In the following report, Hanover Research presents best practices in instructional coaching, drawing on a review of the literature and the experiences of school districts noted for effective practices with positive outcomes.
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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

In this report, Hanover Research reviews instructional coaching, an approach designed to support teachers through continuous instructional improvement. The report examines a variety of definitions and models employed by researchers and school districts, and notes the evidence in favor of specific components of instructional coaching. Since literature provides statistical evidence of effectiveness and typically focuses on the instructional coaching model as a whole, rather than specific practices, this report relies on both the available academic literature and the experiences of various school districts to provide insight into practical implementation concerns.

This report comprises the following three sections:

- **Section I: Introduction to Instructional Coaching** draws upon secondary literature to establish a common understanding of the theory and framework of an effective instructional coaching program.

- **Section II: Coaching Models and Roles** reviews secondary literature and the design of instructional coaching programs at K-12 school districts to identify specific practices associated with effective instructional coaching. This section includes a discussion of literacy and numeracy coaching, roles and responsibilities of key actors in the model, allocation of coaches’ time and resources, and mechanisms for the supervision and evaluation of programs.

- **Section III: Profiles** presents practical examples from instructional coaching programs implemented at public K-12 school districts across the United States. Profiled school districts include Texas’s Dallas Independent School District, New York’s Ithaca City School District, and the Mathematics Coaching Program developed by The Ohio State University.
KEY FINDINGS

- **An instructional coach is a dedicated professional development expert who works with teachers to increase student achievement through improved teacher effectiveness.** Instructional coaches provide job-embedded professional development, with an emphasis on inquiry-based learning, differentiated instruction, and collaborative practices.

- **Instructional coaches typically serve multiple roles within a district and a school,** including designing and modeling lessons for teachers, observing instruction and providing teachers with feedback, facilitating professional development activities, analyzing student data, staying abreast of current research, and supporting school and district improvement plans. However, researchers and district leaders are explicit regarding the need to carefully and clearly delineate a coach’s responsibilities. In particular, multiple sources explain that it is important to separate a coach’s role from teacher evaluation, as blurring these activities can undermine the effectiveness of an instructional coaching program.

- **Establishing trust-based relationships between coaches and teachers is a critical practice for successful instructional coaching.** In his widely-cited seven principles of instructional coaching, Jim Knight of the Kansas Coaching Project explains that the teacher-coach relationship should be one of equality, characterized by collaboration, authentic dialogue, and mutual development.

- **The available research offers evidence of positive effects on student achievement for both general instructional coaches and for literacy and mathematics coaches.** However, the number of studies examining the effects of coaching on student achievement are limited, and observed gains appear dependent on the implementation of all of a model’s components as a cohesive whole, rather than on the presence of specific features.

- **Professional development for instructional coaches is generally considered an integral consideration in an effective instructional coaching model.** Professional development should include both content-specific and pedagogical knowledge, as well as skills for developing close and trusting relationships with teachers and colleagues.

- **With respect to the supervision and evaluation of instructional coaches, the literature recommends the inclusion of coaches in the development of evaluation standards, forms, and processes** in order to establish buy-in among the coaches and develop an understanding of goals and expectations.
SECTION I: INTRODUCTION TO INSTRUCTIONAL COACHING

In this section, Hanover Research provides an introduction to the instructional coaching model for professional development. This section draws on secondary literature to discuss the history and definitions of the model, foundations of effective coaching, and available evidence of the effectiveness of instructional coaching in the K-12 setting.

HISTORY AND DEFINITIONS

The concept of instructional coaching emerged in the early 1980s as a means of creating more iterative and formative modes of professional development in the K-12 context. In school settings, instructional coaching is often viewed as a mechanism to support teachers and help educators provide high quality teaching across the content areas, including math, English, and science. The model is often termed job-embedded professional development and is viewed by many educational researchers as more effective than “...drop-in or drive-by professional learning that offers no opportunity for collaboration and collective problem solving.”

Instructional coaches typically provide support to teachers on two levels: in-class support provided to individual teachers and group-focused professional development activities. Despite some variability in implementation, educational researchers and practitioners tend to employ reasonably consistent definitions of instructional coaching, generally emphasizing the model’s inquiry-based, differentiated, and collaborative nature. According to the Center for Early Childhood Professional Development (CECPD) at the University of Oklahoma, instructional coaches are:

“...onsite professional development providers and change agents who use differentiated coaching to increase teacher effectiveness by teaching educators how to successfully implement effective, research-based teaching techniques and practices.”

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The instructional coaching concept gradually developed from an in-situ peer mentoring structure proposed by Beverly Showers and Bruce Joyce in 1980. Evidence presented by Showers and Joyce suggested that “…modeling, practice under simulated conditions, and practice in the classroom, combined with feedback” provided the most productive design for professional development and training, especially for teachers attempting to master new pedagogical approaches and curricular models. Additional empirical research showed that members of more formalized peer-coaching groups tended to exhibit greater long-term retention of new educational strategies and were more likely to appropriately adapt to new teaching models in the future.

