



Low-inference transcripts in peer coaching: a promising tool for school improvement

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Abstract

Purpose – The purpose of this paper is to examine highly detailed “low-inference” transcripts (LITs) of peer coaching conversations, drawn from two public US high schools located in New York City, to explore the kinds of interactions that led peers to be more reflective about their instructional practice.

Design/methodology/approach – Using the constant-comparative method of analysis, highly detailed LITs of peer coaching conversations were analyzed to identify instances where peers had what the researchers identified as an “Aha!” moment, where the peer’s prior belief or opinion about their instruction and/or planning shifted. Subsequent re-coding identified specific strategies that caused the shift.

Findings – Three kinds of interactions were identified as leading to an “Aha!,” all of which involved a thoughtful and strategic use of the LITs during the coaching conversation. Conversely, findings suggested that passive use of the transcripts was less successful.

Research limitations/implications – Future research should explore the nature and staying power of the shifts in peer thinking, and the extent to which these shifts lead to instructional changes and improved student performance.

Practical implications – LITs are a promising tool for instructional coaching. The evidence suggests when in the hands of a skilled coach the transcripts can shift teachers’ thinking in ways that are likely to improve instructional practice and thus student outcomes.

Originality/value – This study highlights the value of pairing strategic and thoughtful peer coaching with highly detailed LITs, and identifies specific kinds of interactions that lead to shifts in thinking about instruction.

Keywords Continuous improvement, Teacher leadership, Evidence-based practice, Peer coaching, Inquiry, Low-inference transcript, School improvement, School reform

Paper type Research paper

The Scaffolded Apprenticeship Model (SAM) is a team-based school improvement and leadership development program in which participants earn graduate-level credits and school leadership certification[1]. One key component of the SAM program is peer coaching, where SAM participants, or “coaches,” partner with colleagues, or “peers,” in

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their schools to examine the peers' instructional practice. In SAM, the term "peer coaching" is used to emphasize that the interaction will take place between colleagues for the purposes of learning and improvement. Since the coaching task is in fact an assignment within the context of a leadership development program, the name "peer coaching" reinforces that there is no connection between this activity and traditional instructional supervision models. Given the goals of the SAM peer coaching component, there is no prescribed formula for the pairings. The coaches and peers in the SAM model are colleagues, first and foremost, and represent varied combinations of a variety of experiences (i.e. novice, mid-career and/or veteran).

SAM coaches make use of what program designers came to call "low-inference transcripts," or LITs, as evidence of instructional practice. The term "low-inference" is derived from organizational psychologist Chris Argyris' "ladder of inference" (as cited in Senge, 2006), a tool used to surface how assumptions influence decision making. The LITs are highly detailed transcripts of classroom practice and/or coaching conversations, similar to a stenographic report (see Appendix). The coach creates the LITs by hand, capturing as much as possible in note form and then types the transcription to share with the peer. They are as close to factual as possible, devoid of assumptions or personal commentary. The SAM coaches and their peers engage in cycles of instructional coaching conversations coupled with observations of the peer's teaching over the course of the year (see Panero and Talbert, 2013 for an overview of the SAM program and LITs). Throughout this time, the SAM coach creates LITs to capture what is said during a peer's class, as well as during pre- and post-observation coaching conversations. SAM coaches analyze the LITs to evaluate their peer's instructional planning and practice. In addition, SAM program facilitators and the coaches use the LITs to evaluate and improve the participants' coaching practices.

LITs are a key tool in the coaching process, where the goal is to improve instructional planning so that it is aligned with evidence of student need. Ideally, peer coaching requires both the coach and the peer to learn together; to use evidence from observations and student performance to improve instructional planning; and to enact shared leadership in the service of improved student outcomes through instructional improvement. LITs are a potentially powerful tool because, in conjunction with student work, they document the peer's instructional practice and can provide evidence of its impact. This may lead to new thinking that prompts improvement in the peer's planning and instruction.

Although prior evaluations of the SAM program have suggested that LITs were critical tools in shifting coaches' focus from teaching to learning (Rivera-McCutchen *et al.*, 2010; Talbert, 2009; Talbert *et al.*, 2009), closer evaluation of the LITs of the debrief conversations between the SAM coaches and their peers did not always demonstrate that the peer (or even the coach) saw how they might improve their planning and instruction (Rivera-McCutchen *et al.*, 2010). In some cases, the peers seemed defensive or the coach seemed ill prepared to engage their colleague in a reflective conversation. The present study, therefore, examines what kinds of interactions caused the peers to be more reflective about their teaching practice. It draws from LITs generated during the last of a series of post-observation conferences between coaches and their peers as the source of data.

