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Gary Houchens

Thomas A. Stewart

Sara Elizabeth Jennings

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# Enhancing Instructional Leadership through Collaborative Coaching: A Multi-case Study

Gary Houchens, *Western Kentucky University*



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# Enhancing instructional leadership through collaborative coaching: a multi-case study

Gary W. Houchens and Tom A. Stewart  
*Educational Administration, Leadership, and Research,*  
*Western Kentucky University, Bowling Green, Kentucky, USA, and*  
Sara Jennings  
*T.C. Cherry Elementary School, Bowling Green Independent Schools,*  
*Bowling Green, Kentucky, USA*

## Abstract

**Purpose** – Executive coaching has become increasingly important for enhancing organizational leaders' professional effectiveness. The purpose of this paper is to contribute to a growing body of research literature that examines how coaching techniques help school principals improve their instructional leadership.

**Design/methodology/approach** – Using a protocol based on a *theories of practice* framework (Argyris and Schön, 1974) to support principals in deepening their self-reflection, this study added the element of a guided peer-coaching component in a group setting.

**Findings** – Results confirmed the effectiveness of the coaching protocol for assisting principals in deepening their self-awareness and critical reflection regarding their leadership, including the way principals' core assumptions about teaching and leadership shaped the outcomes of their problem-solving strategies. Perceptions of the peer-coaching element were mixed, however. While principals reported feeling affirmed by sharing their leadership challenges with others, and indicated that the group coaching experience contributed to their sense of professional community, there were limitations to principals' willingness to challenge one another's core assumptions.

**Originality/value** – This study builds on literature that cites theories of practice as a mechanism for enhancing professional effectiveness and represents a further iteration of recent research studies applying the concept to the work of school principals. Findings affirm that a coaching protocol based on theories of practice is well received by principals, serves to deepen self-reflection, and can, in limited cases, contribute to sweeping changes of thinking and practice congruent with the concept of double-loop learning.

**Keywords** Practice, Principal, Coaching, Theory, Leadership, Instructional, Protocol

**Paper type** Research paper

## Introduction

Researchers have attempted to explain the role of school principals in supporting student achievement (Robinson *et al.*, 2008; Walhstrom *et al.*, 2010). Hallinger (2010) summarized this research and proposed a model for understanding the way school principals bring their values and beliefs into specific school contexts to support improvements in teaching. This model of "leadership for learning" emphasizes the principal's role as instructional leader and suggests improvements in student achievement hinge, in part, on improvements in principals' professional effectiveness in supporting teaching and the school's academic capacity (Hallinger, 2010).

Meanwhile, executive coaching has become a popular tool for leadership development in both the corporate and non-profit sectors. An increasing number of authors are focusing on coaching school leaders in elementary and secondary school settings, suggesting the practice may be one approach for developing instructional leadership (Bloom *et al.*, 2005; Reiss, 2007; Rhodes and Fletcher, 2013; Wise and Jacobo, 2010). Coaching models typically rely on a structure of reflective dialogue between coach and client. Argyris and Schön (1974) suggested that such reflective structures could be powerful tools for promoting professional effectiveness.



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Argyris and Schön (1974) articulated a model for understanding the mental maps that professionals use to carry out day-to-day problem solving. These mental maps, called theories of practice, promote self-awareness by forcing the practitioner to identify his or her action strategies for addressing a problem of practice, as well as the underlying beliefs, values, and assumptions from which the client's action strategies emerge. By uncovering and naming these assumptions, Argyris and Schön believe that the practitioner is better able to engage in reflection, using feedback to continuously revise his/her action strategies and assumptions in a process the authors called double-loop learning (as opposed to the trial-and-error approach to problem solving that normally characterizes much decision making, known as single-loop learning).

Argyris and Schön's work parallels other change models that focus on the change agent's role in confronting problems with new forms of thinking. Perhaps the strongest parallel in this regard is Prochaska and DiClemente's (1986) change theory which stresses how an individual rises from a "precontemplative" stage in which he or she is unaware of the problem, to a "contemplative" stage of awareness in which he or she has the capacity to reflect on the problem and identify possible solutions.

This study extends previous literature using Argyris and Schön's theories of practice framework to better understand the instructional leadership of school principals and to help them improve their effectiveness (Houchens, 2008; Houchens and Keedy, 2009; Houchens *et al.*, 2012; Keedy, 2005; Keedy and Achilles, 1997).

Using Houchens and Keedy's (2009) conceptual framework, Houchens *et al.* (2012) subsequently found that their coaching process enhanced the instructional confidence of principals and contributed to double-loop learning for some participants. Through coaching, the principals were able to shift their core assumptions about teaching, learning, and leadership. Houchens *et al.* (2012) called for additional research applying this protocol in other contexts and with a broader range of participants.

The study described here extends the work of Houchens *et al.* (2012) by applying a version of this coaching framework in a single school district using a broader array of instructional leadership problems and adding a new element to the protocol: regular group meetings during which principals could share their emerging theories of practice and collectively reflect on progress. This approach mirrored techniques used by Argyris and Schön by promoting additional lines of feedback and also reflects elements of peer coaching that have been found efficacious in a variety of other settings (Feldman and Lankau, 2005). Each participating principal was able to reflect on his or her theory of practice utilizing feedback from both the coach and fellow practitioners.

