SPECIAL ISSUE
Politics, Policies, and Practices of Coaching and Mentoring Programs

education policy analysis archives

A peer-reviewed, independent,
open access, multilingual journal

epaa aape

Arizona State University

Volume 22 Number 54 June 23rd 2014 ISSN 1068-2341

Understanding Relationship: Maximizing the Effects of Science Coaching

Ruth Anderson
FACET Innovations
Sue Feldman
Lewis and Clark College
&
Jim Minstrell
FACET Innovations
USA

Citation:Anderson, R., Feldman, S & Minstrell, J. (2014). Understanding Relationship: Maximizing the Effects of Science Coaching. *Education Policy Analysis Archives, 22* (54). http://dx.doi.org/10.14507/epaa.v22n54.2014. This article is part of EPAA/AAPE's Special Issue on *Politics, Policies, and Practices of Coaching and Mentoring Programs*, Guest Edited by Dr. Sarah Woulfin.

Abstract: There is growing empirical evidence that instructional coaching can help teachers transfer their learning from professional trainings (e.g., new strategies) to classroom practice and that coaching promotes greater collaboration and reflection among teachers. At the same time, however, research on the effectiveness of particular coaching models and the underlying reasons for their effectiveness is only beginning to emerge. Why does coaching "work" when it does? What causes it to break down and to what extent can it be repaired? Our five-year mixed methods study of science instructional coaching in a single school district set out to answer these and other questions. Data from multiple sources (surveys, interviews, classroom observations and coaching logs) confirmed a

Journal website: http://epaa.asu.edu/ojs/
Facebook: /EPAAA
Twitter: @epaa_aape

Manuscript received: 12/20/2013
Revisions received: 5/2/2014
Accepted: 5/25/2014

strong correlation between improvements in teacher practice and the time teacher and coach spend together (at least 10 hours for elementary teachers and 20 for secondary) the focus of their work (narrow as opposed to broad); and most importantly, the quality of their professional relationship. In this paper, we present preliminary findings from a follow-up analysis intended to help explicate how relationships seemed to matter in coaching. We believe the findings from the secondary analysis help to clarify coaching interactions and to specify what contributes to or detracts from their productivity. These findings may not only help to inform decisions related to the design, implementation and ongoing maintenance of coaching programs but also provide fodder for considerations related to the organizational capacity, flexibility and adaptability of the schools and school systems.
Keywords: coaching, professional development, science education

Comprendiendo relaciones: Maximizando los efectos de los entrenamientos/*coaching* en ciencias.

Resumen: Existe creciente evidencia empírica que los entrenamientos/*coachings* pedagógicos pueden ayudar a los profesores a transferir sus aprendizajes de las capacitaciones profesionales (por ejemplo, nuevas estrategias) a práctica en el aula y que el *coaching* promueve una mayor colaboración y reflexión entre los profesores. Sin embargo, la investigación sobre la eficacia de determinados modelos de *coaching* y las razones subyacentes de su efectividad no están suficientemente estudiadas ¿Por qué funciona el *coaching* cuando lo hace? ¿Qué causa que el *coaching* no funcione y hasta qué punto puede ser reparado? Nuestros cinco años de estudios usando métodos mixtos sobre como entrenadores en el área de ciencias en un distrito escolar respondían a estas y otras preguntas. Los datos de múltiples fuentes (encuestas, entrevistas, observaciones en el aula y los registros de entrenamiento) confirmaron la fuerte correlación entre la mejora de la práctica docente y el tiempo que entrenador y profesores pasan juntos (al menos 10 horas para los maestros de primaria y 20 de secundaria) el enfoque de su trabajo (enfocado en comparación con amplio); y lo más importante, la calidad de la relación profesional. En este artículo presentamos los resultados preliminares de un análisis destinado a explicar cómo las relaciones serian importantes en coaching. Creemos que los resultados de este análisis ayuda para entender las interacciones en coaching para especificar lo que contribuye o resta valor a su productividad. Estos hallazgos no sólo pueden ayudar a informar las decisiones relacionadas con el diseño, la implementación y el mantenimiento continuo de programas de entrenamiento, sino también proporcionar elementos para las consideraciones relacionadas con la capacidad de organización, flexibilidad y capacidad de adaptación de las escuelas y los sistemas escolares.
Palabras clave: entrenamiento/coaching; desarrollo profesional; enseñanza de las ciencias.

Compreendendo relações: Maximizando o impacto dos treinamentos na ciência.

Resumo: Há uma crescente evidência empírica de que os treinamentos podem ajudar os professores a transferir suas aprendizagem profissionais (por exemplo, novas estratégias) para a prática de sala de aula e treinamento promove uma maior colaboração e reflexão entre os professores. No entanto, a investigação sobre a eficácia de certos modelos de coaching e as razões subjacentes para a sua eficácia não estão suficientemente estudados. Porque o coaching funciona quando isso acontece? O que faz que esse treinamento não funcionei e como ele pode ser reparado? Nossos cinco anos de estudos utilizando métodos mistos de pesquisa sobre o treinamento na área de ciência em um distrito escolar respondeu a essas e outras perguntas. Dados de várias fontes (inquéritos, entrevistas, observações em sala de aula e registros de treinamento) confirmaram a forte correlação entre a melhoria da prática docente e o tempo que passam juntos treinador e professores (pelo menos 10

horas para professores do ensino fundamental e 20 secundária) como abordam o trabalho (focalizadamente contra enfoquei amplo); e, mais importante, a qualidade da relação profissional. Neste artigo, apresentamos os resultados preliminares de nossa análise para explicar como as relações podem ser importantes em coaching. Acreditamos que os resultados desta análise ajuda a compreender as interações em coaching para especificar o que contribui ou prejudica a sua produtividade. Estes resultados não só pode ajudar a informar as decisões sobre a concepção, implementação e manutenção contínua de programas de treinamento, mas também fornecer elementos para as considerações relacionadas à capacidade de organização, flexibilidade e capacidade de adaptação das escolas e sistemas escolares.
Palavras-chave: treinamento; desenvolvimento profissional; educação científica.

Introduction

Research has long suggested that ongoing, in-house professional development, such as instructional coaching, may be an effective tool for impacting classroom practice (e.g.,Cohen & Hill, 2000; Costa & Garmston, 2002; Killion & Harrison, 2005; Kise, 2006; Knight, 2006, 2007; McLaughlin & Talbert, 2006; Neufeld & Roper, 2003c; Stein & Coburn, 2007; Steiner & Kowal, 2007). There is also growing empirical evidence that coaching can help teachers transfer their learning from professional trainings (e.g., new strategies) to classroom practice (Hartnett-Edwards, 2011; L. Hubbard, H. Mehan, & M.K. Stein, 2006; Joyce & Showers, 1982; Kertlow & Bartholomew, 2010) and that coaching promotes deeper professional reflection (Coggins, 2005; Coggins, Stoddard, & Cutler, 2003; Garet et al., 1999; Poglinco et al., 2003). Our own extended study of science instructional coaching in 15 schools, in a single school district had similar findings. Data from multiple sources across five years confirmed a strong correlation between improvements in teacher practice and the time teacher and coach spend together (at least 10 hours for elementary teachers and 20 for secondary) as well as the focus of their work (narrow and consistent as opposed to broad and multifaceted). These first two, however, consistently depended upon the quality of the coach-teacher relationship