The model was further developed in the early 2000s by Dr. Jim Knight, Director of the Kansas Coaching Project at The University of Kansas. Knight found that professional development activities were often undermined by external tensions and negative experiences with previous attempts by administrators to change instruction. However, by engaging participants in pairs and small groups and encouraging the development of relationships, Knight found that teachers were considerably more willing to fully participate in substantive training programs and more likely to translate new concepts into the classroom.

**FOUNDATIONS OF EFFECTIVE COACHING**

A review of current literature reveals a number of consistent themes present in most instructional coaching programs. According to Brown University’s Annenberg Institute for School Reform, effective instructional coaching must involve a range of building-level actors, including teachers, administrators, and specialized educators. In this system, coaches facilitate and guide professional learning through a combination of individual and group meetings, classroom observations, and professional development workshops. Dedicated instructional coaches work collaboratively with administrators and teachers to improve curriculum, instruction, and assessment.

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9 Ibid.
10 “Director of the Kansas Coaching Project.” Center for Research on Learning, The University of Kansas. http://instructionalcoach.org/about
14 Ibid.
Knight identifies seven principles that form the basis of the instructional coaching theoretical framework. First, the teacher and coach must establish a sense of equality within the relationship, placing equal value on the thoughts and beliefs of both parties. The coach must also ensure that the teacher maintains both choice and voice, allowing for the educator to maintain control over the techniques and methods employed. The professional learning mechanisms must also enable a natural and authentic dialogue, engaging the teacher in conversations regarding the application of pedagogy and encouraging reflection about what elements have been effective and which may be improved. The model should also include a praxis component, allowing teachers to apply new skills in real educational scenarios as they learn. Finally, the instructional coaching model is built upon reciprocity and defined by lateral flows of knowledge, allowing for mutual growth and development of both the teacher and coach during the process.

Additionally, the Kansas Coaching Project provides a practical process for the administration of the instructional coaching model (Figure 1.1). According to Knight, effective instructional coaching begins by forming a close and open working relationship between teacher and coach, and allows for a continuous cycle of learning and feedback regarding specific instructional approaches and techniques.

**Figure 1.1: Knight’s Seven Components of Instructional Coaching**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Enrollment</td>
<td>The coach initiates a one-on-one interview prior to engaging in professional learning activities. The interview helps build common ground, develop interests and concerns, and establish a rapport between teacher and coach.</td>
</tr>
<tr>
<td>Collaborative Planning</td>
<td>Teacher and coach collaboratively develop a practical plan for the implementation of a new teaching practice, and build a rubric to help guide observation of the lesson’s delivery.</td>
</tr>
<tr>
<td>Modeling the Lessons</td>
<td>The coach delivers the planned lesson in the teacher’s classroom, while the teacher observes and records notes on the observation guide.</td>
</tr>
<tr>
<td>Teacher-Directed Post-Conference</td>
<td>Immediately following the coach’s model lesson, the teacher facilitates a collaborative and constructive conversation.</td>
</tr>
<tr>
<td>Observing the Lesson</td>
<td>The pair then reverses roles, with the teacher delivering the planned lesson and incorporating elements learned during the previous three steps. During the lesson, the coach records observations on the rubric.</td>
</tr>
<tr>
<td>Collaborative Data Exploration</td>
<td>Immediately following the teacher’s lesson, teacher and coach discuss the lesson, incorporating data from the coach’s observation rubric.</td>
</tr>
<tr>
<td>Continued Support</td>
<td>The coach provides continuous support in the development of lessons and pedagogical techniques, until both parties feel recognize mastery of the practice.</td>
</tr>
</tbody>
</table>

Source: Knight and Cornett

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16 Ibid. pp. 32-33.
18 Ibid.
EVIDENCE OF EFFECTIVENESS

Despite widespread acceptance among educational practitioners, few scientifically-rigorous studies have attempted to assess the efficacy of the instructional coaching model as it relates to teacher improvement and student achievement. Furthermore, the available literature often does not provide statistical evidence to confirm specific best practices and tends to discuss models with too little diversity to compare the traits of successful and unsuccessful practices. Nevertheless, this subsection provides a brief overview of the current base of research regarding instructional coaching, emphasizing empirically valid scientific studies.