Peer coaching and LITs in the literature

Given the challenges of making broad school reform efforts "stick" (Tyack and Cuban, 1995; Elmore, 1996; Hess, 1999), exploring the possibilities and promise of instructional

coaching as a lever for school improvement is especially promising. Knight (2011) defines instructional coaching as a partnership in which the coach works in collaboration with the teacher to promote effective teaching through reflection. Because of the potential of peer instructional coaching to shift school cultures to be more reflective, the present study explores the peer instructional coaching component of a larger leadership development program, the “Scaffolded Apprenticeship Model of school improvement through leadership development” (SAM). The research focusses specifically on what interactions between SAM coaches and their peers cause the peers to be more reflective about their teaching practice. This study contributes to broader efforts to shift school culture to evidence-based practice, shared accountability and distributed leadership: practices widely understood among researchers and reformers to be necessary for continuous improvement (Leithwood and Riehl, 2005; Spillane, 2005).

There are many reasons why developing teachers’ capacities to help each other improve through coaching is a worthwhile investment. While some would argue that instructional coaching should be the primary role of school principals, they are often consumed with accountability mandates and school management, constraining the availability of time to take on the role of the instructional coach (Danielson, 2007). In addition, since serving as an instructional coach is a role that is predicated on a foundation of trust, it is difficult for principals to fulfill the role when they are also asked to evaluate and rate their teachers (Hobson and Malderez, 2013; Hoy and Miskel, 2013). In some ways, the current climate of increased accountability and high-stakes teacher evaluation has made the role of instructional coach even more at odds with the role of principal than ever before. Rather than placing value on teacher learning and improvement over time, policy mandates encourage teacher ratings based on infrequent classroom observations and student test data (Normore and Brooks, 2012).

Shrinking budgets in most schools and districts are also an important factor when considering the value of instructional coaching. Since many schools, particularly those serving historically underserved populations, have increasingly limited resources with which to hire formal coaches, schools must develop this capacity from within their ranks. These financial constraints, in concert with the current zeitgeist of increased rigor and accountability, have created a paradoxical condition such that principals are expected to develop and cultivate teachers to meet an ever higher bar while enforcing increasingly rigorous and punitive evaluation systems (Hoy and Miskel, 2013). Peer instructional coaching may alleviate this tension by creating crucial support structures for teachers within the school without making the principal solely responsible for fulfilling this role, though it should be noted that potentially similar limitations may also arise in peer coaching (Hobson and Malderez, 2013). Furthermore, since external coaching consultants cost money that schools often do not have, school principals can cultivate a school culture where peers coach one another without taxing already stretched funds.

Instructional peer coaching may also fill a void in many schools and districts that lack comprehensive professional development aimed at supporting improved instructional planning. In these settings, professional development activities are inconsistent and are limited in their ability to support sustained improvement. Many also lack systematic teacher induction programs that aid novice teachers in improving planning. New teachers are often left struggling to figure out how to teach while navigating a system with which they are unfamiliar. Peer coaching can potentially fill this void by supporting novice and struggling teachers while simultaneously providing growth opportunities for effective teachers (Danielson, 2007). More experienced teachers

with a proven track record of effectiveness can be groomed to become teacher leaders through coaching novice or struggling teachers; this provides experienced teachers with leadership opportunities within their school without the additional administrative responsibilities that come with being a formal school leader (e.g. a principal or assistant principal). An additional benefit of peer instructional coaching is that it can cultivate an open school environment by making teaching practices public in a non-threatening manner (Knight, 2011). Peer coaching encourages the development of professional relationships where struggling, growing and developing are discussed openly in an effort improve teaching practice as a collective. In fact, there is increasing recognition that collaborative rather than individually based leadership, is the hallmark of high-performing schools, and that strong leadership is that which invests in structured teacher collaboration as the primary strategy for instructional improvement (Dufour and Marzano, 2009).

Mentoring in the field of education typically refers to the process of development of new or inexperienced teachers by experienced colleagues, in terms of both the novice's teaching as well as their acculturation to the school site and the profession (Gosh, 2012; Hobson and Malderez, 2013). While mentoring has been found to benefit the mentees and the mentors themselves (Hobson *et al.*, 2009), the primary purpose of mentoring programs, where used with beginning teachers, is typically aimed at improving retention and pedagogy. The primary purpose of peer coaching in the SAM program, however, is to shift school culture toward shared accountability, evidence-use and distributed leadership so that schools will be able to continuously improve. Peer coaching in the SAM program, therefore, makes use of whoever the SAM participants happen to be, and aside from the program admission criteria, veteran status is not a prerequisite to become a coach. In recent research, Hobson *et al.* (2009) identify collaborative culture as a condition in which mentoring is more likely to be successful. SAM's model of peer coaching must be understood within the context of a larger school improvement and leadership development program that aims to bring about that very culture.

