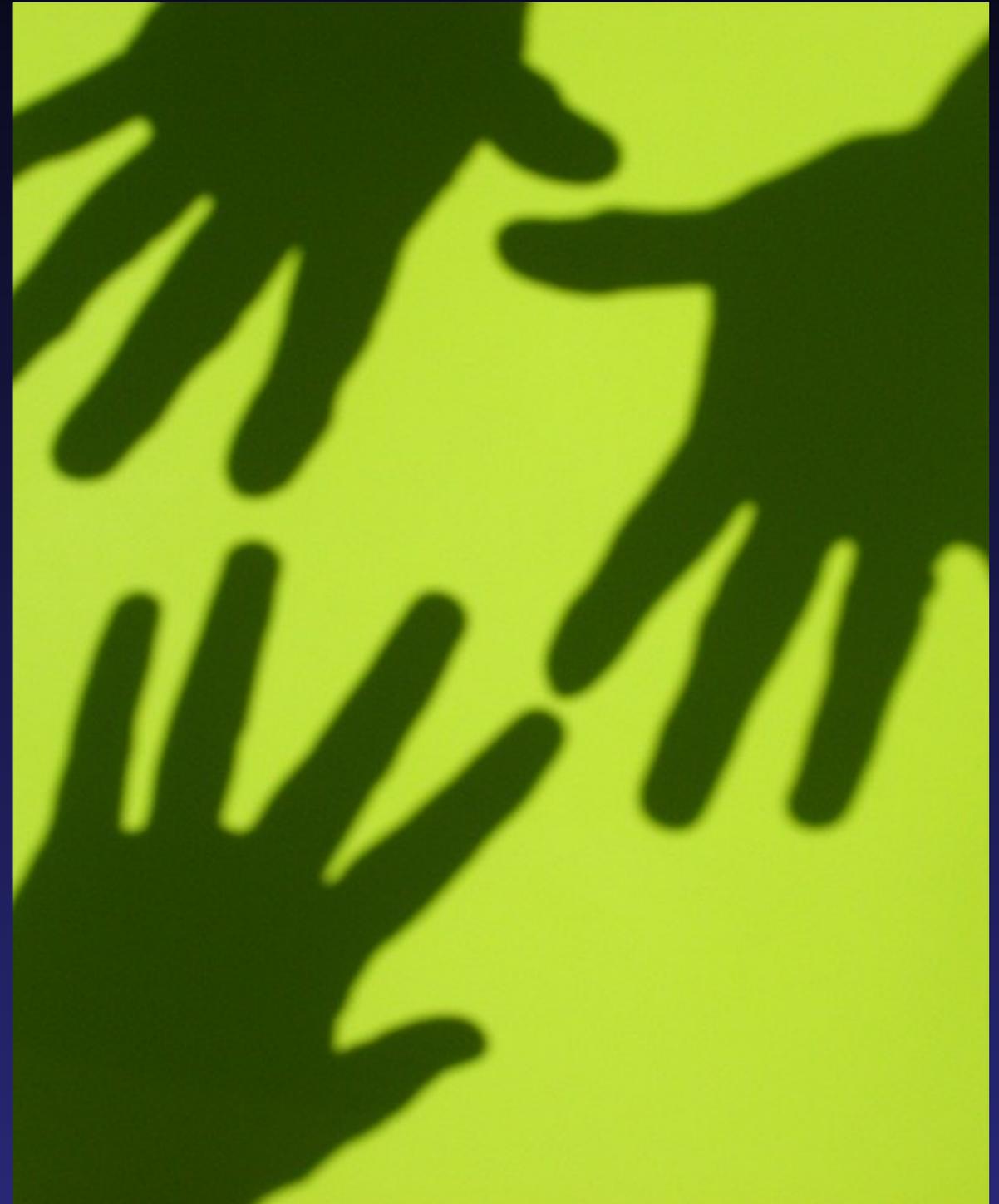


Leadership

Leadership* refers to activities tied to the core work of the organization that are designed by organizational members to influence the motivation, knowledge, affect, or practices of other organizational members or that are understood by organizational members as intended to influence their *motivation, knowledge, affect, or practice.

Management

- **Management is about maintenance; maintaining current organizational arrangements and ways of doing work** (*Burns, 1978; Cuban, 1988*)



Instruction: The Heart of the Matter

Anchoring Our Leading & Managing Practice in Teaching

Students'
Opportunities To Learn



Teaching



What gets taught?

How is it taught?

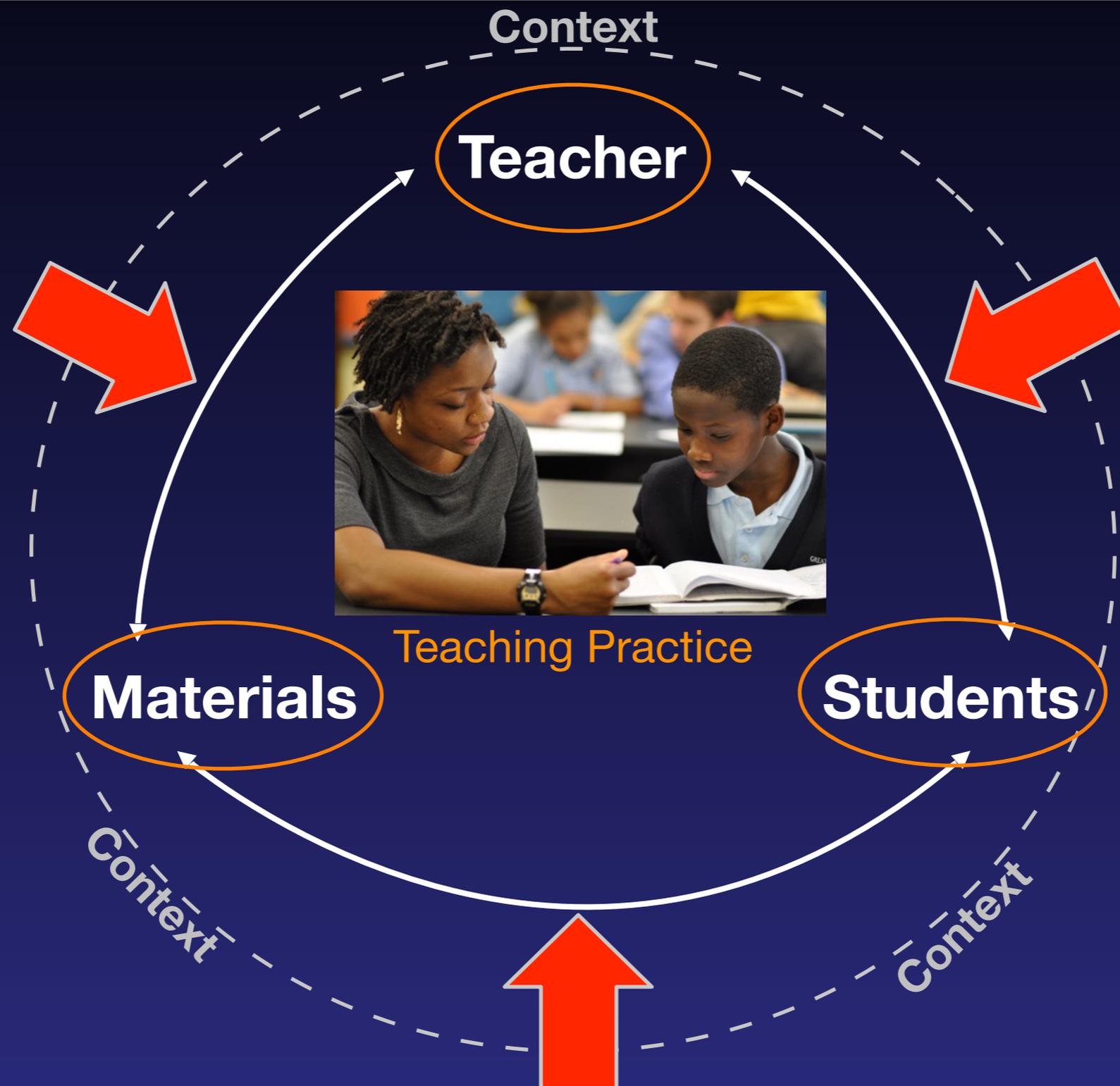
Leading and Managing



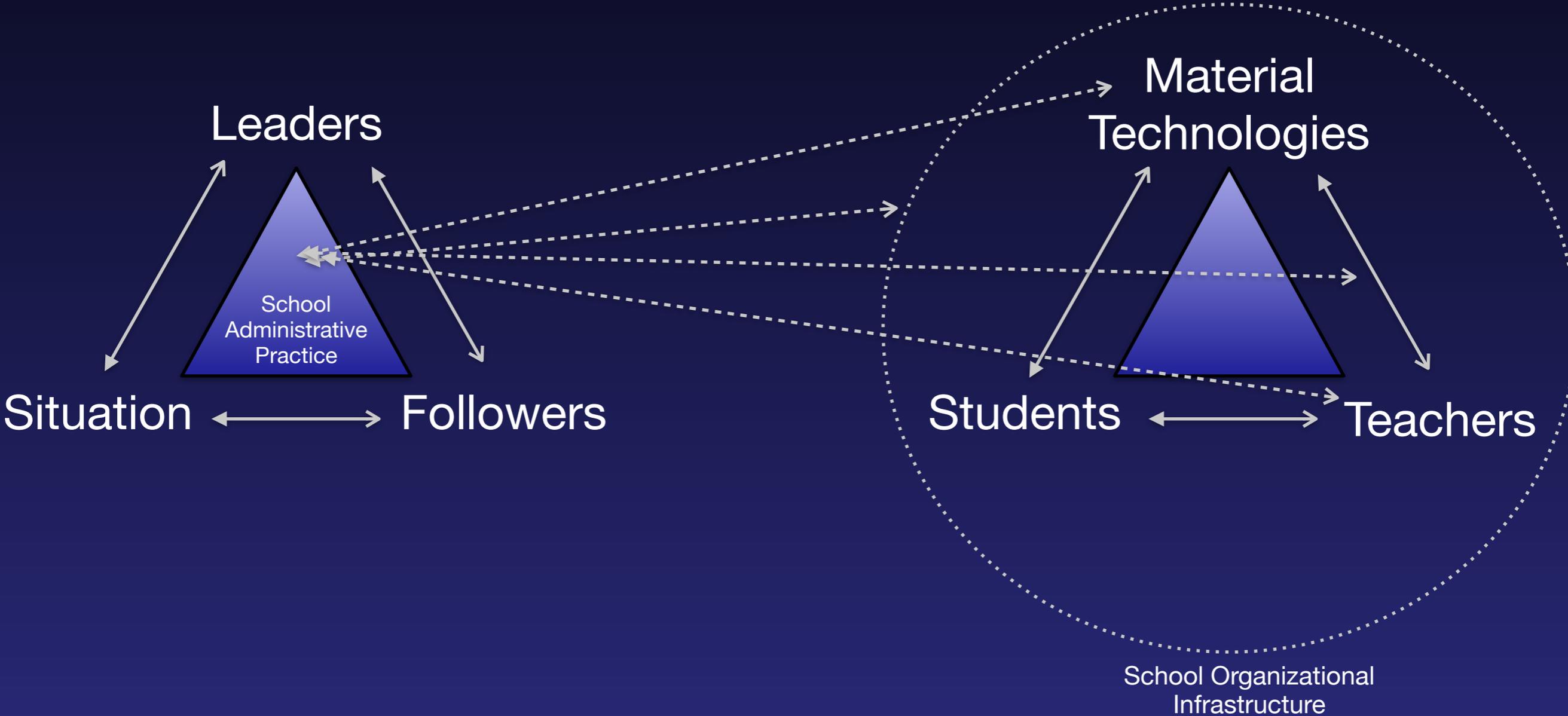
Teaching as a Social Practice



Teaching and Leadership

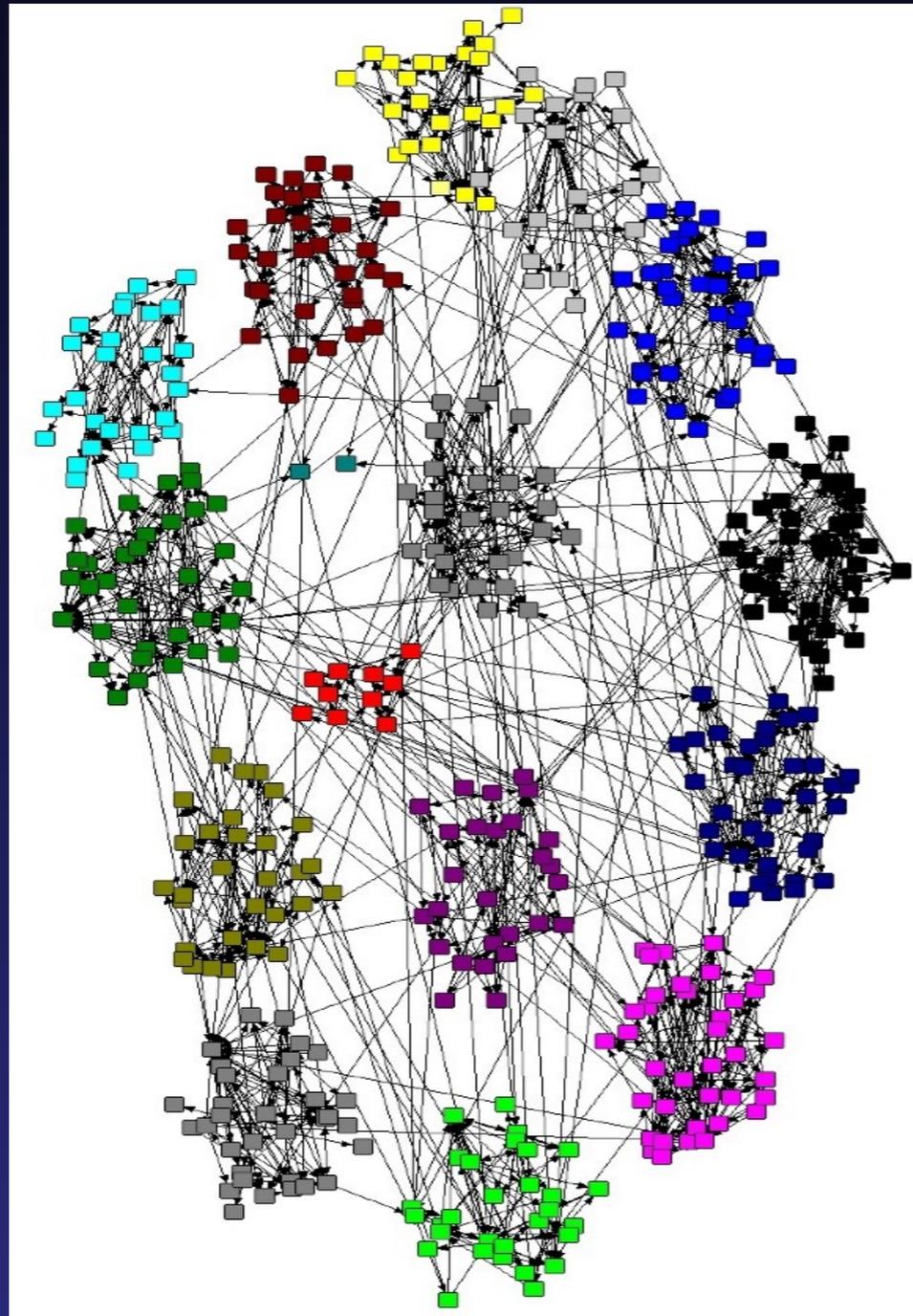


School Administrative Practice and Instructional Practice

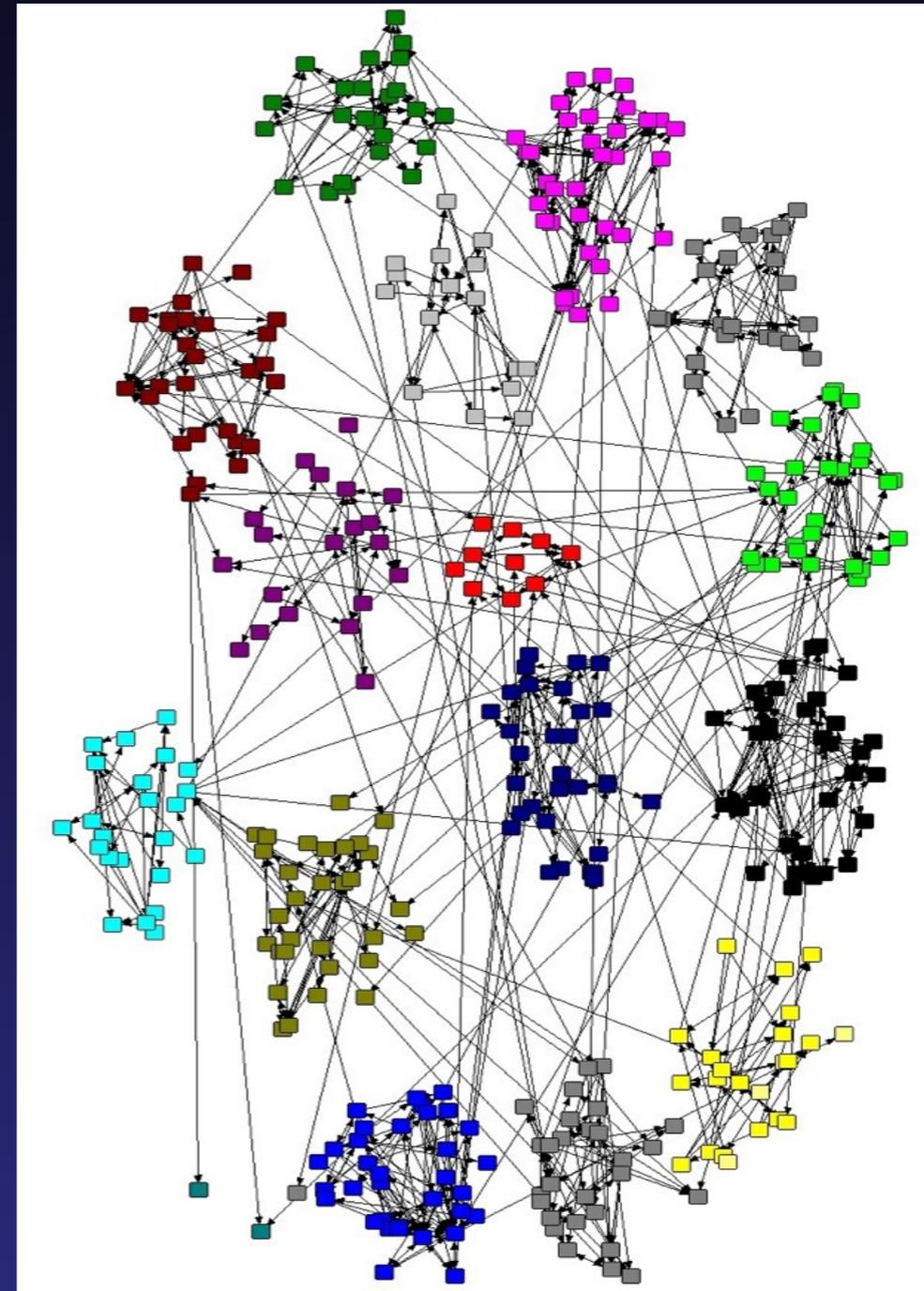


The Subject Matters: Instruction and Leading and Managing Work

English Language Arts



Mathematics



A Distributed Perspective: The Essentials

Task Two

- **What does ‘distributed leadership’ mean to you?**
- **Write a one-sentence definition that captures your understanding of distributed leadership.**
- **Discuss your definition with the person next to you and identify one similarity and one difference between your two definitions.**



A Distributed Perspective

- A diagnostic framework that draws attention to particular dimensions of leadership & management work
- A design framework for guiding leadership and management improvement efforts



The Leader-Plus Aspect

- The **Leader-Plus Aspect**:
 - The principal often works with others when performing leadership and management tasks
 - At times other formally designated leaders take responsibility for leadership and management tasks
 - And, individuals with no formal leadership designations often have a hand in leading and managing instruction



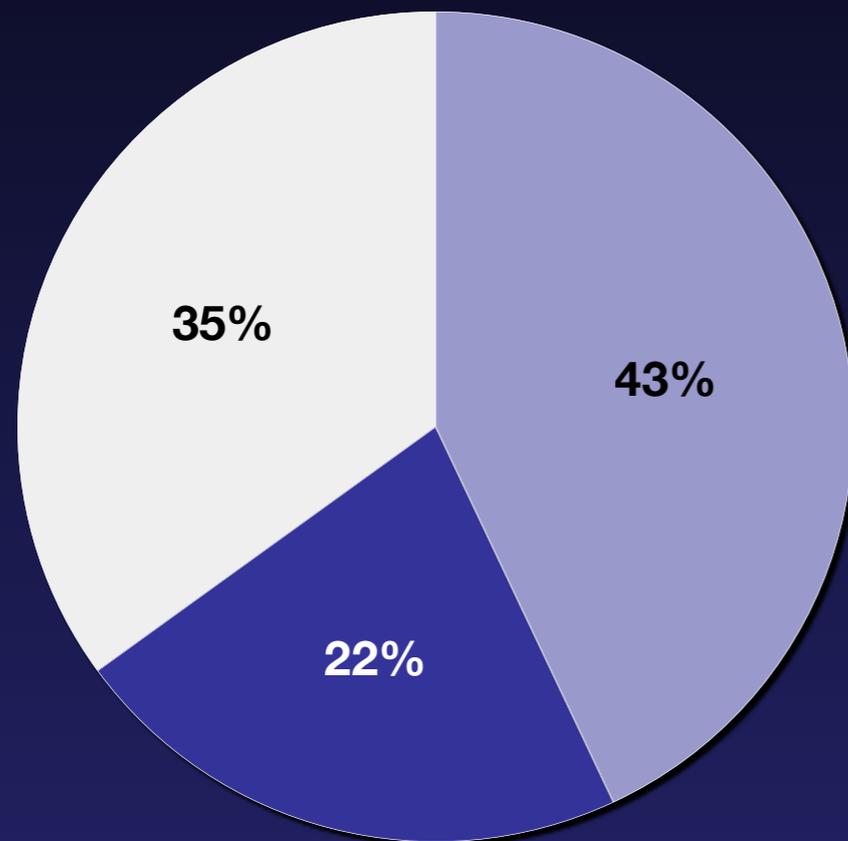
An Alternative to the 'Heroics of Leadership' Genre

“Initially I tried to do it all. I was trying to do it all and that was impossible. You cannot be all things to all people... I don't know everything about everything.”

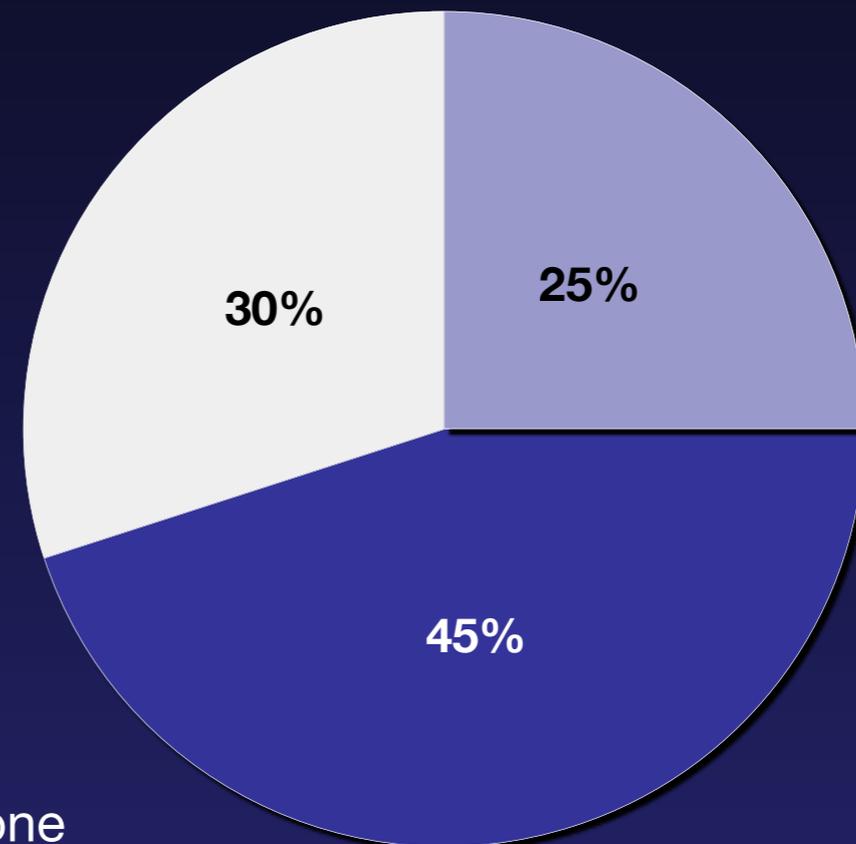
Dr. Johnson

The Principal's Workday: The Significance of Others

Administrative Activities



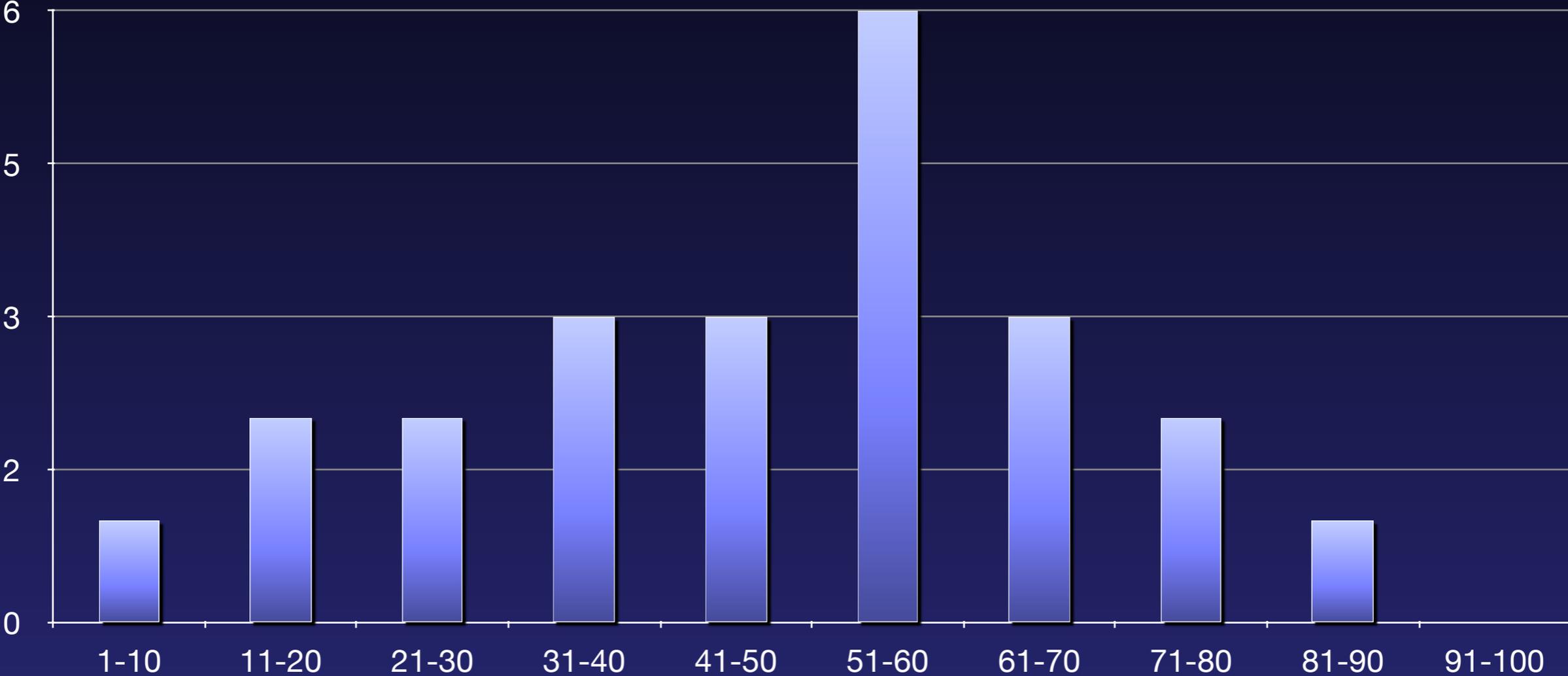
Curriculum and Instruction Activities



- Leading Alone
- Not Leading
- Leading with Others

Co-Performance: Between School Variance

Figure 2(b). Frequency Distribution of Percentage of Principals' Activities Co-lead with Someone Else (N=23).