On the surface the importance of relationship seems obvious since coaching is mediated through interactions of a coach and a coachee. Everything a coach does, from initiating hallway conversations, to conducting classroom observations, to facilitating meetings, to developing and scoring classroom assessments has an implied, yet under-conceptualized, reliance on relationship (Gallucci, 2008; Gallucci, Boatright, Lysne, & Swinnerton, 2006; Taylor, 2008). Many of the early studies of coaching allude to the importance of relationships for coaching (Howe & Stubbs, 2003; Neufeld & Roper, 2003a; Ross, 1992; Schweiker-Marra, 1995; Sherrill, 1999; Showers, 1985; Smylie & Denny, 1990). Several of these attribute a coach's success to personal qualities including a positive disposition and good interpersonal communication skills (e.g., Knight, 2004, 2005, 2007; Kowal & Steiner, 2007; Mangin & Stoelinga, 2008a) pedagogical experience (Dole & Donaldson, 2006; Kise, 2006; Wicker, 2006) and or content knowledge (Kesselheim, 1998; West & Staub, 2003). This was in part because instructional coaches were unlikely to be trained and would therefore need to rely on personal qualities to negotiate their work (Feger, Woleck, & Hickman, 2004; Harwell-Kee, 1999; Neufeld & Roper, 2003b). A school's culture of relationships has also been attributed to the success of coaching relationships (e.g., Akhavan, 2005; Richard, 2003). Reviews of the coaching literature (e.g., Borman, Feger, & Kawakami, 2006; Greene, 2004; Kertlow & Bartholomew, 2010; Neumerski, 2013), and subsequent research (e.g., Bean, Draper, & Hall, 2010; Ippolito, 2010; Marsh, Sloan-Mccombs, & Martorell, 2012; Matsumura, Garnier, & Resnick, 2010), continue to suggest the importance of "relationship" in coaching. However, there are few empirical studies of the nature of the coaching relationship.

By "coaching relationship" we are referring to coach-teacher interactions that move beyond friendly exchanges to one that is productive in terms of teacher and student effects. In Year Two of our science coaching study, relationship had already emerged as the pivotal element for coaching success, without which work-focus and time spent coaching did not seem to matter. The importance of relationship was not completely unexpected. We had assumed, like other researcher colleagues and the coaches themselves, that relationship building would be an important part of coaching—particularly at the beginning. What we did not expect to find however, was that cultivating such relationships would be an ongoing endeavor (in most cases). This was true not just in the case of new staff coming in, but also with those teachers who had been "coached" for years. As late as Year Four of the study, for example, *coaches one day would describe "going deep" with a teacher and the next day report that they had to "start all over" in their relationship building.* During a coaches' meeting, one coach described the work as "two steps forward and one step backward," the other coaches voiced similar observations or nodded affirmatively.[1] This episode and the many up and down relationship storylines that appeared within each school case raised questions about the nature of coaching relationships and led to the secondary analysis of the data, and the focus of this paper. In the pages that follow, we hope to provide new (and perhaps actionable) insights into coaching relationships and propose some implications of such relationships for the larger system. We begin with a brief overview of the parent study and data sources relevant to the secondary analysis

Study Context

The science coaching study was set in a mid-sized urban school district in the Northwest United States where six high schools, six middle schools and thirty-four elementary schools serve approximately 30,000 students. The district had instructional assistants/facilitators performing roles similar to coaches (primarily in mathematics and literacy) for about fifteen years, before the position of "coach" was introduced in 2003. That year, the district developed a framework to implement coaching (now also in science) as a principle component of district professional development for teachers within the context of building-based professional learning communities. The supportive model of coaching had the long term goal of building capacity and the shorter term goal of facilitating the translation of school and district initiatives into classrooms. In most schools, participation in the coaching program was considered optional.

Five elementary schools, 5 middle schools and 5 high schools actively participated as "coached" schools in the study. There were some changes in coaching assignments and coaches during the study period, but a stable core of 10 coached schools (4 elementary, 3 middle and 3 high schools) remained through the end of the study.

Participants

Science coaches

A total of twelve full- time and part-time science coaches (FTE from .2 to 1.0) participated in the study, with eight actively serving the core 10 schools in a given year. The coaches were selected from within the school district and assigned to one or two schools—frequently one in which they had taught. All were experienced science teachers with acknowledged content and instructional expertise, [2] and most of them had 10-20 years of classroom experience when they took on the role of coach.

[1] Literacy and mathematics coaches conveyed similar experiences in surveys.
[2] For 7 of the coaches, observational data gathered before the start of the study served to confirm their instructional expertise.

The majority of coaches had prior experience as an adult educator, either as a mentor, cooperating teacher with teacher interns or delivering professional development for teachers. Coaches received general training in mentoring adult learners as well as periodic specialized training to support teachers in implementing core district initiatives and related strategies. Science coaches also met as a group (elementary and secondary) twice a month for a half-day science-specific professional development led by the district Science Coordinator (also a former coach).

Teachers

Approximately 180 elementary and secondary science teachers participated in the study at different levels or "tiers" of participation. Tier 1, the most active level of participation, consisted of 16 teachers (6 elementary, 5 middle school, and 5 high school) who participated in multiple consecutive classroom observations (video recorded at the secondary level) for 2-3 years, responded to yearly surveys, and were interviewed 2-3 times during each year of participation. Tiers 2 and 3 included elementary and secondary teachers who participated in one or more of the activities described for Tier1.

Other participants

Survey and interview data were also gathered from building administrators (principals and assistant principals), non-science instructional coaches (e.g., literacy or mathematics), un-coached teachers, and various district personnel. Data collected from these groups helped to round out the picture of coaching that emerged at individual case schools.

Data Collection

Data collection for the study began in earnest in the 2006-07 school year after a start up year devoted to revision of the study design, developing instruments and measures, and recruiting teachers for the following fall. Data collection in this start up year focused primarily on testing instruments. During the next four years, data collection took place during regular monthly visits to the district. Table 1 below provides an overview of only those data collection activities that contributed to the secondary analysis discussed in this paper, followed by brief descriptions of how specific data sources contributed to that analysis.

Table 1:
Data Collection Activities, Fall 2005 - Spring 2010

Source	Activity (totals 2005-2010)	2005-06	2006-07	2007-08	2008-09	2009-10
Science coaches	Surveys & Reflections (111)		X	X	X	X
	Interviews (48)	X	X	X	X	X
	On-line coaching log entries (8626)		X	X	X	X
	Observations (approx.75)	X	X	X	X	X
Teachers	Surveys (441)		X	X	X	X
	Interviews (81)		X	X	X	
	Collaboration time observations		X	X	X	X
Building Administrators	Surveys (38)	X		X	X	
	Interviews (18)	X	X	X	X	X
Non-Science coaches	Surveys (12)				X	
	Interviews (12)				X	

Observations

Researchers attended the coaches' meeting at least once a month during the school year. In addition, each coach was observed at least three times a year while facilitating teacher collaborative time, professional development or one-on-one meetings with their teachers. On a few occasions, researchers "shadowed" a coach through the entire workday. Field notes were taken during these events and included in the ongoing site visit summaries completed with each round of data collection.