The following research questions framed the study:

- RQ1. What were the principal's theories of practice for addressing a specific school-wide instructional problem?
- RQ2. What were the specific outcomes of the principal coaching protocol for the targeted problem?
- RQ3. How did the coaching protocol shape the principal's self-understanding about his/her instructional leadership?
- RQ4. How did the principals perceive the benefits or limitations of the coaching protocol in general?
- RQ5. According to the principals' perceptions, how did the group cohort component of the coaching protocol help or hinder the outcome or the principal's self-understanding about his/her instructional leadership.

While results varied, several participants reported specific evolutions in their instructional leadership theories of practice. Cross-case analysis suggested that the coaching protocol

enhanced principals' sense of accountability for their improvement efforts, and the trusting, confidential relationship that emerged between the principal and coach encouraged deeper self-reflection and openness to the vulnerabilities inherent in double-loop learning. Principals reported that the collaborative dimension of group coaching affirmed the difficulties they each faced and in turn fostered a stronger leadership culture throughout the district.

### Background and review of literature

In response to the perceived gap between theory and practice, Argyris and Schön (1974) posited that theories are a normal aspect of everyday decision making. Theories of action are “vehicles for explanation, prediction, and control” (p. 5) and include two parts: a set of underlying values, beliefs, and assumptions about the specific problem of practice being confronted, and an action strategy based on these tacit assumptions.

The problem, Argyris and Schön argued, is that theories of action, or “mental maps” (Houchens and Keedy, 2009) often reside in the practitioner’s subconscious. Our assumptions, especially, are unknown to us without careful reflection. As a result, there is often a gap between our espoused theories (how we say we typically respond to problems) and our theories-in-use (our actual way of behaving based on assumptions we may not consciously recognize). Argyris and Schön state that this often leads to a trial-and-error approach to problem solving in which we throw action strategies at the problem without questioning how our assumptions may be shaping the outcome (single-loop learning). In contrast, Argyris and Schön (1974), and later Schön (1983) suggested that, with intentional self-reflection, practitioners could discover their tacit assumptions and action strategies, and test how alternate assumptions might contribute to different outcomes (double-loop learning).

Few studies have applied the theories of practice concept to the work of school principals. Keedy and Achilles (1997) first argued that understanding the work of school principals through Argyris and Schön’s theory of practice lens might reveal how effective principals actually impact student learning. Keedy (2005) further suggested that principals should openly articulate their theories of practice, invite teachers to provide feedback, explore their collectively shared assumptions, and test how their shared thinking shapes student learning.

Houchens (2008) used Argyris and Schön’s framework to document the theories of practice of four successful school principals related to one of their key responsibilities: instructional leadership. Using a visual framework that explicated assumptions and action strategies (later laid out in Houchens and Keedy, 2009), Houchens (2008) conducted a qualitative multi-case study exploring how the instructional leadership of effective principals could be “mapped” using theories of practice. Among other findings, the study revealed that the theories of practice framework explained how these principals engaged with teachers to build student-oriented cultures that supported academic achievement.

However, Houchens (2008) also discovered few instances of double-loop learning, even on the part of these effective school principals. By their own admission, the principals rarely engaged in active questioning of their assumptions. Considering the various protocols Argyris and Schön (1974) originally used to test their own ideas, Houchens (2008) speculated that intentional structures that forced principals into self-reflection would be necessary to foster double-loop learning.

In response, Houchens *et al.* (2012) designed a coaching protocol based on the theory of practice framework that used best practices for executive coaching. While the results of the qualitative multi-case study varied across the four participants, Houchens *et al.* (2012) found that through the coaching protocol principals were able to revise their assumptions about the specific leadership problem they were facing (how to help a struggling teacher improve his or her practice). Houchens *et al.* (2012) further found that three of the four participants actively engaged in double-loop learning and altered their key assumptions about teaching, learning, and their role as principal.

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Based on the positive results of Houchens *et al.*'s (2012) study, the present paper describes a subsequent application of the coaching protocol, with the added component of two group sessions in which all participating principals shared their emerging theory of practice with their peers, described their progress in addressing their chosen problem of practice, and solicited feedback. Like Houchens *et al.* (2012), this study indicated that the theories of practice framework, utilized in a supportive coaching context, contributed to deeper levels of principal self-reflection, and increased the principals' capacity for double-loop learning. The collaborative dimension of group coaching sessions provided affirmation for the leadership difficulties they each individually faced and fostered a stronger leadership culture throughout the district.

## Method

The two lead researchers on this study were both former school administrators and served as coaches for the study, delivering a coaching protocol based on Houchens *et al.*'s (2012) previous work. The coaches worked with each participant to identify an instructional leadership problem of practice that the principal wanted to address during a school year. The researcher-coaches then utilized the coaching protocol to assist the principals in articulating a specific theory of practice for addressing the problem, and in a succession of one-on-one coaching sessions, the principals tested and refined their theories of practice based on their progress in addressing the problem. Additionally, the lead researcher-coach facilitated three group sessions in which all participating principals met to share and solicit feedback from one another.

The researchers used a naturalistic, multi-case study design to examine the coaching process and its effects as perceived by each principal. Data were gathered from transcribed recordings of all coaching sessions and from artifacts generated during the coaching process. Descriptive and pattern coding was used to conduct within- and cross-case analysis relative to the research questions.