A Distributed Perspective: The Practice Aspect

Leaders

Administrators, Specialists,
Teachers, Parents, Students

Leadership Practice
is in the interaction

Situations

Tools, Routines,
Structures, Rules

Followers

Teachers, Administrators,
Specialists, Students,
Parents

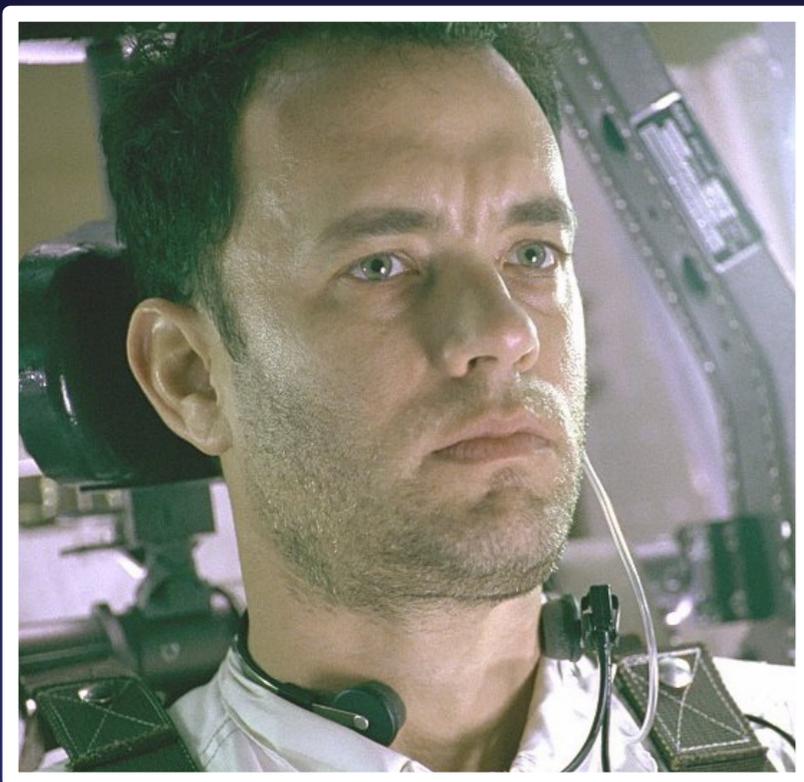


Task Three: Examining Leadership in Practice



Task Three

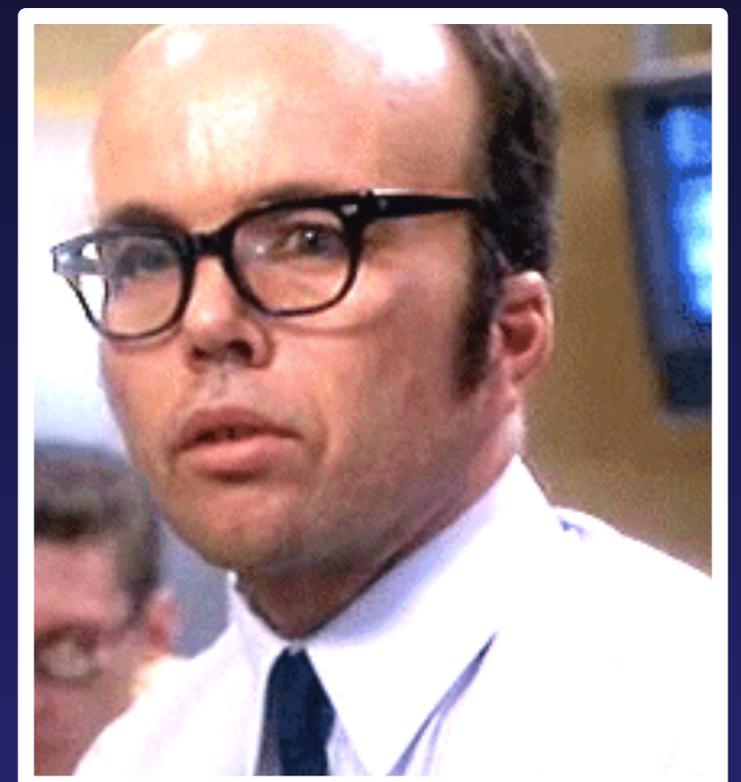
- Watch the scene, keeping in mind the distributed perspective. Take notes about who is leading and in what capacity. Where is the leadership practice?
- While noting what happens in the scene, keep in mind the characters below.



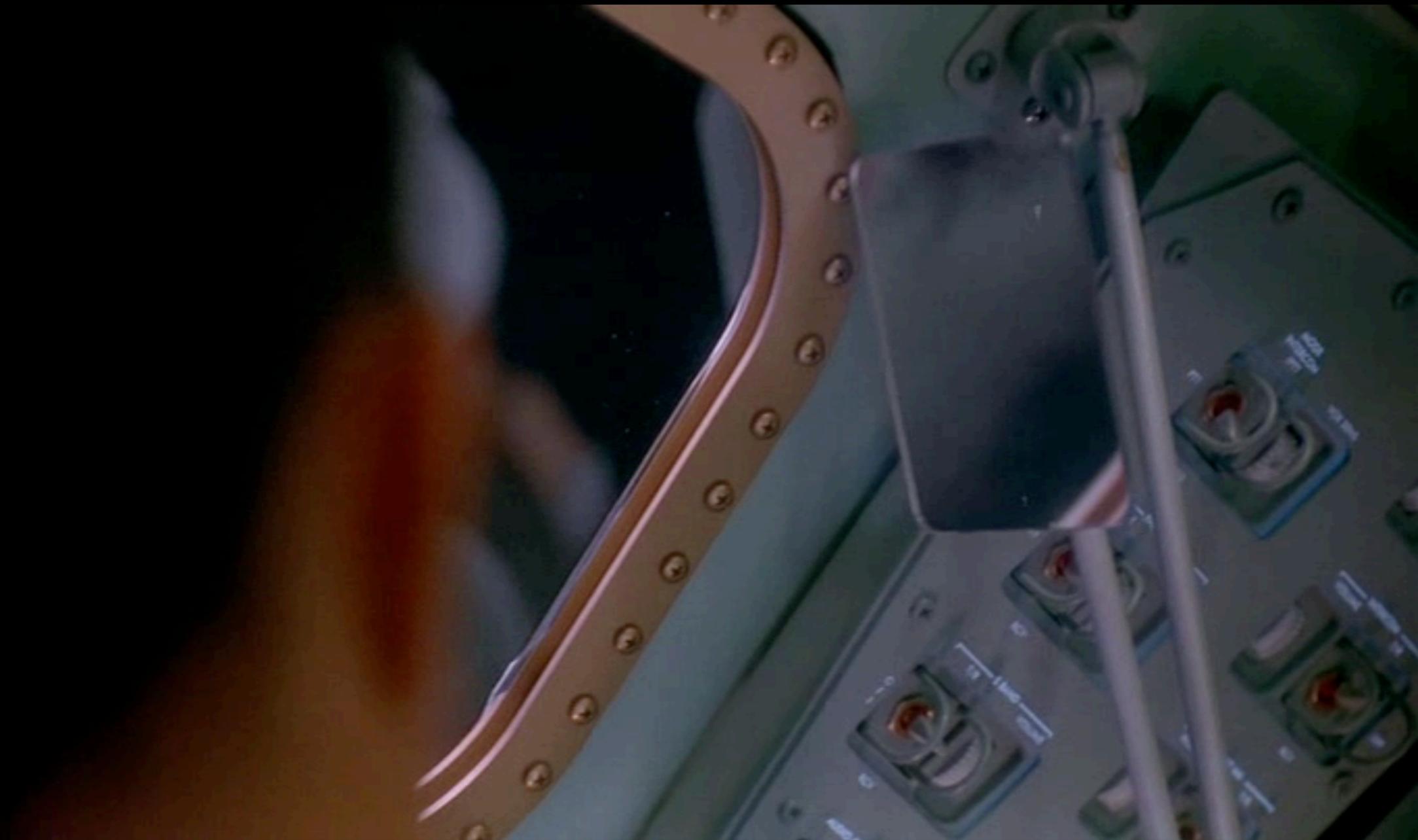
Jim Lovell



Gene Kranz



EECom (Cy)



Challenging Popular Understandings of Practice

- **Practice is equivalent of individual behavior or action**
- **Aspects of our situation (e.g., tools, techniques) are merely accessories to practice**

Practice



The Problem: “Heroics of Leadership” Genre

- The lure of leaders and their gallant acts
- The leader is center stage, while others play follower
- Setting school principals up for failure.



Take Away Lessons: Putting Distributed Perspective into *Practice* in Diagnostic Work

- Developing ‘taken as shared’ understandings of our analytical tools; sharp tools are key to success.
- Understanding what it entails to put instruction central in leading and managing work.
- Taking a distributed perspective involves:
 - Exploring how multiple actors are involved in leading and managing work
 - Focusing on the **practice** of leading and managing instruction by examining **interactions, not just actions**
 - Examining how **aspects of the situation** define practice

A Distributed Leadership Perspective in Practice: The Formal Organization

Session Two

Preview/Goals

- **Developing a *Diagnosis* and *Design* mindset.**
- **Understanding the nature of diagnostic work.**
- **Distinguishing between the formal and informal organization.**
- **Doing diagnostic and design work on the *formal* organization focusing on organizational routines.**

Embracing a Diagnostic and Design Mindset

Task Four

How many times does the white team touch the ball?



**“We have one hunter and one gatherer...
everyone else is a consultant”**



Diagnosis and Design

- **Diagnosis** = identify nature or cause of something
- **Design** = shaping things (e.g., aspects of the situation) for particular purposes

Nature of Diagnostic Work

- **Sense-making:**
 - **Noticing and selecting particular cues**
 - **Bracketing or classifying these cues**
 - **Interpreting cues**
- **Sense-giving:**
 - **Using interpretation of cues as evidence for some particular definition of a problem**
 - **Convincing others of one's interpretation**

Defining Problems in Practice: Diagnostic and Prognostic Framing

Ms. 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?”

W: “I wouldn't disagree, but I think there has to be a balance with the fluidity required for creativity.”

Koh: “Put the foot down and demand the children learn, demand the parents are responsible, and you know how much harder it is to do that in high school. That's why someone has to do this job,” and “**Children know, when we lower our expectations**” and “I'm not superwoman,” it's not something amazing about her that turns things around, but “**You've got to have that expectation, because they are going to be serving you someday** (students).”

W: “But **our [students'] scores are going up.**”

Koh: “But our students are changing, and we want to insure that everyone is going up. If you don't think I'm compassionate,” and she give the 3rd time 3rd grader story again. 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, Faculty meeting Kosten School, October 29th, 1999]

Data: Evidence of What, for What?

- **Data on student learning - beyond just test scores**
- **Data on classroom teaching practice**
- **Data on school leadership and management practice**
- **The nature of a problem ... motivation, capacity, fear.**
- **Using Data for Diagnosis and for Development Purposes:**
 - **Video Clubs**
 - **Lesson Study**
 - **Learning Walks, Instructional Rounds,**

Task Five

- **Read the two cases of Kosten and Adams schools. Record your initial reactions to each case.**
- **In your group, share your initial reactions. Then discuss the following questions and share your ideas with the class.**
 - **What are the salient differences in the two situations described?**
 - **What are some aspects of the situation that frame the leadership practice in each case?**

Diagnostic and Design Work: Core Organizational Functions

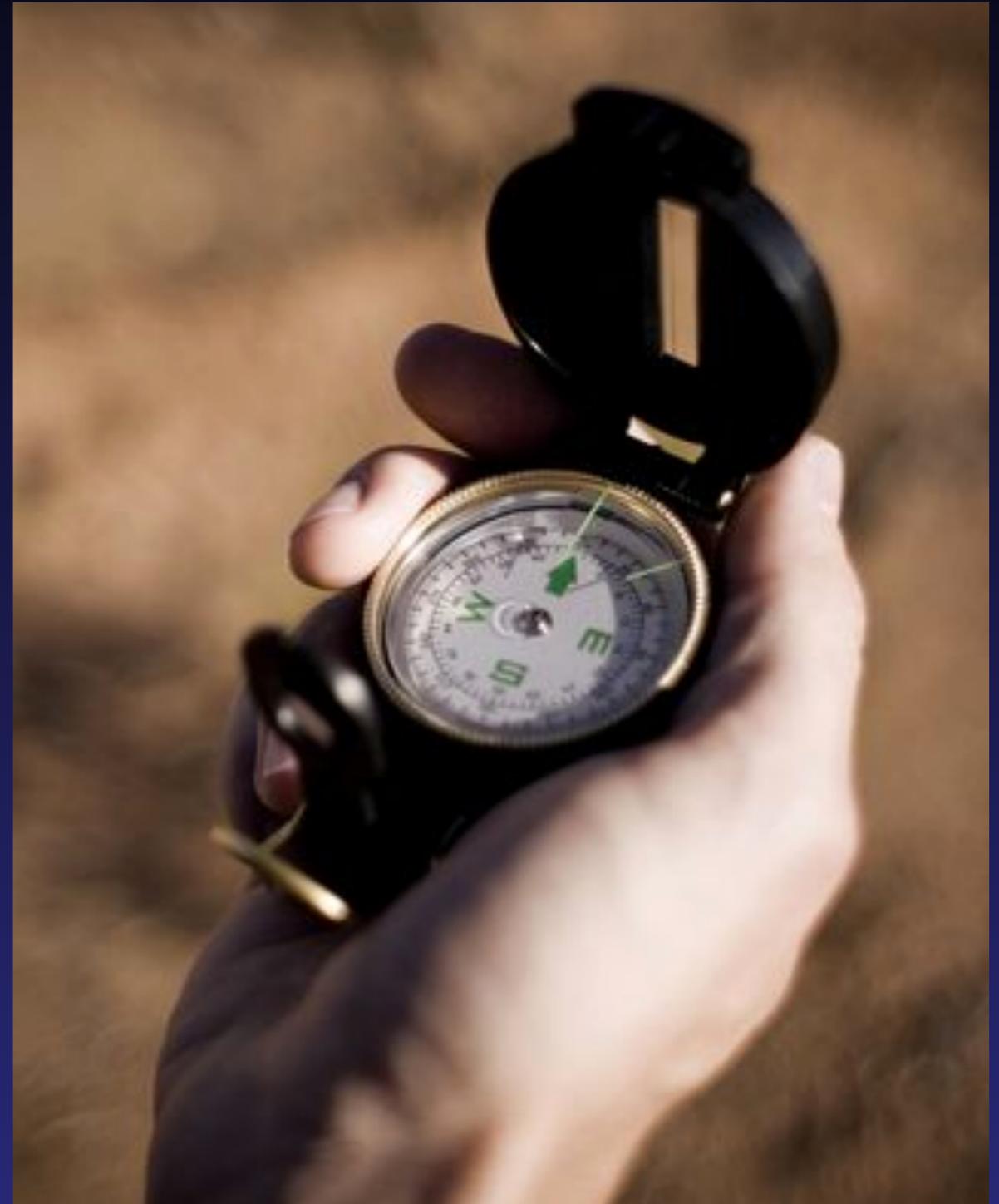
Core Organizational Functions

- **Setting Direction**
- **Human Development**
- **Organizational Development**



Setting Direction

- **Building a vision for instruction**
- **Getting buy-in from staff for the vision**
- **Establishing goals in order to realize the vision**
- **Establishing high expectations**



Human Development

- **Supervising instruction**
- **Monitoring program implementation**
- **Developing teachers and staff**
- **Providing encouragement and recognition**



Organizational Development

- **Behavior:**
 - **build relations among staff**
 - **build connections beyond subunits and the schoolhouse**
 - **procure resources**
 - **handle disturbances**
- **Norms:**
 - **de-privatize classroom practice**
 - **build trust among staff & stakeholders**
 - **create norms of collective responsibility**

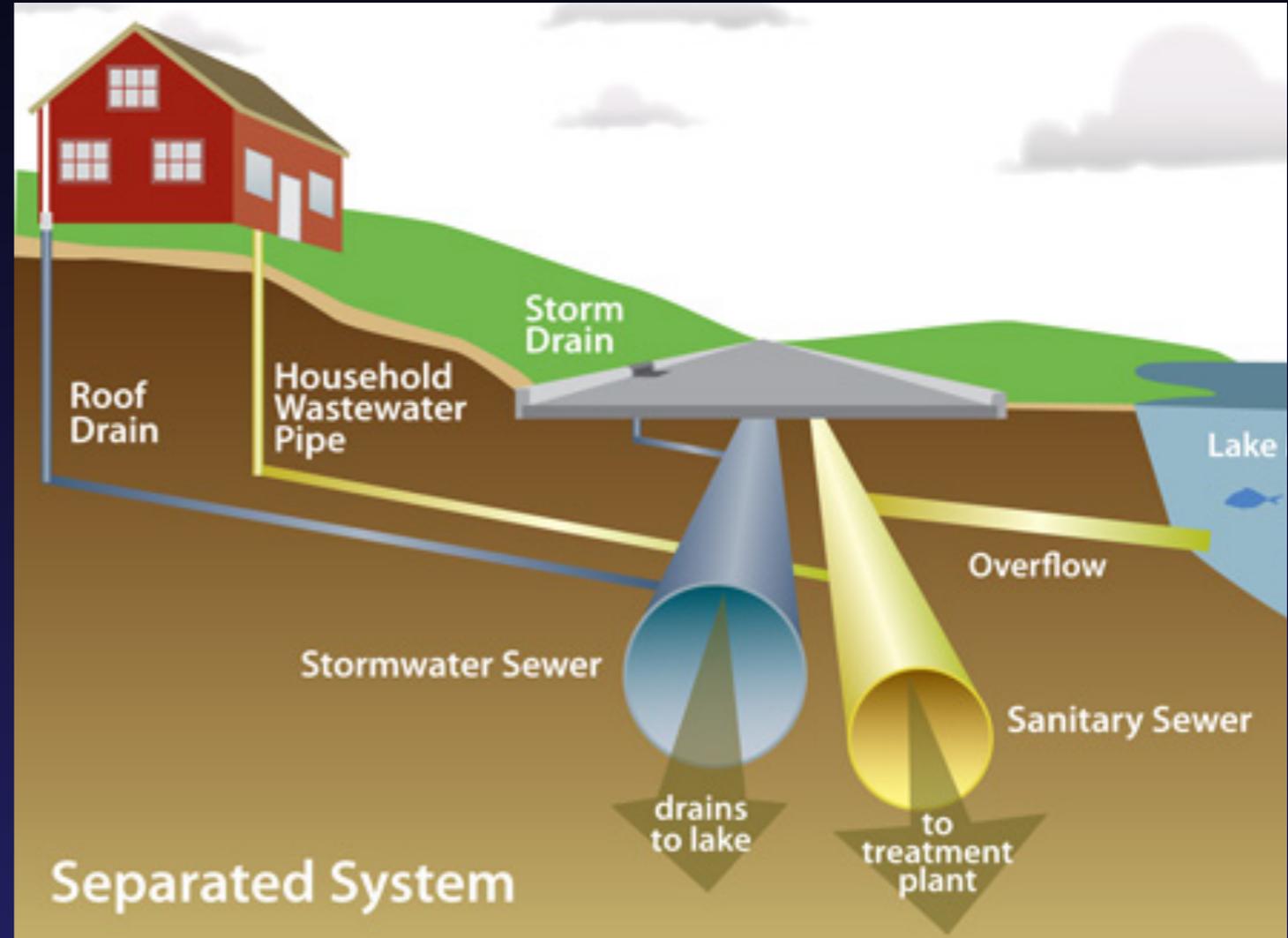
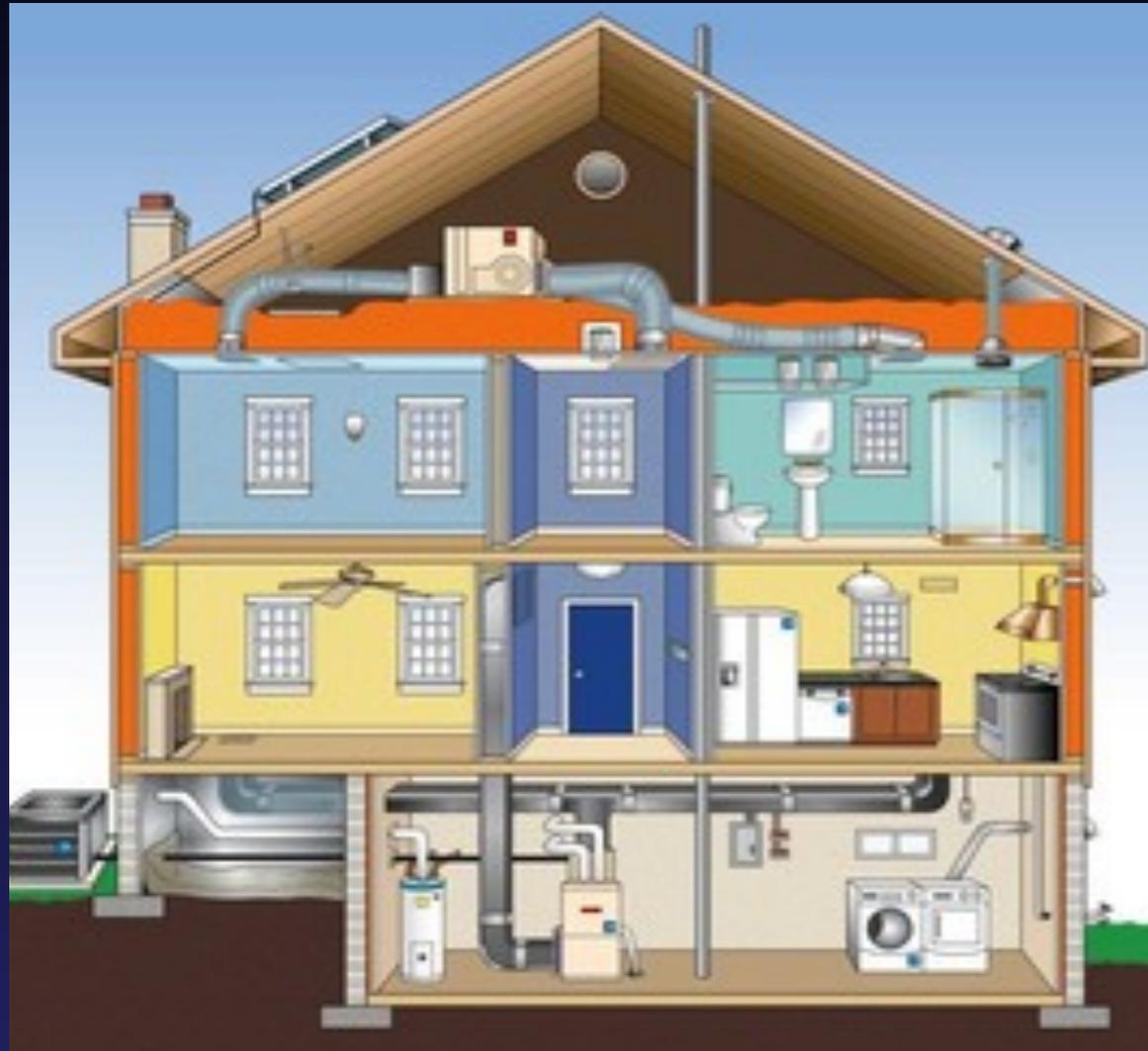


Doing Diagnostic and Design Work: The Formal/Designed Organization

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

VS

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



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

The Designed Organization: Formal Positions

- **What leadership/management positions?**
- **How are these positions arranged?**
- **What are the responsibilities assigned to these positions?**
- **Who assigns these responsibilities?**
- **Who occupies these positions AND why these occupants?**



Organizational Routines

- **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
- **Concerns about the organizational routine construct** — rigid, mundane, mindless, explicitly stored (*Cohen, 2007*)

Organizational Routines

- **Advantages**

- **Allow efficient coordinated action**
- **Provide source of stability**
- **Reduce conflict about how to do work**

- **Disadvantages**

- **Result in inappropriate responses**
- **Inertia, mindlessness, and de-motivation**

Leading & Managing Instruction By Designing Organizational Routines

- **Adams School:** Breakfast Club, Grade level meetings, Teacher Talk, Teacher Leaders, Five-Week Assessment, Literacy Committee, School Improvement Planning, and Mathematics Committee
- **Baxter School:** Cycle Meetings, Leadership Team Meetings, Literacy Committee, Math/Science Committee, School Improvement Planning
- **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

- **Origins**

- **Received**
- **Locally Designed**
- **Inherited**



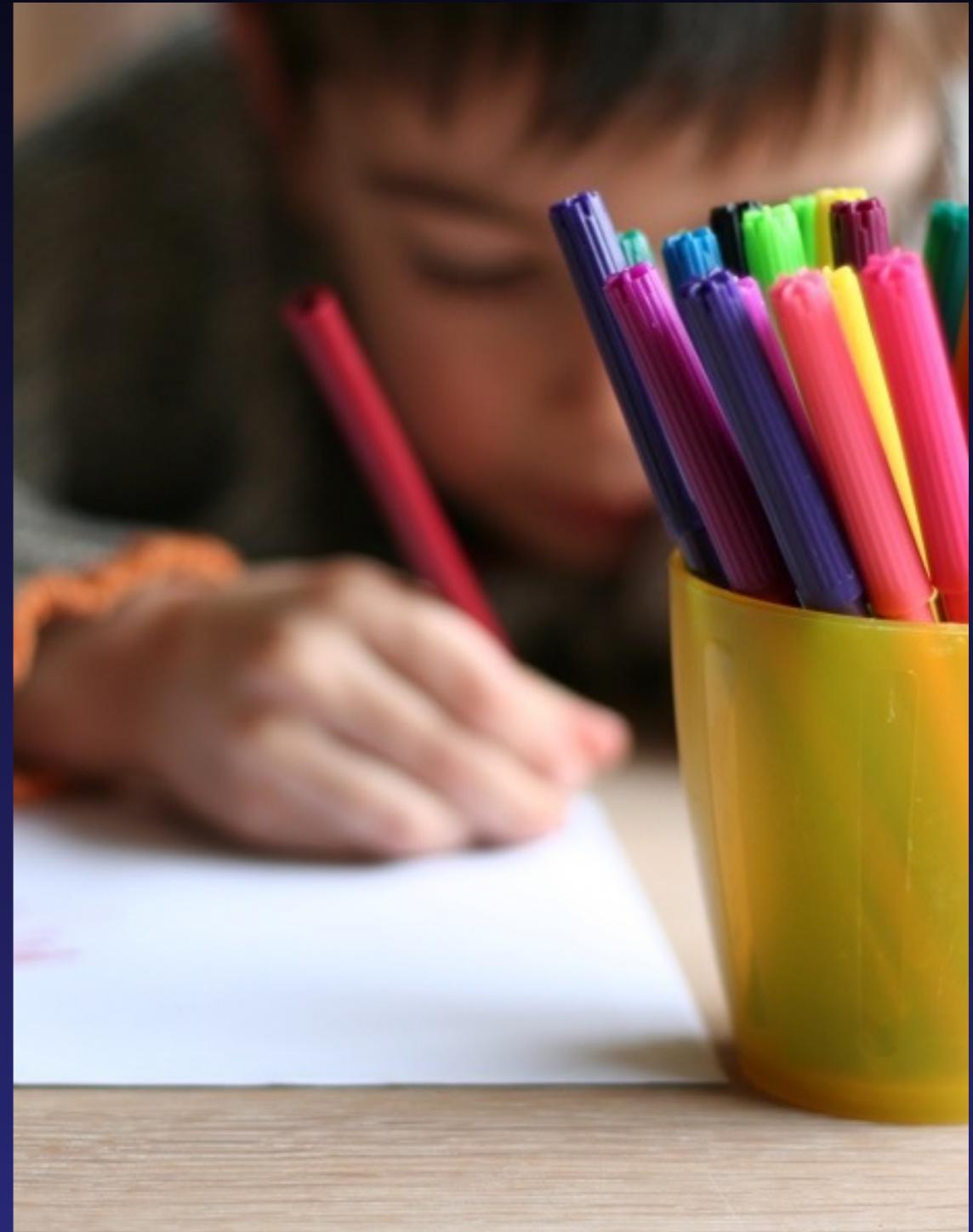
- **Design**

- **Designed and redesigned by multiple individuals over time**
- **Adapted over time; social evolution**

Task Six

The Writing Folder Review Routine:

Framing interactions through
the design of organizational
routines



Task Six: Assessing the Writing Folder Review Organizational Routines

- In your group, discuss the writing folder review routine using the following three questions.**
- Recalling our earlier discussion of teaching as a social practice that is defined in the interaction among teacher, students, and material, how is the Writing Folder Review Routine designed to connect with teaching?**
- What are two strengths and two weaknesses of the writing folder review routine as designed?**
- How might you redesign the Writing Folder Review Routine to address the weaknesses?**

Task Six: Teaching as a Social Practice



Organizational Routines at Adams School

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

Organizational Routines for Teacher Learning at Forest High School

Teacher Learning Routine	Teacher Learning Function	Tools	People
Breakfast Club: “Muffins and Math”	-Increase enjoyment of math problem solving -Practice math problem solving skills	-Math puzzles -Logic problems	-Assistant principal -Teachers
National Board Support Group	-Prepare portfolios for National Board Submission	-Videotapes from participants’ classes -National Board materials	-Board certified teacher/facilitator -Teachers
District-Wide Science Inservice	-Increase understanding of science standards by strand	-Standards documents -Curriculum materials	-District curriculum coordinator -Science department chairs -Teachers
Classroom Observations	-Feedback for teachers on instruction	-School Protocol, -District Protocol	-Principal -Assistant Principal
Informal Check-Ins	-Touch base with colleagues about new graphing calculators	-Lesson plans -Teaching materials	-Algebra teachers

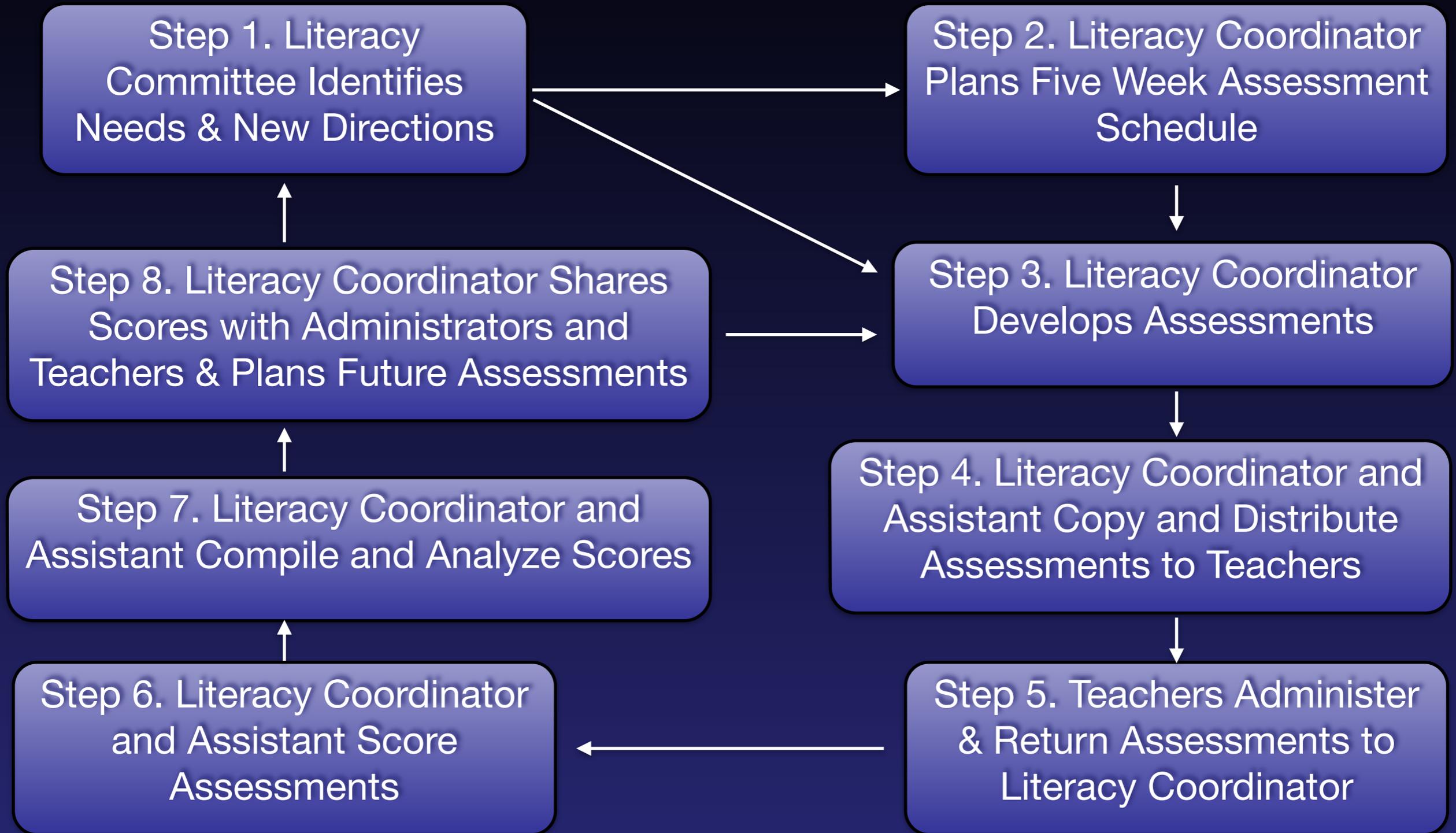
Why Organizational Routines?