The online coaching log

The online coaching log was developed in Year One of the study in close collaboration with the coaches, but not used as a data collection tool until the second year of the study. Years 2 through 5, coaches regularly recorded their work with and for teachers in one of three formats (one-on-one; group work; support or "behind the scenes" activities) and submitted monthly[3]. For example, in the one-on-one and group logs, coaches would select the name(s) of the teacher(s) they worked with and indicate the approximate amount of time they had spent with the teacher(s) in a particular activity (e.g., debrief, lesson planning, co-teaching, analyzing student work, etc.). They would also indicate the focus of activity (e.g., teacher content knowledge, pedagogy, curriculum, etc.) and who had initiated the interaction (teacher, coach, mutual or administrator). Insights, professional learning, challenges and successes were recorded in optional text boxes labeled "comment" and "powerful moments." These qualitative entries helped researchers to track individual relationship "stories" that could be followed up on through interviews and surveys while the quantitative aspects (time spent in activities and specific categories of activities) provided insight into the depth of interactions.

Surveys

Surveys were designed with a core set of common questions across stakeholder versions to provide multiple perspectives on specific dimensions of coaching as it evolved in each school context. In addition to gathering information about education and work background, roles within the school, school climate, culture, and professional practice (e.g. teaching, coaching, collaboration), the surveys asked respondents specifics about their current experience with coaching, including time spent in specific activities, the focus of the work and the nature and perceived quality of their coaching relationship(s). After each round of surveys, the researchers conducted a sample of brief follow-up phone interviews to clarify and confirm survey responses. *Coach reflections*, a subset of the surveys, were administered to coaches approximately once a quarter. These brief online questionnaires would typically pose a common question to all the coaches, and then hone in on case-specific themes that had emerged elsewhere in the research data with regard to coaching at that school. Coach reflections allowed the researchers to more closely examine the particulars of specific teacher-coach interactions and relationships

Interviews

Semi-structured interviews were conducted with the science coaches and Tier 1 teachers on a yearly basis, while others (administrators, non-science coaches, teachers outside the sample) were interviewed as feasible or deemed necessary. Teachers in the sample represented a broad range of

[3] For activities in a given month, coaches were able to log entries at any time through the first 10 days of the next month. After that time, however, the log for the month would close and additional entries (or changes to existing entries) had to be made through the research team. This helped to keep the entries current and data monitoring feasible.

involvement with coaching in a given school and therefore a range of perspectives on and experience with coaching interactions. The face-to-face interviews with teachers (as opposed to the post survey phone interviews) were important to counterbalance the predominant coach perspective within the data.

Data Analysis

Analysis of data from the individual instruments mentioned above was ongoing. And while qualitative and quantitative analyses were completed independently, they worked in concert to inform subsequent data collection and the revision of instruments. This allowed us to maintain a close "conversation" with the data and provided us with direction even when statistical power was not available. Survey summaries and monthly summary reports of the coaching log results for individual coaches are two examples of interim reports of data that were regularly created and shared with the study stakeholders. This practice gave us regular benchmarks for reflection on the development of coaching across the district and in individual schools.

Atlas.ti software was used to organize and analyze the qualitative data (interview transcriptions, coaching log and open-ended responses survey responses, etc.), which were organized by coaching assignment (single school or two schools). A coding scheme developed in the second year of data created "bins" broadly aligned with the research questions of the larger study, and coding was conducted as both a primary analysis and as a constant comparison process (Glaser & Strauss, 1999).

In Year 4 (2008-09), the various streams of qualitative and quantitative data were brought together into a "case framework" or report (Merriam, 1998) in order to integrate and reduce data from individual instruments and research activities (Creswell & Clark, 2007) and build school-based cases of science coaching. Prioritizing those cases with the most complete sets of teacher and coach data, we developed seven frameworks to "hold" the story of science coaching across time, and across changes in staff (including coaches), leadership and initiatives. These labor-intensive products (40-60 pages each) helped to highlight correlations across instruments within a case and patterns and themes across cases. Most important to our purposes here, the frameworks provided the clearest view of the ebb and flow of the coaching relationships—the relationship between coach and teacher(s) and between coaching and the school context.

While the codes clued us into potential storylines, the case frameworks reduced the data to essential elements of each school "coaching story." The chronological flow of events, attitudes and perceptions not only allowed us to trace the changing appearance of relationship, but also possible causes and conditions (e.g., changes in building leadership, new initiatives, changes in assignments, etc.

Exploring Relationship

Early on, we had anticipated that coaches' relationships with administrators, teachers and other coaches would be important supports/constraints on their work and had developed codes for these. Additionally we had codes for coaching dilemmas and for resolution to those dilemmas, which we soon observed were most often cross-coded with one or more of the relationship codes. We could see that successful coaching was not well characterized as a linear process of establishing relationships and then "getting to work." The ups and downs did not seem to be a reflection of the personal disposition or skills of the coach or the teacher, but rather seemed to result from *the situated interaction between coach and teacher.* Coaches, and teachers seemed aware of the potentially vulnerable

space in their professional interactions, as teachers would be asked to open their classroom to allow an "outsider" to look critically at their practice:

> … *There needs to be trust between the two, so that you feel that you can express your ideas, and then you need the openness of the other party in order to be able to feel like your ideas are accepted, rather than constantly just being shut down.*
>
> (high school teacher, interview 2009)

> *In order for a coach to be successful I believe there needs to be a relationship built between coach and [teacher] mentee. If there is no trust, change is not going to happen.*
>
> (elementary school teacher, survey 2008)

Many statements similar to those above suggested that the teacher-coach "relationship" was synonymous with the notion of trust. And while this was not surprising, we were still faced with the challenge of teasing out smaller features of coaching interactions that would help to explain why or how some teacher-coach interactions seemed to lead to productive activity while others did not.

In order to produce greater specificity in our own descriptions of what was happening in and between these coaching cases, we looked for a framework to provide an analytic lens for a close analysis of our "relationship" code reports. Noting that trust was mentioned commonly in participants' references to relationships we turned to theories of trust (e.g., Deutsch, 1960; Forsyth, Adams, & Hoy, 2011; Fukuyama, 1995; Hoy, 1999; Sztompka, 1999; Tschannen-Moran, 2004) to gain a better understanding of how trust might matter in these bumpy coaching trajectories with their breaks and repairs. We finally settled on relational trust (Bryk & Schneider, 2002) as a probable framework for dealing with both the situational quality of the relationships we were observing and the foundational importance of "trust" that our practitioner colleagues kept referencing.

Relational Trust

Relational trust is a kind of interpersonal trust that is generated in interactions between people, rather than a personal attribute that an individual may carry with them (e.g.,Galford & Drapeau, 2002; Hoy, 1999) or a fund someone holds as in a bank account (Dika & Singh, 2002). Relational trust suggests that trust is a feature of the moment-to-moment interaction between people, as coaching itself may be explained as a moment-to-moment interaction between people. Composed of four dynamically-related and overlapping components (personal regard, respect, integrity and competence), relational trust may increase or diminish in each interaction as the participants demonstrate and discern or do not discern those key components.