### *Selection of subjects*

The participating principals all came from the same school district in the Southeastern USA. The district was purposively chosen based on the lead researcher's previous experiences working with principals on a variety of initiatives, including coaching using the theories of practice framework (Houchens *et al.*, 2012). The researchers focused on a single district because the principals already had an established relationship of trust with one another and had already established monthly administrative meetings, which could be adapted to group coaching sessions. Each individual principal voluntarily consented to participate. The district served approximately 1,800 students in three elementary schools: one middle school, one high school, and one alternative high school. The researcher contacted all six schools and obtained consent of each principal to participate, and secured the cooperation of district administrators. The research was carried out with the approval and oversight of the Human Subjects Review Board at the researchers' university. Table I displays demographic data on each principal and his/her school.

### *Coaching protocol*

Using Houchens *et al.*'s (2012) coaching framework, the researchers engaged participants in a yearlong coaching protocol with at least three face-to-face or telephone coaching sessions.

Each principal was asked to select a school-wide problem of practice related to instructional leadership to be the focus of the coaching sessions. The researcher-coaches emphasized that a goal of the study was to help the principal improve self-awareness and instructional leadership in general. It was not an explicit goal of the study that the problem of practice be successfully addressed or resolved, but rather that the principal would apply a self-reflective theory of practice to improve his or her leadership. As reported in the findings below, some problems of practice were more successfully addressed than others.

**Table I.**  
Principal and school  
characteristics

Principal	Yrs exp in education	Yrs exp in admin	Yrs exp at current school	School level	School enrollment	Problem of practice
A (male)	9.5	2.5	2.5	Elementary (grades K-5)	225	Differentiation
B (male)	10	6	4	Elementary (grades K-5)	380	Lesson planning
C (female)	11	7	3	Elementary (grades K-5)	280	Professional learning community (PLC) implementation
D (male)	25	5	4	Middle (grades 6-8)	450	Classroom management support for new teachers
E (male)	22	8	5	High (alternative; grades 9-12)	50	Implementation of standards-based, teacher- led instruction
F (male)	30	14	9	High (grades 9-12)	580	Implementation of guided lesson-planning protocol

The researcher-coaches used a protocol of scripted questions to guide principals through an analysis of their problem of practice, establishment of their theory of practice, and subsequent testing and revision of their theory of practice based on feedback from its implementation, and then finally through a principal reflection on the protocol itself. The protocol reflected a version of what Bloom *et al.* (2005) called “transformational coaching.” Table II displays the basic structure of the coaching protocol.

#### *Data collection*

Data for this study came from transcribed recordings of all one-on-one and group coaching sessions totaling more than 25 hours for all subjects combined, as well as through review of the principal’s written theories of practice as they evolved over the course of the year.

**Table II.**  
Components of  
coaching protocol

Session	Elements of protocol
First private session	<ol style="list-style-type: none"> <li>1. Overview of theories of practice</li> <li>2. Establish principal’s assumptions about good instruction and the principal’s role in promoting it, assumptions specific to the problem of practice and the principal’s tentative action plan for addressing the problem</li> </ol>
Group sessions	<ol style="list-style-type: none"> <li>3. Collaboratively map the theory of practice</li> <li>1. Review goals and structures of the coaching initiative</li> <li>2. Invite each principal to voluntarily share his/her theory of practice, progress toward goals, and insights</li> <li>3. Solicit feedback from group, especially in terms of perceived gaps between espoused theories and theories-in-use</li> </ol>
Second private session	<ol style="list-style-type: none"> <li>1. Review theory of practice, progress made toward implementation, principal’s perspective on why progress is/is not being made, and possible revisions to theory of practice (assumptions or action strategies) as a result, including feedback from group sessions</li> <li>2. Repeat process with subsequent coaching sessions as requested by principal or as needed</li> </ol>
Final private session	<ol style="list-style-type: none"> <li>1. Discuss principal’s progress toward addressing the problem</li> <li>2. Discuss and establish final revisions of the principal’s theory of practice</li> <li>3. Discuss principal’s perceptions of the coaching protocol</li> </ol>

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### *Data analysis procedures*

The researchers used constant comparative analysis to identify data patterns in transcripts of all coaching sessions (Glaser and Strauss, 1967). Descriptive and pattern coding was used to analyze the data for each individual principal (RQ1 through RQ3) as well as look for patterns across the experiences of all the principal participants (RQ4 and RQ5) (Saldaña, 2009). A narrative of rich description and data displays (Miles and Huberman, 1994) portray the results. Individual principal data were displayed through visual representations of each theory of practice based on the conceptual framework developed by Houchens and Keedy (2009).

### *Trustworthiness and methodological limitations*

Trustworthiness was supported through multiple data sources, prolonged engagement, and member checks, which took the form of continuous feedback and participative analysis on the part of principals as they reviewed and refined their emerging theories of practice. This study was limited to the experiences of six principals in a single school district in one Southeastern US state. However, by examining the topic of principal coaching in a contextualized setting, the study does provide insights into the use of principal theories of practice within a coaching protocol that can be generalized to similar contexts.