- **Pragmatic reasons:**
 - **Key mechanism in instructional improvement efforts**
 - **Schools and school systems design and deploy organizational routines in efforts to improve instruction**
- **Conceptual reasons:**
 - **Focus attention on practice - patterned interactions**
 - **Provide frame for examining relationship between organizational infrastructure and practice**
 - **Involve cognitive, normative, and regulative dimensions**

Task Seven: Organizational Routines

- **List five organizational routines at your school. Be sure that each routine you identify meets the criteria to count as an organizational routine.**
- **Prioritize the five routines you have chosen by indicating which is most important for leading and managing instruction and instructional improvement, second most important, etc.**
- **Complete your organizational routine chart by identifying who is responsible for executing each routine, the tools involved, and the function of the routine (e.g., set direction, building knowledge about instruction).**
- **Share your list and discuss with a colleague.**

Five Week Assessment: Ostensive Aspect



Diagnostic and Design Work: Asking the Difficult Questions about Organizational Routines

- **What is the theory of action behind the routine?**
- **What arguments explain and evaluate the routine?**
 - **Why should it work?**
 - **Why might it not work?**
 - **What are the advantages of this routine?**
 - **What are the disadvantages of this routine?**
- **How is the routine connecting with/anchored in teaching and learning?**



Task Eight: Organizational Routines for Leading and Maintaining Instructional Quality

- **Identify one key organizational routine from your list.**
- **Jot down the components of the routine.**
 - **What is the theory of action for this routine?**
 - **How might it work?**
 - **How might it not work?**
 - **Is it working as intended? How do you know?**
- **Discuss your routine with the person next to you.**

Task Eight: Organizational Routines

- As a pair, you need to adopt a critical colleague perspective so that you genuinely help one another ask the questions essential for real diagnostic work. This real diagnostic work is the foundation for design and redesign work that will make a difference.
- Based on the feedback from your critical colleague, identify some key ways in which you would redesign the organizational routine.
- Clearly justify your redesign to your colleague.

Take Away Lessons

- **Develop a diagnostic and design mindset.**
- **Diagnostic work involves scanning, noticing, classifying, interpreting, and marshaling data to define problems.**
- **Distinguish between the formal and informal aspects of the organizational infrastructure in diagnostic and design work.**
- **Using design and redesign of organizational routines to lead and maintain instructional improvement:**
 - **Specify design principles**
 - **Explore strengths and weaknesses of routines as designed.**

A Distributed Leadership Perspective in Practice: The Informal Organization

Session Three

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

VS

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

Preview/Goals

- **Using a distributed perspective for diagnostic and design work on the *informal/lived* organization.**
- **Understanding social capital & distributed models of expertise.**
- **Examining how interactions among school staff about instruction enable teachers' 'on-the-job' learning.**
- **Exploring how the design of the formal organizational infrastructure shapes the informal or lived organization.**

Diagnostic Work: The Lived/Informal Organization

- Looking at what people actually do
- Looking at what people do together
- Taking informal leaders into account
- Examining relations among the informal and formal organization



Why Focus On Interactions about Instruction: Teacher Learning & Knowledge Development

ESM Log Prompts



- Are you engaged in a school-related activity?
- Where are you?
- What are you doing?

- My Office
- Main Office
- Classroom
- Hallway
- Other Onsite Location
- District Office
- Other Offsite Location

- Administration
- Instruction & Curriculum
- Building Relations
- Your Own Professional

ESM Log Prompts



- **What kind of administrative activity?**
 - Managing budget
 - Managing personnel
 - Managing schedules
 - Managing campus
 - Managing students
 - School improvement planning

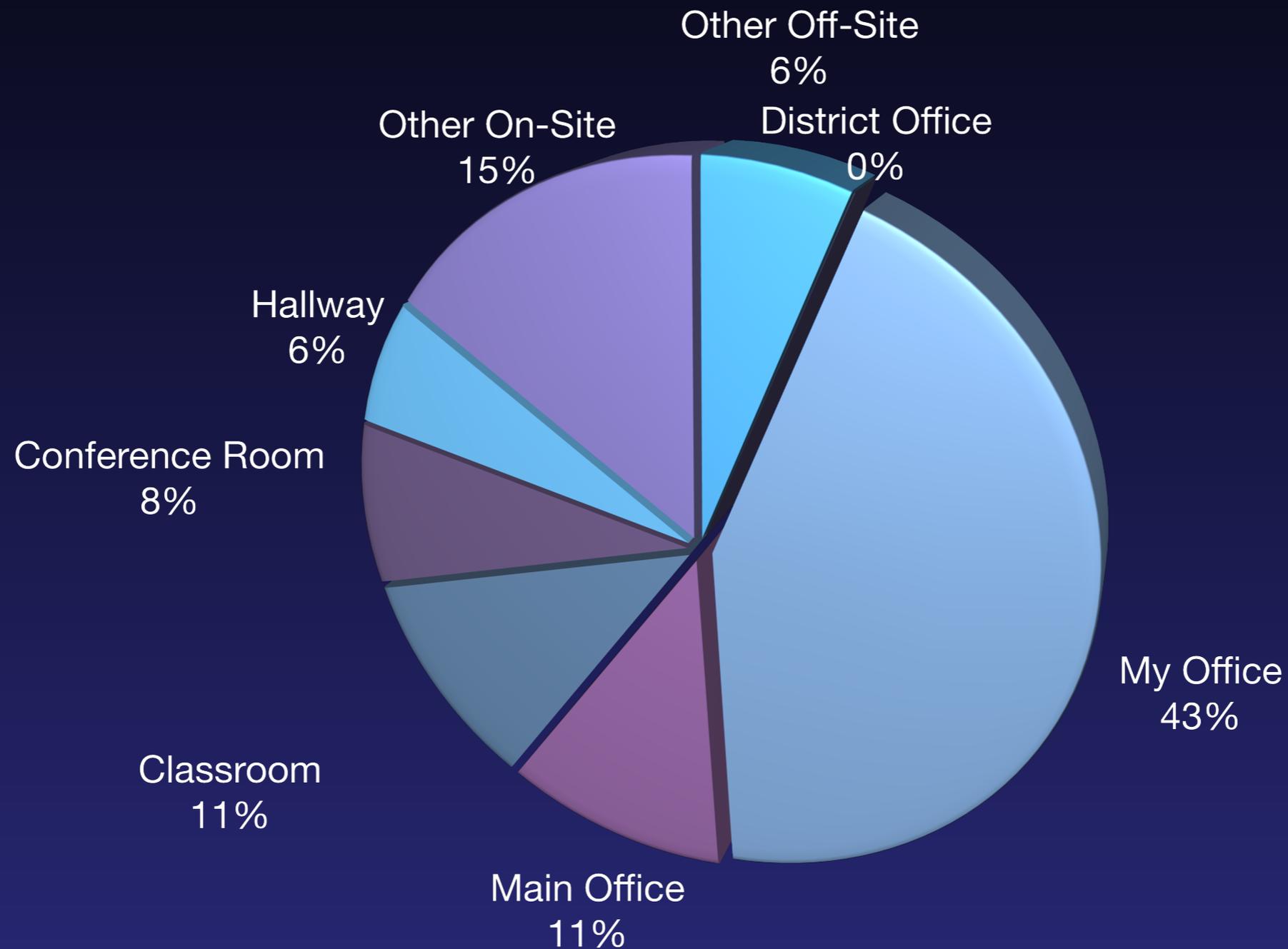
Where is Time Spent?

Think about a school principal you know well. Estimate the percentage of time he/she spends in each of the following locations during a 'typical' school day:

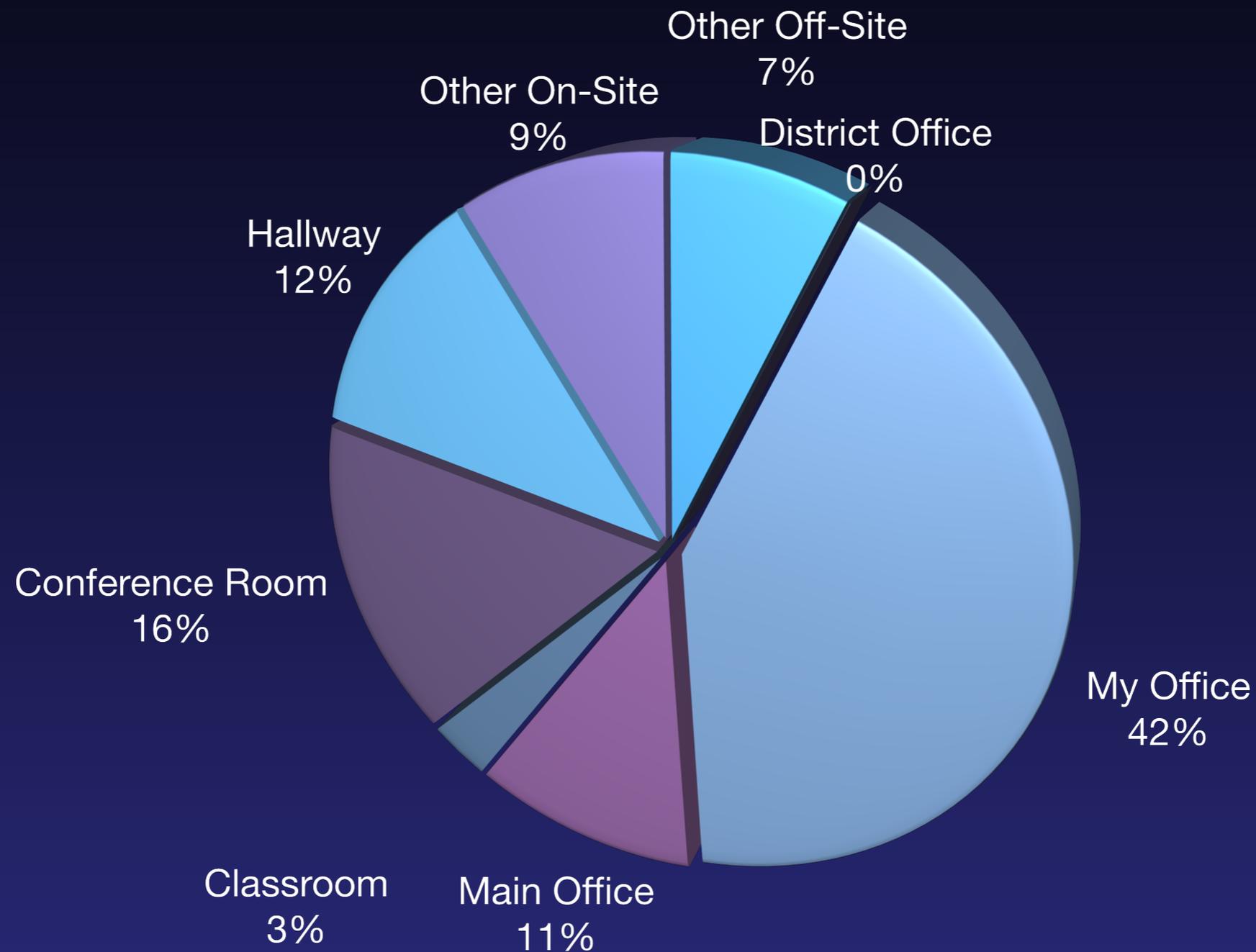
- **Principal's office**
- **Other on-site location**
- **Classroom**
- **Main office**
- **Conference room**
- **Hallway**
- **Off-site location**



Where Time is Spent: Primary School Principals



Where Time is Spent: Secondary School Principals



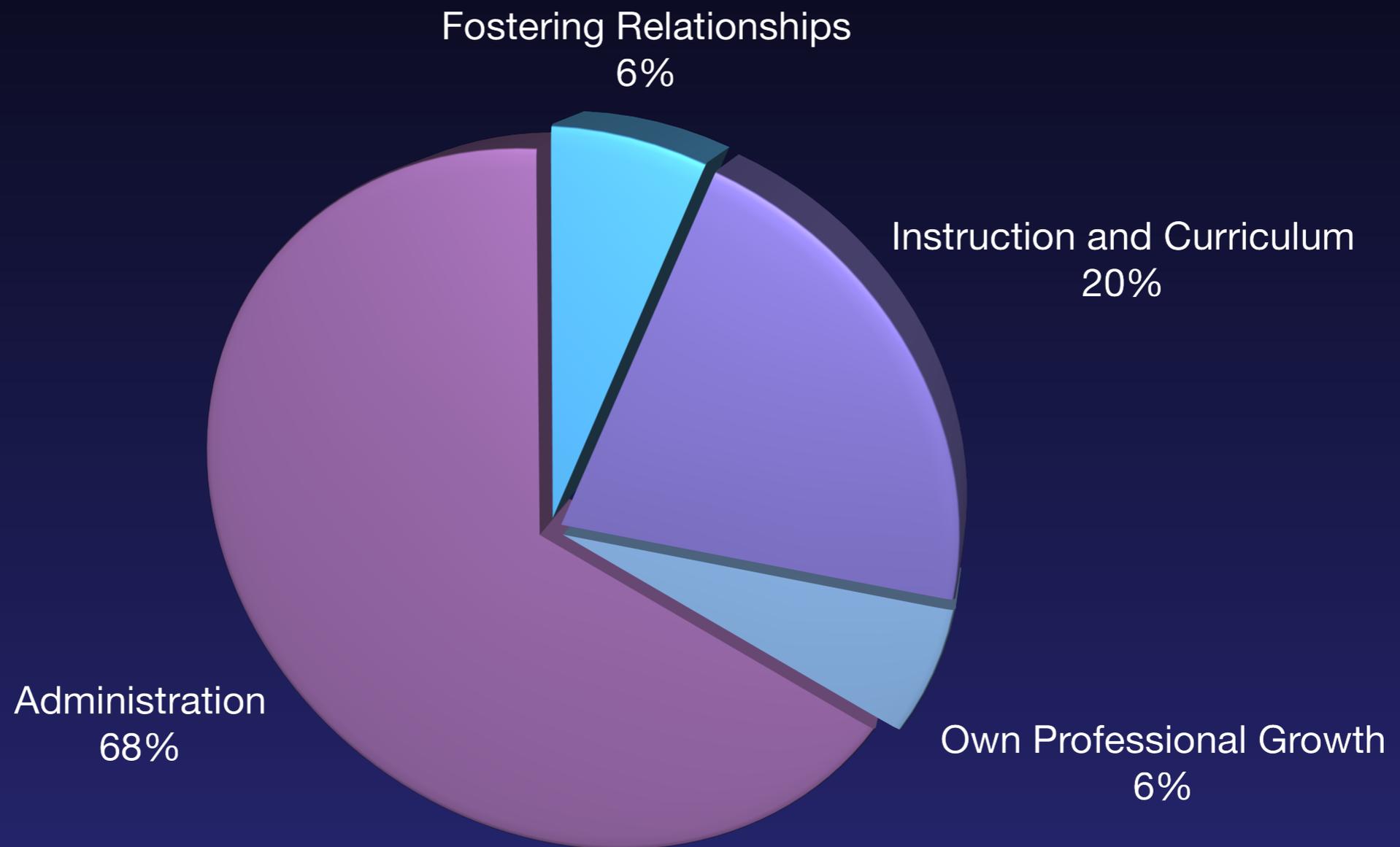
On What is Time Spent?

Think about your job and estimate what percentage of the day you spend on each of the following:

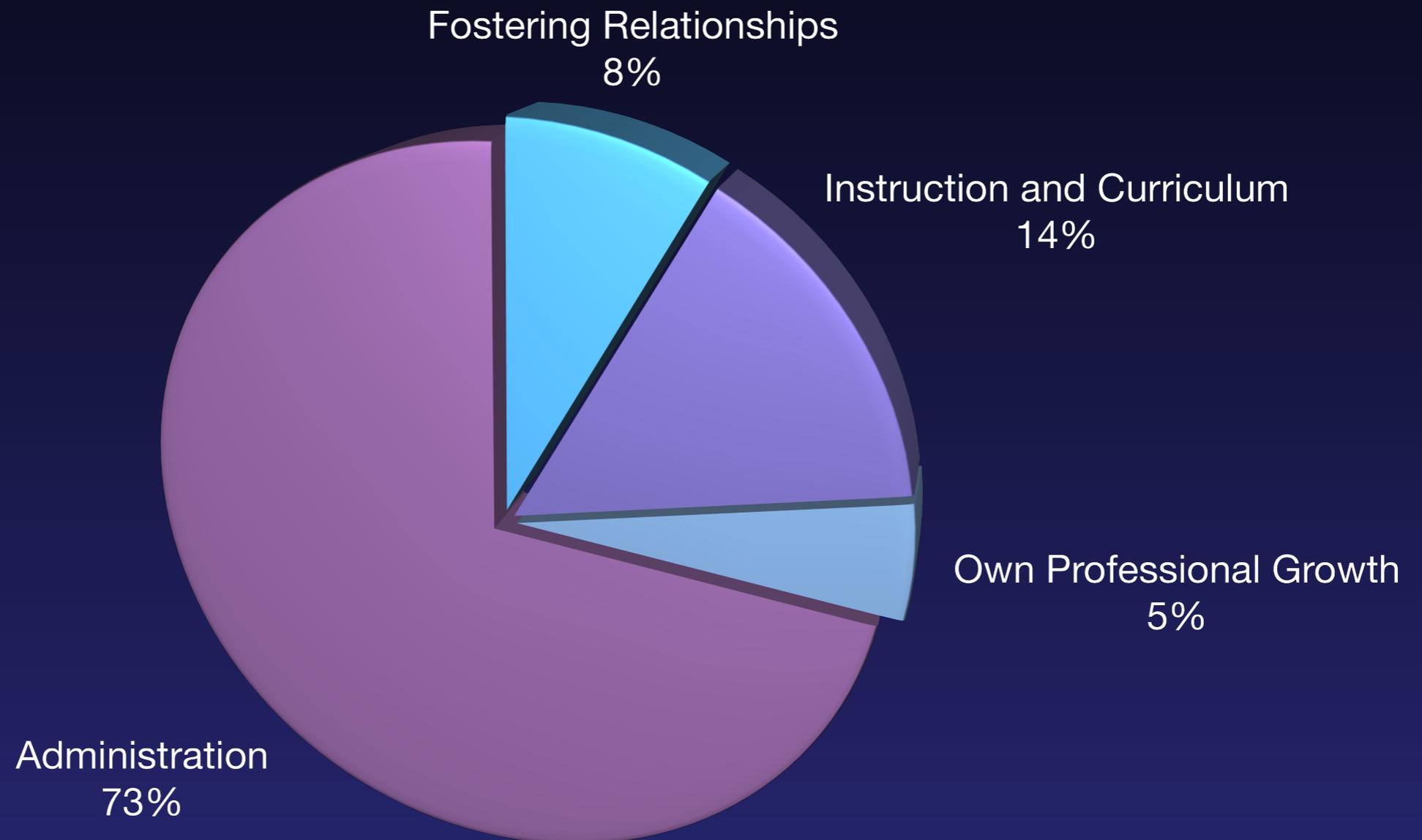
- **Instruction and curriculum**
- **Administration**
- **Building relations**
- **Your own professional development**



What Primary School Principals Spend Time On



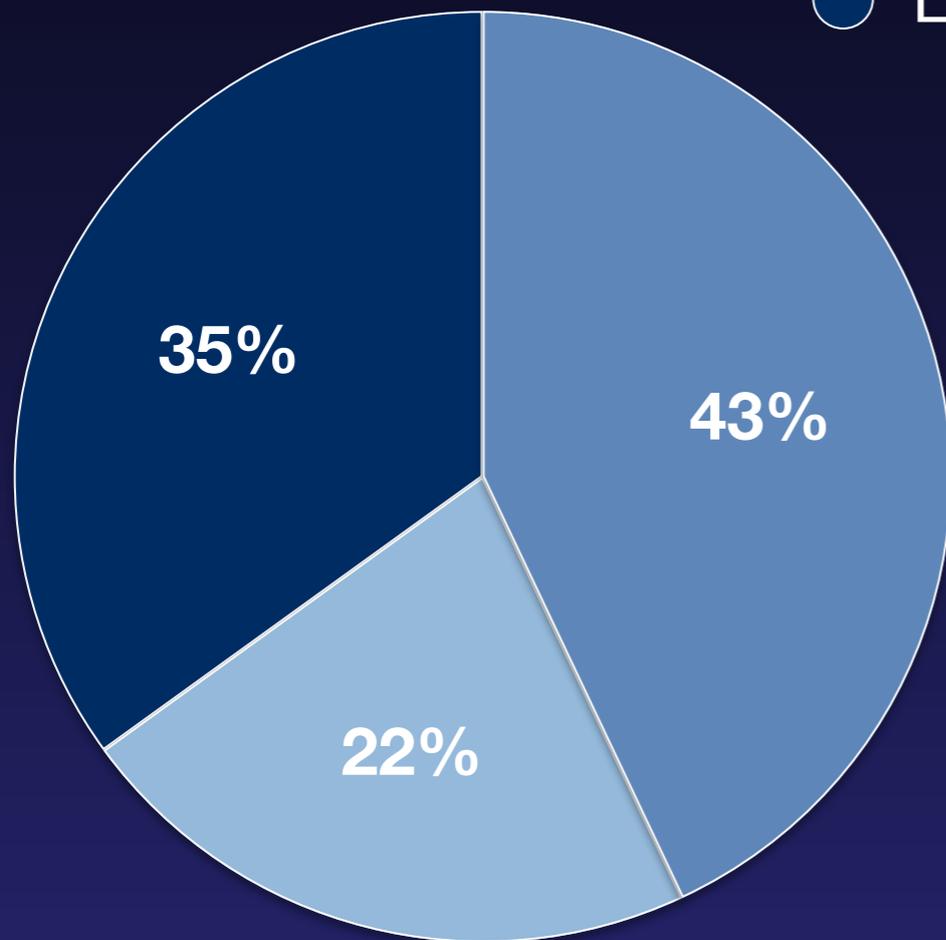
What Primary School Principals Spend Time On