The model of peer coaching studied here is aligned with other coaching models that promote questioning strategies aimed at eliciting new thinking and the active construction of knowledge on the part of the coached teacher (Bearwald, 2011; Costa and Garmston, 2002; Knight, 2011). Strategies such as paraphrasing and probing, as described by Costa and Garmston in their "cognitive coaching" approach, for example, are heavily drawn upon in the model presented here. The model is aligned also with Knight's (2011) emphasis on asking questions that do not have a pre-determined answer, with Bearwald's (2011) emphasis on coaching questions that elicit higher-order thinking on the part of a colleague peer, and with Tschannen-Moran and Tschannen-Moran (2011) view that "tak[ing] off the expert hat" and letting a peer guide his or her own learning promotes independence (p. 15). In all of these approaches, authenticity, collaborative relationships and the active generation of new thinking and knowledge as a result are key.

However, the model of peer coaching presented here departs from other models in that it takes more of a stand in pushing the conversation in particular directions based on a belief about what fundamental elements of lesson design must be in place in order to push instructional improvement. Namely, the SAM model of peer coaching takes as a starting point that the conversation should involve a clear understanding by the peer and coach of what exactly the instructional objective is, and how both will know whether it has been met. In the SAM model, these are the basic requirements for

ensuring that the collaborative conversation is evidence-based. As in cognitive coaching, the goal is new thinking and learning. In the SAM model, however, the structure of the coaching conversation (i.e. guided by clarifying instructional objectives, identifying evidence that the objectives been met, etc.) is more defined.

Another difference is that the SAM model of coaching makes use of LITs as a key tool. These tools have origins in Hunter and Russell (1989) and Saphier (1993), who advocated the use of transcription as a key record of an observed lesson to study and to use as a non-hierarchical instructional and school improvement tool. Transcripts minimize assumptions and judgments, and therefore allow the peer to reflect on their instruction and form their own opinions. As Earl and Timperley (2009) maintain, "Conversations that are grounded in evidence and focused on learning from that evidence have considerable potential to influence what happens in schools and ultimately enhance the quality and the efficiency of student learning" (p. 2). Earl and Timperley underscore the necessity of teachers discussing the micro-details of practice as a strategy for culture change and school improvement. Transcripts of classroom instruction are a useful form of evidence of practice that facilitates close examination of teaching and learning. Moreover, since SAM coaches are also required to transcribe the coaching conversations, in addition to the lesson, coaches and their peers can closely study the gaps between the stated instructional goals and the lesson as it was actually taught. Although transcribing is time consuming, particularly at first, with practice, SAM coaches learn to transcribe quickly and accurately.

While LITs in the SAM model draw upon the practice of script-taking (Hunter and Russell, 1989) and literal notes (Saphier, 1993), they are used slightly differently. Unlike script-taking and literal notes, SAM coaches transcribe from the position of colleague and peer, rather than supervisor, and they script the entire class period, rather than selected segments. This is to allow more potential interpretations in the subsequent conversation. Another distinction is that SAM coaches script planning and post-observation conversations as well. In scripting these conversations, coaches work with the peer over time to determine if planned objectives were met during the lesson, while also using the LIT to reflect on their coaching practice.

The SAM

The SAM program, piloted in 2004 and refined over six iterations at Baruch College, works primarily with teams of public high school teachers and counselors in New York City. It is an innovative team-based school improvement program the primary goal of which is to seed the practices and habits of mind necessary for continuous school improvement in leadership teams. SAM teams are tasked with fostering the principles of shared accountability, evidence-based practice and distributed leadership across their schools.

The core of the program involves inquiry-based improvement by teams focussing on three key areas: identifying and improving outcomes for a specific group of struggling students; analyzing and improving instructional systems that allowed this underperformance; and leading colleagues to engage in similar work and improvement[2]. Participants work as a cohort guided by one facilitator over four university semesters (for an in-depth discussion of the SAM program and its impact, see Panero and Talbert, 2013; Rivera-McCutchen *et al.*, 2010).

In the ongoing peer coaching task, the focus of the present study, SAM program participants ask a colleague in their school to volunteer to be observed several times and to participate in "coaching" conversations about their instructional planning.

The peers have a range of teaching experience (i.e. novice, mid-career or veteran), and may or may not share the same discipline as the SAM participant. In some cases, a peer may also be a fellow SAM participant.