## **Results**

While the principals reported varying levels of success in addressing their problems, all participants were able to use the protocol to actively reflect on their instructional leadership. In some cases, principals were able to make necessary – and even sweeping – adjustments in their theories of practice as a result, confirming the process’s efficacy for promoting double-loop learning. Cross-case analysis suggests that the principals found the coaching process gratifying and beneficial. Sections below describe results for each research question.

### *RQ1 and RQ2: principals’ theories of practice and outcomes*

RQ1 sought to identify the theory of practice developed by each principal to address his or her problem of practice. RQ2 sought to document the outcomes for each theory of practice. A brief description of each principal’s chosen problem of practice, theory of practice, and outcome is described below. For space reasons, the actual map of the theory of practice is only provided for one principal (Principal A; see Figure A1).

*Principal A.* Principal A was the third-year principal of his school (his first principalship) and a ten-year educator overall. The school district had recently launched a standards-based grading and assessment initiative in all three elementary schools. Under standards-based grading, student learning is evaluated based on progress toward learning goals rather than averages of test scores or other traditional means of grading.

*Principal A theory of practice.* Principal A reported that teachers at his school had embraced the standards-based assessment approach, which emphasizes student mastery of specific content objectives and flexible pacing of instruction. But to implement standards-based assessment effectively, teachers must also intentionally differentiate instruction. Principal A believed there were pockets of teachers throughout the school using effective differentiation. Based on these assumptions, and his belief that as principal one of his key functions was to promote teacher collaborative learning, Principal A articulated a theory of practice to address school-wide implementation of differentiated instruction. His action strategies included modeling of differentiation by a core group of teachers on his leadership team with the expectation that all teachers would begin differentiating their instruction by the end of the year.

*Principal A coaching outcomes.* Over the course of the coaching sessions, Principal A reported an increased resistance on the part of teachers in certain grade levels to



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implement differentiation. In fact, these same teachers were actively resisting the larger district initiative of standards-based grading. With only a few exceptions, differentiation remained an activity pursued only by teachers who served on the school's leadership team. Through the coaching protocol, Principal A was prompted to review his underlying assumptions about the problem and how these assumptions might be shaping his results. The focus of this reflection centered on Principal A's emphasis on leading through the nurturing of positive relationships with teachers. He wondered if this leadership style provided leverage to teachers who resisted his recommended instructional changes, since they might believe he would never take directive action against them.

Through coaching, Principal A actively questioned whether a more formal, directive leadership style was needed to promote more rapid instructional change. He suspended the differentiation initiative altogether given its lackluster results. At the end of the year, Principal A reassigned several teachers to new grade levels, breaking up groups he believed had become toxic. In a demonstration of double-loop learning, he resolved to approach his work with new assumptions in the coming year and test a more directive approach to instructional leadership (see Figure A1 for a display of Principal A's final theory of practice reflecting revisions that occurred in the coaching process).

*Principal B.* Principal B was in his fourth year as principal and his tenth year in education. Principal B presided over a high-performing school within a district that was known for its successful elementary schools.

*Principal B theory of practice.* During the year this study was conducted, teachers at his school were implementing new curriculum standards for the first time. In his first coaching session, Principal B discussed his belief that instruction must be rigorous, and he believed that the new standards would push teachers at his school to increase instructional rigor. Articulating an assumption that the principal's role involved closely monitoring instruction, he decided to require teachers to begin submitting weekly lesson plans for his review as his problem of practice for the coaching process. Principal B's action strategies indicated that he would provide teachers some general guidelines, he would offer written feedback, and once per month he would analyze a random selection of plans to look for patterns across the school and share results with teachers for improvement.

*Principal B coaching outcomes.* During coaching sessions, Principal B reported his progress on implementing his action strategies and indicated teachers were frustrated with a lack of clarity about his expectations. With his coach, Principal B decided to develop a rubric for evaluating the lesson plans with key indicators for rigor, differentiation, and other features. While he found it difficult to make time for the monthly analysis of randomly selected lesson plans, Principal B managed to complete this process once. His analysis revealed that most lessons were of high quality. Where lesson plans were lacking in quality, the analysis led to communication with teachers who needed improvements in specific areas. He resolved that the following year he would focus more heavily on using lesson plans to inform walkthroughs and to look for congruence between plans designed and lessons delivered.

While Principal B's theory of practice did not prove entirely successful in raising instructional rigor, it did create an opportunity to reflect on his underlying assumptions. Submitting detailed lesson plans was challenging at first for teachers, requiring some clarification of expectations from the principal (which necessitated deeper reflection on the principal's part); however, informal feedback from teachers confirmed that lesson planning had improved the quality of instruction and teachers were eager to get descriptive feedback on their lesson designs. He concluded that the coaching experience had reaffirmed his core belief about the instructional leader's role in monitoring and evaluating the quality of instruction, and this had increased his instructional confidence.

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*Principal C.* Principal C was head of a National Blue Ribbon School designee for three consecutive years under her leadership. Schools are designated with National Blue Ribbon status by the US Department of Education for sustained levels of high student achievement or progress in closing achievement gaps.

*Principal C theory of practice.* The school had already successfully implemented the district's standards-based report card, and Principal C's teachers had what she identified as a good grasp of the state's new curricular standards. Because the formative assessment process was integral to standards-based grading, Principal C felt that her teachers used formative assessment instinctively but there was no formal program in place to ensure that formative assessments were regularly used to inform and modify instruction. In addition, she felt that many of her school's professional learning community (PLC) meetings were not as successful as they could be since they met during time-bound planning periods. She wanted to support an exploration and implementation of the formative assessment process with true PLCs, which involved small groups of teachers discussing student progress and collaborating on strategies for student intervention and enrichment.