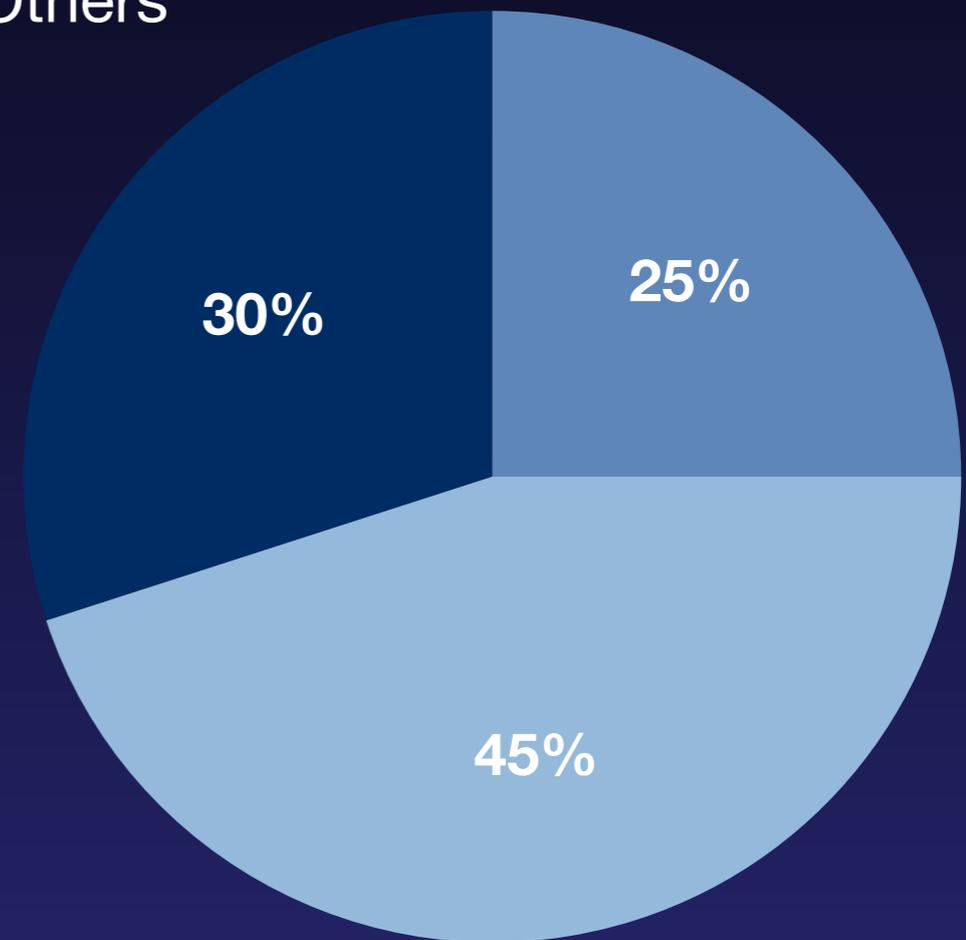
The Principal at Work

Chart Title

- Leading Alone
- Not Leading
- Leading With Others

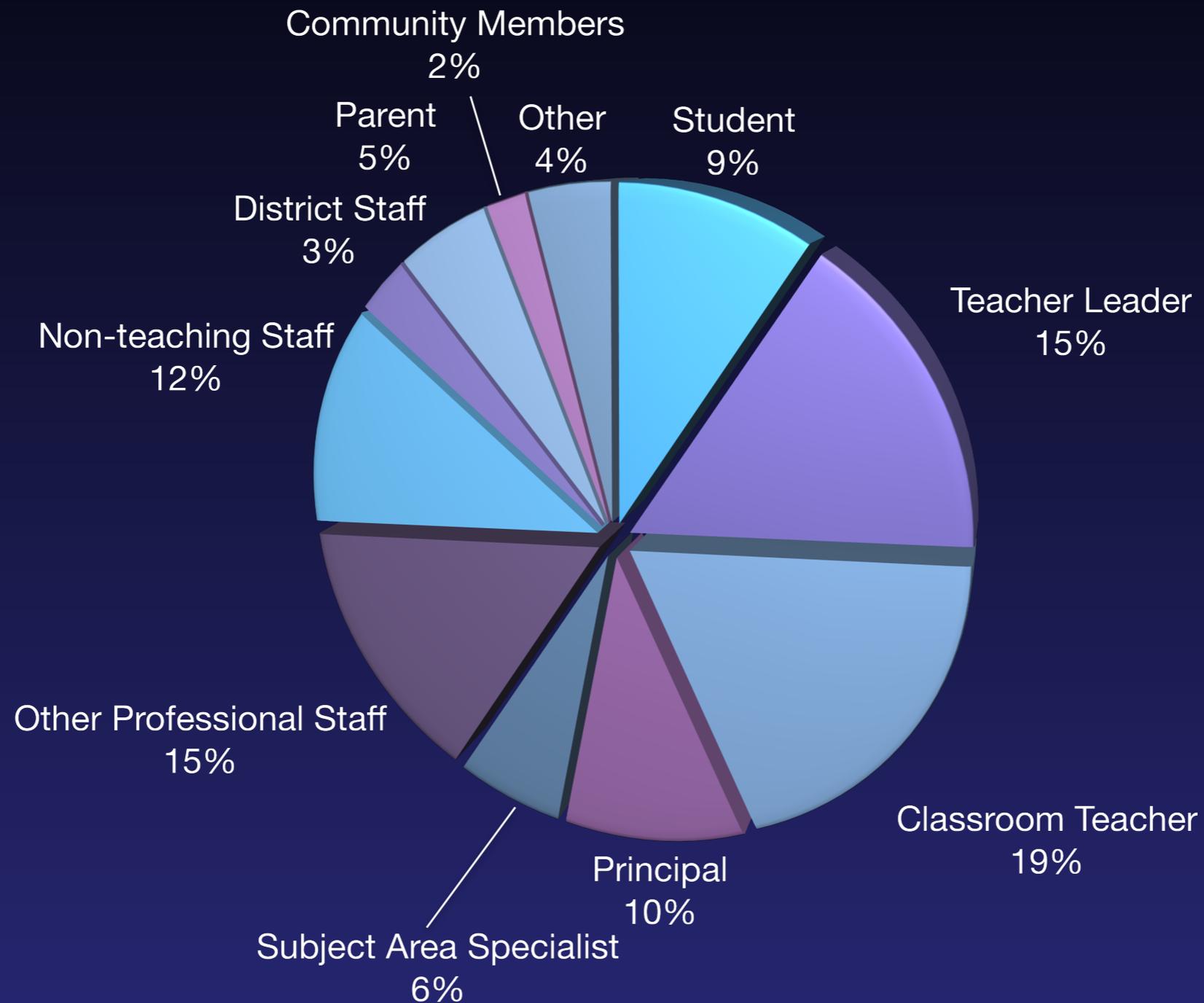


Administrative

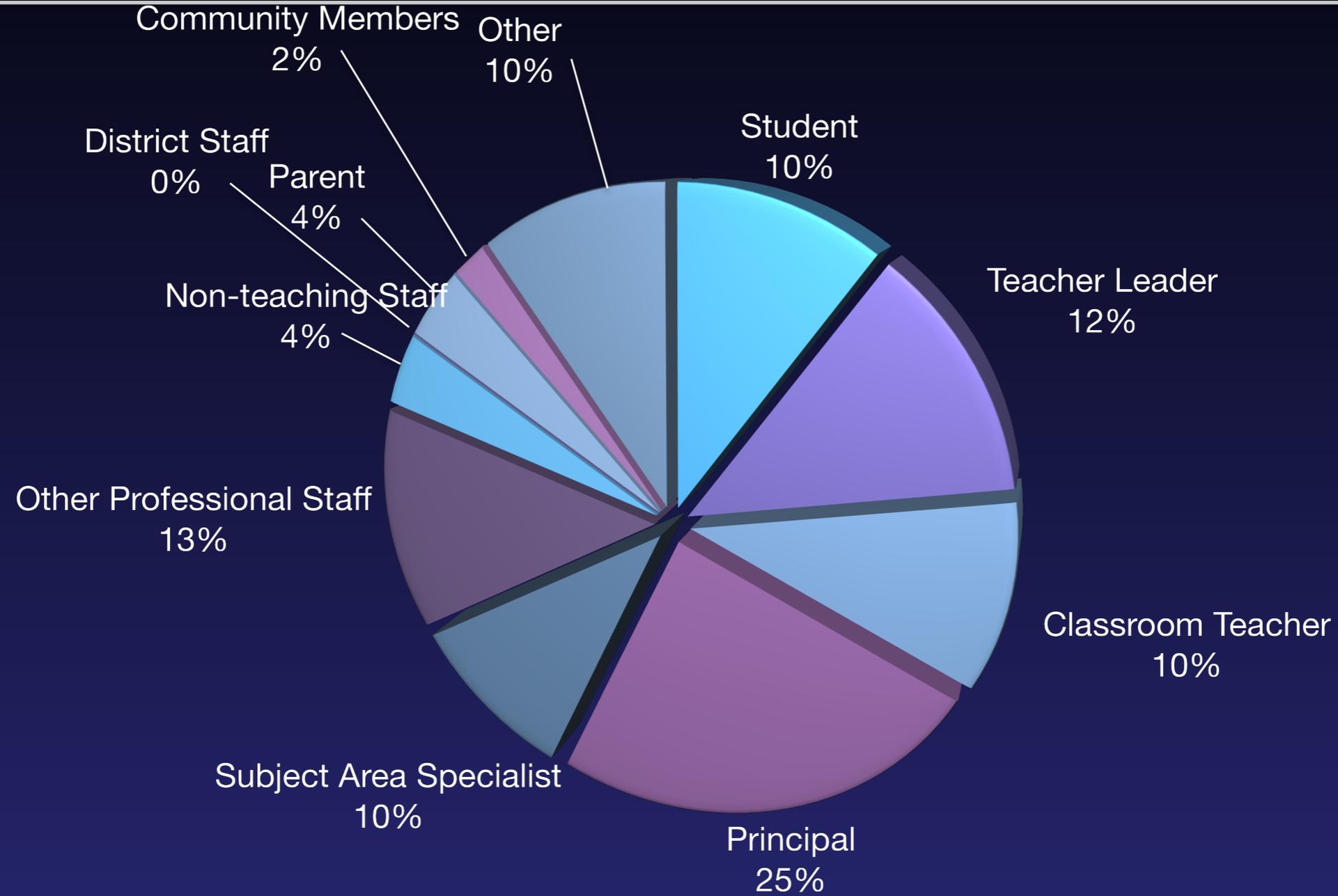


Curriculum and Instruction

Who Are The Co-Leaders? Primary School Principals



Who Are The Co-Leaders? Secondary School Principals



Task Nine

The High Low Card Game



Round One: How to Play

- **Form groups of six or fewer people. You will be dealt two cards and must maintain two cards throughout the game. Trade cards within your group to reach your highest individual score. You must trade a card at least once. Your goal is to have the highest-scoring pair of cards in your group.**
- **Scoring**
 - **All cards are worth their number value. Aces are worth one point.**
 - **Face cards are worth ten points.**
 - **A pair of cards of the same suit is awarded an extra ten points.**
 - **Two cards of the same number cancel each other out and equal zero.**

Reflection

- **Add your score with the others' within your small group to reach a total group score. Write down this score.**
- **Who had the highest individual score in your small group?**
- **What did you notice about your group's interactions?**
- **Did anyone take a leadership role during the game? If so, was this helpful or hurtful to your success?**

Round Two: How to Play

- **The rules and scoring are the same as in round one. Trade cards with the players within your group. Each player still must trade a card at least once.**
- **Tally your individual and group score. Write down your group score.**

Same Cards Dealt, Higher Score Achieved?

- **Did anyone in your group identify him/herself as a leader either formally or informally?**
- **Was a leader necessary to win?**
- **The same deck of cards produced a higher group score in round two than in round one. Why?**
- **What parallels can be drawn from the High-Low Card Game to school life?**

A (Simple) Model of Teachers' Instructional Productivity

Motivation  Knowledge  Situation

 Teacher Productivity

Re-thinking The Nature of Expertise

- **Social Capital, not just Human Capital**
- **Embracing Distributed Models of Expertise**
- **Re-thinking Instructional Capability**

The Critical Role of Social Capital

- **Social capital refers to real or potential resources for action attained *through relationships* (Lin, 2001; Bourdieu, 1980; 2001; Coleman, 1988).**
- **Three key elements**
 - **social relations or ties**
 - **resources available through these ties**
 - **resources that reside in the relations among people**

Developing Instructional Knowledge On The Job: Social Capital at Work

- **Advice and information as building blocks for knowledge**
- **Teachers learn about teaching from their peers**
- **On-the-job interactions associated with the transfer of advice and information — essential to knowledge development**
 - **Socialization: Tacit Knowledge — Tacit Knowledge**
 - **Externalization: Tacit Knowledge — Explicit Knowledge**
 - **Combination: Explicit Knowledge — Explicit Knowledge**
 - **Internalization: Explicit Knowledge — Tacit Knowledge**

Blau, 1957; Bryk & Schneider, 2002; Choo, 1998; Coburn, 2001; Daly & Finnigan, 2010; Elmore, 1996; Eraut & Hirsh, 2007; Frank, Zhao, & Borman, 2004; Goldhaber & Hansen, 2010; Jackson & Bruegmann, 2009; Hill, 2004; Little, 2002; Smylie, 1995; Spillane, 2004

Diagnosing the Informal Organization: On the Job Interactions about Instruction

Social Network Instrument

Screen Shot from School Staff Questionnaire (SSQ) – Math Advice Questions Page 1



NORTHWESTERN
UNIVERSITY

During THIS SCHOOL YEAR, to whom have you turned for advice and/or information about CURRICULUM, TEACHING, and STUDENT LEARNING? Please write full first and last names. You do not need to fill all the spaces.

Please consider all forms of communication including face-to-face, via e-mail or telephone, etc., and include individuals across content and school/district/outside roles. You may list people you named as your close colleagues as well.

I have not sought advice from anyone. *Do not check this box if you provide a name(s) below.*

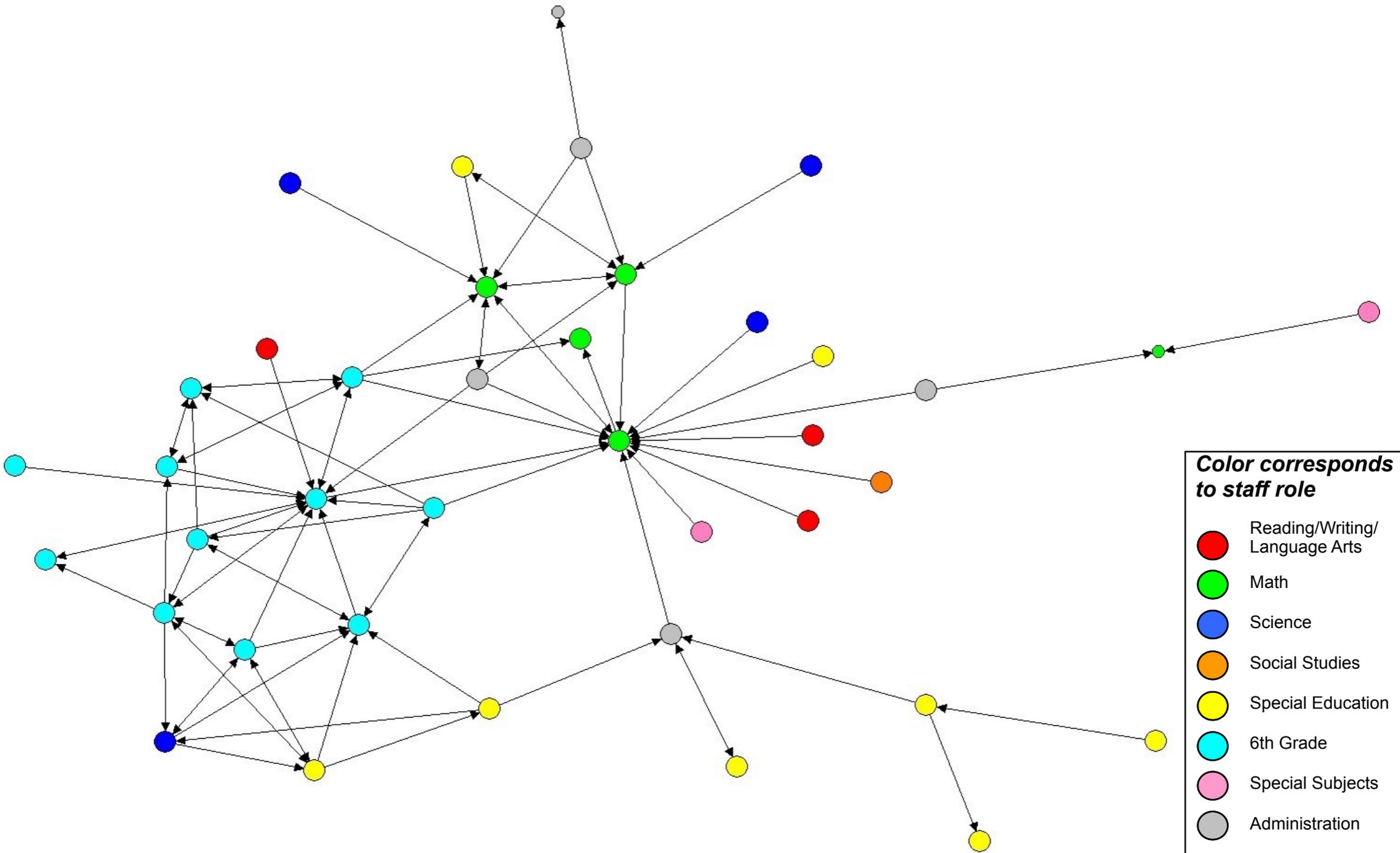
- 1) James Spillane
- 2) Megan Hopkins
- 3) Katie Mertz
- 4) |
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)
- 11)
- 12)

Please Note: No names or identifying information will ever be revealed in reports produced from these data.

Progress



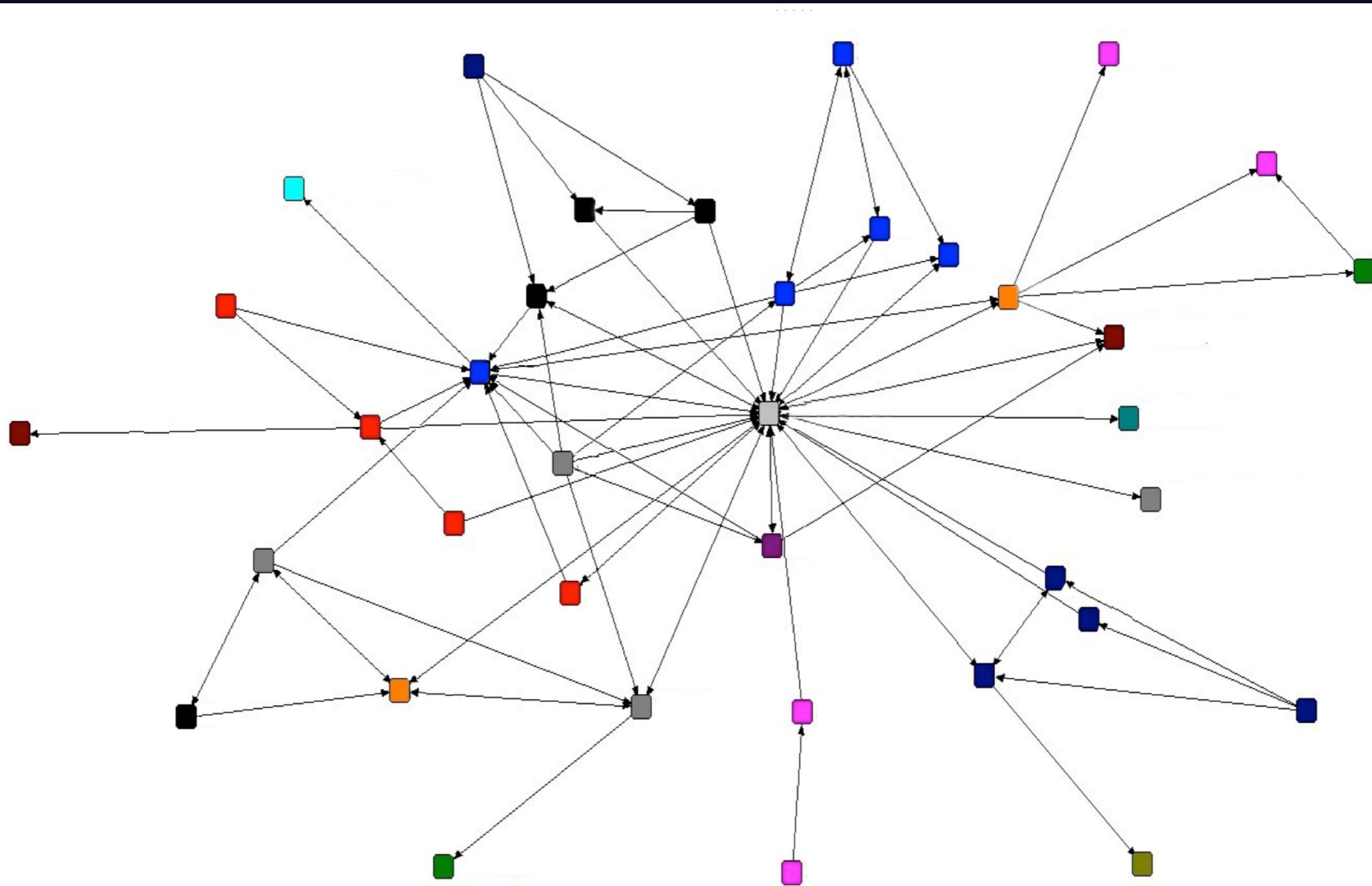
Central Actors



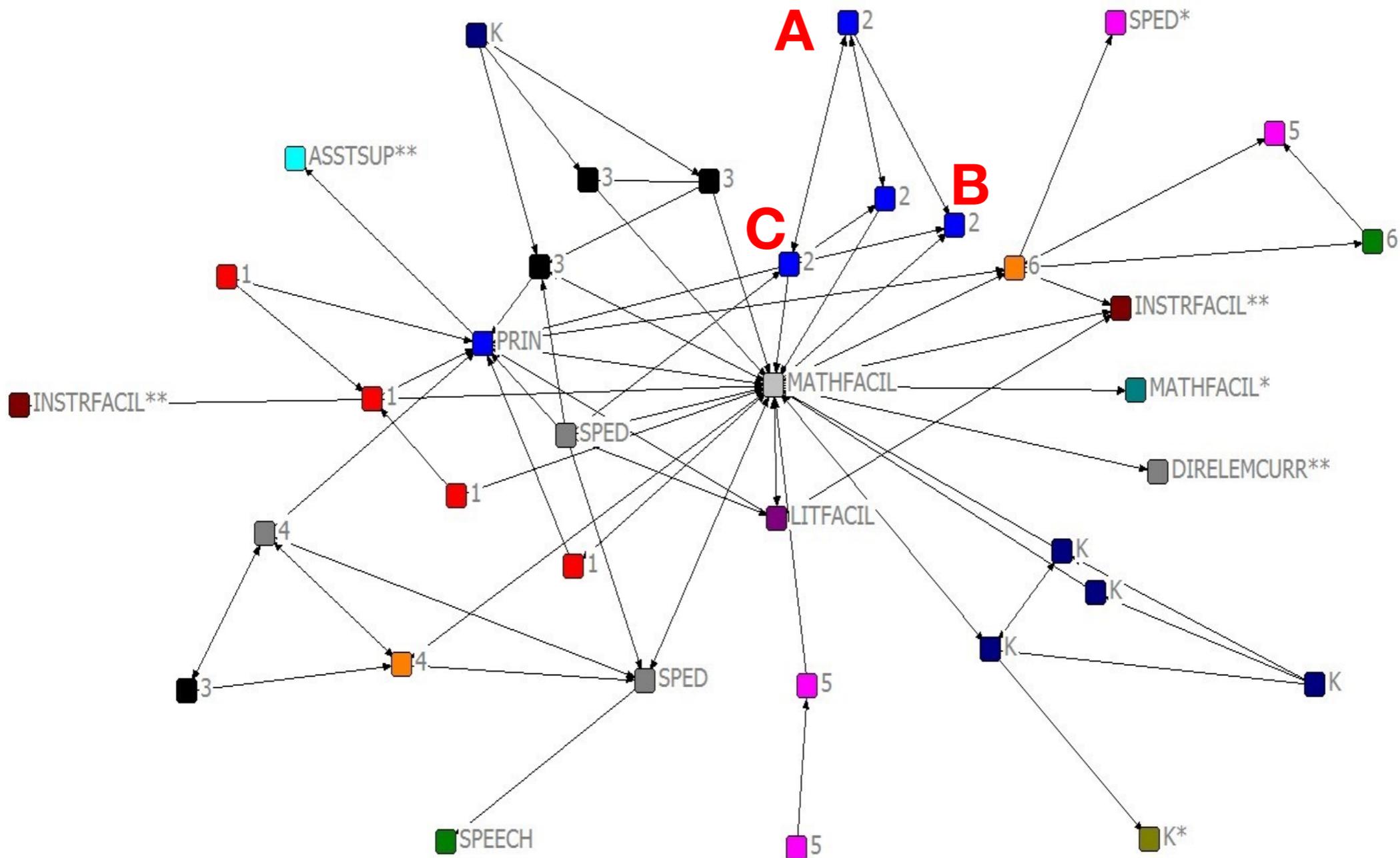
Task 10: Diagnosing Social Interactions about Instruction

- **In your group, examine the advice and information interactions about instruction at Kingsley Elementary School.**
- **Compare and contrast the interaction patterns for English Language Arts, Mathematics, and science.**
- **Identify two patterns that you think would be important in efforts to lead and manage improvement in instruction at Kingsley Elementary School. Explain why you think each pattern is salient.**

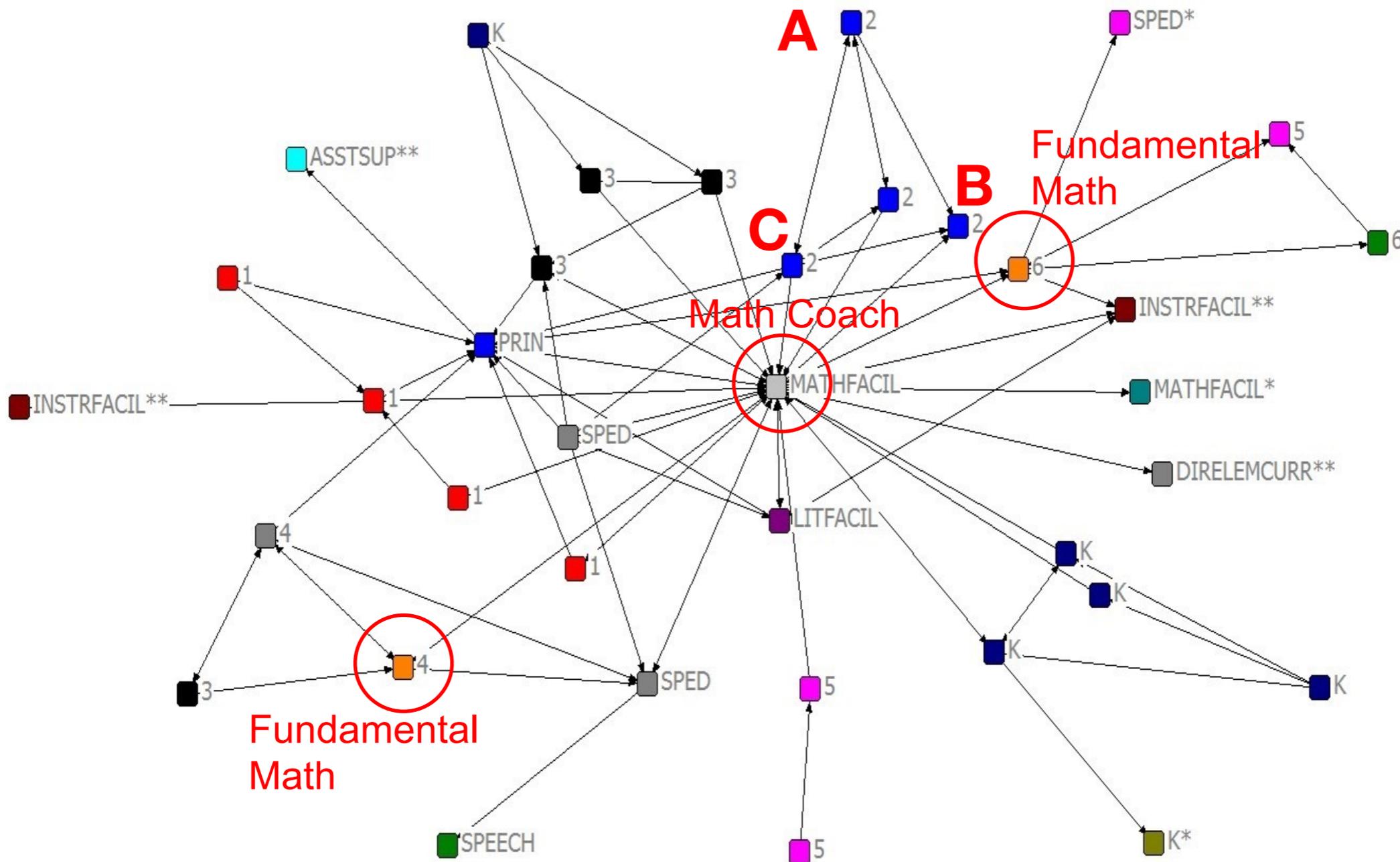
Task 10: Examining Interactions about Mathematics Instruction