TEACHER EFFECTIVENESS

Evidence presented by the Kansas Coaching Project suggests a number of positive impacts for teachers involved in professional development activities as part of an instructional coaching model. Notably, research reveals that at least 85 percent of teachers participating in the Project’s Pathways to Success instructional coaching model, as well as a similar model sponsored by the Maryland State Department of Education, titled Passport to Success, had incorporated new and effective instructional practices in their classrooms within the first six weeks. Furthermore, evidence suggests that teachers who participate in instructional coaching transfer new pedagogies in the classroom with higher implementation fidelity, improving student performance by up to 13 percentage points.\(^{19}\)

Another article published by the National Council of Teachers of Mathematics discusses a number of studies identifying a positive correlation between participation in an instructional coaching program and improved instructional practices.\(^{20}\) Two independent studies conducted by Campbell (1996) and Race, Ho, and Bower (2002) found that teachers participating in instructional coaching programs were significantly more likely to incorporate new instructional techniques into their classrooms and generally employed greater variety in their instructional methods. Similarly, Becker (2001) and McGatha (2008) found that mathematics teachers participating in an instructional coaching professional development model tended to:\(^{21}\)

- Emphasize problem-solving and analytical thinking rather than skill-based instruction;
- Develop lessons and exercises that were more aligned with student needs;
- Encourage students to think through and articulate problems; and
- Focus on a more holistic understanding of the discipline.


\(^{21}\) Ibid.
Other evidence suggests that instructional coaching may be a less resource-intensive means of improving teacher performance and engagement than traditional professional development. In a rigorous, year-long study of 2nd and 5th grade teachers, Van Keer and Verhaeghe (2005) found that 15-hours of contact time in an instructional coaching model produced results similar to that of 35-hours of contact time in traditional professional development activities. Additional evidence presented by Sailors and Price (2010) suggests that coaching is an effective means of improving performance for teachers in 2nd through 8th grade, and is associated with positive results in a wide-range of academic subjects including reading, language arts, science, and social studies.22

**STUDENT ACHIEVEMENT AND ENGAGEMENT**

In what is perhaps the most comprehensive study of the effects of instructional coaching on student achievement, researchers from the University of Maryland examined the performance of nearly 25,000 3rd, 4th, and 5th grade students on standardized mathematics assessments over a three-year period.23 The research design included five elementary schools across the Commonwealth of Virginia, including schools classified by the National Center for Education Statistics as urban, suburban, and rural, and compared the performance of students in an experimental group within the school with those of students who were not taught by a teacher working with an instructional coach. Research results indicate statistically significant, positive effects on student achievement over time. Interestingly, the authors noted that positive impacts were not evident after the first year of implementation, but rather “…emerged as knowledgeable coaches gained experience and as a school’s instructional and administrative staffs learned and worked together.”24

Another study conducted by researchers at The Ohio State University identified positive results for students taught by teachers in a mathematics instructional coaching program.25 The study examined the performance of 3rd and 4th grade students in 34 urban, suburban, and rural schools in Ohio that participated in a state-wide pilot project of the Mathematics Coaching Program (MCP) model (see Section III).26 Preliminary pre- and post-test results identified modest gains in mathematics content knowledge over a single year of implementation. Similarly, the study found that students in MCP-schools scored approximately three percentage points higher on the mathematics section of a state-wide standardized test than their non-MCP peers.27

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24 Ibid.
27 McGatha, M. Op cit.
Positive effects have been reached beyond mathematics, as well. For example, in a long-term study launched by the Edna McConnell Clark Foundation, five Corpus Christi, Texas, middle schools that participated in an instructional coaching initiative found that between 22 percent and 35 percent of students increased their reading comprehension scores on the state test by more than three grade levels within a period of only three years. Overall, the literature finds positive gains in student achievement for both general content coaches and for coaches focused specifically on literacy or mathematics.


SECTION II: COACHING MODELS AND ROLES

In this section, Hanover Research reviews best practices in instructional coaching according to education experts and district leaders. In particular, the section includes a summary of the roles and responsibilities of coaches, administrators, and teachers in instructional coaching programs; considerations for specialized instructional coaching models; a discussion of the allocation of coaches’ time and resources; and mechanisms employed for the development and evaluation of instructional coaches.

ROLES AND RESPONSIBILITIES

This subsection presents a discussion of the roles and responsibilities of key actors in the instructional coaching model. Information presented in this section is drawn from pertinent secondary research from leading educational experts, as well as the practices and experiences of successful school districts.

INSTRUCTIONAL COACHES

The primary goal of an instructional coach is to improve classroom instruction and increase student achievement. In daily practice, instructional coaches are responsible for helping teachers adopt new instructional practices, and ensuring effective and consistent implementation of these practices in the classroom. Instructional coaches perform a variety of tasks within the educational setting, including meeting with teachers, modeling lessons and content delivery, observing and gathering classroom data, and facilitating learning teams. A review of professional standards established by education associations and school districts around the country identified several common responsibilities for instructional coaches, including:

- Design and teach model lessons for teachers’ observation;
- Guide teachers in effective lesson development, instruction, and assessment;
- Provide in-depth, sustained professional development;
- Facilitate workshops, inter-classroom visitations, and opportunities for reflection;
- Discuss techniques with teachers and support teachers in self-improvement efforts.