During the coaching conversations, the SAM participants, or “coaches,” and the peer collaborate to improve the peer’s instructional planning. SAM coaches typically hold a planning conversation on the day of the scheduled observation. The planning conversations can take from 15 to 45 minutes, during which time the coach elicits the instructional plan and objectives from the peer. The coaches observe the lesson discussed. Then they conduct a debrief conversation within a few days after the observation.

The SAM coaches document the entire coaching process – observation, planning and debrief – through the use of LITs. The LITs of classroom observations are intended to allow the SAM coach and the peer teacher to work collaboratively to identify areas in planning that need improvement. LITs of the planning and debrief conversations allow the program instructor and the coach to do the same.

Methods

Participants

The participants in the present study were working in two NYC public high schools at the time they were in the SAM program. The program participants were split into one cohort per school, with each having a different SAM program facilitator. The sample for the present study was comprised of 14 females and 11 males, who were working as high school teachers, social workers or counselors in two NYC public schools. Those of the SAM coaches who were teachers represented a range of disciplines and subjects, including English/language arts, math, science, social studies, technology and college now (a college preparatory course).

The SAM coaches included in this study were drawn from the two SAM cohorts, and were selected using convenience sampling. All of the coaches’ LITs generated between fall 2010 and spring 2011 were available to the researchers. Of the 28 LITs written by SAM coaches during their fourth semester, only 25 included LITs of the post-observation coaching conversations. These 25 were analyzed and are presented in this study.

Data analysis

Grounded theory is a method of qualitative research that allows for the construction of new theory from the data, rather than applying preexisting theory (Glaser, 2011). Early program evaluations indicated that SAM coaches believed the peer coaching process was useful in improving instructional practice. Yet, SAM program facilitators were unsuccessful at identifying why some coaches were successful in the coaching assignment while others were not. An exploratory grounded theory approach to examining the LITs was an obvious methodological choice for the present study to generate a tentative theory about what led to some coaching interactions to be successful while others were not.

The last of over ten debrief LITs written by 25 SAM coaches were initially analyzed to identify instances where peers had what the researchers identified as an “Aha!” moment. The “Aha!” was operationally defined as a statement made by the peer, as documented in the LIT of the coaching conversation, suggesting that the peer’s prior belief or opinion about their instruction and/or planning had shifted. For example, after reading over a LIT of a planning conversation and the observation of her lesson, one peer recognized that she manages her time poorly, saying, “So I think that I definitely

over plan, and I spend a lot more time reviewing what makes a good experiment.” In this example, the peer has had an “Aha!” about how her planning and execution are interfering with achieving the learning objectives.

After the initial coding and identifications of these instances, the LITs were re-coded and, in some cases, previous identification of “Aha!” moments were eliminated because they did not fit the refined understanding of what constituted an “Aha!” that evolved out of the initial coding. That is, “Aha!” moments had to demonstrate shifts in the peer’s prior belief or opinion, rather than passive agreement with the coach. After the second coding, those remaining LITs coded as including “Aha!” moments were re-coded a third time to identify what may have caused the shift. The third round of coding yielded identification of three coaching strategies that seemed to lead to the “Aha!” including: first, the peer’s review of the classroom observation LIT alone; second, the coach’s active use of the LIT with a focussed question; and third, the coach’s use of the LIT with persistent focussed questioning.

Because the coding process was iterative, each reading of the LITs yielded a more refined coding structure, including trends in LITs where there were no “Aha!” moments. These LITs were coded separately and yielded additional codes that described the absence of the “Aha!” These fell into the following two categories: first, the coach’s rapid use of seemingly pre-scripted questions; and second, the coach’s superficial use of the LIT during the debrief conversation. Once the data within each code were confirmed, the codes were arranged to form an exploratory theoretical framework that explained what interactions did and did not lead to “Aha!” moments (Foss and Waters, 2007).

Findings

Analysis of the LITs revealed the three kinds of interaction between coaches and peers that seemed to lead to “Aha!” moments. These include: first, the peer’s review of the classroom observation LIT alone; second, the coach’s active use of the LIT with a focussed question; and third, the coach’s use of the LIT with persistent focussed questioning. In those transcripts that did not yield an “Aha!” moment, two codes emerged: first, the coach’s rapid use of seemingly pre-scripted questions; and second, the coach’s superficial use of the LIT during the debrief conversation. Each type of interaction is described with examples below.