Advice and Information Interactions

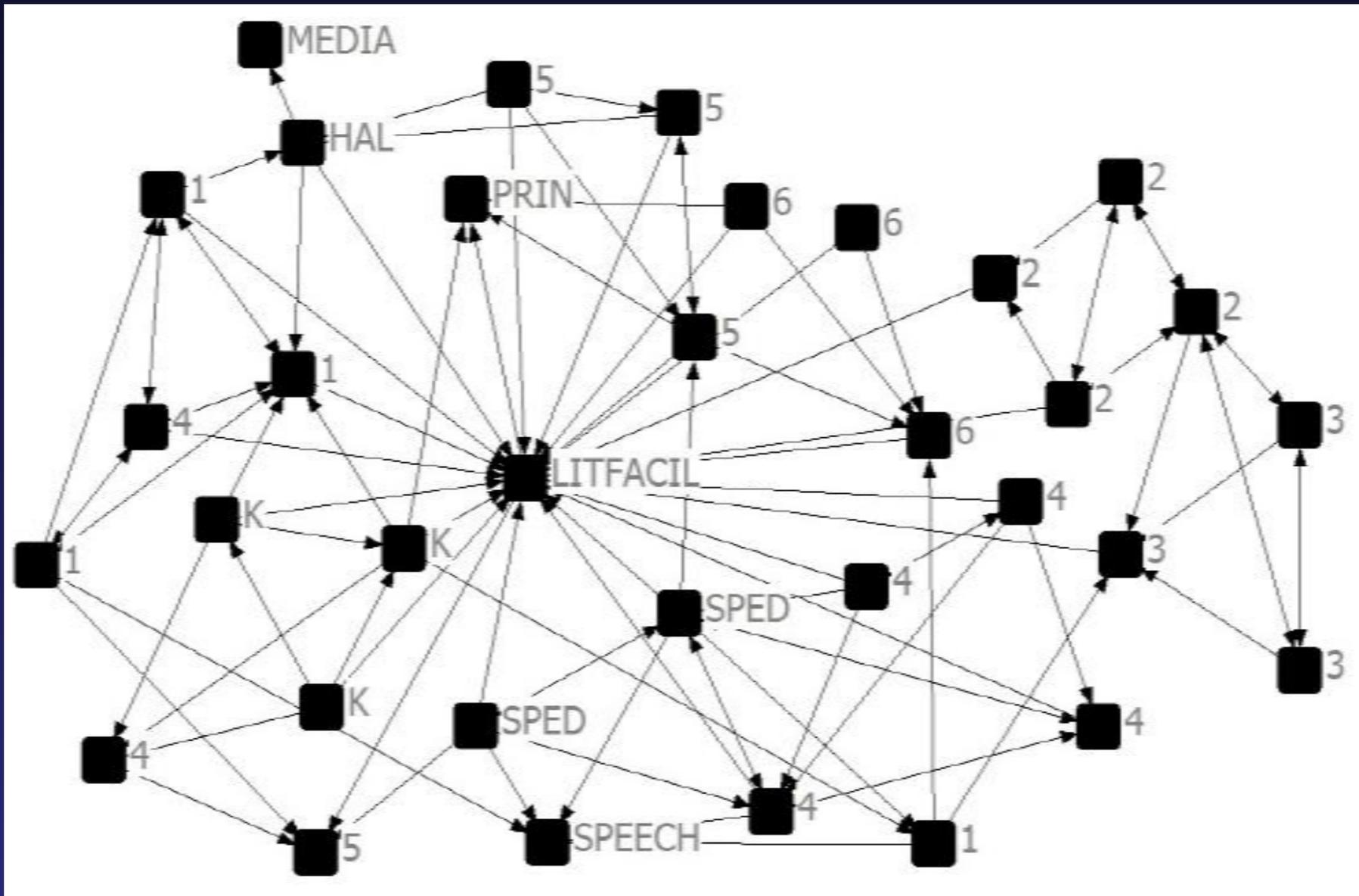


Advice and Information Interactions

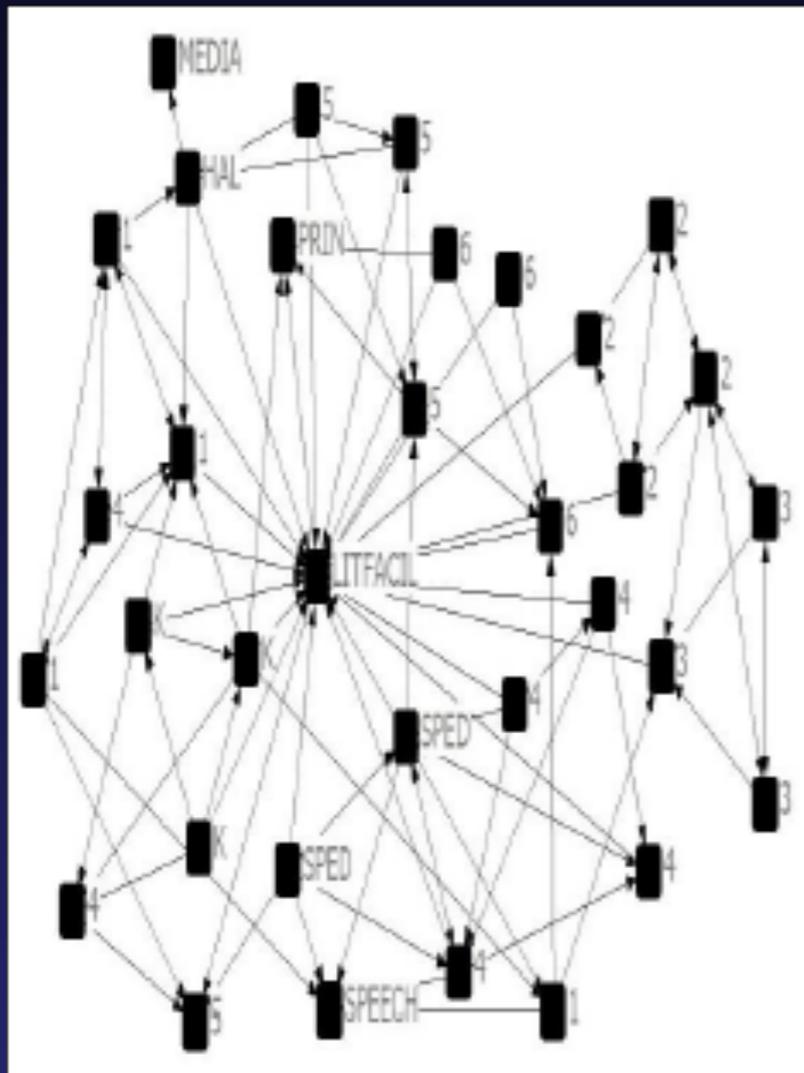


Instructional Interactions & School Subject Matter

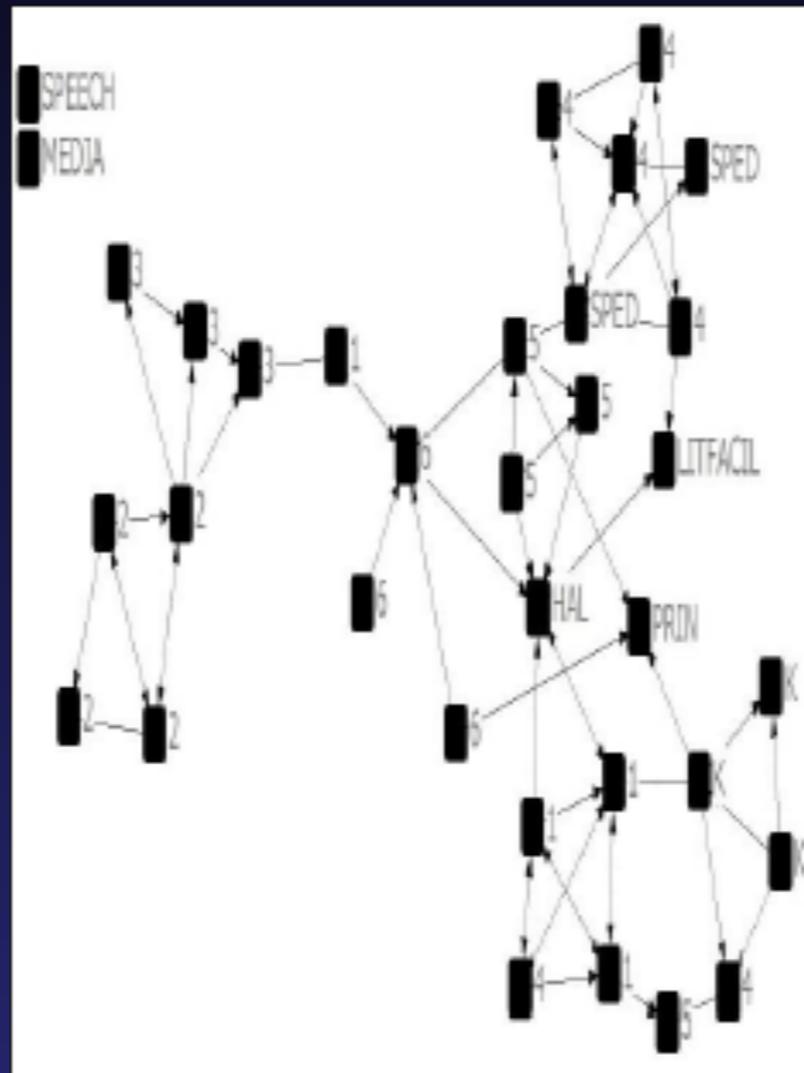
Matter - Language Arts



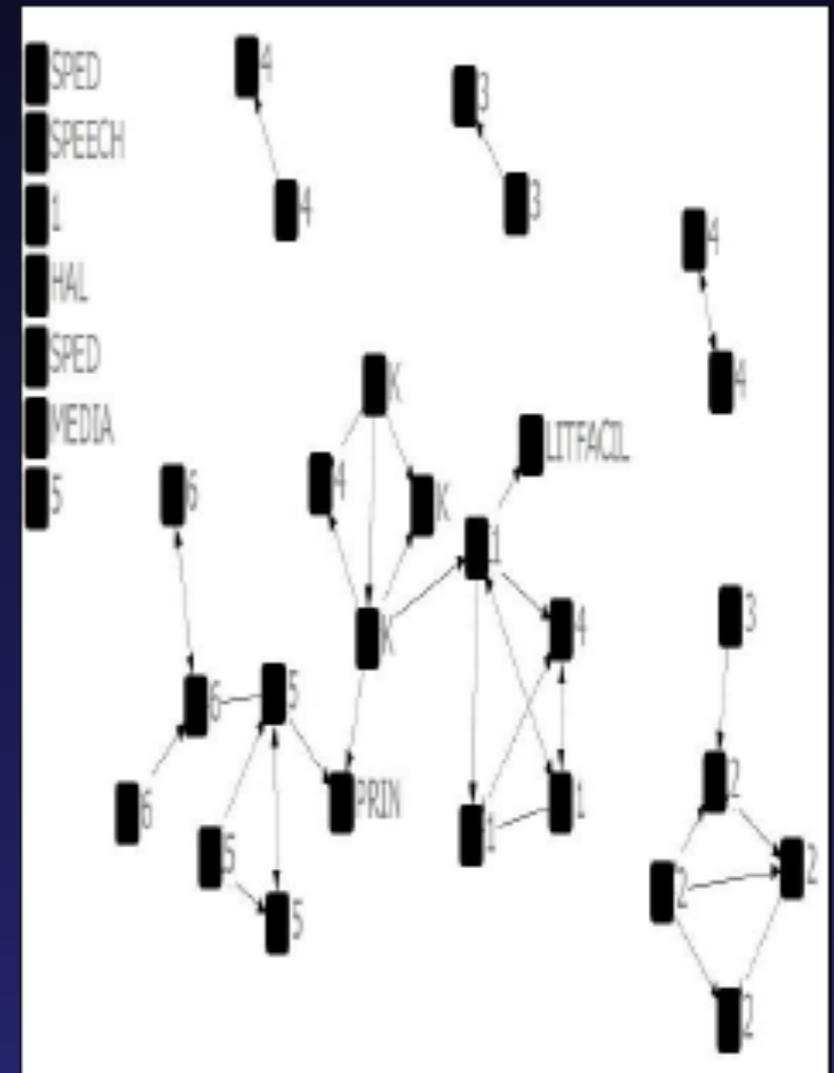
The Subject Matters: Kingsley Elementary School



Literacy



Mathematics

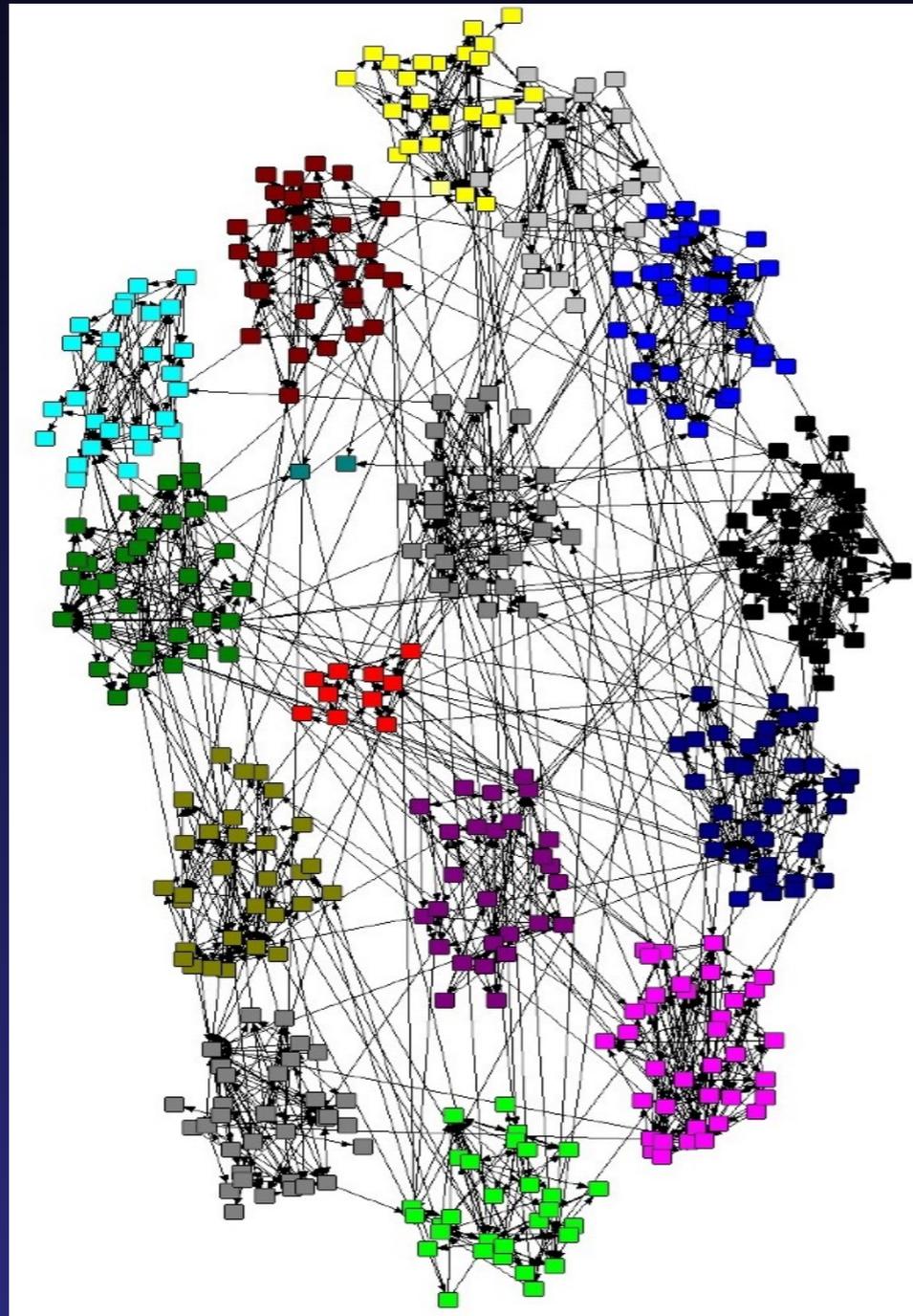


Science

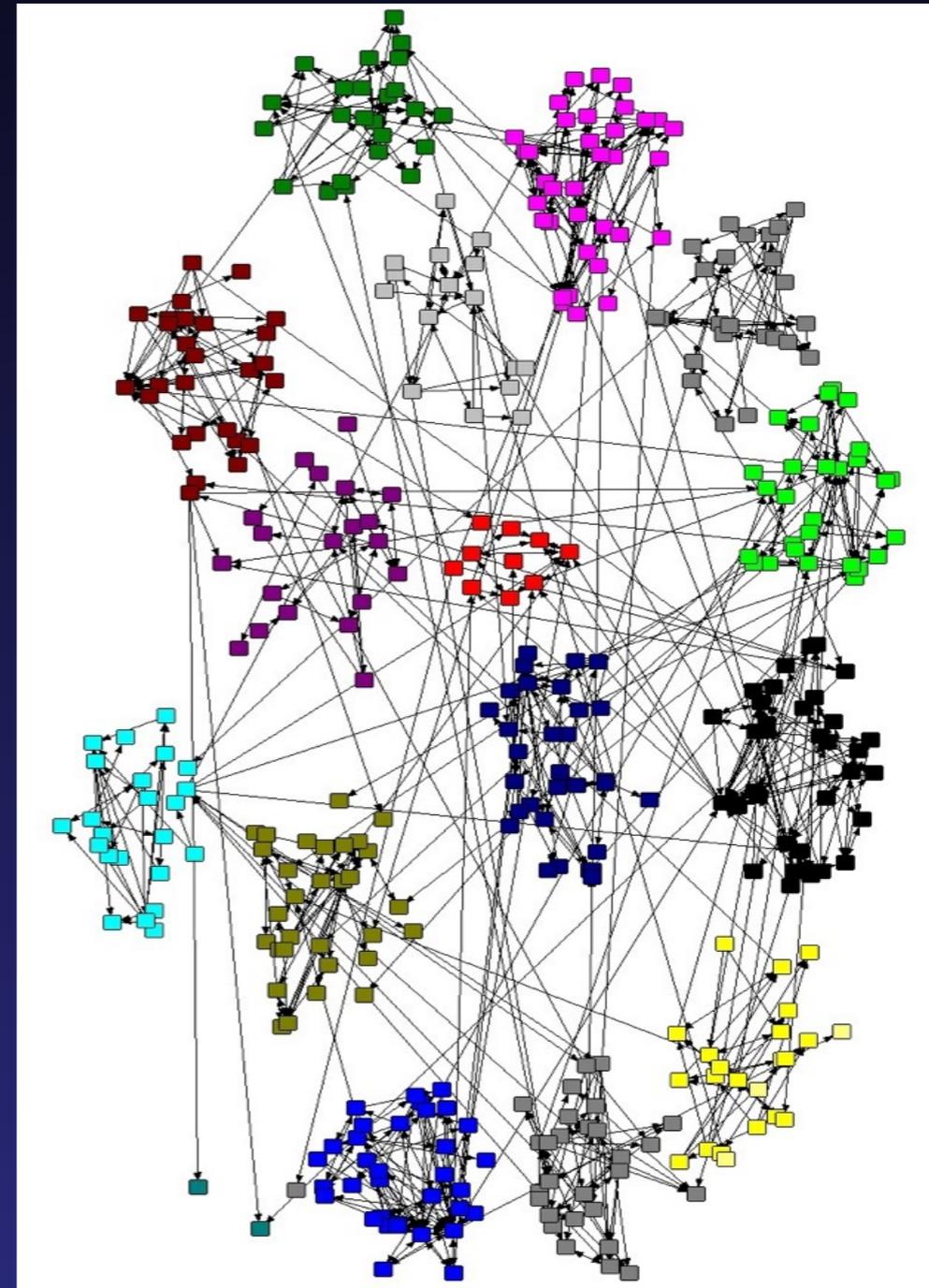
Spillane, J. P., & Hopkins, M. (2013). Organizing for instruction in education systems and school organizations: How the subject matters. *Journal of Curriculum Studies*, 45(6), 721-747.

Interactions about Instruction and School Subject Matters

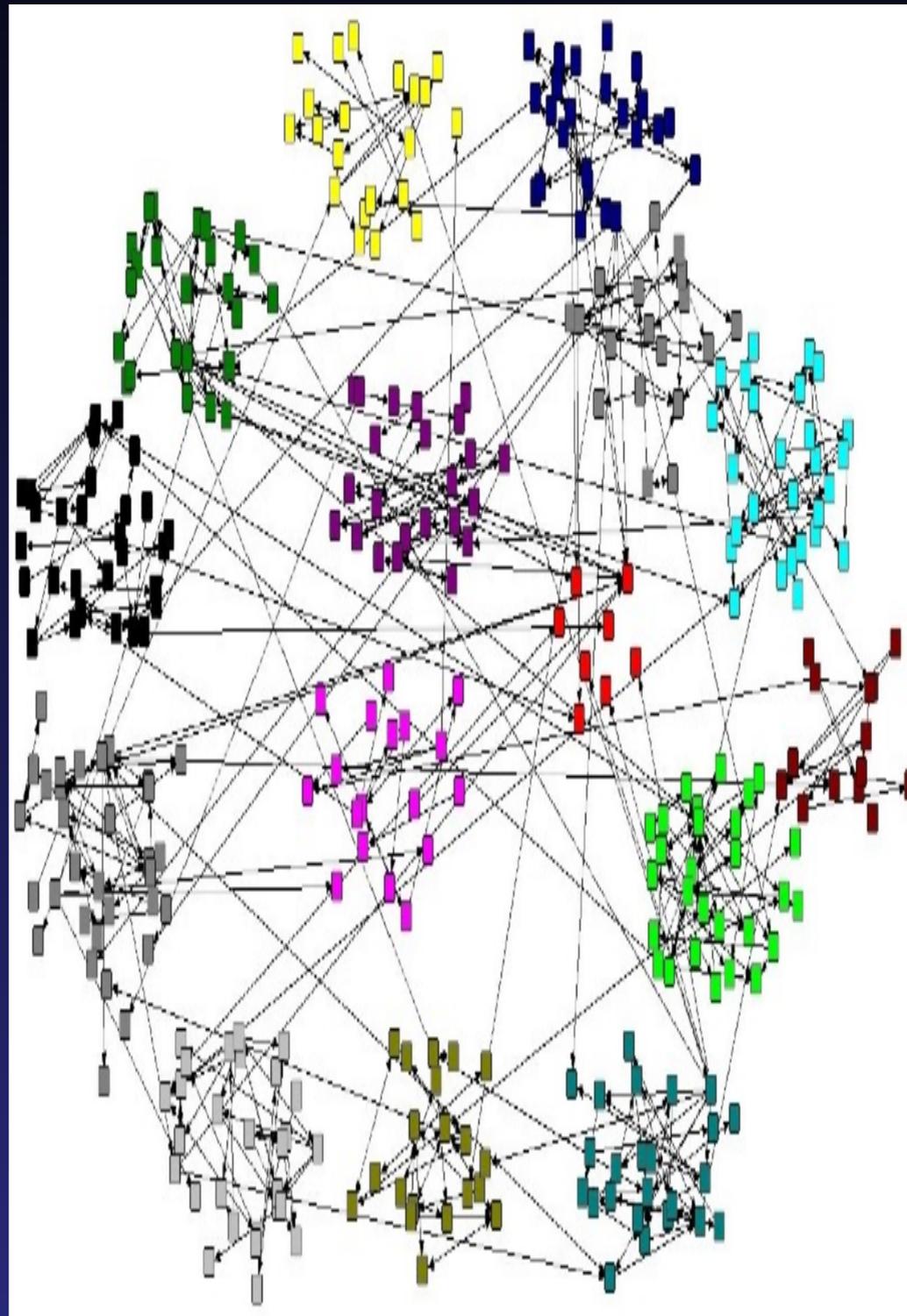
English Language Arts



Mathematics



Interactions about Instruction and School Subject Matters: Science



Exploring Relations between Formal Organization Redesign and School Staff Interactions about Instruction

Study One: Teachers' Advice & Information Interactions about Instruction

- 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** 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*, 49(6), 1112-1145.

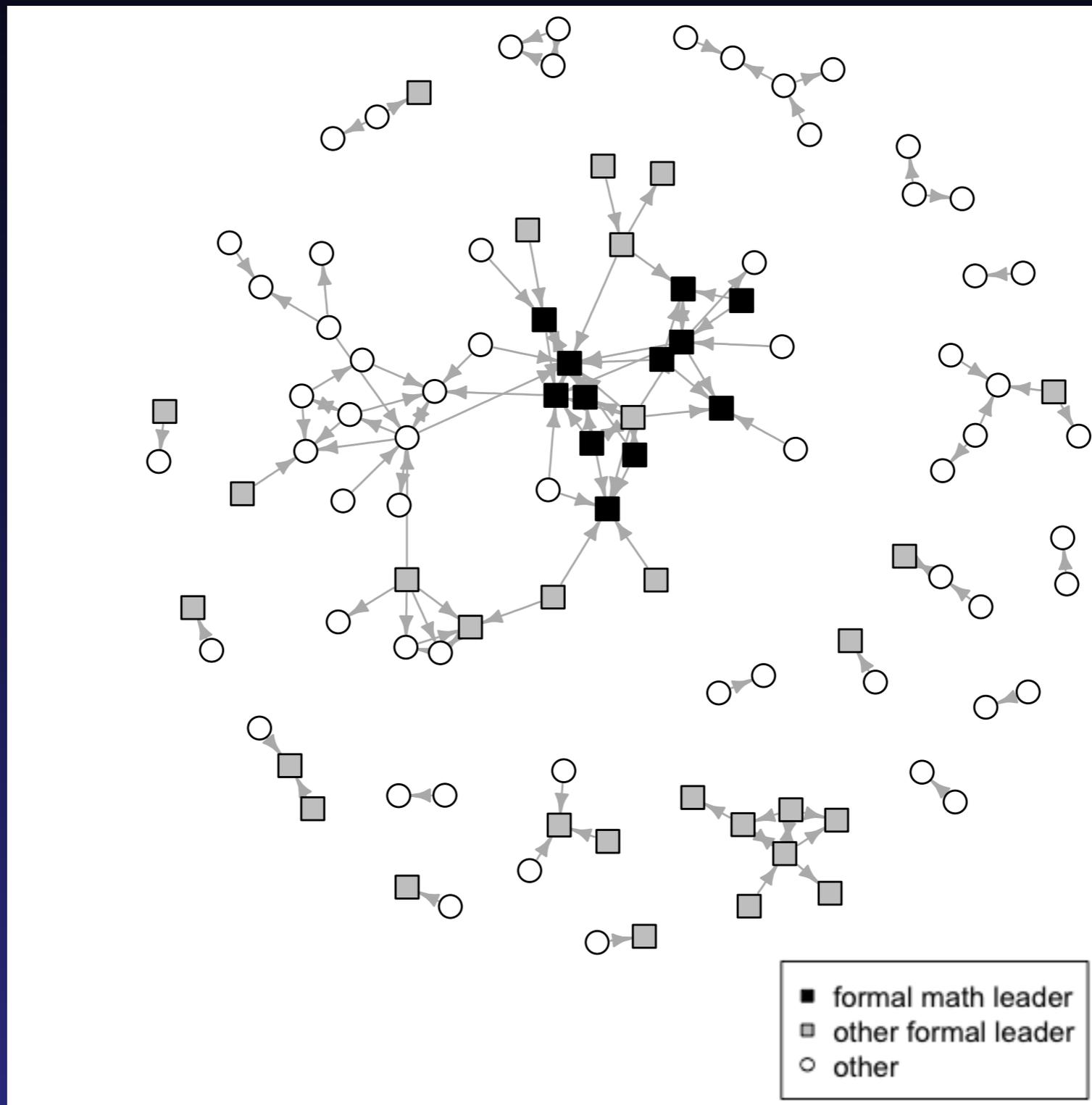
Study Two: Intra-School Ties & Formal Organization

- Individual characteristics are associated with advice and information ties
- Aspects of the formal organization are much more strongly associated with such ties.
- Formal organization aspects that have a strong influence in both math and language arts:
 - Same grade assignment: More likely to have a tie
 - Assignment to multiple grades: Less likely to have a tie
 - Formal leadership position: More likely to have a tie

Study Two: Inter-School Ties & Formal Organization

- **Formal organization** stronger than individual characteristics in forging ties between schools
- Having a **formal leadership position** predicted instructional advice and information ties more than anything else between schools

Between-School Advice and Information Brokers



The Case of Auburn Park: Designing System and Organizational Infrastructure for Leading and Maintaining the Quality of Mathematics Instruction

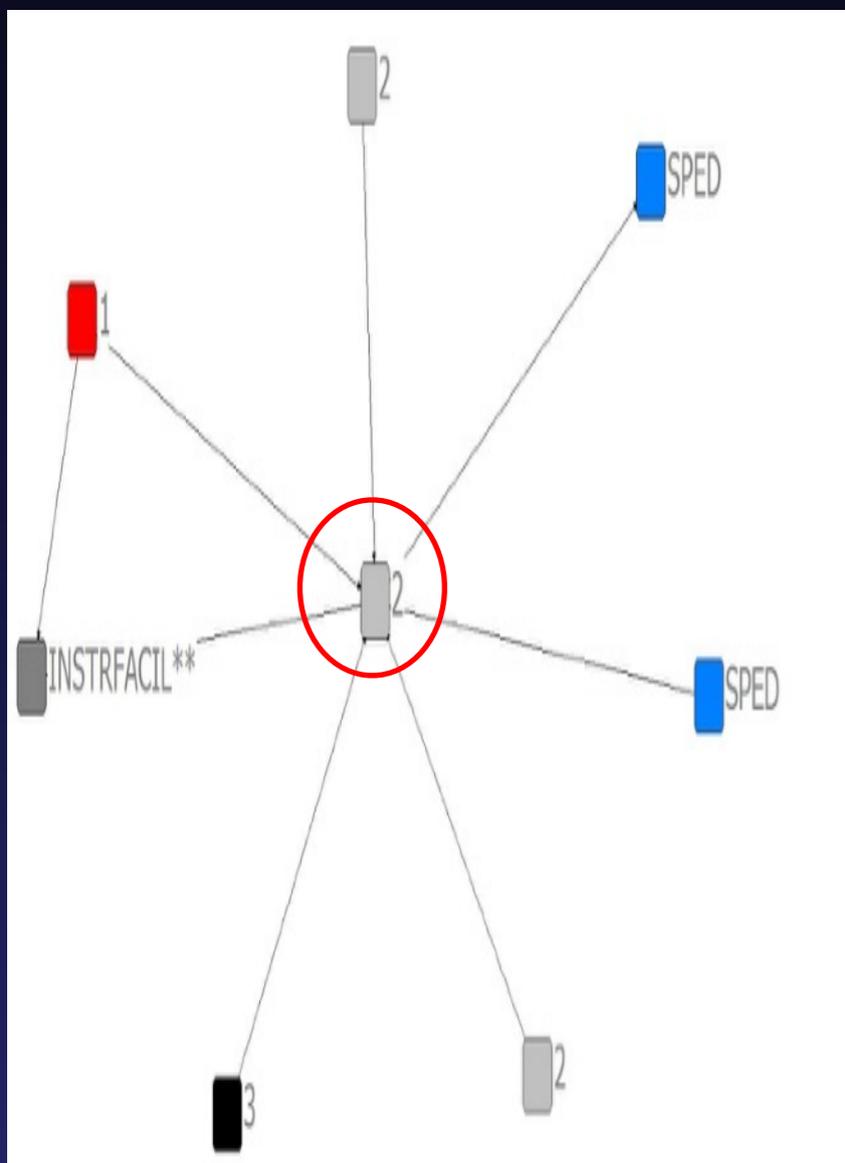
- **Redesigning school system and school organizational infrastructure:**
 - **New inquiry focused mathematics curriculum and materials**
 - **New assessments focused on inquiry mathematics**
 - **Professional development for math teacher leaders**
 - **Creation of math coach position in 3 schools**
 - **PLC and grade level planning organizational routines at school level**
 - **Subject matter toolbox & arrays routines at school system level**

Teacher Leadership and Training as a Marker of Expertise

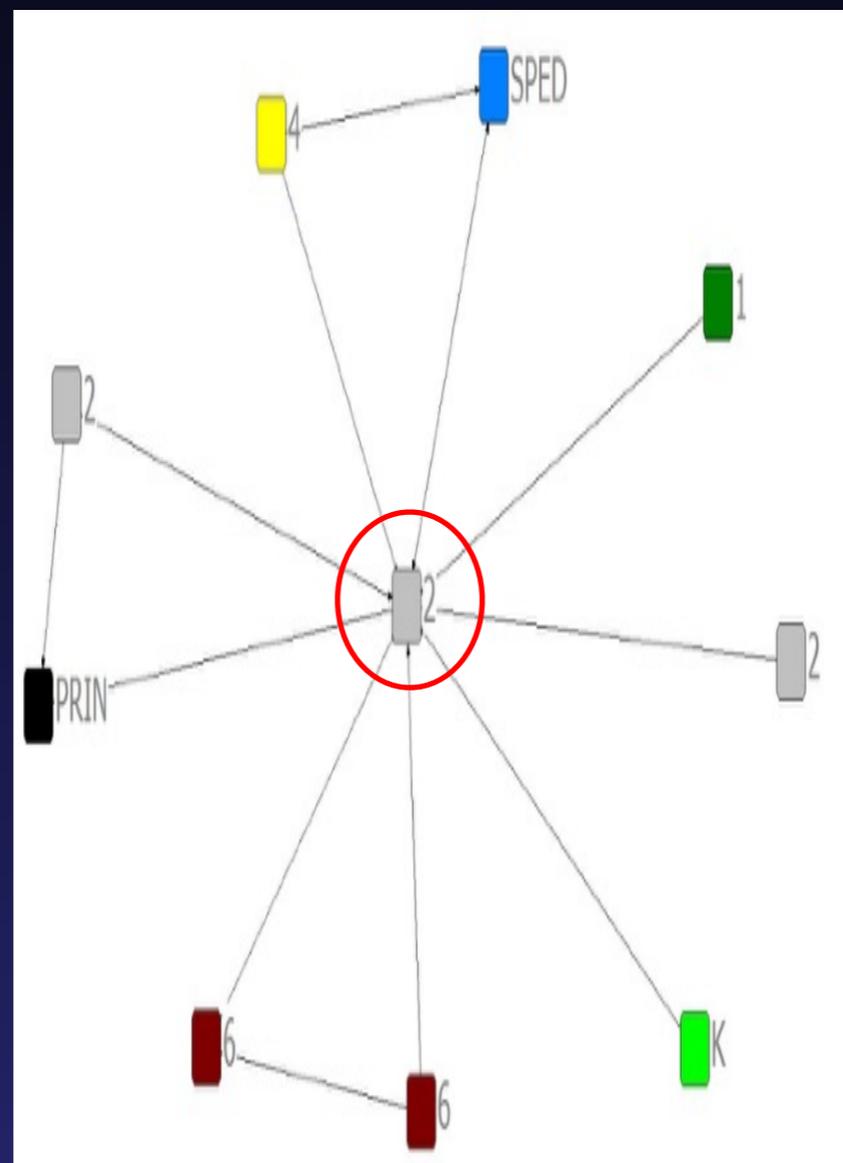
Karen (1st grade)

“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.”