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https://www.fcps.edu/hr/epd/evaluations/docs/perfexpectinstcoaches.pdf
While coaching experts often note that instructional coaches “wear a lot of hats” within the school, there is a growing consensus that creating more distinct and focused roles and responsibilities may benefit both the coach and his or her teachers. Wren and Vallejo (2009), for example, note that “…it is appropriate to expect coaches to take on a few different roles and responsibilities as instructional leaders, but those roles should be relatively few, very clear, and highly prioritized.”33 A guidance document published by Washington State’s Spokane Public Schools (SPS), for example, specifies which roles and responsibilities do not fall under a coach’s purview. Notably, SPS specifies that instructional coaches should not be involved in teacher evaluations or provide information used in teacher evaluations, serve as substitute teachers, or take primary responsibility for classroom instruction.34

TEACHERS

Despite strong evidence of its efficacy, teachers have often viewed professional development requirements with some resentment. A qualitative assessment of teacher perceptions conducted by Knight revealed that professional development is often hampered by sentiments that professional development is impractical, an additional cumbersome task, and emblematic of the top-down decision-making employed at the district level. Given the instructional coaching model’s heavy emphasis on collaboration and the lateral sharing of knowledge, however, an effective coaching program requires a high level of buy-in from teachers.35

The main responsibility of teachers in the instructional coaching model is to be open-minded and active learners.36 Accordingly, instructional coaches and school administrators must ensure that teachers’ voices are heard within the coaching program and activities and lessons are structured to align with teachers’ needs and interests. Furthermore, school administrators need to clearly emphasize the benefits of participating in coaching programs to help create clarity regarding the role of the coach.37

Citing the importance of a close and trusting teacher-coach relationship within the instructional coaching model, Spokane Public Schools specifies that teachers are responsible for developing their own learning goals and for being active participants within the professional learning community.38 Furthermore, SPS notes that the freedom associated with participation in instructional coaching comes with added accountability; as such, teachers involved in instructional coaching professional development are required to take

an active role in their school’s improvement plan, respond to all professional learning surveys, and establish professional rapport and collaborative relationships with their colleagues.\textsuperscript{39}

\textbf{Administrators}

The relationship between coaches and building administrators – especially the principal – has been shown to be a critical indicator of the success of the instructional coaching model.\textsuperscript{40} The influence of administrators is widely felt throughout the instructional coaching program, from the selection and hiring of qualified coaches to the establishment of a clear and coherent framework for professional development. To a large extent, the ultimate success or failure of an instructional coaching program can be attributed to the decisions and actions of building-level administrators.\textsuperscript{41} The following are recommended strategies for administrators when implementing instructional coaching programs:\textsuperscript{42}

\begin{itemize}
  \item Select coaches comfortable with conflict, resistance, and multiple demands on their time.
  \item Be clear on the mission, role, and development of site-based coaches.
  \item Help coaches have a greater impact by focusing them on one or two goals within the school's overall mission.
  \item Get external support on the content, process, and implementation of coaching from critical friends such as school district administrators (long-term) or outside consultants (short-term).
  \item Create ways to collaborate. Constructive feedback between critical friends and staff developers helps create a supportive environment.
  \item Offer new coaches guidance from mentor staff developers, including teacher leaders or veteran staff developers.
\end{itemize}

While there is widespread agreement that administrators must offer professional support for instructional coaches, more nuanced elements of the principal-coach relationship are the subject of some debate within the literature.\textsuperscript{43} For example, many educational practitioners believe that principals and coaches should have limited interaction in order to prevent perceptions of collusion in teacher evaluations that could potentially undermine the coaching model.\textsuperscript{44} While such advice seems primarily informed by anecdote, rather than

\textsuperscript{39} Ibid. p. 13
\textsuperscript{41} Wren, S. and Vallejo, D. Op cit. p. 3.
\textsuperscript{43} Wren, S. and Vallejo, D. Op cit. p. 3.
empirical evidence, it is representative of the philosophical basis of the coaching model and the importance of integrity in the maintenance of professional relationships.  

There is also a general consensus within the body of literature that school administrators must ensure adequate time and resources for instructional coaches’ professional development activities. While many coaches have a wealth of classroom experience teaching students in the K-12 setting, effectively teaching and interacting with their peers may require different skills and techniques. As such, administrators need to ensure that their candidates are appropriately qualified for the unique challenges of instructional coaching, and then create a system of professional development that further develops their abilities and allows them to stay up-to-date with current research and practices.

**Literacy, Mathematics, and Other Specialty Coaches**

The roles and responsibilities of content area instructional coaches are very similar to those of instructional coaches in general, albeit with increased responsibility for delivering greater content-specific knowledge and pedagogies. Literacy coaches, in particular, have been noted to have a unique challenge, as they possess the skills to help teachers improve student literacy across the entire spectrum of K-12 education. Accordingly, the International Reading Association’s literacy coaching standards address the need to collaborate with teachers in a variety of fields. The evidence of a link between instructional coaches and increased student achievement has been strongest specifically in studies focused on the effects of literacy and mathematics coaches.