In their longitudinal study of Chicago Public Schools, the researchers documented a strong statistical link between the composite level of relational trust among school role groups (teachers-principal; teachers-parents; parents-principal, etc.) and the level of organizational health and academic improvement in a school (Bryk, Schneider, 2002). Their study did not distinguish between the roles of teacher and coach, but their description of a dynamic interpersonal trust was consistent with what we had been hearing from coaches and teachers as they described the challenge of having "deep" conversations and engaging in truly collaborative work. Drawing on Bryk and Schneider, we modified the four component definitions to the following:

- **Personal Regard:** show of care and consideration for other person; a willingness to "go the extra yard" for colleagues
- **Respect:** regard for the dignity and worth of another; the demonstration of a genuine interest in other person's point of view

- **Competence:** ability to carry out the responsibilities of one's role
- **Integrity:** transparency and honesty in one's work; dependably keeping one's word and acting in a way that is congruent with one's expected role;

Next we reanalyzed the broadly coded "relationship" and "challenge/dilemma" bins within the qualitative data, using the components of relational trust. We found more than ninety percent of coaching relationship instances previously coded as "breakdowns" (i.e., lack of engagement or a suspension of engagement) or "repairs" (i.e., engaging or re-engaging in coaching) were explained either by one or more of the relational trust components or by "role synchrony" (described in a later section). Below we provide some examples.

Personal regard

Personal regard was the attribute most commonly used by teachers describing their relationship with the coach. This powerful dimension of trust in any organization may be even more crucial in the relationship-based environment of schools, where isolated practitioners may become vulnerable just by opening their classroom to an observer. In such an environment, any actions taken to reduce another's feeling of vulnerability communicate personal regard (Bryk, Schneider, 2002). In the context of coaching, actions taken by the coach to create a "safe" environment for sharing ideas and practice could constitute such actions. According to Bryk, the display of personal regard in school environments also involves the willingness of participants to extend themselves beyond what is formally required by a job description or contract. They would describe the coach as likeable, friendly, caring, for example, or willing to go out of their way to help. The quote below captures a teacher's discernment of the coach's willingness to go out of her way:

> *I think she's gone above and beyond… The sheer number of hours that she's put in… we're all at very different places with science content. And …we would work together, but she would be more than willing to work with us in addition to that if we needed something.*
>
> (elementary school teacher, 2010)

We did not find explicit expressions of a lack of personal regard among coach and teacher descriptions of coaching. This was not surprising, as courtesy and politeness are very basic tender within organizations and it is not likely that such feelings would have been readily shared with the researchers. In addition, given that a relationship is essential for coaches to do their jobs, it is unlikely that they would readily misstep in the realm of basic courtesy.

Where basic personal regard is lacking between colleagues, there is little chance of finding trust. Below, a secondary teacher recounts an extreme example of lack of personal regard that undermined the possibility of trust with a colleague (not a coach) at his new school:

> *I went around my very first year that I was here, and I was trying to put together what… a lab write-up is going to look like...I talked to a number of teachers about this. When I came to one of my colleagues, basically he said, 'I think this is stupid… there's no need for this. The kids should be able to adapt to whatever it is that you throw at them, blah blah blah.' I still remember this conversation [from] four years ago… that blew relationships out of the water. That blew trust out of the water. That blew any opportunity for a deep conversation with that individual …*
>
> (high school teacher, interview, 2009)

The attitude conveyed by the veteran teacher described in the above quote was not uncommon at the school. Perhaps not surprisingly, coaching there did not take hold very easily or fully among the staff.

Respect

Respect in an interaction is "marked by a genuine sense of listening" that is confirmed when subsequent actions take into consideration what was expressed. Social exchanges lacking in interpersonal respect break down as participants avoid or react negatively to what they perceive to be a "demeaning" situation (Bryk, Schneider, 2002). In the context of coaching, coaches frequently showed respect to individual teachers by listening to their concerns and having them determine the focus and goals of the coaching work. The following quote from a middle school teacher presents an example of a "repair" in the area of respect in coaching. A teacher recalls in an interview how the coach, who was then new to the position and without a clearly defined role, chose to listen to and follow the teacher's lead rather than insist on adhering to the protocol for a Lesson Study like activity:

> *… it felt like district had given us a spy… and so we together started questioning everything as a department. And [the coach] just kind of stepped back and said, "I'm listening." And so we went from [spending] the entire day…six teachers in a classroom…and you write all this data and you were exhausted and mad by the end of the day to, "Let's videotape" … so what we got was really authentic dialog and information… we'd go through the whole regular [Professional Learning Lab] process but it morphed into what worked for us…. I loved when we all went, "I don't want to do this anymore, can we do it this [another] way?" And it was that moment of this is ours, because we have this opportunity…video PLLs were like ours. And that was really, really, really cool.*
>
> (middle school teacher, interview 2010)

By choosing to listen at that particular moment, the coach managed to assuage her colleagues fears that a "spy" had been placed among them. From the time of that event the teachers in that department embarked on a period of focused collaboration and unprecedented sharing among the faculty of classroom practice through video.

Teachers also interpreted coaches' behavior as "respectful" when they (coaches) acknowledged teacher autonomy and deferred to their schedules and preferences. Below, an elementary teacher contrasts the approach of two coaches with whom she had worked, highlighting the distinction between respectful and disrespectful behavior:

> *…let's say I'm working on something and I'm in the middle of something before or after school, and [the science coach] will come in and say, "Here. We've got to talk about this, blah, blah, blah, blah, blah . . . ." Pretty soon, 15 minutes have passed and I have to go get my kiddos [from lunch] and I didn't get to finish…I am looking at the clock, trying to get stuff done… I never felt that with [the other coach]. [She] was more, "How can I support you? Let's meet after school. Let's set up a time where we can meet and then we'll talk about it"…not as much "last minute."*
>
> (elementary school teacher, interview 2008)

Situations coded for respect were frequently associated with teacher perceptions of their own competence. For example, elementary teachers would express feelings of increased confidence and competence as a result of working with a coach. They also expressed gratitude for not being made to feel less than capable in the process of learning, as illustrated in the quote below:

> *[The coach] makes it easy for us to come to her and say, "Honestly, I'm looking at this lesson and I'm not really sure what it is we're getting at here. Can you help me?" She's willing to plan with me…she has made it so easy for me to get help without ever feeling intimidated. She never ever makes me feel like she's evaluating me in any way. She celebrates my successes and says, "Oh, look, my gosh, [teacher name], look how far you've come!" And it makes me want to do more.*
>
> (elementary school teacher, interview, 2010)

Competence

Competence refers to the perception of one's ability perform their role. Within the study data, science coach competence appeared to be tightly connected to both the coach's science content knowledge and classroom teaching experience. For example, in each of the five annual teacher surveys administered during the study, teachers across grade levels consistently rated the following attributes of a coach's status in their top three requisites for "effective coaching": "science content expert," "proven master teacher" and (in the case of many elementary teachers) "the ability to work successfully in the classroom with students." [4]

If personal regard permitted coaches to be acknowledged as colleagues by their teachers, the coach's competence in science learning and teaching seemed to give them the professional collateral needed to begin to establish a strong professional relationship with a teacher:

> *After knowing her as a person and her history and her background as an elementary teacher, you have a certain level of respect because she's been through the war, so to speak. I don't have the time to listen to a newbie tell me what theoretically it should look like if you haven't been in the trenches.*
>
> (elementary school teacher, 2009 interview)

The greatest variability in teachers' perception of coach competence with regard to content knowledge was among high school teachers. Teachers trained in one science discipline were occasionally skeptical that a coach trained in another discipline of science could provide useful counsel. As one high school teacher explained:

> *There are so many different curriculums and such a great number of teachers that I don't believe…there's any possible way to do any justice to any given classroom -- let alone all of them...*
>
> (high school teacher, interview 2008)

In many cases, however, high school teachers managed to focus less on the coach's particular subject area background, and more on their pedagogical expertise:

> *My idea of a coach is to be able to help [teachers] implement good student-centered types of activities and lessons…They don't necessarily need to know the details of the content in order to do that. It's truly an instructional coach and not a content coach.*
>
> (high school teacher, interview 2008)

Perspectives on the purpose of coaching varied widely between some teachers, across grade levels and even between school roles. Elementary administrators, for example, unanimously expressed in survey responses that the purpose of coaching was to support teachers of all experience levels. Meanwhile, a substantial portion of secondary administrators (especially in the early years of the study) said that the primary goal of coaching was to support new and struggling teachers. (This sort of variance has obvious implications for the perceived competence--and therefore effectiveness--of instructional coaches.)