Successful coaching interactions: eliciting an “Aha!” moment

Analysis of the LITs revealed that one kind of interaction between the coach and the peer that led to an “Aha!” was the peer’s review of the observation LIT alone. In this basic interaction, the coach provides the peer with the observation LIT prior to or at the start of their debriefing conversation, and allows time for the peer to read and reflect on the content. The following excerpt from a debrief conversation illustrates the kind of shift in thinking that can take place simply by being given the LIT prior to the conversation and asked to read it:

Coach: So, as I had mentioned to you earlier, our discussion will be mainly focused on the class goal.

Peer: Well, after reading the transcript, it’s pretty clear that in this lesson the SWBAT [Students Will Be Able To] wasn’t really “swabatted.”

This coach begins the coaching conversation with a simple statement focussing the peer on the instructional goal, but the LIT is the driving force behind the teacher’s

realization that the instructional objective was not met. When asked to clarify the statement above, the teacher explains: “Well, my goal was for them to get to look at their own art and get the writing down to get them ready for their presentations. But that wasn’t what was happening in the room.” By reviewing the LIT, the teacher could see that what she had intended had not actually occurred. The coach strategically shared the LIT with the peer at the start of the debrief conversation, thereby creating an opportunity for the teacher to independently review evidence of her classroom practice. More importantly, the coach was able to stay out of the way as the peer used the LIT appropriately for self-discovery; as noted below, this is not always the case with the coach.

This finding is consistent with earlier research suggesting that simply placing a script of lessons in a teacher’s hands has a positive impact resulting in student improvement (Willerman *et al.*, 1991). However, in the SAM model, having a coach to discuss the LIT with the peer deepens the impact of the script. When the coach and the peer have developed a trusting relationship around discussing instructional practice over an extended period of time, the peer can process the information with the coach and, together, the coach and peer can reflect on ways to improve instructional planning going forward. The long-term coaching relationship enables the coach and peer to refer to prior conversations and instruction to promote continued development (Bearwald, 2011).

Another effective strategy that led teachers to have “Aha!” moments was the coach’s use of the LIT with a focussed question. This strategy differs from the first one in that the coach has reviewed the LIT beforehand and identified an important area of focus. The coach then uses the LIT in conjunction with the question and, together, the coach and the teacher can respond to the question based on evidence from the LIT, prompting new evidence-based thinking. For example, in one interaction between a different coach and peer team, the coach began the debrief conversation with a general question about how the teacher felt the lesson went. The teacher replied, “Pretty well. They actually seemed to like DNA and I think most of them understood.” At this point in the conversation, the coach shared the LIT with the teacher. After giving the teacher time to review the LIT, the following exchange occurred:

Coach: So how do you think your objective went? Do you think it was too long, too short, too tough, too easy?

Peer: Um I think it was ok [...] they seemed to get it.

Coach: Well let’s look at the LIT [of the classroom observation]. [...] You had two objectives. You finished one and moved on, but how many students had finished?

Peer: 7 raised their hands. [...] Wow I think it seemed like more when I asked the question.

In this example, the coach seeks to encourage new thinking regarding the teacher’s perception of the students’ mastery of one of the instructional objectives. Rather than accepting the teacher’s original assertion that the students “seemed to get it,” the coach used the LIT to push the teacher to identify evidence to support the notion that students mastered the content. In fact, the LIT reveals that the teacher’s perception that most students understood the content was flawed. In this example, the coach’s use of the LIT plays a critical role in allowing the teacher to “see” where his perceptions were not substantiated by evidence. Without the LIT, the coach would have to describe details of the lesson recreated from memory or from notes, and the peer might perceive

the coach's retelling as subjective and flawed. This example highlights how critical a tool the LIT is in serving as an objective source of data for the both the peer and the coach. Just as important as the LIT is a coach who is appropriately trained in previewing the LIT to select and maintain a strategic focus for the debrief.

The example further illustrates the distinction between the SAM model and cognitive coaching. Whereas Costa and Garmston (2002) recommend letting the peer take the lead in determining the direction of the coaching conversation, this and similar examples in the data underscore the value of the coach identifying an area of focus prior to the conversation. Although the peer may have come to the "Aha!" moment naturally in due time, this approach makes the "Aha!" come pretty quickly.

A final strategy that was effective in prompting an "Aha!" was the coach's use of the LIT and, at times, other evidence, with persistent focussed questioning. Similar to the previously discussed strategy, in this approach, the coach not only identifies a focus area but also uses a persistent line of questioning that does not allow the teacher to avoid or evade the focus. In one example, a coach is working with the teacher to determine whether insufficient time or skill gaps are causing students not to complete the examples. The teacher's first assumption is that she might need to cut back on the number of problems she assigns to students in the interest of time. Rather than allow the teacher to make future instructional decisions based on that assumption, the coach pushes the teacher to examine the evidence first in the LIT and then in student work to check this assumption:

Coach: So what are these work samples telling us?