**Specialized Instructional Coaching**

In general, specialized instructional coaches typically serve a similar role within the school and district as other instructional coaches, but with a greater emphasis on content-specific instructional techniques and skills. This subsection examines considerations in the development of two common specialized instructional coaching programs – literacy and numeracy coaching – exploring the critical skills and knowledge to work effectively as a literacy and mathematics coach.

**Literacy Coaching**

According to the International Reading Association, a literacy coach is “...a reading specialist who focuses on providing professional development for teachers by providing them with the additional support needed to implement various instructional programs and

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practices.”51 These coaches are typically most effective when they are actively engaged in the implementation and monitoring of evidence-based literacy interventions that classroom teachers are able to embed in grade-level curriculum and instruction.52 With the increasing national focus on reading achievement in K-12 education, literacy coaching has come to be seen as an integral part of educators’ efforts to increase student achievement.53

In examining the minimum qualifications and desired skills for a literacy coach, the National Reading Technical Assistance Center (NRTAC) highlights the importance of both in-depth content knowledge, expertise in the analysis and presentation of pedagogies, and the ability to work collaboratively with a wide range of actors throughout the district (Figure 2.1).54 Further, the Association for Supervision and Curriculum Development (ASCD) notes that the literacy coaching role is often not well-understood by building-level teachers, and can be viewed as a punitive measure. Accordingly, the ASCD recommends that literacy coaches are able to clearly elaborate their position within the educational environment and define their role within the teacher-coach relationship.55

**Figure 2.1: Minimum Qualifications and Desire Skills for Literacy Coaches**

<table>
<thead>
<tr>
<th>MINIMUM QUALIFICATIONS</th>
<th>DESIRED SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Excellent teacher of reading, preferably at the levels at which he or she is coaching;</td>
<td>• Look for the positive in each interactive opportunity;</td>
</tr>
<tr>
<td>• In-depth knowledge of reading processes, acquisition, assessment, and instruction;</td>
<td>• Strong listening skills, questioning abilities, and confidentiality;</td>
</tr>
<tr>
<td>• Expertise in working with teachers to improve their practices;</td>
<td>• Willingness to embrace the teacher/coach model as a way to address professional development needs;</td>
</tr>
<tr>
<td>• Excellent presenter and group leader; and</td>
<td>• Support the individual teacher’s learning;</td>
</tr>
<tr>
<td>• Experience or preparation that enables her to model, observe, and provide feedback about instruction for classroom teachers.</td>
<td>• Coach individuals and groups to identify their strengths, areas of potential growth, and steps to take in improving instruction;</td>
</tr>
<tr>
<td></td>
<td>• Provide instruction and coaching that honors the diversity of students and teachers; and</td>
</tr>
<tr>
<td></td>
<td>• Communicate appropriately with all involved in the success of the program.</td>
</tr>
</tbody>
</table>

Source: National Reading Technical Assistance Center.56

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**MATHEMATICS COACHING**

The National Council for Teachers of Mathematics (NCTM) defines a math coach as “...an individual who is well-versed in mathematics content and pedagogy and who works directly with classroom teachers to improve student learning of mathematics.” Initially, coaches may help schools examine available resources for teaching mathematics and propose changes to curriculum, pedagogies, and the allocation of time to create a solid foundation for effective instruction. The coach then provides continuous job-embedded professional development over the course of the school year, working in a role largely defined by building leadership, the needs of teachers and students, and the strengths of the coach.

Similar to the responsibilities of the more generalized instructional coaches, math coaches generally perform a wide range of functions within a school. Accordingly, the NCTM advises that these responsibilities require that an effective math coach possesses: deep understanding of math content; solid knowledge of the grade-level context; expertise in demonstrating effective instruction and curriculum; knowledge and skills for working with adult learners; and leadership skills to support education efforts.

**PROFESSIONAL DEVELOPMENT**

Both the best practices literature and reports of instructional coaching practice emphasize the importance of content area and pedagogical knowledge for instructional coaches, as well as skills for building relationships and working collaboratively. Since coaches should be a source of instructional best practices, it is critical that they maintain and expand their knowledge of research on education and pedagogy. Furthermore, since the role of the coach demands aptitude in guiding teachers in refining their instructional approach and techniques, coaches must understand both pedagogical concepts and appropriate methods for teaching and collaborating with adult learners. Accordingly, coaches should receive professional development in these areas on a regular basis.