---

[4] By contrast, administrators often ranked other attributes and skills as more important (e.g. that the coach be pragmatic, actively identify and address issues, "fix" problems). These suggest that teachers and administrators may be looking at different qualities when they discern "competence." This may, therefore, have consequences for coaches establishing themselves within a school.

Integrity

Integrity involves the ability to depend on what people say and their ability to keep their word. Coaches demonstrated integrity by being reliable, open and honest with the teachers with whom they worked. They also demonstrated integrity when their actions were consistent with their talk. One example of this was shared by a teacher who had been working with the coach on improving his questioning skills reached a moment of frustration in class:

> *…there was something we [the students and I] just couldn't get and I finally just said [to the coach], "Look, I've used up everything I can think of. YOU come up here and figure it out." So he literally got up from the back of the room, went up, and finished the questioning for the rest of the class, and then we debriefed afterwards.*
>
> (high school teacher, 2009)

In the above scenario, as the coach "comes to the rescue" and immediately performs as the teacher expected, he demonstrated both integrity and competence. Integrity scenarios were not easily captured in the data—perhaps because "follow-through" and dependability are usually illustrated through two-part scenarios (like "resolutions" which require some initial problem). Occasionally in an interview, teachers would refer to the dependability of their coach, but overall integrity was the most illusive of the four components. We found the strongest evidence of integrity in the negative examples or the descriptions of a lack of integrity when a coaching interaction broke down. For example, in the following quote a novice second career teacher recalls a brief breakdown in his relationship with the coach when he perceived an implicit agenda behind her questions:

> *She would come in, make her observations, and get to the "I noticed, I wonder." And what we did with the "wonder" part was there was some rhetorical wonderings in there. And I said, "Look, if you're wondering about something, just ask me." And so, I think that was the biggest bump in our relationship. I said, "If you've got something on your mind, don't ask me a question about it if you already have an answer in your head. Just tell me what you're thinking and let's work from that point." So I think that [is] where we are right now. I feel very comfortable with her coming in and she's been in on days that were like, "Oh my god" kind of days. And she's been in on other days, too…*
>
> (middle school teacher, interview 2007*)*

It is not clear to us why integrity is illusive in our data. Teachers demonstrate integrity in their classrooms commonly, but the demonstration and discernment of integrity between teachers and teachers and coaches was less apparent. One possibility is that integrity intercepts with role synchrony in a way that made it difficult to tell one from the other. For example, in the case of one elementary school where the teachers freely changed their instructional day, making it difficult for the coach to observe science instruction, during the planned time for a science observation. This was not seen by the coach as a lack of integrity, but instead as the need to align her expectations with actual working conditions of the teachers, which were flexible and responsive to student learning and emergent teachable moments, which easily moved the class off their planned schedule. It is also possible that at the time of this study when collaboration between teachers was an emerging practice integrity might have been a weak area for increasing trust between teachers. There is enough left unknown about this particular finding that it warrants further study. As teacher collaboration has become more normalized in schools, it would be interesting to go back to these schools to see how integrity and ultimately trust operates in their work now and in the future.

Role Synchrony

In theory, role synchrony is the foundation upon which relational trust exists. The concept is similar to role alignment in that it describes the relationship between expectations and witnessed actions:

> *Effective practice requires a synchrony between parties, both in terms of general understandings about each other's expectations and obligations and in terms of the interpretations made about the specific behavior occurring. For a school community to work well, synchrony must characterize all role sets.*
>
> (Bryk & Schneider, 2004, p. 125)

Here we are use the term to refer specifically to the ongoing adjustments made by teachers and coaches in order to align themselves to one another's expectations. Within the supportive (as opposed to directive) model of coaching we were studying, we found the burden of expectation alignment fell primarily to coaches, who seemed to continually shift roles between teachers and with teachers as their work together progressed over time. In some cases, within the same school, the coach might be positioned as a mentor with one teacher, a resource provider with another and a co-teacher with yet another. Early in the study, for example, the elementary coaches worked closely with students in the classroom even though it was not explicitly part of the district model (or their own vision) for science coaching. They did this in part to satisfy the expectations of their teachers—many of whom had prior experience with literacy and math coaches, both of whom frequently worked directly with students. Later, as those coaches provided additional support in data analysis, assessment development and co-teaching, teachers' expectations of the coach shifted away from direct student interventions.

Getting in sync and staying in sync with teachers' expectations seemed to rely on continuous adjustments in expectation alignment. We found that when there was role synchrony, coaching was likely to be initiated or continued. When coaching broke down, it could be attributed to one or more components of relational trust or a lack of role synchrony. For example, if a coach did something that thwarted teachers' expectations of the coach's role, no matter how well it was done the coach's competence could not be discerned:

> *We did have a [problem] about mid-year when I decided that it would be a good idea to collect some baseline data around questioning (passive vs. overt-covert) that was occurring in classrooms. The trouble was that I did not do a very good job in communicating the purpose of collecting the data and how it would be used. (It was to be for teachers only, so that we could measure our growth as we worked on implementing engagement strategies around questioning.) It turned out that it caused a bit of grief...some of the teachers thought that I was collecting the data to be evaluative and were offended.*
>
> (middle school coach, survey 2008)

The above example, from the coach's point of view, she was doing what coaches are supposed to do—provide data to allow teachers to reflect on their practice. From the teachers' perspective, however, the coach seemed engaged in an evaluative activity and was therefore "acting like an administrator" rather than as a teacher colleague or coach. As was true in many of these breakdown situations, repair was enacted through clarification and re-alignment of expectations. In this case the situation was quickly remedied when the coach explored the teachers' thwarted expectations. Reflecting on and inquiring into the dynamics of the coaching meeting is a coaching practice, and in this situation, seemed to repair the break in role expectation as the coach's reflection on and inquiry into the teachers' expectations aligned with coaching practice rather than administrative practice, reestablishing the coach in her expected role. In several other instances, on the other hand, similar breakdowns were not repaired so easily.