Peer: Well I think that 6th period just ran out of time.

Coach: Do we really know that for certain or are there maybe some skills that they are missing?

Peer: Well I know that on the diagnostic that I gave factoring and exponents seemed to be really difficult for them.

Coach: Do you think from the diagnostic that you can determine exactly what parts of those particular topics are hard for the students?

Peer: Not really because I only had [state exam] questions on the diagnostic. But I can maybe give a quiz that breaks down the skills a bit more – like simpler questions that deal with exponents and factoring – to figure out where they are.

Coach: I think that sounds perfect – maybe you can bring that to our next inquiry meeting?

The coach's persistent line of questioning and use of the LIT prompts an "Aha!" about the need to develop a more finely tuned diagnostic assessment that will help the peer design instruction so that it is in better alignment with student needs. The coach pushes the teacher to move from acting on an assumption to working from evidence. This intervention slows down the thinking process and results in different decisions about next steps. If the coach in this example were to employ a cognitive coaching approach, the coach may have focussed on the area identified by the peer: time management (Costa and Garmston, 2002; Knight, 2011). However, this example highlights that by having a focus, the coach can guide the peer to identify a more probable area of concern, which in this case was skill gaps. In this and similar examples, getting to an "Aha!" was aided by the use of the LIT, which provided

objective evidence of instruction as implemented, and allowed the peer and coach to examine the micro-details of instruction (Earl and Timperley, 2009).

Unsuccessful coaching interactions: missing the “Aha!”

The examples above reveal strategies coaches used to push and/or encourage peer teachers to have an “Aha!” moment that suggested the peer had changed his or her thinking in ways that might directly influence and shift instructional practice. However, reviews of the coaching transcripts also uncovered how some coaching strategies missed the mark. In instances where coaches did not help a teacher have new thinking, the debrief often seemed rushed and the coach’s questions scripted, as the following example illustrates:

Coach: How do you think the lesson went?

Peer: I think it went pretty well, I was able to get through most of the PowerPoint.

Coach: Okay, did the students meet the objectives?

Peer: Well, they did well on the worksheet on identification of congruent triangles.

Coach: Good. I was also able to see that they were raising their hands a lot during the class.

Peer: Yes, and those who didn’t raise their hands did well on the worksheet.

Coach: And you observed this while walking around and doing checks for understanding?

Peer: Yes.

Coach: Excellent. Now, so the evidence can indicate that the objective, “Students will be able to identify congruent triangles”, was met?

Peer: Yes.

Coach: Great, now how did the students do on the objective of applying this knowledge by justifying congruence?

Peer: That I am not so sure on.

Coach: What did the evidence indicate?

Peer: Well, several did not complete the assignment which could mean that either they didn’t understand or were distracted during classwork.

Coach: Yes, I noted that in the LIT that some students had to have their seats moved and another who all she wanted to do was sleep. Those students have the same issues in my class as well. So what should we do for the students who did not meet the objective?

Peer: I would probably re-teach the proofs and give more class exercises to see if they understood.

Coach: Great, thanks for your time.

In this example, the coach moves rapidly through a series of questions without probing in any particular area. While it might be argued that the early portion of the

conversation suggests that students met the desired learning objective, the latter part indicates that some did not. Rather than push the peer to reflect on the structure and quality of the lesson design, the coach asked the teacher to consider how to bring the students up to speed. Although this remedy might result in the short-term goal of students' meeting the learning objective, the coach fails to lead the peer to think in new ways about how to improve instruction – a higher leverage, long-term goal. In this example, the coach and peer do not appear to examine the LIT, and it is not clear if the coach used the LIT to meaningfully prepare for the debrief conversation. As a result, the questions fall flat and do not seem to promote growth on the part of the peer. The value of a strong peer coaching relationship is that the coach should engage the peer in questions that lead to higher-order thinking and subsequent improvement (Bearwald, 2011). In the preceding example, however, the rapid pacing and pre-scripted nature of the questions leave little room for growth.

In other examples, coaches used the LIT, but failed to use it strategically to elicit an “Aha!” As in the prior examples, coaches in these instances moved through seemingly pre-determined questions and used the LITs in a manner that did not necessarily add value to the conversation. In one example, the coach first begins by sharing the LIT and providing some time for the peer to read it over. Then the following exchange takes place:

Coach: Based on the LIT, do you believe that the students met that objective in the lesson?