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http://www.theprofessionaleducator.org/articles/combined%20fall_09.pdf
Fairfax County Public Schools (FCPS), for example, notes that sustained professional development opportunities for both coaches and principals are “critical for the self-efficacy of coaches and for the efficacy of the program as a whole.”62 FCPS provides all coaches with foundational training based on the research of Killion and Harrison, as well as training based on the following programs: Cognitive Coaching Foundations Seminar, Advanced Cognitive Coaching Seminar, and Adaptive Schools: Developing Groups. Additional professional development incorporates the research of Joyce and Showers, Knight, Neufeld and Roper, and Poglinco. The district seeks to create a culture of teacher leaders comfortable with data analysis, collaboration, and facilitation of professional development. The vision of the program is for instructional coaches to be integral members of professional learning communities.63

Similarly, the coaching model employed by Spokane Public Schools explicitly addresses the importance of professional development for the continual improvement of instructional coaches.64 As such, SPS allots time each month for professional development activities specifically designed for instructional coaches, including:65

- One full day at the beginning and end of each school year for goal setting and reflection;
- Two afternoons each month for content-specific learning communities;
- One half-day each month for development and interaction including building-level administrators;
- One half-day each quarter for curricular content learning; and
- Travel to national and regional conferences, where appropriate.

**Evaluation of Instructional Coaches**

Given the nature of instructional coaching, the evaluation process requires different standards, forms, and processes than districts and schools typically use. The International Reading Association, National Council of Teachers of English, National Council of Teachers of Mathematics, National Science Teachers Association, and National Council for the Social Studies have collaborated to determine appropriate standards for literacy coaches, summarized in Figure 2.2, seen on the next page.66

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Figure 2.2: Standards for Literacy Coaches

<table>
<thead>
<tr>
<th>LEADERSHIP STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STANDARD 1: SKILLFUL COLLABORATORS</strong></td>
</tr>
<tr>
<td>Content area literacy coaches are skilled collaborators, who function effectively in middle school and/or high school settings.</td>
</tr>
<tr>
<td><strong>STANDARD 2: SKILLFUL JOB-EMBEDDED COACHES</strong></td>
</tr>
<tr>
<td>Content area literacy coaches are skilled instructional coaches for secondary teachers in the core content areas of English language arts, mathematics, science, and social studies.</td>
</tr>
<tr>
<td><strong>STANDARD 3: SKILLFUL EVALUATORS OF LITERACY NEEDS</strong></td>
</tr>
<tr>
<td>Content area literacy coaches are skilled evaluators of literacy needs within various subject areas and are able to collaborate with secondary school leadership teams and teachers to interpret and use assessment data to inform instruction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTENT AREA STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STANDARD 4: SKILLFUL INSTRUCTIONAL STRATEGISTS</strong></td>
</tr>
<tr>
<td>Content area literacy coaches are accomplished middle and high school teachers who are skilled in developing and implementing instructional strategies to improve academic literacy in the specific content area.</td>
</tr>
</tbody>
</table>

Source: The International Reading Association

While created specifically for instructional coaches who support literacy professional development in secondary education settings, the standards could be adapted easily for a variety of instructional coaches. Furthermore, the International Reading Association acknowledges that these standards represent an ideal and that few coaches will meet all of these standards at the outset. Research suggests that “it takes two to three years for most [new coaches] to develop the full complement of coaching skills.”

The FCPS Standards of Performance, Guidelines, and Expectations for Instructional Coaches are similar to the International Reading Association standards. FCPS defines standards within five areas:

- Planning and Assessment
- Instruction
- Learning Environment
- Human Relations and Communication Skills
- Professionalism

The FCPS standards emphasize that the coach “guides and assists” teachers in a range of tasks related to improving teaching and learning. The standards focus both on the coach’s knowledge and his or her ability to effect instructional improvements in collaboration with teachers. Furthermore, the standards note the importance of the coach communicating,

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67 Ibid., p. 5.
68 Ibid.
70 Ibid.
collaborating, and forming healthy, strong relationships with educators. FCPS expects coaches to support all professional learning in the district and articulate their efforts with other professional development activities, while also engaging in instructional coach training.

According to Knight, evaluation is a “major mechanism for continuous improvement,” though the process is not without challenges.71 One such difficulty stems from the fact that no one in the district may have been a coach previously. To address this issue, Knight suggests a process that some districts have implemented, which is to include coaches in the creation of guidelines, standards, and tools for use in the evaluation process. This approach helps ensure that all stakeholders are in agreement on the expectations for coaches, while also encouraging buy-in and providing an opportunity for coaches to develop a better understanding of their objectives and goals.