When asked to characterize how this would manifest at her school, she replied, "I think I would see [...] where groups of colleagues are gathered – probably after school. And they're having good, real, *goosebumpy* kinds of conversations about student work (and student learning. And looking at data."

*Principal C coaching outcomes.* Principal C inherently knew that the most systematic processes were best supported by a true PLC structure. However, as she articulated her theory of practice, her assumptions forced an honest look at her own practice. While one of her key assumptions was that PLCs existed in name only, another assumption revealed that she feared that a lack of personal knowledge of PLC principles would hinder their implementation and progress.

Making this admission during coaching sessions led to action strategies aimed not only at teachers and PLC groups, but also at herself. Principal C revised the PLC schedule to include more time for principal modeling of a protocol with a student-level formative assessment data-driven focus. However, after a few months of trying to make the new PLC model fit, she made another uncomfortable admission and decision during the third coaching session:

I knew that you were going to touch base with me, and I knew that I didn't want to sit here and not do what I needed to do. That's kind of the personal aspect of this coaching. I knew that it needed to be done so this was what I was going to do. We did the [...] PLCs that we discussed several times after that and then I relinquished that control, told them that I wanted them to start meeting at least once a week [...]. It did not happen. And then I had to do a lot of reflecting as to why. And at first, to be honest with you, for a long time I felt like a big failure as a leader and as a principal. I read, I watched, I studied, and I talked. I felt a lot better about the PLCs myself. I modeled just like I had planned to and I felt like they were good with that process. So really, it took a lot of reflection and talking to different staff members, and the conclusion that I came to was that they weren't ready.

She explained further that her personal philosophy of deep implementation over compliance that emerged during coaching ultimately trumped what she knew her teachers would see as just another initiative rather than meaningful work. However, this decision did not come without personal struggle: "I just hate telling you that. I feel like I'm a quitter."

Sometimes a relationship of deep trust develops during the coaching process. However, Principal C did not let trust in her coach or her fear of the coach's "judgment" overtake what she rightly sensed the process was telling her. By adding another action strategy, she knew that the time was not right for PLC implementation, but she also knew that the time would be right the next year.

*Principal D.* Principal D had 25 years of experience in education, including five years as an administrator. The middle school where he served as principal was primarily staffed

with teachers he characterized as effective and skilled in engaging students in rigorous instruction. His veteran teachers were skilled at presenting engaging lessons; in fact, he assumed his new hires would quickly assimilate into the school's culture. The assumption proved incorrect for at least one new teacher.

*Principal D theory of practice.* Principal D knew that effective, relationship-based classroom management was directly linked to higher levels of instructional rigor. In fact, the two concepts informed each other. He also knew that as principal he played an important role in supporting effective classroom management. Principal D's veteran teachers knew these things, too. However, in the past two years he had hired eight new teachers. Seven of these quickly grasped the school's culture of excellence. The eighth new teacher was leading a classroom that the principal's walkthrough observations told him was characterized by off-task dialogue and lower levels of rigor. Additionally, the new teacher referred more students to his office for off-task behavior than any of her colleagues.

*Principal D coaching outcomes.* Through the coaching process, Principal D began to identify potential action strategies to support this teacher in whom he saw potential to professionally grow. He provided additional support from a local educational cooperative's classroom management consultants. He became more consistent in his classroom management expectations of all teachers, and not simply new teachers, recognizing the need to formally communicate his own expectations instead of relying on assumptions. He admitted, "I'm going to be consistent in seeing that she's consistent with her rules. As the leader here I think I have a responsibility, too, to make sure that she's consistent. And that's a result of this whole coaching process. It's helped me put more focus on this; made me accountable. I would think, 'Aw, dang it, Dr. Stewart's going to be here. I better get in there and see what's going on.'"

Additionally, Principal D's positive experience with the coaching protocol and his theory of practice informed his planning for the upcoming school year. He included – and vowed to continue to include – expectations for instructionally meaningful, relationship-based classroom management in all future new teachers' professional learning induction and orientation.

*Principal E.* Principal E was director of the district's alternative high school that served 50 at-risk students. He had 22 years of experience in education and had served as the alternative school's principal for five years. The school offered a complete high school curriculum, facilitated largely through online coursework since the staff of the school was limited to only a few certified personnel and instructional assistants.

*Principal E theory of practice.* Based on assumptions that learning is best supported through rich dialogue and interactions between students and teachers, Principal E was concerned that the school's online classes were insufficient for preparing students for standardized assessments such as the American College Test (the ACT, used by universities to make admissions decisions) and did not provide adequate formative assessment data.

Principal E developed a theory of practice based on these assumptions, and his expressed faith that his staff could provide more teacher-directed instruction and assessment of student learning. His action strategies included establishing a routine by which every student would participate in a weekly teacher-led lesson and formative assessment activity for every class in which they were enrolled. Principal E would coordinate communication between the school's staff and content area specialists at the district's traditional high school to establish the specific learning targets required for each course.