Peer: The majority of them met the objective. I asked a number of them to summarize their stuff at the end, these three questions – “distilling out recommendation into one sentence,” “linking the recommendation to the hypothesized impact of the Q of L in a persuasive way,” and “how can I justify and persuade others to adopt my ideas?” I called on students and the majority were able to tell me what the answers are.

Coach: Can you show me some examples from the LIT where students answered the questions correctly?

Peer: I will try. (*Peer looks through the LIT again*). Aaron, he answers in part of this LIT. Taquon, I asked him to read [...] and then I asked Yuet, and she answered [...] these three do not understand, Mostafa, Abraham, and Malik. Mostafa said that he wasn't ready. Let's see anything else [...] that is pretty much it on the conclusion.

This coach integrates use of the LIT in the debrief conversation, however, she misses a teachable moment in allowing the conversation to move on when the peer says that “the majority of [students]” met the objective, rather than slowing down and focussing discussion on those who did not. Instead, the coach validates the peer's focus by asking him to use the LIT to highlight the students who answered correctly. She misses yet another opportunity to focus on students who did not meet the objective when the peer highlights three students who did not understand. Rather than capitalize on this information that was captured in the LIT and that the peer identified, the coach continues with her pre-determined line of questioning. The role of the coach in this example is essentially to be a “sounding board”; however, research indicates that the role of the coach should be to more actively encourage reflection and growth (Tschannen-Moran and Tschannen-Moran, 2011). More than just listening to a peer defend his/her practice, a skilled coach asks probing, thoughtful questions that cause both the peer and the coach to reflect and grow (Bearwald, 2011; Costa and Garmston, 2002; Knight, 2005, 2011; Tschannen-Moran and Tschannen-Moran, 2011).

Conclusions and implications

The evidence from the present study suggests that when in the hands of a skilled coach, LITs can play a key role in shifting teachers' thinking in ways that are likely to improve instructional practice. These findings further suggest that while simply providing an LIT to a coached teacher can make some difference, achieving a greater impact requires a coach to thoughtfully prepare for the debrief conversation. In order to achieve success, a coach must develop and implement a range of skills in making use of the LIT to develop new thinking (Bearwald, 2011; Knight, 2011). Use of the LIT alone does not guarantee new thinking or maximize the learning that it can provide. It is the meaningful interaction between a coach and a peer that develops over time (Bearwald, 2011; Knight, 2005) that can lead to a deeper "Aha!" That is, the coach has to spend time looking at the LIT, be thoughtful about the planning and debrief conversations, and make decisions about where he/she wants to lead the peer.

This study corroborates findings from earlier research (Cornett and Knight, 2008; Costa and Garmston, 2002; Knight, 2011) that effective coaching leads to improved instructional planning, and highlights the complexity of identifying what exactly effective coaching strategies entail and how these strategies are developed in coaches. It builds on prior research (Rivera-McCutchen *et al.*, 2010; Talbert *et al.*, 2009) that highlights LITs as a transformative tool, shedding new light on their critical role in prompting a shift in focus from teaching to learning and encouraging evidence-based practice.

LITs are a powerful coaching tool and a potentially powerful school improvement tool, since the shifts in school culture necessary for continuous improvement rely, essentially, on changes in thinking that lead to changed practice and improved outcomes. This study also sheds light on a possible framework for teacher leadership practice that can yield improvement in schools. It indicates that being collaborative and acting as a "peer" in the context of instructional improvement, and having a point of view along with a rigorous process for determining effectiveness, are not mutually exclusive. The kind of peer collaboration that works to shift thinking, rather than to reinforce existing assumptions, will require a tight focus, pushing in areas that are often difficult to discuss. That is, the collaborative analysis of evidence of both instruction and student work, and the willingness to be a public learner are often counter-cultural in schools.

Findings from the research may also contribute to the field of school leadership preparation. While this research focussed solely on peer coaching relationships, SAM coaches were progressing toward their leadership credential and the entire peer coaching collaboration took place within a larger context, in which coaches were implementing other aspects of evidence-based school improvement. They were enacting a notion of leadership that is defined by pushing for shared accountability, evidence-based practice and collective leadership from whatever formal position one may hold. SAM coaches demonstrated that they could act to improve collective practice despite not holding formal leadership roles. The time is ripe for incorporating this notion of teacher leadership into existing leadership development programs.

Areas for future research

This study highlights moves and strategies that do and do not make a difference in prompting new thinking within a peer coaching context. Future research needs to explore the effectiveness of these moves in similar and different contexts and to become more finely grained in understanding what these moves look and sound like. In

addition, the nature and staying power of the accompanying shifts in thinking should be further explored.