Role Shifting: The Teacher-Administrator Continuum

The tendency to put the coach on a teacher-administrator continuum (as suggested in the last section) was not uncommon. We found many instances in which teachers, administrators, coaches and even researchers (at first) would place coaches along a continuum ranging from "teacher like" on one end (i.e., supporting and advocating for teachers, working with students) to

"administrator like" (i.e., prescribing and evaluating practice, etc.) on the other end. It is, after all, consistent with the traditional organizational dynamic of schools, where teachers and principals are the primary roles in the power structure. However, the introduction of coaches may alter this dichotomy by opening up new middle ground. One science coach described her own discovery of the awkward in-between space occupied by coaches:

> *I was learning how to coach as I went. And so I made a lot of mistakes, and I was sort of taking advantage of [friendships, thinking] that, "Well, you're my friend, so I can make these mistakes and it's all going to be okay." And there was a pivotal moment where I kind of realized that being a coach is this sort of weird gray area where I am sort of shoulder-to-shoulder with the science teachers in the department, but I'm also kind of shoulder-to-shoulder with the administration. And it's a weird kind of space. Some personal friendships didn't make it through that space; professional relationships definitely endured. But that was a real turning point for me in seeing myself as a leader and seeing how important it is to truly understand the how and the why of the things I'm asking people to do, and where I need to cross the line to say, "We're not going to do it this way, because this truly is going to be more important for you guys," and then be able to turn around and say to the other people on the other side[i.e. administrators], "We didn't do it that way, and this is why," and … have that confidence in myself to make that call and stand that line. So I sort of realized that there's kind of a teeter-totter of coaching...*
>
> (middle school coach, interview 2010)

For some coaches this "teeter-totter of coaching" along the teacher-administrator continuum was exacerbated by holding the concurrent actual role of teacher or administrator intern. For coaches who also taught, the assignment seemed to reinforce their "teacher-like" (as opposed to "administrator like") role. This common sentiment is expressed in the teacher quote below as he implies that coaches only engage in "real work" when they engage in the work of teachers:

> *Somebody who is coaching a few periods and you know they're teaching…well, you still respect them because they're teaching…they're still in it. … I mean, they may be working their tail off, but in your mind as a teacher, you're not really working unless you're teaching, because you don't have kids.*
>
> (high school teacher interview, 2009)

Individuals assigned to both coach and teach were also learning to use their expertise as classroom teachers to inform work that positioned them differently with their colleagues, for at least part of each day, if not entirely. One coach described this shift from classroom teacher to coach as follows:

> *The shift in roles (from colleague to coach) has been the greatest challenge in building relationships and communicating with teachers. The teachers I coach are the same teachers I have worked next door to for the last 10 years. As a colleague, the conversations I had with teachers did not necessarily have a goal or a particular focus. I was the teacher next door, someone to bounce ideas off of and plan with. As 'the coach', conversation expectations and focus are much different and it has taken me some time to adjust.*
>
> (middle school coach, survey 2008)

This quotation underscores the interplay between role synchrony and relational trust in coaching. The theory of relational trust commonly articulated in the literature asserts that role synchrony is foundational to relational trust in that the four components of personal regard, respect, integrity and competence are rarely discerned if role expectations are not synchronized. However, in

the supportive model of coaching that we studied, coaches were constantly shifting their role to adapt to teacher expectations--not the other way around--even as they worked to revise those expectations based on their own perception (and expectation) for their role as coach. Given that the role of coach and purpose of coaching varied across schools and individuals and changed over time, this meant that coaches were continually discovering, creating and revising their role within each interaction and coaches' roles were continuously flexible and responsive. Even within stable coaching assignments, changes in activity could misalign expectations requiring continuous attention to revising and clarifying expectations.

Coaches as Trust Builders

Within the study data, we found mostly a one-sided model of relational trust between teachers and coaches. That is to say, while teachers needed to discern (and coaches need to display) respect, competence, integrity and personal regard in order for teacher-coach work to happen, the opposite did not seem to be true. Although coaches sometimes seemed to avoid working with certain teachers (perhaps in part due to the teacher's lack of display of respect and personal regard), this was certainly not the norm. Since a viable coach-teacher relationship is essential to a coach being able to do his/her job, it stands to reason that whether or not the coach discerns qualities of trust on the part of the teacher, the coach will engage in relationship-building actions. In this way, coaches function as trust builders within at least a portion of the organization.

Without trust, teachers are unlikely to cooperate or collaborate. In schools where people are pressed for time and interactions are often truncated or aborted due to schedule pressures, it can be a challenge to demonstrate and discern much in an interaction. Additionally the habits and routine practices in schools may not lend themselves to these demonstrations. Teachers pass each other in hall all day long and are unlikely to acknowledge each other simply because of the routine nature of the interaction. On the other hand, we know that where trust is strong among school faculty, there is greater organizational health (Hoy et al., 1991; Hoy & Sabo 1998, cited in Forsythe, Adams and Hoy, 2011), which in turn is conducive for individuals to initiate and sustain long-term improvements (Bryk, Schneider, 2002).

The school principal has traditionally been charged with building professional community and the care of school climate and to date few have explored the contribution of coaches and coaching in this realm. However, given the dynamic nature of teaching and the time needed to engage in meaningful professional interactions (among other factors), coaches seem particularly well positioned for the task. For one thing, because they are *not* administrators (non-supervisory) and because they are (at least in our study) experienced teachers of the same academic discipline, they share social similarity with their teacher colleagues-- an important dimension of role synchrony that undergirds trust. (Kochanek, 2005) For another, trust building is already a large part of their day-to-day work as we have seen.

Coaches seem to foster trustworthy environments as they create the context for risk taking, being vulnerable and as they carry out trustworthy actions. We found evidence of coaches modeling and co-teaching science lessons on the fly or at the request of their teachers. At such times they were showing themselves willing to take the same risks as their colleagues. Content-specific coaches residing within a department are also well situated to leverage the trustworthy environment in ways that are meaningful in terms of learning and teaching in the discipline and that prompt greater academic productivity. Over the first three years of the study, we saw teachers' weekly collaborative sessions become more productive and focused on learning when coaches were regular facilitators as compared to what transpired at un-coached schools or where coaches had limited access. As

coaches move between classrooms, grade levels, schools and school role groups (e.g., administrators and teachers), sharing information, knowledge and experience, they are helping to build shared knowledge, experience and community/culture. Consequently, coaches and their integral work of building trusting relationships may be for cultivating and maintaining the organizational health of a department of school. At the same time coach*ing*, from a systemic perspective, may be a potent mechanism for building and maintain the organizational health (including flexibility and adaptability) of an entire district.

Implications and Future Directions

For this paper, we have drawn on a larger study of science instructional coaching within a single school district and of a particular model (i.e. supportive) and therefore our findings are not necessarily generalizable to other disciplines or contexts. Nevertheless, we believe that much of what we have learned applies to instructional coaching writ large and may have both practical and theoretical contributions for the field.

In our investigation into relational trust and role synchrony with regard to coaching, we have tried not only to specify some of the complexity of coaching interactions, but also to challenge the traditional view of such relationships as being heavily dependent on personal attributes or as something that can/must be established before the "real work" of coaching begins. We believe this information could be useful in the design and implementation of coaching programs and in the training of coaches. To what extent, for example, might the components of relational trust serve as guidelines in designing an effective coaching program?