FCPS officials consider the creation of guidelines through an inclusive process to be an important improvement made in the second year of the district’s program. The program manager at FCPS notes that designing an evaluation specific to instructional coaches was a major step for the program at the time:

One significant advance is the development of a performance evaluation, specifically designed for the role of instructional coaches. This evaluation tool was developed with input from the CIC program manager, educational consultants, instructional coaches, personnel from the Department of Human Resources, several CAS, and principals.72

To accommodate the unusual nature of the program, supervision of the management and evaluation purposes is split between different actors.73 An evaluation process with joint supervision is unusual for FCPS, but the district has experienced success with the process so far.74

Administrators in Spokane Public Schools use one evaluation form for both instructional coaches and mentors. Spokane Public Schools serve nearly 30,000 students, 57 percent of whom qualify for free or reduced-price meals.75 A version of the district’s evaluation form, last edited in 2007, is publicly available online, but is too extensive to reproduce in full here.76 The form evaluates the coach on a three-tiered scale—satisfactory (S), requires improvement (R), or unsatisfactory (U) — as well as each of the following categories:

- Instructional Skills
- Classroom Management

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74 Ibid.
75 “District Profile.” Spokane Public Schools. http://www.spokaneschools.org/Page/54
- Handling of Student Discipline and Attending Problems
- Interest in Teaching Pupils
- Knowledge of Subject Matter
- Professional Preparation and Scholarship
- Professional Characteristics
- Effort toward Improvement When Needed

Within each area, evaluators rate instructional coaches on a number of objectives. The most extensive area of review is the instructional skills section, which assesses instructional coaches’ performance in planning model lessons, teaching model lessons, and assisting teachers in a variety of ways, including assisting teachers in the assessment of student work.

While the need for thorough evaluations is clear, the appropriate frequency of evaluation is not as well-defined in the literature. The evaluation form for Spokane Public Schools presents the options for evaluation type as annual, 90-day, or other. The District of Columbia Public Schools (DCPS) offers a more extensive discussion of the frequency and logistics of evaluation for instructional coaches. DCPS serves more than 45,000 students in Washington, DC, and approximately three-quarters of all students are eligible for free or reduced-price lunches. The district assesses proficiency in instructional coaching standards four times over the course of the year. The coach’s administrator conducts two assessments, the first by December 20 and the second by June 10. A representative from the DCPS Office of Curriculum and Instruction conducts the other two assessments, the first by February 15 and the second by June 10. The administrator observes the coach for at least 30 minutes during each cycle, while the coach conducts a debriefing with a teacher, helps set goals or analyze data with a teacher, or implements support in a classroom. The district publishes its standards and ratings methodology for instructional coaches online.

Allocating Time and Resources

With limited resources available for professional development, districts must carefully assess how many coaches they can afford and how these coaches should be deployed to maximize their impact. While many districts attempt to provide all schools with at least some instructional coaching time, researchers Barbara Neufeld and Dana Roper warn that

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77 Bullets taken verbatim from: Ibid.
78 Ibid.
   http://www.dc.gov/DCPS/About+DCPS/Who+We+Are/Facts+and+Statistics
spreading coaching resources too thinly may ultimately limit the model’s impact. Arrangements where coaches work within a school for only one or two days a week tend to lack the continuity required to build formative teacher-coach bonds and create an impractical workload for coaches. Instead, most practitioners suggest that a coach is embedded in a single school for at least four days each week, with a fifth day reserved for preparation, data analysis, and personal professional development.

Researchers with the Kansas Coaching Project note that the most basic way to increase the effectiveness of a coaching program is to increase the amount of time coaches spend interacting with and guiding teachers. Therefore, beyond the number of days when an instructional coach is embedded in a given school, the more detailed allocation of time spent on various activities is an important consideration. Instructional coaches at Fairfax County Public Schools, for example, spend approximately 60 percent of their time working with teams of teachers, 30 percent working with teachers individually, and 10 percent working toward their own professional development (Figure 2.3).

![Figure 2.3: Allocation of Coaching Time, FCPS](http://www.fcps.edu/pla/opp/ic/2011_12/TimeAllocation.pdf)

Source: Fairfax County Public Schools

In order to maximize coaching resources, many schools and districts have implemented group-based instructional coaching models. A review of current research and district coaching guidelines suggests that using group-coaching techniques in tandem with individual coaching is a common practice throughout the K-12 context. For example, the “Collaborative Coaching and Learning” model developed by Boston Public Schools (BPS)

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83 Ibid. p. 20.
divides teachers into small teams that collaboratively decide which instructional strategies they would like to further explore. The coaching model then uses three unique elements – inquiry, lab site, and follow up – during which the coach interacts with the teachers in groups and individually to provide guidance on the selected pedagogies (Figure 2.4). The BPS model allows the district to maximize its coaching resources, while ensuring sufficient teacher-coach contact time and creating the opportunity for more advanced collaborative learning between teachers.