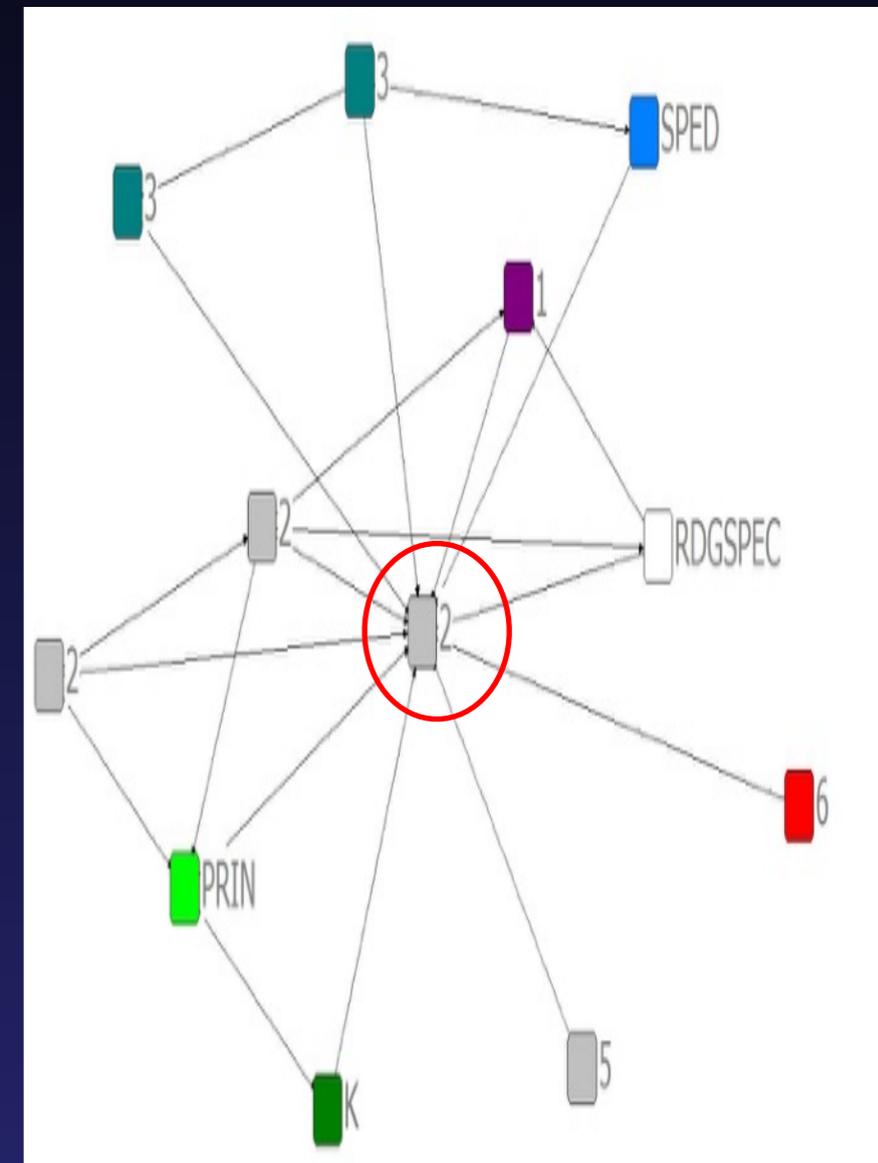
Math Teacher Leaders and Interactions about Mathematics Teaching & Learning



2009-10



2010-11



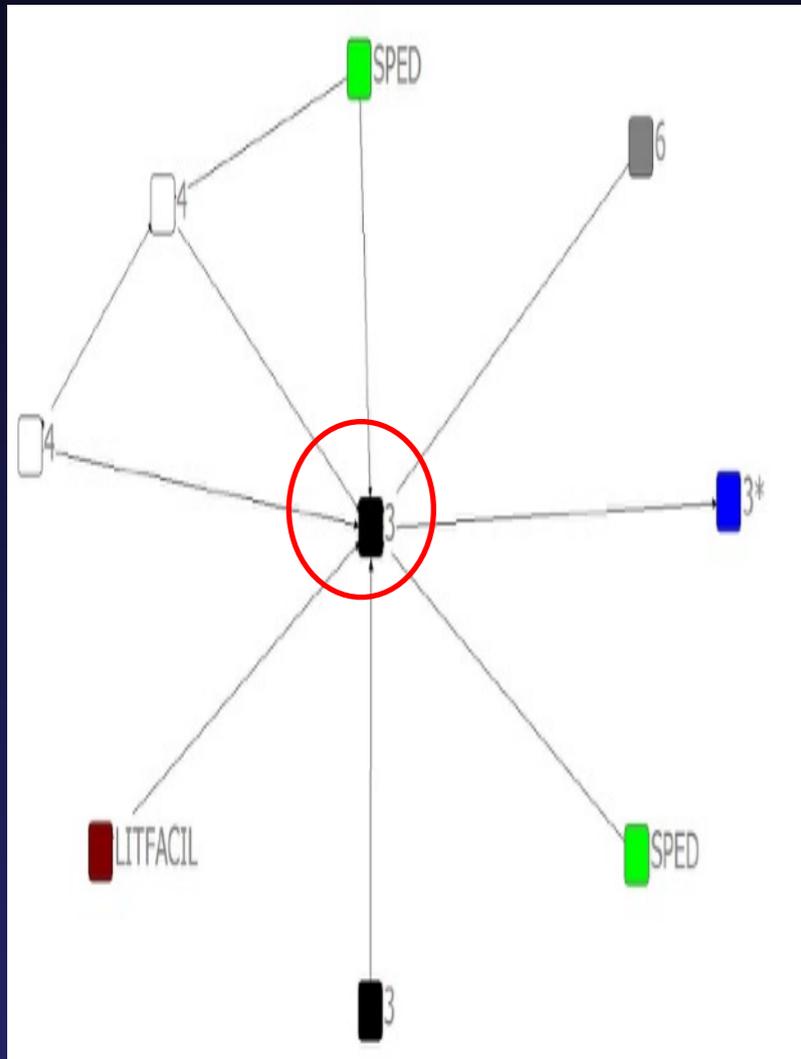
2011-12

Formal Position Promotes Advice Seeking

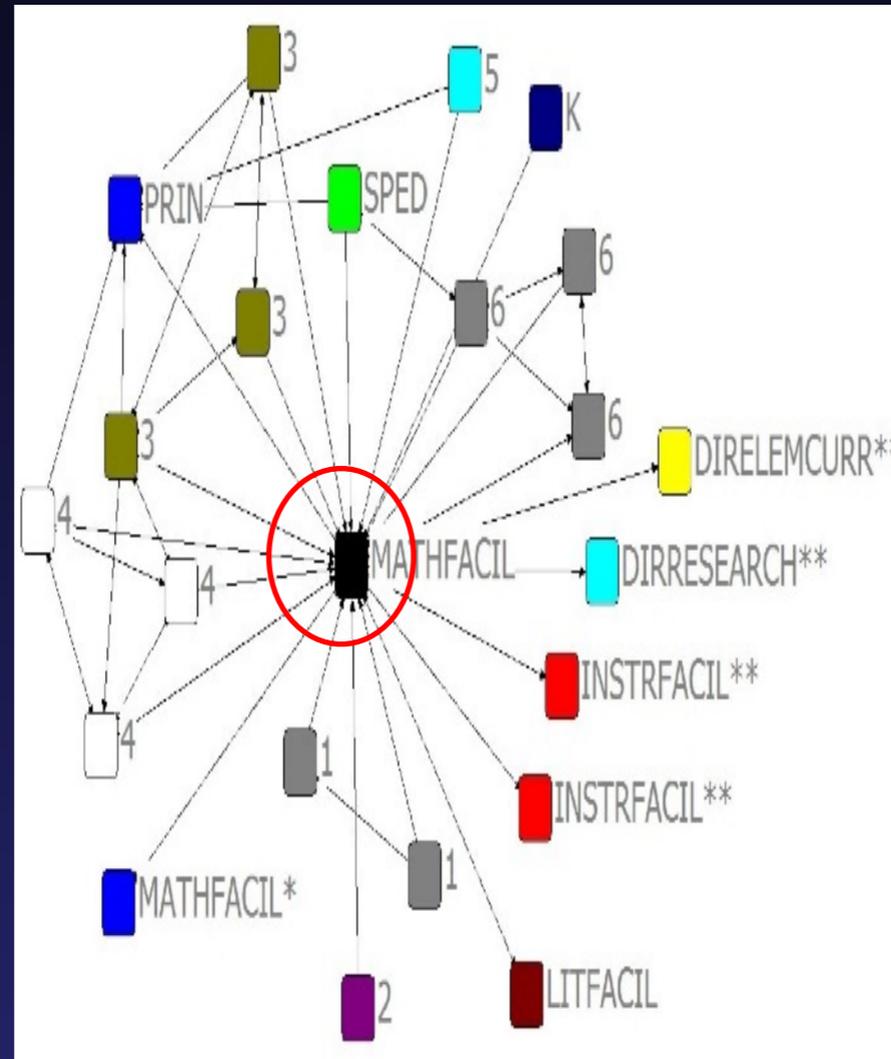
“[Emily] really wasn’t our facilitator [last year], though she was my co-worker, just a third grade teacher. I knew she had a wealth of knowledge, I just wasn’t in [her classroom] when she was teaching math. But, now that she’s moved into this math facilitator position, that’s different...She’s been 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

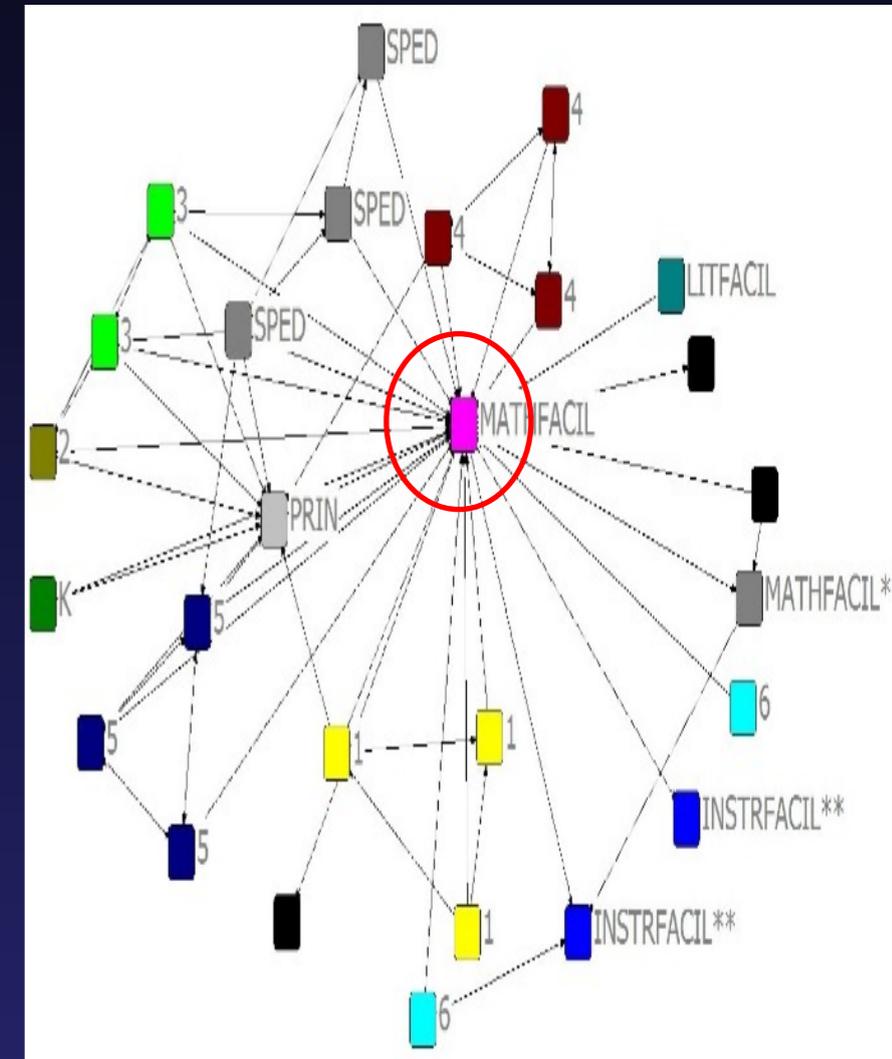
Math Coach Transforms Interactions *about Mathematics Teaching* (Bryant Elementary)



2009-10



2010-11



2011-12

Staff Associate Leadership Positions with Expertise

Kelly (2nd grade)

“if I have a question about math well my number one person is [Mary] of course, **being the math coach**. She’s been through **a lot of the training**, she’s had the desire and the passion for math. ...I go to her primarily.”

Infrastructure Redesign Promoted Advice and Information Seeking in Mathematics

Average In-Degree for Teacher 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

Infrastructure Redesign Promoted Brokering in Mathematics

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

	2009-10	2010-11	2011-12
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

How Organizational Infrastructure Matters

- **formal leadership position signaling expertise for school staff**
- **staff perceived colleagues' participation in district-level organizational routines as signaling expertise, and access to, instructional information**
- **formal position working in tandem with organizational routines to influence instructional interactions:**
 - **school and district organizational routines enabled staff to interact with peers including formal leaders**
 - **participation in school and district level organizational routines contributed to shared professional experiences that influenced interactions**

Organizational Routines and Expertise

“We have had that benefit of having [Gabrielle] on the [district] toolbox [routine] and so she was looked upon as you know more of the expert. And she would come back and share everything with us ... we kinda felt more in the math loop than maybe some other teams who don't have that connection piece of somebody on the toolbox in their building.”

“our [grade] team plans and we get to collaborate together ... our math coach [Mary] ... when we're planning together if we have a question she's always there to help ... she knows a lot”

Rachel,
Kindergarten teacher

Clarissa,
1st grade teacher

Teacher Leadership as a Coupling Mechanism

Change in Teachers' Beliefs about and Reported Practices in Mathematics

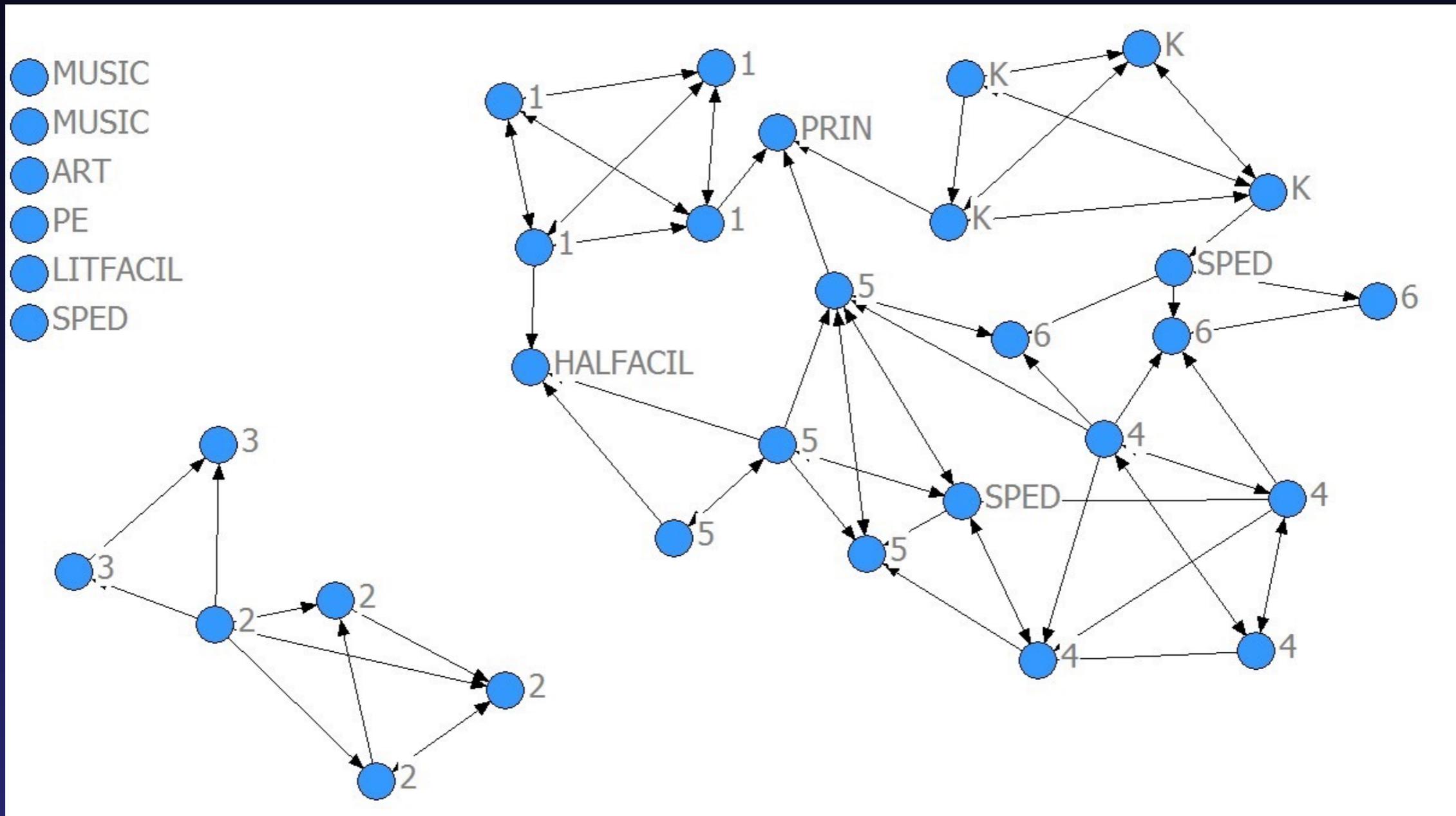
	2009-10	2010-11	2011-12
Beliefs about Mathematics Instruction Mean (SD)	3.35 (0.5)	3.46*** (0.5)	3.51*** (0.5)
Reasoning and Problem-Solving Practices Mean (SD)	2.39 (0.4)	2.52*** (0.4)	2.64*** (0.5)

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

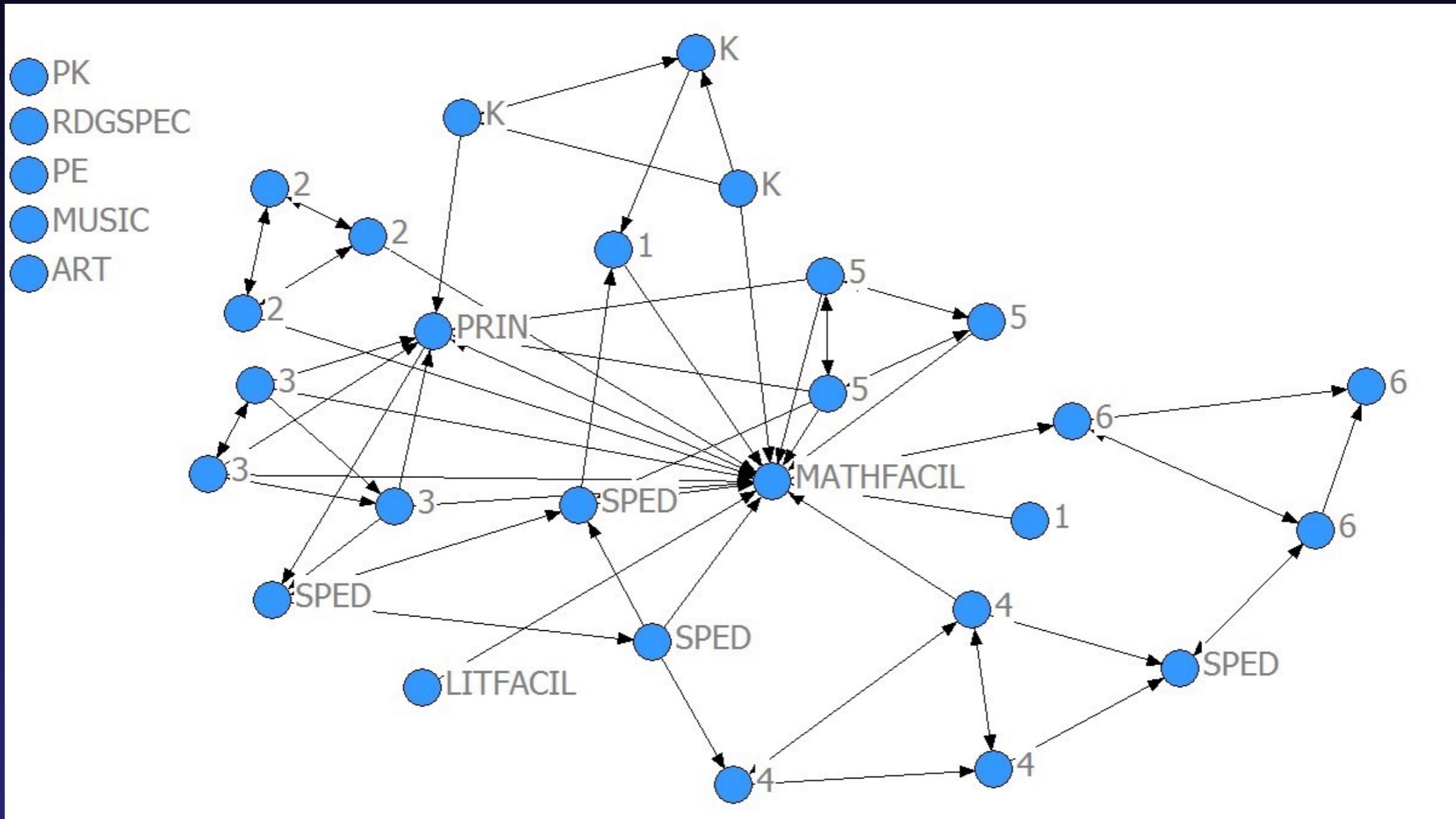
Task 11: Diagnosing on the job Interactions (Primary School)

- **Imagine you are introducing a new mathematics curriculum in Kingsley, Chamberlain, and Bryant elementary schools. Compare the mathematics networks among the schools.**
 - **Identify two differences and two similarities relevant to introducing a new curriculum in mathematics in these schools.**
 - **How might your strategies for introducing a new mathematics curriculum differ among these three schools, given these data?**
 - **How might you build ties between the three schools to support mathematics instruction?**

Kingsley Elementary Mathematics Network



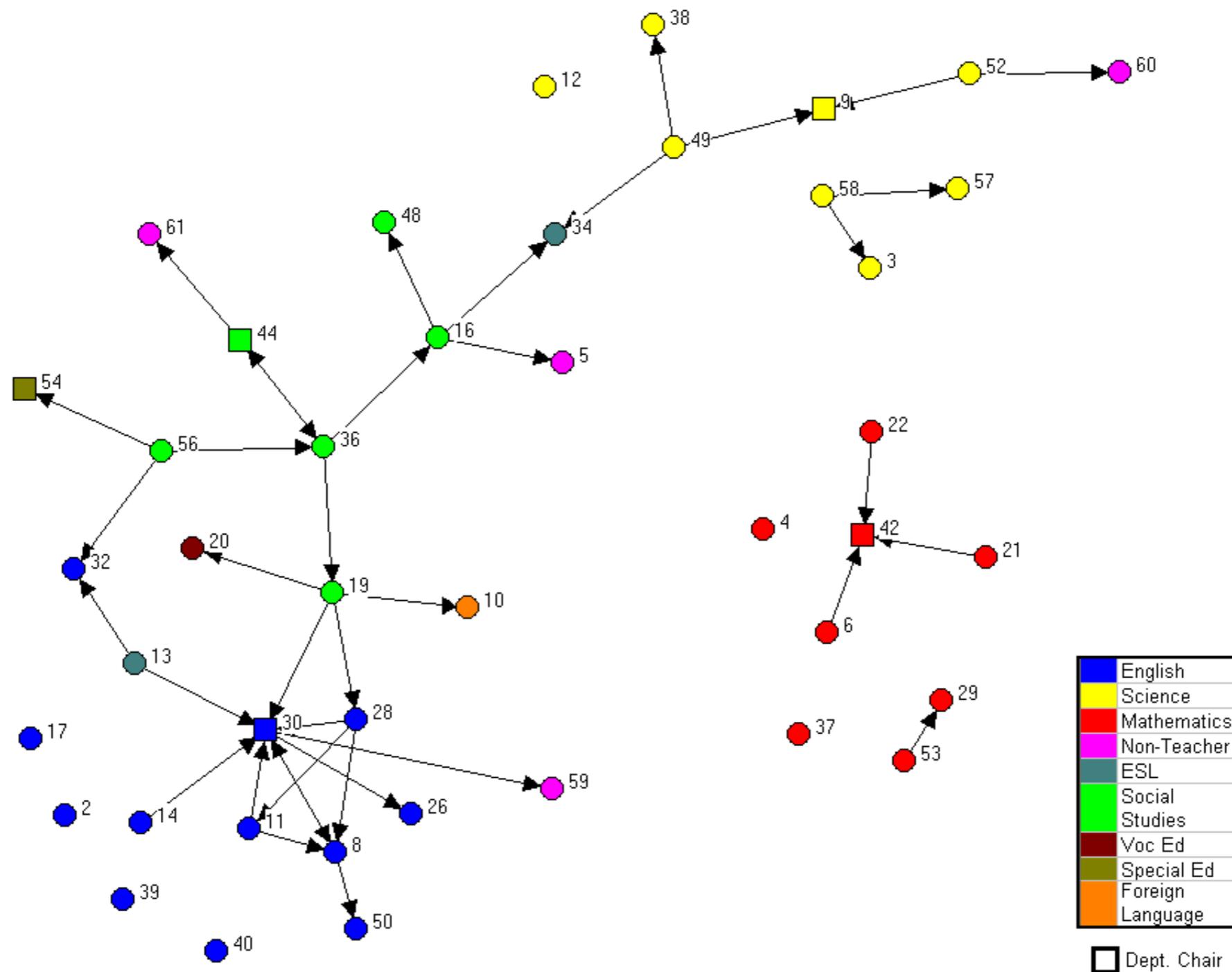
Bryant Elementary Mathematics Network



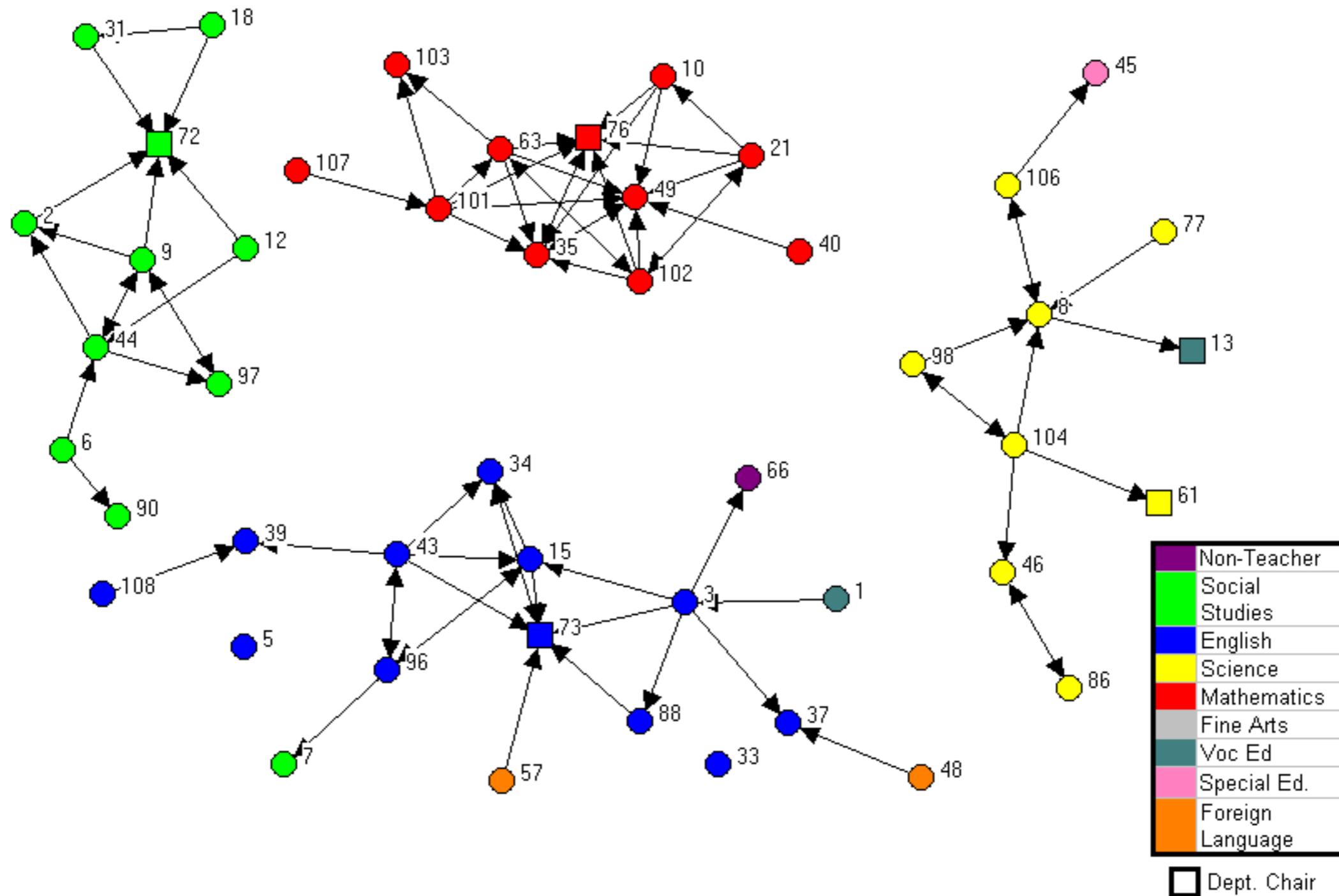
Task 11: Diagnosing on the Job Interactions (Secondary School)