We have largely focused on individual coach-teacher relationships in illustrating relational trust and role synchrony, but the more intriguing finding is perhaps the coach's role as "trust builder" and the questions it raises regarding the larger organizational role of coaching. We are not the first researchers to consider the potential value of coaching from a systemic perspective, but as far as we know, there is no significant related research agenda to date. Yet there are several that we are interested in. For example, do coaches and coaching build trust (as we have suggested) or do coaching and coaching relation simply thrive in environments where trust is already cultivated? What are the collective effects of ever more trusting interactions taking place in schools over time and what is the measureable contribution of coaching to increased levels of trust? Beyond the role of "trust builder" in what ways might coaches and coaching be contributing to the overall organizational health of a school or a district? At the level of the system, what are the implications of introducing a possible third role into the traditional dichotomy of school structure? The resulting organizational effects warrant further investigation in order to better understand the ultimate potential of coaching as both a function of the system and a tool to promote organizational health.

References

Akhavan, N. (2005). Creating and sustaining a collaborative culture. *Leadership and Policy in Schools, 34*(5), 20-23.

Bean, R. M., Draper, J. A., & Hall, V. (2010). Coaches and coaching in reading first schools: A reality check. *Elementary School Journal, 111*(1), 87-114.

Borman, J., Feger, S., & Kawakami, N. (2006). Instructional Change: Key Themes from the Literature. Providence, RI: The Education Alliance at Brown University

Bryk, A., & Schneider, B. (2002). *Trust in Schools: A core resource for improvement*. New York: Russell Sage Foundation.

Coggins, C.T. (2005). *Coaching as a districtwide reform strategy.* (Ph.D.), Stanford University.

Coggins, C.T., Stoddard, P., & Cutler, E. (2003). *Improving instructional capacity through school-based reform coaches*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Cohen, D.K., & Hill, H.C. (2000). Instructional policy and classroom performance: The mathematics reform in California. *Teachers College Record, 102*, 294-343.

Costa, A.L., & Garmston, R.J. (2002). *Cognitive coaching: A foundation for renaissance schools*. Norwood, MA: Christopher-Gordon Publishers, Inc.

Creswell, J.W., & Clark, V.L.P. (2007). *Designing and conducting mixed methods research*. Thousand Oaks: Sage Publications, Inc.

Deutsch, M. (1960). Critique and Notes "Trust, trustworthiness, and the f scale". *Journal of Abnormal and Social Psychology, 61*(1), 138-140.

Dika, S., & Singh, K. (2002). Applications of Social Capital in Education Literature *Review of Education Research, 72*(1), 31-60.

Dole, J.A., & Donaldson, R. (2006). 'What am I supposed to do all day?': Three big ideas for the reading coach. *The Reading Teacher, 59*(5), 486-488.

Feger, ST., Woleck, K., & Hickman, P. (2004). How to develop a coaching eye. *Journal of Staff Development, 25*(2).

Forsyth, P., Adams, C., & Hoy, W. (2011). *Collective Trust: Why Schools Can't Improve Without It.* New York: Teachers College Press.

Fukuyama, F. (1995). *Trust*: Simon & Schuster.

Galford, Robert, & Drapeau, Anne Seibold. (2002). *The Trusted Leader*. New York: The Free Press.

Gallucci, C. (2008). Using sociocultural theory to link professional learning to organizational support in the context of school district instructional reform. *American Journal of Education, 114*, 541-581.

Gallucci, C., Boatright, E.E., Lysne, D., & Swinnerton, J. (2006). The pedagogy of third-party support for instructional improvement: A partnership between CEL and Highline School District. Seattle: Center for the Study of Teaching and Policy, University of Washington.

Garet, M.S., Birman, B.F., Porter, A.C., Desimone, L., Herman, R., & Yoon, K.S. (1999). Designing effective professional development: Lessons from the Eisenhower Program. Washington, DC: U.S. Department of Education.

Glaser, B.G., & Strauss, A.L. (1999). *The discovery of grounded theory: Strategies for qualitative research*. New Brunswick: Aldine Transaction.

Greene, T. (2004). Literature Review for School-Based Staff Developers and Coaches *NSDC's School-Based Staff Developer Learning Community Coach* (pp. 1-17).

Hartnett-Edwards, K. (2011). Helpgin the Adults Learn. *Educational Leadership, 69*(2), 60-63.

Harwell-Kee, K. (1999). Coaching. *Journal of Staff Development, 20*(3), 28-29.

Honig, H.I. (2008). District Central Office as Learning Organizations: How Sociocultural and Organizational Learning Theories Elaborate District Central Office Administrators' Participation in Teaching and Learning Improvements. *American Journal of Education, 114*(4), 627-664.

Howe, A.C., & Stubbs, H.S. (2003). From Science Teacher to Teacher Leader: Leadership Development as Meaning Making in a Community of Practice. In D. Trumbull (Ed.), *Science Teacher Education* (Vol. 87, pp. 281-297): Wiley Periodicals, Inc.

Hoy, W. (1999). Five faces of trust: an empirical confirmation in urban elementary schools. *Journal of School Leadership, 9*, 184-208.

Hubbard, L., Mehan, H., & Stein, M. K. (2006). Reform as Learning: School Reform, Organizational Culture, and Community Politics in San Diego: New York: Routledge.

Ippolito, J.(2010). Three ways that literacy coaches balance responsive and directive relationships with teachers. *Elementary School Journal, 111*(1), 164-190.

Joyce, B., & Showers, B. (1982). The coaching of teaching. *Educational Leadership, 40*(1), 4-10.

Kertlow, A., & Bartholomew, C. (2010). Using Coaching to Improve the Fidelity of Evidence-Based Practices: A Review of Studies *Teacher Education and Special Education, 33*(4), 279-299.

Kesselheim, C. (1998). *The assistance relationship between content-specialist science facilitators and their constituent teachers.* Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Killion, J., & Harrison, C. (2005). Nine roles of the school-based coach. *Teachers Teaching Teachers*, 1-5.

Kise, J.A.G. (2006). *Differentiated coaching: A framework for helping teachers change.* Thousand Oaks, CA: Corwin Press.

Knapp, M. S., & Feldman, S. (2012). Managing the intersection of internal and external accountability: Challenge for urban school leadership in the United States. *Journal of Educational Administration, 50*(5), 666-694.

Knapp, M. S., Feldman, S., & Yeh, T.L. (2013). Learning-focused Leadership in Urban High Schools: Response to demanding environments. *Journal of School Leadership, 23*(2), 252-285.

Knight, J. (2004). Instructional coaches make progress through partnership: Intensive support can improve teaching. *Journal of Staff Development, 25*(2), 32-37.

Knight, J. (2005). A primer on instructional coaches. *Principal Leadership (Middle Sch Ed), 5*(9), 16-21.

Knight, J. (2006). Instructional coaching. *The School Administrator, 63*(4), 36-41.

Knight, J. (2007). *Instructional coaching: A partnership approach to improving instruction.* Thousand Oaks, CA: Corwin Press.

Kochkanek, J.R. (2005) *Building trust for Better Schools.* thousand Oaks, CA: Corwin Press.

Kowal, J., & Steiner, L. (2007). Instructional coaching *Issue Brief* (pp. 1-8): Learning Point Associates & The Center for Comprehensive School Reform and Improvement.

Mangin, M.M., & Stoelinga, S.R. (2008a). *Effective teacher leadership: Using research to inform and reform.* New York: Teachers College Press.

Marsh, J., Sloan-Mccombs, J., & Martorell, F. (2012). Reading Coach Quality: Findings from Florida Middle Schools *Literacy Research and Instruction, 51*(1), 1-26.