*Principal E coaching outcomes.* Principal E's coaching sessions throughout the year revealed his increasing confidence in this approach. Each session found him reporting successful efforts to coordinate communication between the two schools and to deliver engaging lessons. Logistical challenges were met with enthusiasm on the part of the school staff, in his view. By the end of the year, practice and achieved ACT scores indicated that

students were performing better than in previous years, affirming Principal E's theory of practice. These results did not garner opportunities for the revision of assumptions or action strategies. However, reflecting on the process through the coaching protocol caused him to gain an increased appreciation for the role of the principal in encouraging high-quality instruction based on differentiation and positive relationships.

*Principal F.* With 30 years of experience, including 14 as a school administrator and nine as principal of the district's high school, Principal F was the most experienced principal and educator among all six participants.

*Principal F theories of practice.* Under his leadership, the school's achievement scores had recently been on an upward trajectory, but in his first coaching session, Principal F suggested that he was concerned about inconsistencies in the school's instructional quality. Rooted in assumptions that effective teaching starts with effective planning, he suspected that improvements in lesson planning could create more rigorous and engaging instruction. His chosen problem of practice was implementation of a guided planning protocol, which district leaders had encountered at a recent training. The guided planning involved a reflective coaching mechanism in which an administrator meets with a teacher or small group of teachers and talks through each of the teacher's upcoming lessons, reflecting on various dimensions of the lesson relative to best practices in instruction. Principal F planned to divide the staff between himself and the assistant principal for carrying out the initiative.

*Principal F coaching outcomes.* In subsequent coaching sessions, Principal F reported that the guided planning meetings had been successful, but he had not been able to analyze walkthrough data or other sources of information to assess the impact on instruction as it was actually delivered. He also struggled to keep to his schedule of guided planning meetings with teachers due to other professional demands. This was consistent with his participation in the coaching protocol itself. Principal F canceled or rescheduled his coaching sessions multiple times and was unable to attend the final group session. In his final one-on-one coaching meeting, he indicated a desire to revisit the distribution of leadership responsibilities in his building.

In summary, two principals of the six participants exhibited fairly strong evidence of double-loop learning as a result of the coaching process, while others found that the experience helped them reflect on the importance of certain assumptions in shaping their instructional leadership. It is important to note that the coaching protocol's efficacy is not determined by whether the principal successfully addresses his or her chosen problem of practice (though that might be a happy by-product), but rather that it builds the principal's capacity for self-awareness and self-reflection. In that sense, participants and their theories of practice seem to affirm the value of the coaching protocol.

### *RQ3: principals' self-understanding of instructional leadership*

A key goal of this study was to promote principals' self-reflection about their roles as instructional leaders, and how their theories of practice (including both their action strategies of instructional leadership and their underlying assumptions about general and specific instructional leadership problems) influence the outcomes of their decisions. *RQ3* examined patterns in how participants' understanding of their own instructional leadership evolved as a result of the coaching protocol. Two themes emerged.

*The coaching protocol illuminated how certain key assumptions shaped principals' leadership behaviors.* Argyris and Schön (1974) had argued that the key to reflective practice was assisting the practitioner in becoming aware of his or her tacit assumptions about the problem. In multiple cases, participant principals found their underlying assumptions contributed directly to the success or failure of outcomes. Select examples include the following:

- Principal A came to believe that his leadership strategies placed an excessive emphasis on persuasion and relationship building to accomplish his goals. When

encountering stiff resistance to his proposed change initiatives, he concluded that his relationship-orientation may have indirectly signaled a lack of resolve, and consequently shifted his assumptions and action strategies toward more formal, directive styles of leadership. "I've realized I can be a co-worker and a helper, but I still need to be the boss," Principal A said.

- Principal B experienced positive results from implementing a policy requiring teachers to submit lesson plans for his review and feedback, an initiative he expected teachers would greet with resistance. While teacher concerns caused him to further clarify his expectations and processes, Principal B found that teachers appreciated his feedback. These results reaffirmed his assumption that an effective principal plays a key role in monitoring and evaluating instructional practices.

*The coaching protocol gave principals an opportunity to re-evaluate their school improvement priorities and change or abandon initiatives based on the needs of the school.* By regularly assessing the impact of their leadership decisions and assessing how their assumptions might be shifting as a result of reflection and feedback, principals gave themselves permission to make changes in their approach and even scrap large-scale improvement initiatives. Select examples include the following:

- Principal C began the coaching process firmly committed to implementing a high-quality structure of PLCs in her school. Rooted in her assumption that collaborative processes were central to effective schools, she made the establishment of PLCs a top priority. In coaching sessions, however, Principal C reported that other, equally pressing needs were repeatedly interfering with her capacity to effectively lead a PLC initiative. In an example of double-loop learning, she came to understand that just because an assumption may be true, acting on it immediately may not be necessary or even prudent.
- Principal F discovered that, despite his good intentions to devote necessary time to lead guided planning sessions with his teachers, he was struggling with a larger problem of poorly delegating the wide variety of leadership duties he had reserved for himself. Recognizing that this pattern was contributing to the mixed results of his change initiative, he resolved to attempt the guided planning process again the following year, but only after carefully reviewing all the school's administrative tasks and duties and delegating some of them appropriately.

The coaching protocol described in this study was expressly designed to increase principals' capacity for double-loop learning relative to instructional leadership. The extent to which principals were able to use the coaching process to make real-time changes in their leadership decision making is an indication that the protocols at least partially met their intended goal.