- **Imagine you are introducing a new program to promote the teaching of reading across the curriculum/disciplines (not just in English classes) in Pink Hamlet and Fern Hill High Schools.**
- **Examine the curriculum advice networks in the two schools:**
 - **What patterns do you notice that might be relevant to your program implementation?**
 - **Identify two differences between the schools that you would consider critical to your implementation efforts.**
 - **How would your implementation efforts differ?**
 - **What else would you like to know?**

Fern Center High School Curriculum Network

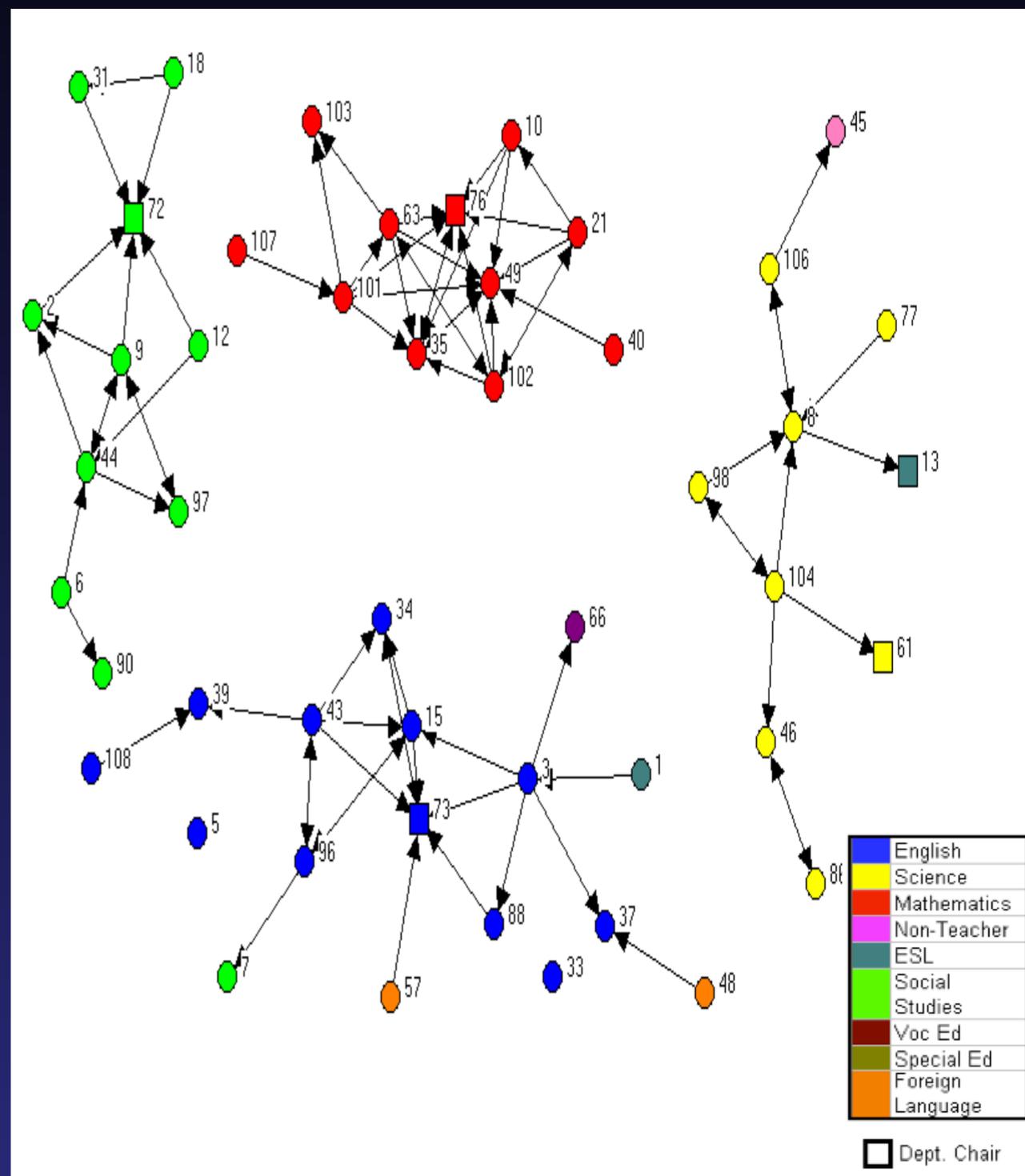
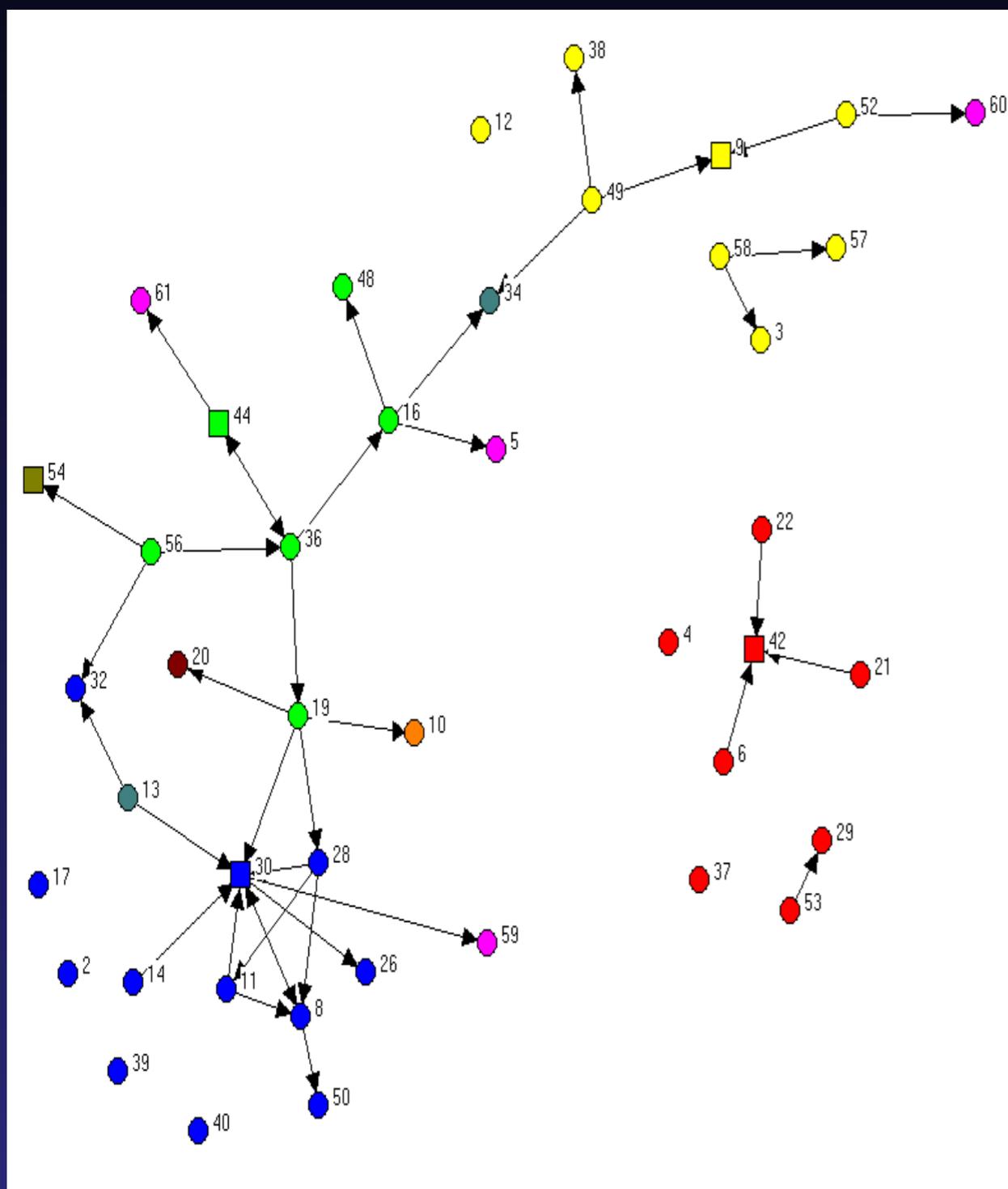


Pink Hamlet High School Curriculum Network



Fern Center High School Curriculum Network

Pink Hamlet High School Curriculum Network



Blue	English
Yellow	Science
Red	Mathematics
Pink	Non-Teacher
Grey	ESL
Green	Social Studies
Brown	Voc Ed
Olive	Special Ed
Orange	Foreign
Purple	Language
White Square	Dept. Chair

Lessons from Research on Social Capital and Social Interactions

- **Strong ties - enable the transfer of tacit, complex knowledge and facilitate joint problem solving**
- **Weak ties - enable the transfer of explicit knowledge**
- **Ties that span organizational boundaries allow for new information and minimize 'group think'**
- **Boundary spanners, individuals that connect different subgroups, facilitate the implementation of new approaches**
- **Trust enables learning in social interactions**

Lessons from Social Capital Research

- **Information, Advice, Ideas ...**
- **Trust**
- **Sense of obligation ... motivation**
- **Materials**
- **Opportunities for joint problem-solving**
- **Support**

A Cautionary Tale: The Downside of Social Capital

- **Like any resource, social capital can be used for multiple goals, both good and bad ...**
 - **support for one's resistance to improvement efforts**
 - **reinforcement of one's low expectations for students**
 - **misinformation**

Take Away Lessons

- **Social capital is critical for knowledge development and instructional improvement.**
- **Social capital depends on social interactions among staff.**
- **Teachers' 'on-the-job' learning about instruction substantial.**
- **Design of the formal organizational infrastructure shapes the informal organization.**
- **Diagnosis and Design work needs to engage the formal and informal organization in tandem.**

Take Away Lessons

- **Developing school leaders as diagnosticians and designers**
- **Key Characteristics of Organizational Infrastructure:**
 - **Anchored in Instruction - both intended and enacted curriculum**
 - **Coherence**
 - **Specificity**
 - **Authority/Power**
 - **Cognitive adequacy**
 - **Corruptibility**
 - **Correctability**
- **Dimensions of the Formal Organizational Infrastructure to consider in design work:**
 - **Regulative**
 - **Normative**
 - **Cultural-Cognitive**

**Grappling with the Challenges of
Taking a Distributed Leadership
Perspective *in Practice***

Session Four

Preview/Goals

- **Analyzing our own personal instructional advice and information networks.**
- **Analyzing social interactions up close in order to:**
 - **gauge the quality of leadership practice**
 - **identify influence strategies used in practice.**
- **Recognizing the Challenges in Taking a Distributed Perspective to Diagnose and Design Work**
- **Dispelling Common Myths about a Distributed Approach**

Social Interactions: Getting Personal

Task 12a: Examining Your Instructional Advice & Information Network for Mathematics

- During this school year, to whom did you go for advice or information about mathematics instruction and its improvement? List names or initials and their position and location (e.g., your school, another school, region, state/province, other).**
- Who came to you for advice and information about mathematics instruction and its improvement? List names or initials and their position and location (e.g., your school, another school, region, state/province, other).**

Task 12a: Examining Your Instructional Advice & Information Network for Mathematics

Draw your advice network, following the instructions below.

- **Use a key to distinguish**
 - a) between teachers and administrators**
 - b) teachers with different disciplinary backgrounds (e.g., mathematics versus English teacher)**
 - c) people in your school from people outside your school**
 - d) use 1, 2, 3, to differentiate primary school teachers' teaching assignments**
- **For people you interacted with daily about mathematics increase the thickness of the line connecting you to them; decrease the thickness of the line for weekly, monthly and yearly connections accordingly.**

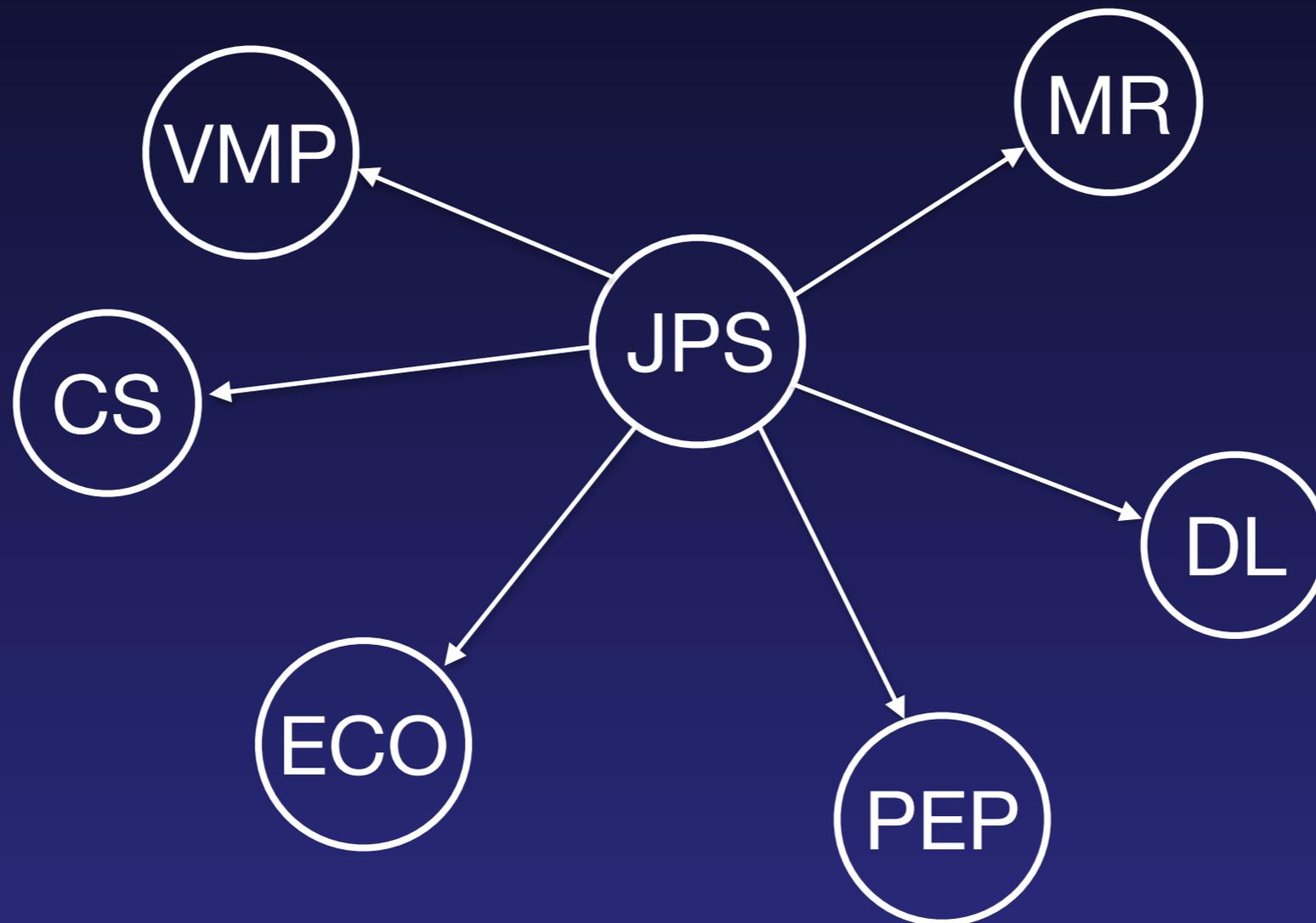
Advice Networks

- Put your initials in the middle of the page and draw a circle around them



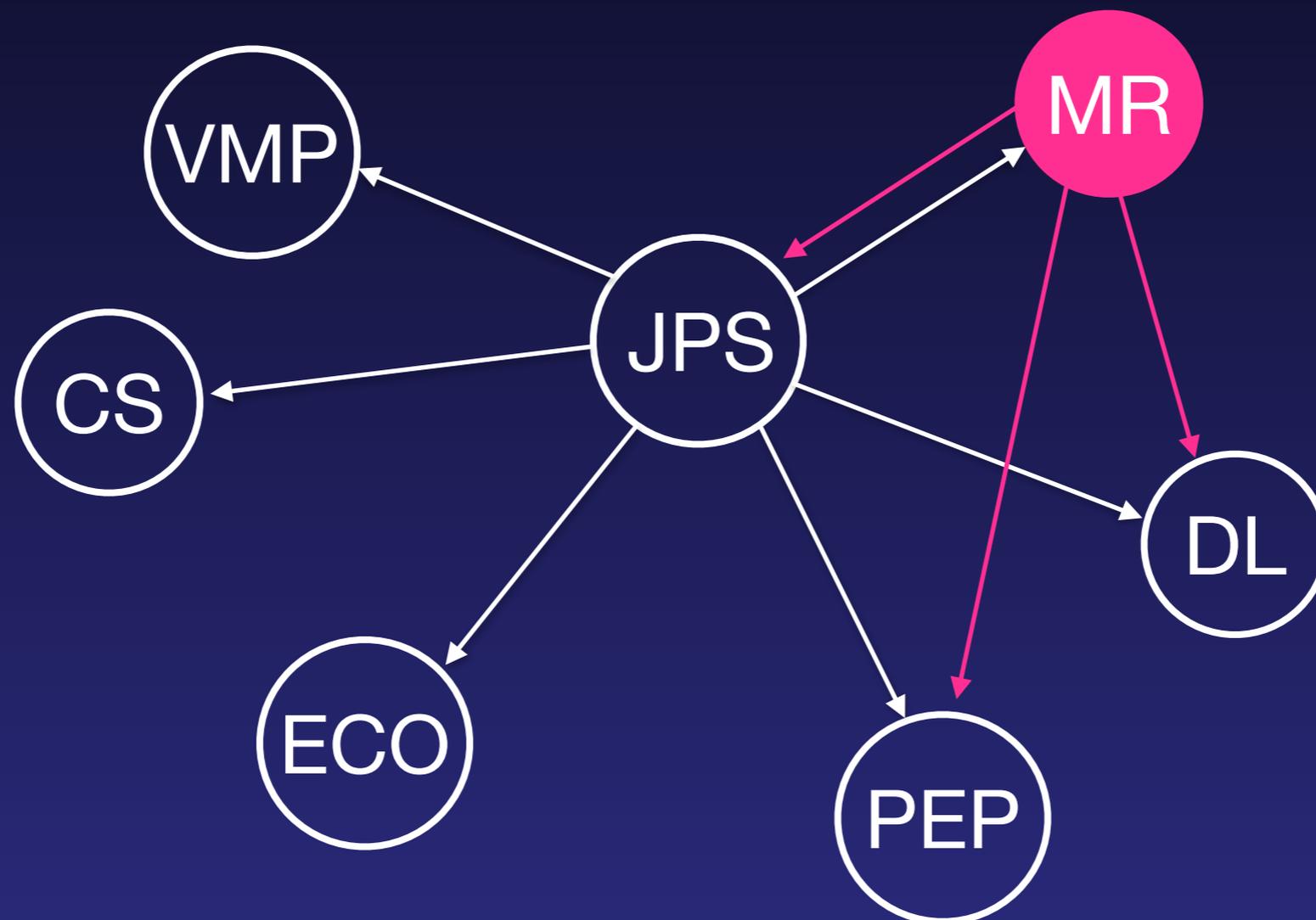
Advice Networks

- Draw a circle for each person you listed. Draw an arrow from your circle to those you sought advice from. Draw an arrow from the circle for folks who sought you out to your circle.



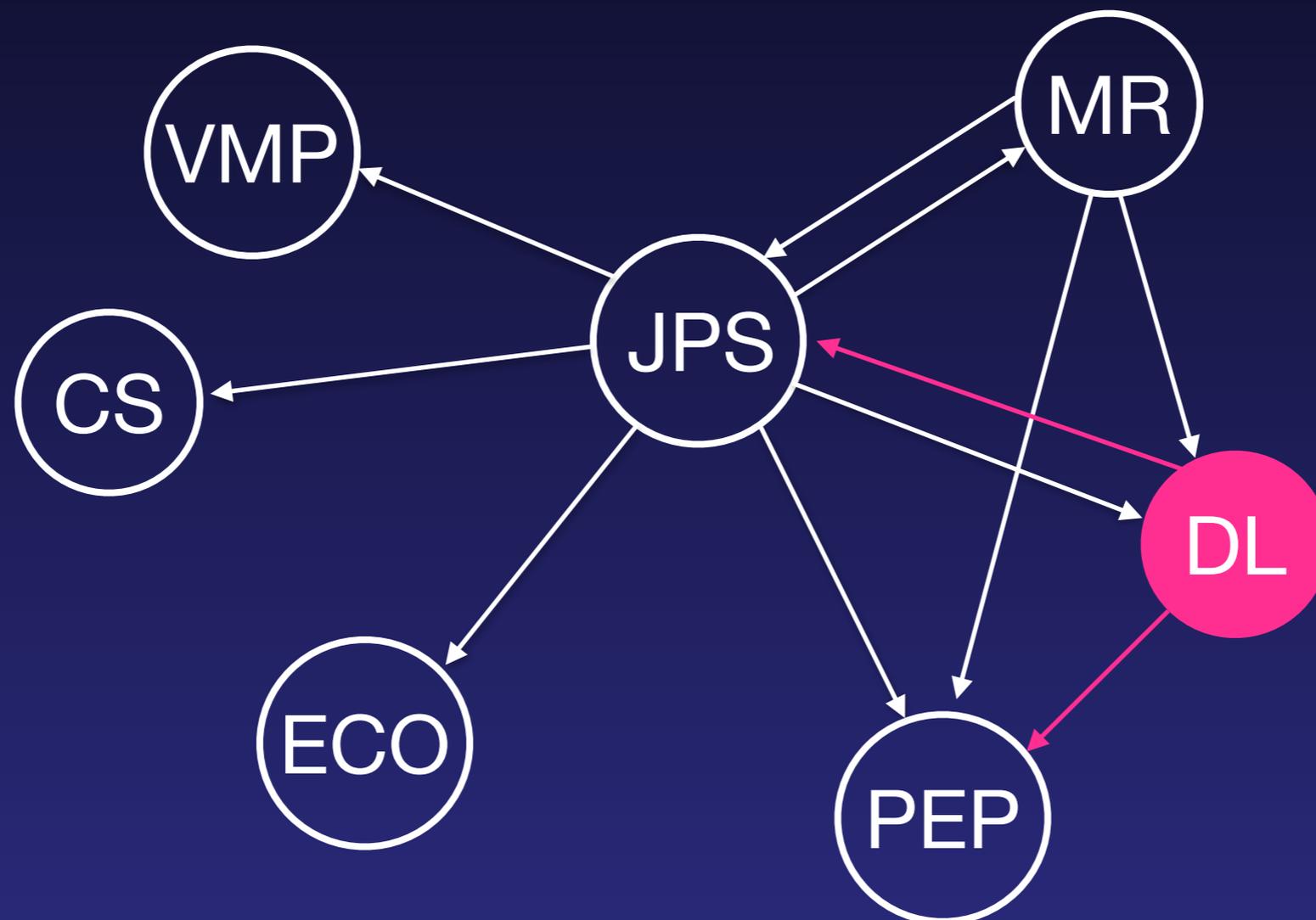
Advice Networks

- For one of your advisors, draw arrows representing people whose advice they seek.



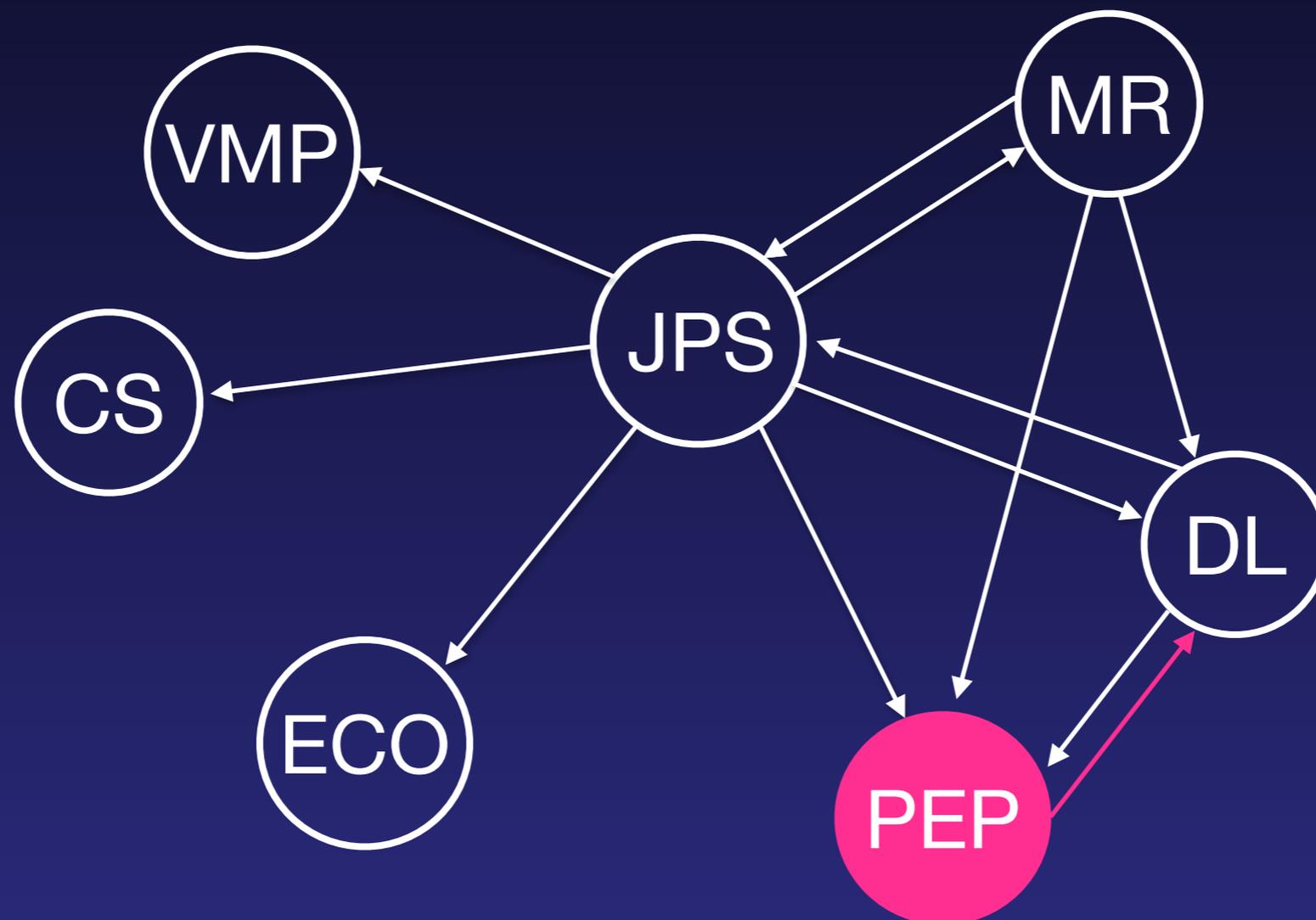
Advice Networks

- Repeat for the next advisor.



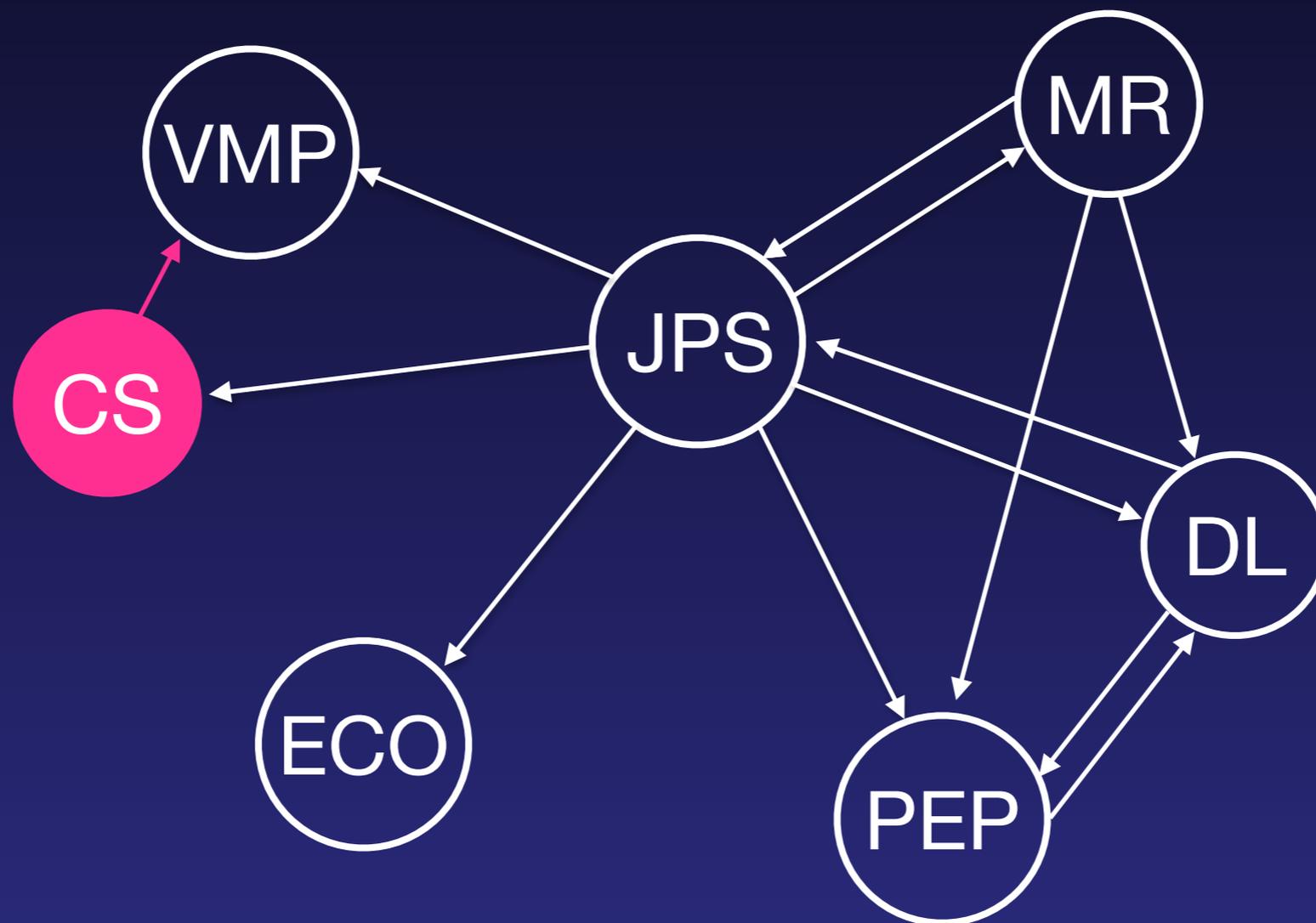
Advice Networks

- Repeat for the next advisor.