Matsumura, L. C., Garnier, H. E., & Resnick, L. B. (2010). Implementing literacy coaching: The role of school social resources. *Educational Evaluation and Policy Analysis, 32*(2), 249-272.

McLaughlin, M., & Talbert, J. (2006). *Building School Based Teacher Professional Learning Communities.* New York: Teachers College Press.

Merriam, S.B. (1998). *Qualitative research and case study applications in education: Revised and expanded from case study research in education* (2nd ed.). San Francisco: Jossey-Bass.

Neufeld, B., & Roper, D. (2003a). Coaching: A strategy for developing instructional capacity: Promises & practicalities (pp. 46 pp.). Boston: Education Matters, Inc., The Aspen Institute Program on Education & The Annenberg Institute for School Reform.

Neufeld, B., & Roper, D. (2003b). How are coaches prepared? In B. Neufeld & D. Roper (Eds.), *Coaching: A strategy for developing instructional capacity*. New York: Education Matters, Inc., The Annenberg Institute for School Reform and The Annenberg Institute Program on Education.

Neufeld, B., & Roper, D. (2003c). Year II of collaborative coaching and learning in the effective practice schools: Expanding the work. Cambridge, MA: Education Matters, Inc.

Neumerski, C. (2013). Rethinking Instructional Leadership, a Review: What Do We Know About Principal Teacher and Coach Instructional Leadership and Where Should We Go From Here? *Educational Administration Quarterly, 49*(2), 310-347.

Poglinco, S.M., Bach, A.J., Hovde, K., Rosenblum, S., Saunders, M., & Supovitz, J.A. (2003). The heart of the matter: The coaching model in America's Choice schools (pp. 55 pp.). Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania, Graduate School of Education.

Richard, A. (2003). The Emergence Of School-Based Staff Developers In America's Public Schools. New York: The Edna McConnell Clark Foundation.

Ross, J.A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education, 17*(1), 51-65.

Schweiker-Marra, K.E. (1995). *Examining the relationship between school culture and teacher change*. Paper presented at the Annual Meeting of the Eastern Educational Research Association, Hilton Head, SC.

Sherrill, J. A. (1999). Preparing teachers for leadership roles in the 21st century. *Theory Into Practice, 38*(1), 56-61.

Showers, B. (1985). Teachers coaching teachers. *Educational Leadership, 42*, 43-48.

Smylie, M. A., & Denny, J. W. (1990). Teacher leadership: Tensions and ambiguities in organizational perspective. *Educational Administration Quarterly, 26*(3), 235-259.

Stein, M. K., & Coburn, C. (2007). Architectures for Learning: A comparative Analysis of Two Urban School districts. In M. Knapp (Ed.): Center for Teaching and Policy.

Steiner, L., & Kowal, J. (2007). Principals as instructional leaders: Designing a coaching program that fits *Issue Brief*: The Center for Comprehensive School Reform and Improvement.

Swinnerton, J. (2007). Brokers and boundary crossers in an urban school district: Understanding central office coaches as instructional leaders. *Journal of School Leadership, 17*(2), 195-221.

Sztompka, P. (1999). *Trust: A sociological theory*. Cambridge: Cambridge University Press.

Taylor, J.E. (2008). Instructional Coaching: The State of the Art. In M. M. Mangin & S. R. Stoelinga (Eds.), *Effective Teacher Leadership: Using research to inform and reform* (pp. 18-71). New York: Teachers College Press.

Tschannen-Moran, Megan. (2004). *Trust Matters*. San Francisco: Jossey-Bass Publishers.

West, L., & Staub, F. (2003). *Content focused coaching: Transforming mathematics lessons*. Portsmouth, NH: Heinemann.

Wicker, R.K. (2006). *Do science coaches promote inquiry-based instruction in the elementary science classroom?*

About the Authors

Ruth Anderson
FACET Innovations
randerson@facetinnovations.com
Ruth Anderson, Ph.D., is an Education Researcher at FACET Innovations in Seattle, Washington. Her professional experience includes fifteen years of classroom teaching (K-16), curriculum development, and program evaluation across academic disciplines. As a program evaluator on several large-scale STEM education projects, she has had ongoing interactions with educators and students at all levels and the opportunity to study a variety of learning environments, educational reform efforts and models of professional development. With a strong background in the humanities (languages, literature and linguistics) and more than a dozen years working in science education, she brings a unique perspective to her work on STEM projects. Her ongoing research interests range from classroom discourse, and diagnostic learning environments to collaborative learning and educational partnerships.

Sue Feldman
Lewis and Clark College
feldmans@lclark.edu
Dr. Sue Feldman, is Assistant Professor in the Graduate School of Lewis and Clark College, Portland Or. Sue combines her background in cognitive psychology and education leadership and policy to form an interdisciplinary research agenda exploring the intersection of learning-focused leadership, equity policy and organization. Sue has worked as an education researcher with the Center for the Study of Teaching and Policy at the University of Washington, and as a research scientist with FACET Innovations, a learning sciences research group, in Seattle Washington, focused on how people learn science. In addition to ten years of experience working in teacher education, Sue brings a wealth of school and district leadership experience to her research including ten years working in school improvement administration at the school, district, and regional levels. All of her work stems from a deep interest in learning and an abiding commitment to the promise of public education to equalize recognition and participation in generating democracy. In addition to working on the function of coaching in education, Sue is currently studying how school leaders enact locally-situated equity policy.

Jim Minstrell
FACET Innovations
jimminstrell@facetinnovations.com
Jim Minstrell, Ph.D., is a Senior Research Scientist and co-founder of FACET Innovations, a Seattle-based research and development company focused on bridging research and classroom practice in STEM education. Jim spent 30 years teaching high school mathematics, physics and integrated science & mathematics and also maintained a "parallel career" conducting classroom research. An award winning science teacher, Jim is well known in the science education community for his research of learners' conceptual understandings of physics and the development of "Facets of student thinking" –a framework for interpreting, assessing and building on learner thinking. In addition to conducting research, Jim works regularly with teachers, and teacher educators across the country.

About the Guest Editor

Sarah Woulfin
University of Connecticut
Sarah.Woulfin@UConn.edu

Sarah Woulfin is an assistant professor of Educational Leadership at the University of Connecticut, Storrs. She studies the relationship between education policy, leadership, and instructional reform. Using lenses from organizational sociology, she investigates how leaders influence teachers' responses to reform efforts. In her doctoral work at the University of California, Berkeley, she focused on institutional theory, policy implementation, and coaching. She has published in the American Educational Research Journal (AERJ) and Reading Research Quarterly. Currently, she is an associate editor for Educational Administration Quarterly (EAQ). She is also on the executive steering committee of the Districts in Research and Reform SIG at AERA. From 2009-2012, Dr. Woulfin served as the program chair for AERA's Organizational Theory Special Interest Group. As a former urban public school teacher and reading coach, she was dedicated to strengthening students' reading and writing skills to promote educational equity. As a scholar, her commitment to raising the quality of instruction motivates her research on how policy influences—and is influenced by—administrators and teachers.

SPECIAL ISSUE
Politics, Policies, and Practices of Coaching and Mentoring Programs

education policy analysis archives

Volume 22 Number 54 June 23rd 2014 ISSN 1068-2341

archivos analíticos de políticas educativas
consejo editorial