*RQ4 and RQ5: principal perceptions of the coaching protocol*

Finally, *RQ4* and *RQ5* assessed the participants' attitudes toward the coaching protocol itself. In the final coaching session, the researcher utilized prompts to solicit feedback from the principals on the perceived benefits and limitations of the coaching process in general (*RQ4*), and of the group coaching sessions in particular (*RQ5*).

*Principal perceptions of the coaching process in general.* Three themes emerged from cross-case analysis regarding principal perceptions of the overall coaching process: accountability, trusting relationship with the coach, and ownership for the problem of practice.

Accountability. Principals reported that the structure of the coaching protocol, and in particular knowing that at some point in the near future they would have to report their progress and reflect openly with their coach and colleagues, greatly contributed to their sense of accountability to the process. “I knew I was going to be having those conversations with the coach, so having that one-on-one time to explain in detail my steps toward implementing my action strategy forced me to stay with it,” Principal B said. “There’s an accountability [...] I wouldn’t have [achieved] on my own.” Principal C affirmed a similar sentiment: “When I knew I had a coaching session coming up on the calendar, I made sure to take time and think about my problem of practice and what I was doing about it.”

Trusting relationship with the coach. Principals reported that the confidential, trusting relationship with the coach encouraged them to self-reflect more deeply and discuss vulnerabilities and growth areas. As Principal A explained, “Having a confidant who I could trust, someone who isn’t directly involved in my school, was extremely beneficial to me, to help me think through the problem.” Principal F expressed gratitude for the coaching process: “In all my years [as a principal], I’ve just never had many chances to sit with another person in private and talk about these things. We’re just too busy, or when you’re with your superintendent—he’s your evaluator. This is a totally different kind of relationship.”

Ownership for the problem of practice. Principals also looked favorably on the freedom the protocol allowed them to identify a problem of practice on their own and to modify it as needed based on coaching feedback and evidence gathered for the protocol. Principals reported this heightened their sense of responsibility for carrying out the action plan, since no one was making them do it. “I’m not sure we would have made the necessary progress without this protocol,” Principal E said. “Knowing you [the coach] were coming around kept me focused on it.” “Nobody was going to do this work for me,” said Principal D. “If I didn’t work on the problem of practice, it wasn’t going to get done.”

*Principal perceptions of the group coaching element.* Cross-case analysis revealed two themes related to principal perceptions of the group coaching component: affirmation, and building a leadership culture.

Affirmation. Principals reported that the group dimension of the coaching protocol affirmed that the kinds of problems they were facing were not unique. They felt affirmed that every principal has growth needs of various sorts. “I like the fact that we can hear each other’s experiences and stories,” Principal B explained:

In this position, you feel alone. No one knows what it’s like to be a principal until they are in that situation. I like the collaborative, collegial nature [of the group sessions]. They reaffirmed for me [that] we’re not in this alone. We all have growth areas and we’re all working on something.

Principal C concurred: “I enjoyed hearing everyone else’s problems of practice. Even though I might be working on a different problem, I can relate to what they’re going through.”

Building a culture of leadership. Principals reported that the group sessions reinforced their collective sense of solidarity and commitment to growing as leaders together. “We’re building a culture of leadership here,” said Principal A. “We are not on islands.”

Participants generally felt that the coaching sessions would be more beneficial if they were greater in number and more frequent, though they recognized related scheduling challenges. Some principals also acknowledged that, while the group coaching sessions were affirming and built a sense of community among the participants, principals did not always perceive or openly challenge gaps between each other’s espoused theories and theories-in-use. As Principal B noted:

The whole process does make you somewhat vulnerable. Sometimes you may not be as honest with the group because of fear of embarrassment. [...] I don’t think this played a role in our group, however. We have a strong professional learning community already. But maybe there were times I thought I wasn’t being as forthright with the group because I may feel embarrassed.

### Discussion and implications

This study builds on literature that advocates implementing theories of practice as a mechanism for enhancing professional effectiveness (Argyris and Schön, 1974; Schön, 1983), and represents a further iteration of research studies applying the concept to the work of school principals (Houchens, 2008; Houchens and Keedy, 2009; Houchens *et al.*, 2012).

Findings of this study affirm the conclusions of Houchens *et al.* (2012) that a coaching protocol based on theories of practice is well received by principals, serves to deepen self-reflection, and can, in limited cases, contribute to sweeping changes of thinking and practice congruent with the concept of double-loop learning. The added dimension of group coaching provided a level of affirmation and gratification to the process not readily evident in Houchens *et al.*'s (2012) study, but there was relatively little evidence that the collaborative coaching element contributed to greater levels of double-loop learning.

Houchens *et al.* (2012) tested their coaching protocol with four principals. While all principals in their study reflected deeply on their instructional leadership as a result of coaching, including examining their underlying assumptions, only one exhibited evidence of double-loop learning in which the principal made significant changes in her assumptions and leadership strategies. Likewise, in the current study only two of six principals found themselves making substantial shifts in strategy and assumptions as a result of the protocols. The added dimension of group coaching, while welcomed by participants, did not appear to increase double-loop learning or the success of principals' action strategies.