Advice Networks

- Repeat for the next advisor.



Task 12b: Comparing Advice Networks

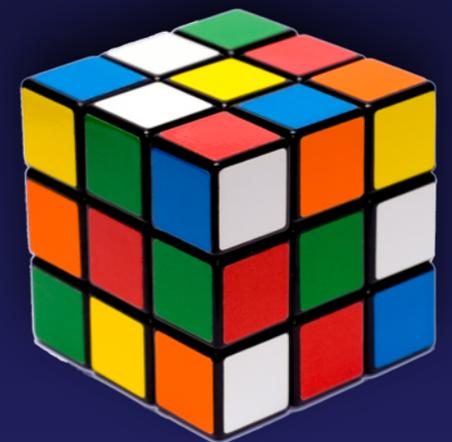
- **Share your instructional advice and information network with a colleague. Compare and contrast your networks.**
 - **Identify key similarities between networks**
 - **Identify two key differences between networks**
 - **Why do you think these differences are key?**

Leadership Practice: Social Interactions Up-Close & Personal Too

Task 13: Examining Practice

Select either the primary school or secondary school simulation. Watch the video and read the transcript provided of the video club routine. Imagine you just dropped in on the performance of this organizational routine at your school. Use the following questions to guide your observation and your evaluation of the routine:

- What do you notice?
- How would you describe the interactions?
- Would you consider this leading and managing practice of high, medium or low quality? Explain your decision on quality.



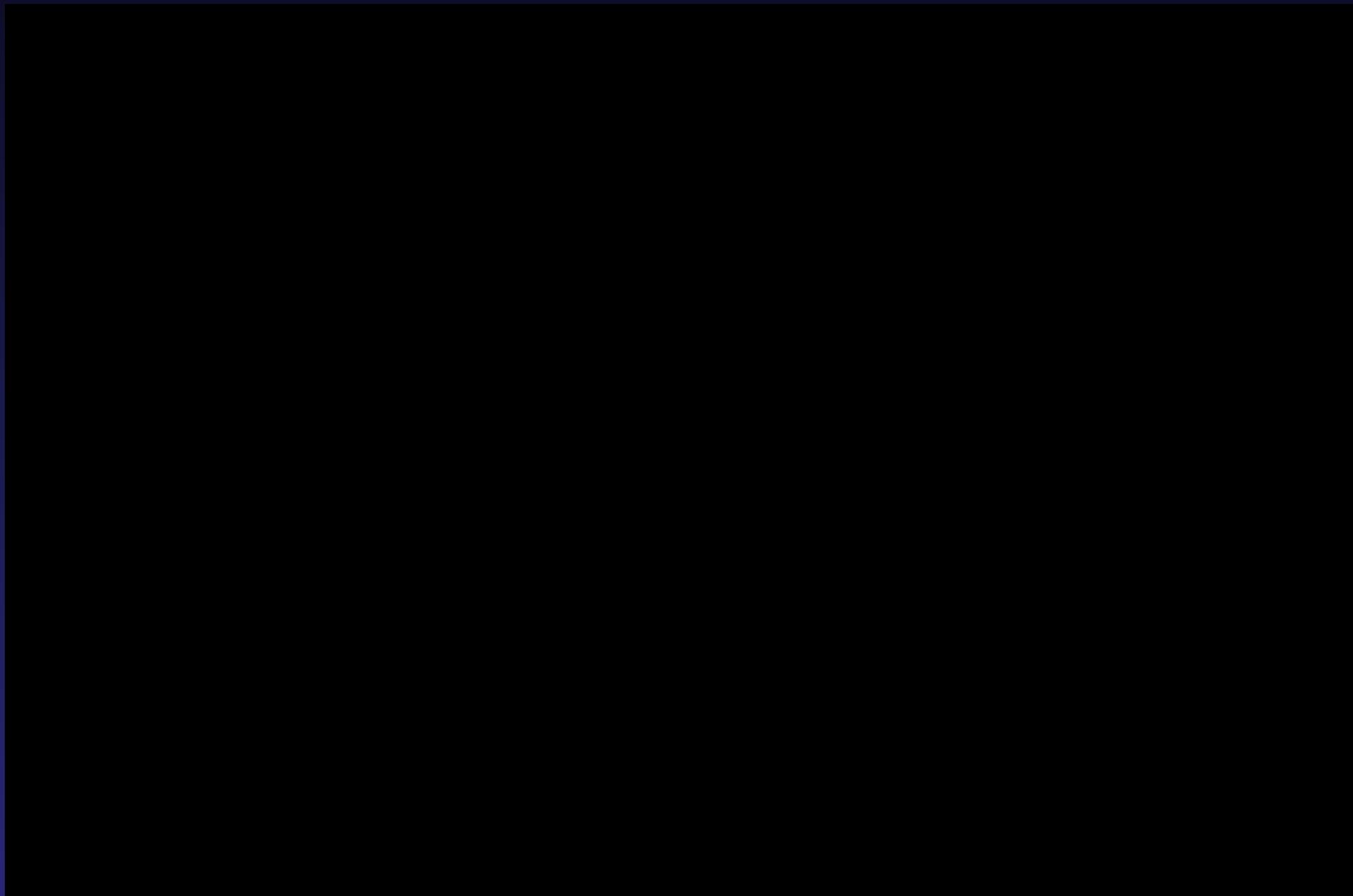
Task 13

Elementary School: Math Lesson



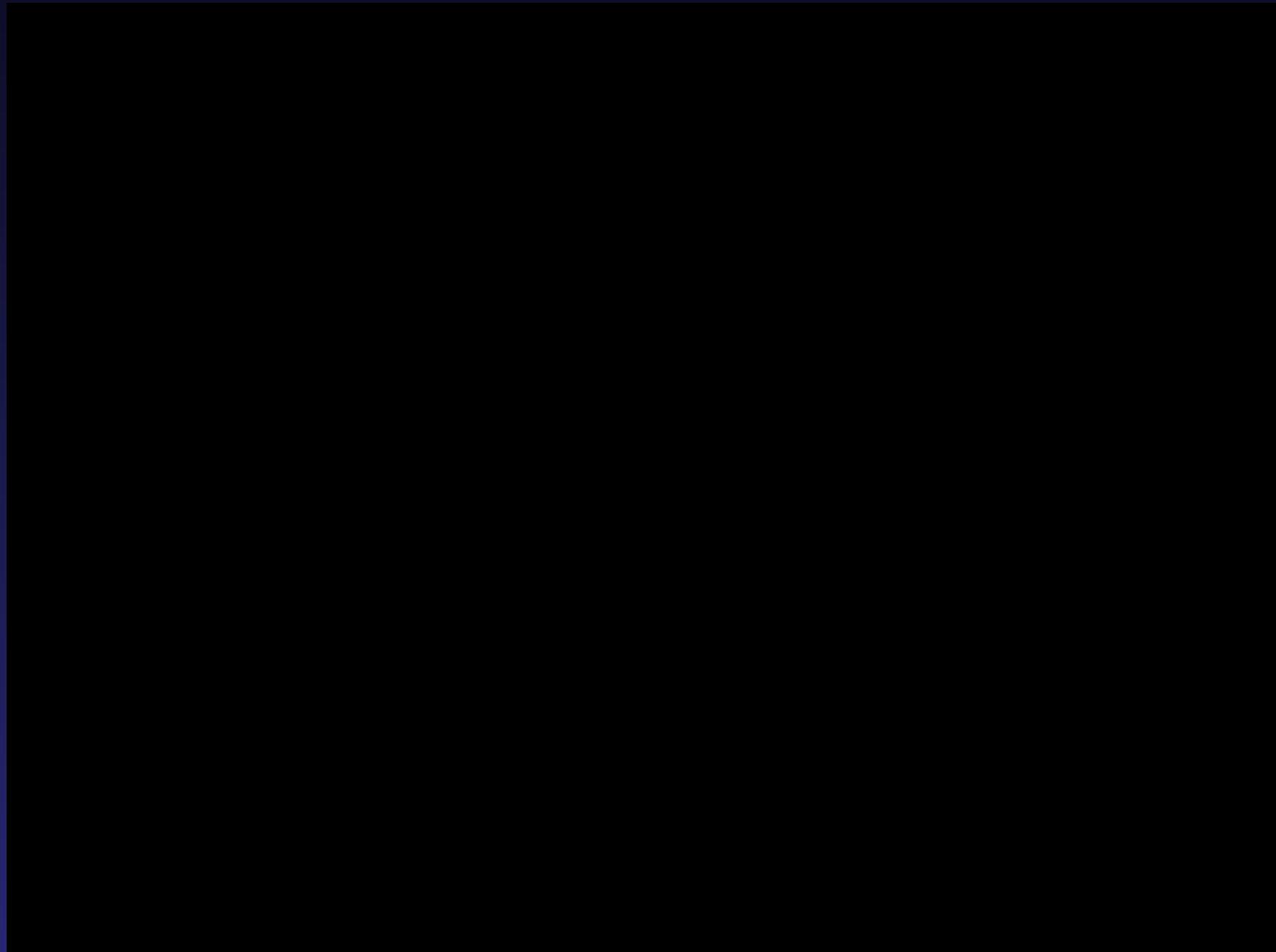
Task 13

Elementary School: Video Club Discussion



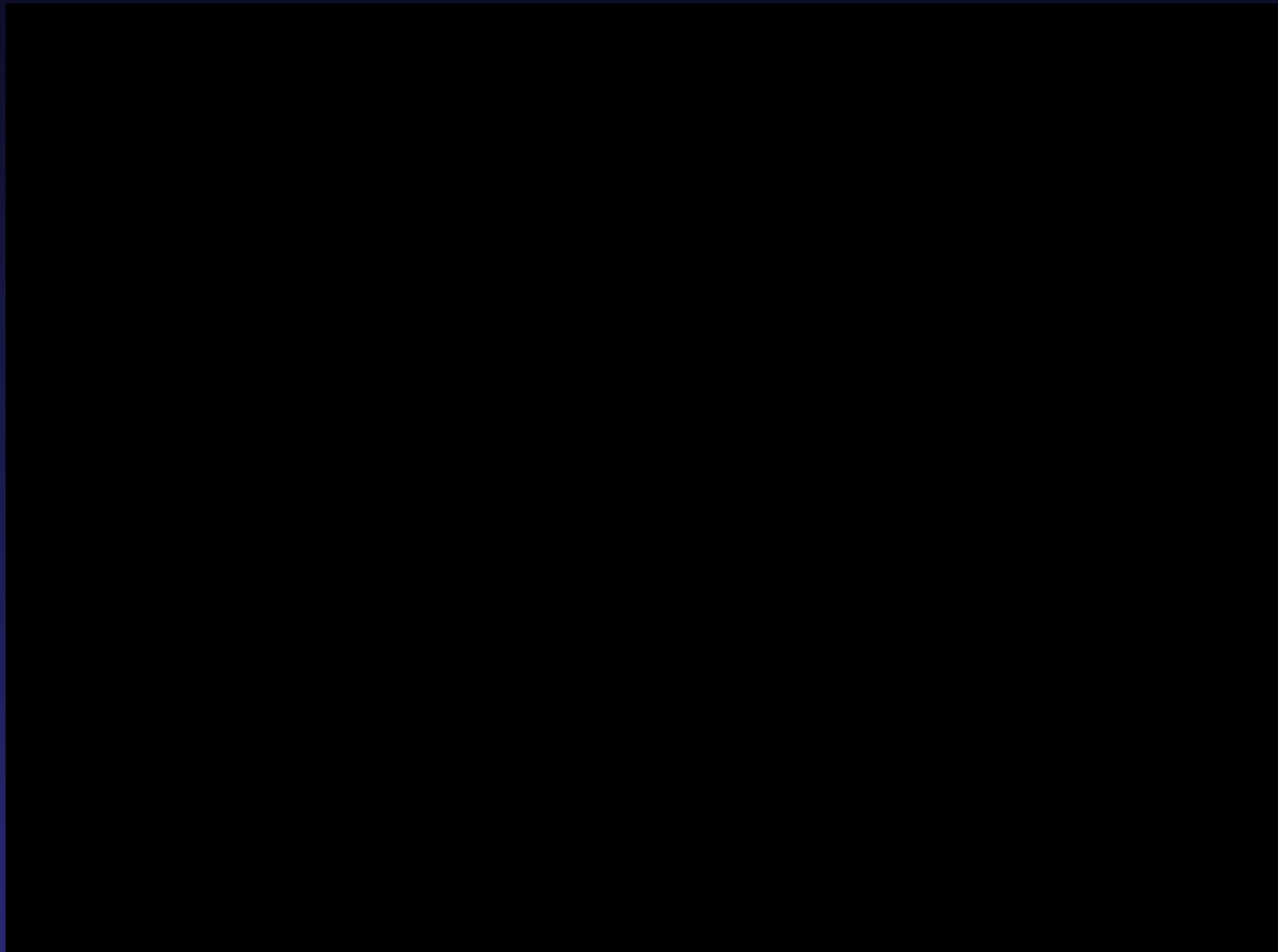
Task 13

High School: Geometry Class



Task 13

High School Video Club Meeting



Developing a Protocol for Observing Leading and Managing Practice

- **As a group, reflect on the dimensions that your analysis of the interactions in the organizational routines addressed.**
- **Identify four or five key dimensions.**
- **Based on your work above, develop a short observation protocol that you would use to gauge the quality of leadership and management practice in your school.**
- **Carefully justify the dimensions you propose to focus on.**

Task 14a

- **Think about the past year and your efforts to get colleagues to cooperate/implement/buy into some new instructional initiative. OR, consider your efforts to get them to stop doing something that you considered harmful to classroom instruction. Carefully consider two or three times when you interacted with your colleagues to convince them of your initiative. Be specific.**
 - **What did you do?**
 - **What resources or strategies did you use to try and convince your colleagues?**
 - **Share your findings with the person next to you and together identify two key resources or strategies used.**

Task 14b

- **Now, consider the brief transcript.**
 - **What tactics/strategies/resources do you notice being used to influence others?**
 - **Name each tactic/strategy/resource.**

School Leaders' Tactics

Mrs. Kelly: Um, I put on the agenda I wanna share some comments with you at the meeting I was at yesterday; Dr. Watkins was there. And she made some comments regarding testing and I just jotted them down so I can kinda share them with you. She said to make sure that our time is being utilized effectively. Many teachers throughout the system are hard working teachers, we're all good teachers, but they're not using the time effectively. They're giving a lot of assignments and they're doing a lot of test prep but it's not real assignments and they're not real test prep. And so there's a difference she said between assigning narrative writing, assigning expository writing, giving a test, an independent multiple choice test then really teaching it or going back over it or showing the kids you know how to do it or what they did wrong or what they did right. She also commented on that all teachers need to be teaching the students. She said that **this year the state for the ISAT is cracking down even more**; they don't feel like their test is a new test anymore. So in the previous years we were kind of fortunate, they didn't really crack the open ended that intensely, they weren't grading the...they were grading the writing but it was, they were being lenient because it was a new test for them...

School Leaders' Tactics

it was a new test for us. Starting this year she said that um, **they have already informed the Board of Ed that they're cracking down and that they are gonna take severe measures for any schools who are not showing improvement.** So it doesn't mean that we necessarily have to all of a sudden jump up and be 70% of our kids reading but whatever we got last year if we're not consistently improving by 3 percentage points and we're not showing that improvement they will come in and they will take measurements. And she's not, **she didn't comment on exactly what they could be but she said they're severe so you can imagine. We might have people coming in, they might re-do our whole curriculum, they might...you know whatever they think they need to do.** And then Chicago you know would have a say so in that because **this is coming right down from the state.** So she wanted to make sure everybody knew about that and we were real serious about doing whatever we can to help our students because **who wants anyone to come in our school and tell us then how to teach and what we have to teach and so forth.** The ISAT test begins the first week... (Grade Level Transcript).

Social Tactic #1: Appealing to Authority

“I’m serious. I have some administrative transfers downstairs; all it takes is my signature. You must do what you are being paid to do. We cannot be absent half of the school year and expect our children to perform on those tests. We must be here...just gonna pass [individual reports]... This is about your attendance for this past school year. You don’t wanna share this with anybody because it looks bad ...this is not to make you feel bad but to have you take a good look at yourself.” *(Principal, school year kick-off meeting)*

Social Tactic #2: Aligning with...

Common Sense

“I think that’s where working smart comes in instead of working hard. Instead of giving these children a lot of practice work, teach them how to do their work first and then they can practice forever. But if they don’t know how to do it [then] practice is not going to help them.” *(Breakfast Club)*

Familiar / Already Doing

Literacy Coordinator: “...I don’t know how you guys felt as you read it but as I was reading it I was saying, ‘we’re doing that, we’re doing that.’ [Audience agrees]”

Literacy Coordinator: “You know this is pretty much nothing new to us...”
(Breakfast Club)

Social Tactic #2: Aligning with...

Common Values / Shared Goals & Norms

“We might have people coming in, they might re-do our whole curriculum, they might...you know whatever they think they need to do. And then Chicago you know would have a say so in that because this is coming right down from the state. So she wanted to make sure everybody knew about that and we were real serious about doing whatever we can to help our students because who wants anyone to come in our school and tell us then how to teach and what we have to teach and so forth.” *(Literacy Coordinator, 4th Grade Level Meeting)*

Social Tactic #3: Other Oriented

“We want these assessments to be um, for you; the teachers. They help Miss A., Miss R., and I kinda look to see where our school is in general; how we, where we would perform on these standardized tests. But the main purpose I want you to know is they’re for you. They’re not for us; they’re for us secondhand. And the reason why they’re for you firsthand is so you can see how your students are doing. Only you know your students. I don’t know them, Miss A. doesn’t know them, Miss R. doesn’t know them; you know them... you know the ones who need help. And so I’m gonna ask first of all that the teachers take them very seriously...” (*Grade Level Meeting*)

Social Tactic #4: Brokering

“It was a new test for us. Starting this year she said that um, they have already informed the Board of Ed that they’re cracking down and that they are gonna take severe measures for any schools who are not showing improvement. So it doesn’t mean that we necessarily have to all of a sudden jump up and be 70% of our kids reading but whatever we got last year if we’re not consistently improving by 3 percentage points and we’re not showing that improvement they will come in and they will take measurements. And she’s not, she didn’t comment on exactly what they could be but she said they’re severe so you can imagine. We might have people coming in, they might re-do our whole curriculum, they might...you know whatever they think they need to do. And then Chicago you know would have a say so in that because this is coming right down from the state. So she wanted to make sure everybody knew about that and we were real serious about doing whatever we can to help our students because who wants anyone to come in our school and tell us then how to teach and what we have to teach and so forth.” *(Grade Level Transcript)*

Social Tactic #5: Asserting In-group Identity

“I want you to set high standards for these children. I don’t want anybody to tell me what they cannot do. Because I haven’t, I’m not so far removed from the classroom that I don’t know. *These children can perform if you expect them to perform.*” (Principal Richards, School Year Kick-off Meeting)

Embracing a Distributed Perspective in Practice: Recognizing and Grappling with the Challenges

Task 15

- **With a critical colleague, compare and contrast a distributed approach to leadership and management with a heroic approach.**
 - **Identify two key similarities.**
 - **Identify two key differences.**
 - **What do you consider the two most difficult challenges in taking a distributed perspective rather than a heroics of leadership perspective in your own practice?**
 - **Explain your choices.**

The Nature of Human Improvement Practice: Teaching

- **Uncertain & contested ends**
- **Uncertain & contested means**
- **Mutual dependency**
- **Unpredictability of teacher-student interactions**



The Circumstances of School Work

- **Pluralistic Institutional Environment**
- **Involuntary Clients**
- **Practitioners who are Professionals**



Embracing The Realities of Real Schools

“Every time I came in this office... it was someone waiting, needing something from me, needing an answer, ... from the parents to the students to the teachers; everyone at every moment ... overwhelming”

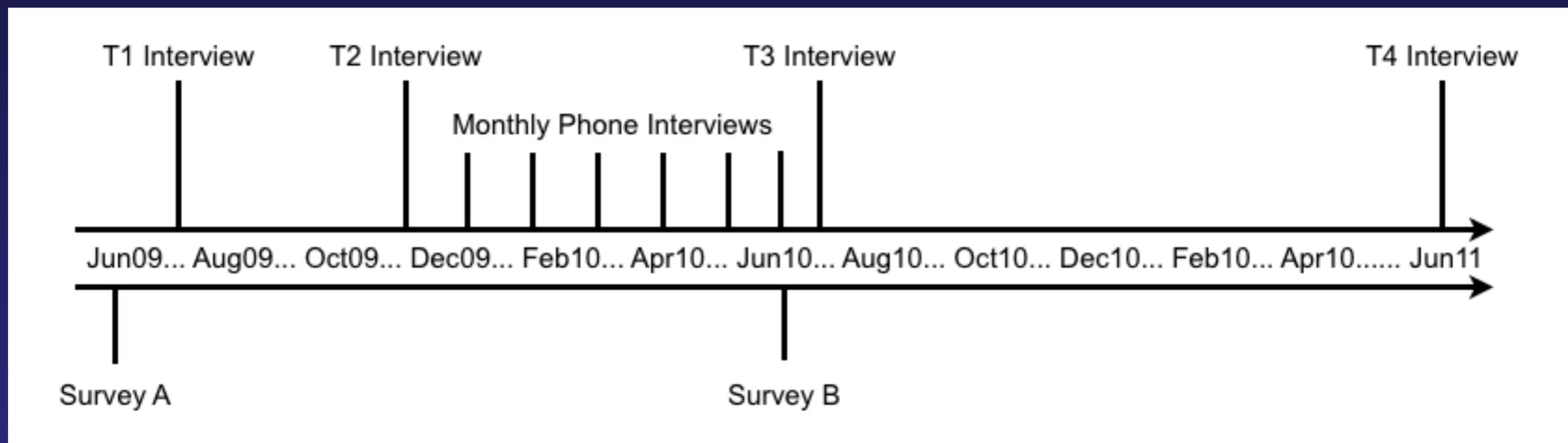
Angela

“...is like dancing that wonderful tango, blindfolded, yet serving lunch, breakfast and dinner on skates to 500 people,” [each of whom has] ordered something different” [and each of whom] “brings...their own set of dynamics, personalities, that you have to be acutely aware of in order to serve them.”

Adriana

The Study

- **Design**
 - **Longitudinal mixed method design: surveys, interview, observation, administrative records**
 - **Two cohorts of new principals (2009-10 and 2010-11) surveyed**
 - **Purposeful sub-sample of Cohort 1 & random sub-sample of Cohort 2 for interview**
 - **Framing: Sense-making perspective**
- **Cohort One data collection:**



Enabler: Volume

There's so much to do. So much to do that it's hard to focus sometimes . . . whether its discipline issues through the day, parents, the area is calling and they want this, central office is calling and they want that . . . it's . . . **treading water** . . . **looking for the shore**, the light beacon.

Andrea

It was just like every time I came in this office . . . it was someone waiting, needing something from me, needing an answer, needing this . . . they expect you to know and be able—from the parents to the students to the teachers; **everyone at every moment.** 'I need to talk to you.' 'I need this.' I was like wow . . . that was really kind of overwhelming.

Angela

Enabler: 'Jack of All Trades'

“Jack of all trades and master of none I would say. It’s **a little bit of every profession rolled up in one**. It’s being a CEO of a company but having to do everything in that company from janitorial all the way to dealing with the CEO of Chicago Public Schools ... We’re mom, we’re a teacher, we’re a guidance counselor, we’re a friend, we’re a mentor, a coach.”

Emily

“**Your hands are in all the cookie jars**. So like **you need to know a little bit about everything and a lot about everything to some degree** ... you need to be able to juggle the big balls of running a school. And be ok with the dropping a little ball once in awhile.”

Nancy

Enabler: Janus-Faced Nature of the Work

Nelson

“It varies. A lot of it depends on the team. **Sometimes you have to be a chameleon.** ... some days — some years you have to crack the whip, other times you can you know reflect or kind of relax and say ‘well that worked and let’s keep doing what we’re doing’.”

And every, everyone’s need is different ... Because it’s like you work to feed and nurture those ... **I’m still Glenda; you know Glenda’s good, she’s also a witch.**

Angela

Enabler: Unpredictability/Volatility

“Being a captain of a sailboat. You’re kind of in control, but **you’re at the mercy of the wind** too. You kind of set the course, direct it, sometimes the wind is your friend, sometimes it’s your enemy...”

Nelson

“It’s like surfing without a surfboard on any given day. I mean one minute you’re on the board and the next minute you’re drowning ... the next thing you know, a wave comes and smacks you and you’re like ‘what happened?’ How do I get back above water? I mean **things can just come out of nowhere.**”

Lori

Inhibitor: Ultimate Responsibility

- “I’m responsible for the whole building of students and **I’m ultimately**—for most purposes—the end all, be all accountability person. **Everything falls on me** ... no matter what One thing that really was smacking me in the gut Sunday night was **the responsibility part**. It’s like **the ultimate responsibility** ...”

George

Nelson

- “**the buck stops at your desk.** ... everything stops at my desk **so I’m ultimately accountable** for everything in this building. ... Everything is your responsibility.”

- “Captain of a ship ... things sometimes are smooth sailing and then in a moment, the winds can turn, and you’re not sure you’re gonna stay afloat ... **I’m the last one out.**”

Kathy

The Challenge of Distributing Leadership

“that tendency to ... **micromanage**, I just felt like I **had to keep that in check. ... that was never my style before**, but I think just because **I would kinda get overwhelmed with the idea of the responsibility** that I felt like I had to have my hand in, you know, all the different things going on. So I just had to challenge myself to let go gender differences ...

Kathy

“it was hard to release that, because I like to be in [involve], and some of it is trusting that it will get done, but with this [person] I know it will get done effectively and right. It's also just wanting to be a part of the process whole heartedly, **but I can't whole heartedly be a part of everything**”

Kara

The Challenge of Distributing Leadership

- “If it’s a bilingual, I’ll send them to Evelyn. If it’s a testing question ... I’ll send them to Helen. ... And not to pass the buck, but they already know cause I gave them a sheet on who’s responsible, **but sometimes they just want me to hear.**”

Carol

School Leaders' Work and Taking a Distributed Leadership Perspective

- **Nature of the leader's job both enables and constrains taking a distributed perspective on leadership**
- **The diversity, unpredictability, and janus-faced, chameleon nature of the leader's work encourage and enable a distributed perspective**
- **But, leaders' sense of ultimate responsibility appears to discourage and constrain a distributed perspective**
- **Tension between heroic and distributed perspectives on leadership and management**



Dispelling Some Myths about a Distributed Perspective

- **Principal somehow less relevant or even irrelevant ... WRONG**
- **Everyone is a leader ... WRONG**
- **The more leaders, the better ... WRONG**

Conclusion: Moving On and Forward

- **Embrace diagnosis and design work as central to leading and managing instruction.**
- **Diagnosis and design necessitates some sort of framework and it is important to be explicit about that framework.**
- **Taking on a distributed framework has particular entailments focusing attention on:**
 - **the practice of leading and managing in terms of interactions**
 - **foregrounding organizational infrastructure.**

Papers

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 flock in social capital development. *American Educational Research Journal*.

Spillane, J. P., & Kim, C. M. (2012). An exploratory analysis of formal school leaders' positioning in instructional advice and information networks in elementary schools. *American Journal of Education*.

Spillane, J. P., & Healey, K. (2010). Conceptualizing school leadership and management from a distributed perspective. *The Elementary School Journal*, 111(2).

Spillane, J. P., & Hunt, B. (2010). Days of their lives: A mixed-methods, descriptive analysis of the men and women at work in the principal's office. *Journal of Curriculum Studies*, 42(3), 293-331.

Camburn, E., Spillane, J. P., & Sebastian, J. (2010). Assessing the utility of a daily log for measuring principal leadership practice. *Educational Administration Quarterly*, 46(5), 707-737.

Dorner, L. M., Spillane, J. P., & Pustejovsky, J. (2010). Organizing for instruction: A comparative study of public Catholic, charter, and public schools' enactment of institutional policy scripts. *Journal of Educational Change*, 12(1), 71-98.

Spillane, J. P., Hunt, B., & Healey, K. (2009). Managing and leading elementary schools: Attending to the formal and informal organization. *International Studies in Educational Administration*, 37(1), 5-28.

Spillane, J. P., & Zuberi, A. (2009). Designing and piloting a leadership daily practice log: Using logs to study the practice of leadership. *Educational Administration Quarterly*, 45(3), 375-423.

Pitts, V., & Spillane, J. P. (2009). Using social network methods to study school leadership. *International Journal of Research and Method in Education*, 32(2), 185-207.

Pustejovsky, J., & Spillane, J. P. (2009). Question-order effects in social network name generators. *Social Networks*, 31(4), 221-229.

Spillane, J. P., Camburn, E., Pustejovsky, J., Pareja, A. S., & Lewis, G. (2008). Taking a distributed perspective: Epistemological and methodological tradeoffs in operationalizing the leader-plus aspect. *Journal of Educational Administration*, 46(2), 189-213.

More At:

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