Future research might also examine the impact on coaching practice over time if coaches examine their own LITs of the debrief conversations between themselves and their peers. Just as this research identified specific coaching strategies that yielded potential changes in instructional planning as well as strategies that failed to elicit an “Aha!,” it is possible that coaches can examine their coaching LITs to identify areas for improvement in their own practice.

Finally, this study investigates the interactions between the coach and the peer, but falls short of examining the impact on student outcomes. Since this is the ultimate goal of all school reform, future research should examine the impact of this peer coaching model on student learning and the particular strategies embedded within it that are successful.

Notes

1. SAM was jointly developed by the school of public affairs at Baruch College CUNY and new visions for public schools and funded by the Carnegie Corporation of New York. Since 2005, there have been six iterations of SAM, involving 162 participants from 48 New York City public schools.
2. In prior iterations of the SAM program, participants applied to the program as a school team of three or more individuals. In its current form, individuals apply to the program and are grouped into teams.

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Appendix: post-observation LIT excerpt

For this conversation, I wanted to ask the teacher to revisit her objective and consider if her objective was met. Although she had narrowed her original objective, it still seemed as she was asking the students to do more than they could handle in one period.

Coach: Did you have a chance to read the transcript?

Peer: Yes, I read it. I know we're going to talk about how I ran out of time! The Do Now always takes too long.

Coach: Well, let's start with the positive. Your objective for this class was that students will read the poem, analyze what the author is saying about identity, and be able to compare it to

their own ideas or feelings about identity. What evidence do you see in the transcript that your objective was met?

Peer: Well, it says here that students were reading the poem. And obviously, I could tell that students were reading it. So they read the poem. Then they were supposed to answer the questions about what the author said about his identity. Some of the students were able to answer some of the questions. Like Patti, here.

Coach: Ok, so we know they read the poem and that they began to answer some of the questions. Would you say that your objective was met? Do you see evidence that the students understood what Hughes was saying about his identity?

Peer: No, not really [...] I thought that this poem would be easy for them [...] but they are still not getting some things [...] they think that if a poem is short, it should be a fast read; they're not getting that a poem takes time to understand. I was disappointed when I was questioning them [...] I felt like they were just not sharing answers, even though they knew them. There are some kids in that class who just won't share, even though they know the answers.

Coach: Ok, let's think about this. You know that you didn't meet the objective – there wasn't enough time to do all of it, for one thing. For example, there was no time at all for the students to compare this author's thoughts on identity to their own.

Peer: We ended up writing about that the next day.

Coach: Ok. So you had time to address the unmet objective in the next class. But maybe we could've set this up differently from the beginning. Maybe what seemed like one large objective really could've been broken into smaller steps. What I'm thinking is, perhaps at least some of the "silent" students are not sharing because they need more support, more scaffolded steps.

Peer: It did surprise me that they didn't see the answers in the poem as clearly as I expected. I think it has to do with how quickly they read the poem.

Coach: Ok, well maybe they need more modeling of how a reader approaches a poem. I'm wondering about the fact that they were asked to read the poem in groups, with a list of questions already in front of them. That might influence them to rush through the reading so that they can complete the work. I wonder if they would benefit from reading through the poem several times with you, as a class.

Peer: Yes, maybe [...] I think maybe it's a mistake to think that a short poem can be digested in one period.

Coach: Well, if it could, that would sort of contradict what your instincts are telling you – that a poem takes time to read. Particularly for the ELLs.

Peer: I didn't realize until they started reading that some of those lines were actually a lot more subtle than I thought.

Coach: So how might we break down the next poem? What can we do to give more students more access to the poem?

Peer: Well, I think I do need to show them how to read it. That's a good idea, to model how many times a good reader reads the poem.

Coach: Would you use the same objective that you had for this lesson?

Peer: No, I definitely think I would break it into several days. Maybe start with reading and general comprehension questions. Then on the next day we could explore how it compares to the students' feelings about identity. I could have them write something on the second day. I mean, that's basically what I ended up doing in the long run anyway, but if I planned for it to take longer, it would feel less like we weren't finishing our work.

Coach: That sounds like it would be a good idea. For the next lesson, let's remember that the students found the work to be more complex than we expected. Let's try to anticipate that, so we scaffold this better.

Peer: I'm already thinking about it.

Coach: Ok! Can you give me any feedback about this conversation?

Peer: Having you watch the classes makes me think about things [...] it makes me more aware of what I'm doing. I don't know, I think maybe I haven't been thinking hard enough about the objective as something to complete in one period. I always have an objective, but I guess I sometimes let the objectives go into the next day, or I know that it can [...] I will try to be more aware of that. Thanks for listening to me!

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