It should be noted that double-loop learning is not always superior to single-loop learning, nor is it evidence that one principal is engaging in a deeper level of reflection than another. If a theory of practice is successful in addressing a specific problem, then reflection in action, as conceived by Argyris and Schön (1974), is likely to be limited to assessing how one's underlying assumptions may have contributed to a positive outcome. In the majority of cases examined by both this study and Houchens *et al.*'s (2012) research, principals were able to resolve their problem of practice to their satisfaction without making major changes in strategy. In this sense, the coaching protocol utilized in this line of research is not merely efficacious if the participant engages in double-loop learning as a result. Rather, the protocol is effective if, in the opinion of the participant, greater levels of self-awareness and reflection have been reached.

Nevertheless, the fact that the group coaching component did not yield results meaningfully different than those of Houchens *et al.* (2012) is important. This finding suggests that in future studies researchers might devote less attention to the importance of collaborative coaching and focus instead on other questions that remain about factors contributing to the protocol's success with individual participants. These factors that warrant further study are similar to those identified by Lofthouse *et al.* (2010), such as the role the coach plays in shaping the coaching experience and how differences in skill, personality style, or demographics among coaches may contribute to different outcomes for clients.

Furthermore, the relative success of the coaching protocol as revealed by Houchens *et al.* (2012) and the study described in this paper suggests that the process should be replicated and studied with other education professionals, such as superintendents or teachers, since thus far this line of research has been restricted to building-level principals. Researchers should also examine whether the protocol might function differently for new school administrators versus experienced principals, and whether it deepens reflection and effective problem solving differently based on level of experience. Lofthouse and Leat (2013) have argued that the test-driven culture of schools may interfere with educators' capacity to reach the deepest of self-reflection, a dimension that should be further explored in research and in the coaching process itself.

We, the authors, intend to pursue these research questions with further studies. In order to maintain a collaborative coaching component, we may engage the participants in more regular group sessions to deepen the level of trust and vulnerability and mimic elements of Argyris and Schön's (1974) group activities, which were more explicit in asking participants to challenge each other's assumptions. In doing so, researchers can test the extent to which the group coaching component may, under different conditions, contribute to more double-loop learning.

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Problem of Practice: How do I address the need for better differentiation of instruction? Based on the following assumptions, I will...

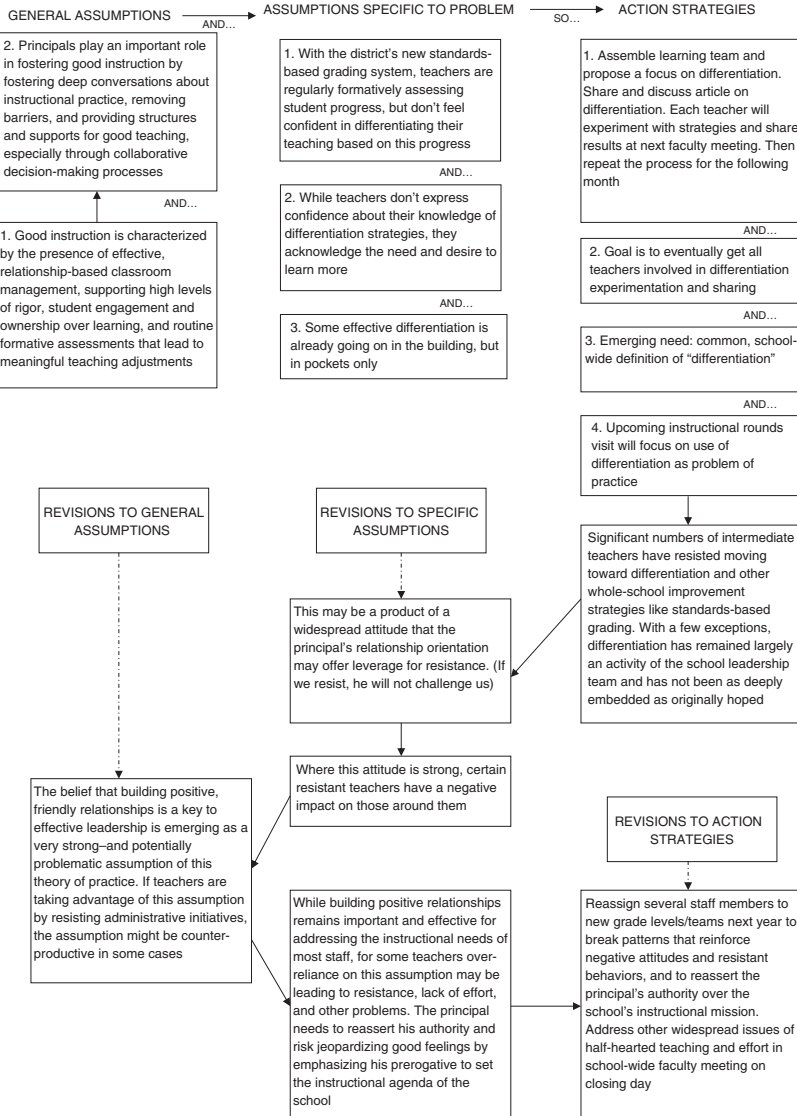


Figure A1. Principal a theory of practice: after final group session (RQ1)

Corresponding author

Gary W. Houchens can be contacted at: gary.houchens@wku.edu

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