**Figure 2.4: Core Coaching Elements, BPS**

<table>
<thead>
<tr>
<th><strong>ELEMENT</strong></th>
<th><strong>DESCRIPTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry</td>
<td>With the coach, the team meets weekly to review and discuss readings and research on their course of study.</td>
</tr>
<tr>
<td>Lab Site</td>
<td>Each week, the teachers and coach take turns observing and teaching in a host classroom — using strategies they have studied in their inquiry — and analyzing the strategy’s effectiveness in a debrief after each session. Each lab site begins with a pre-conference in which the team reviews the purpose of the lesson and agrees on what to watch for.</td>
</tr>
<tr>
<td>Follow-Up</td>
<td>The coach and/or members of the teacher team make visits to individual classrooms, and further discuss the lesson’s effectiveness.</td>
</tr>
</tbody>
</table>

Source: Boston Public Schools

The existing literature base provides little information regarding the optimal size for instructional coaching cohorts. A review of district-level documents reveals that cohort size is generally determined by the district, and is likely influenced by a number of budgetary and resource considerations. In a research setting, Knight and Cornett assume a ratio of one coach per school, though the authors note that available resources are likely to vary widely depending on the setting. Similarly, researchers with the Alliance for Excellent Education recommend a staffing ratio of approximately one coach for every 20 classroom teachers. In practice, instructional coaches appear to be more sparsely allocated. The instructional coaching program at Fairfax County Public Schools, for example, currently employs 69 elementary coaches, 14 middle school coaches, and seven high school coaches, for an average of one coach for every two school sites.

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90 Text reproduced verbatim from: Ibid.
94 Note, however, that FCPS still places coaches in specific schools, commenting that it has 85 schools (of 196 sites) participating in its instructional coaching program. Instructional coaches assist schools without such personnel by designing and leading professional development activities on their behalf. See: “Program Profiles: Instructional Coaching Program.” Fairfax County Public Schools. Op. cit.
SECTION III: Profiles

In this section, Hanover Research presents profiles of two instructional coaching models employed by school districts – Dallas Independent School District and Ithaca City School District – as well as a professional development model for coaches developed by The Ohio State University: The Mathematics Coaching Program. Each profile seeks to emphasize elements of model design, roles and responsibilities of various actors, evaluation criteria, and data collection tools.

DALLAS INDEPENDENT SCHOOL DISTRICT

Dallas Independent School District (DISD) is a large, urban school district serving the City of Dallas and enrolling approximately 160,000 students across more than 240 K-12 schools.95 In 2005, DISD partnered with the Institute for Learning at the University of Pittsburgh to develop and implement a district-wide instructional coaching framework.96 The program was primarily developed to improve educational outcomes at underperforming schools by providing consistently high-quality professional development opportunities to educators. The DISD instructional coaching model is largely informed by research conducted by the Kansas Coaching Project and includes four primary components:

- Instructional Capacity Building;
- Communication Follow-Up;
- Coaching Roles; and
- Instructional Coaching Tools.

As part of the Instructional Capacity Building component, DISD coaches are expected to work closely with classroom teachers to provide pedagogical support, navigate the district’s Curriculum Planning Guide, and develop effective lesson plans. DISD coaches are also expected to remain up-to-date regarding developments in various content areas and provide targeted professional development to improve the quality of instruction. Following classroom observations, instructional coaches provide comprehensive Communication Follow-Up, detailing a teacher’s strengths and areas for improvement within a given lesson plan. Instructional coaches also act as a liaison with building-level administrators and the Campus Instructional Leadership team to develop additional professional development programs that are aligned to the school’s immediate needs.

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The DISD Instructional Coaching Tools component involves the development of teacher’s institutional knowledge. Coaches are expected to impart significant knowledge related to the school and district’s curricular guidelines, planning tools, data management platforms, and help develop differentiated instructional methods for non-native English language students, special education students, and students of exceptional abilities. Finally, the DISD model describes a number of Coaching Roles for instructional coaches, including classroom observation, planning assistance, curriculum review, professional development, and data analysis.

Prior to the 2012-2013 academic year, DISD reorganized the instructional coaching program to better align with the district’s restructured School Leadership Department and to make the system more immediately responsive to schools’ needs. While the DISD model was previously highly centralized, the 2012-2013 reorganization is characterized by a high-level of decentralization, with coaches reporting to Division Assistant Superintendents. Each division was assigned a number of coaches with expertise in the four basic content areas – English-language arts, mathematics, science, and social studies – before these coaches were assigned to different schools within the division. Additionally, the DISD restructuring placed a staff of 25 coaches with expertise in dual or foreign language directly under the authority of the Multi-Language Enrichment Program.

The DISD budget for the district-wide instructional coaching program for 2009 through 2012 is depicted in Figure 3.1 below. The 2012-2013 budget includes salaries for 85 instructional coaches and the expenses associated with the professional development of these instructional coaches. It should be noted that declining financial allocations for the instructional coaching program are primarily associated with personnel reductions, and that the budgets for the 2009 through 2011 academic years do not include professional development expenditures.97

Figure 3.1: DISD Instructional Coaching Budget, 2009-2012

<table>
<thead>
<tr>
<th>Department</th>
<th>2009-2010</th>
<th>2010-2011</th>
<th>2011-2012</th>
<th>2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language Arts</td>
<td>$3,529,608</td>
<td>$3,709,646</td>
<td>$2,447,026</td>
<td>$1,634,216</td>
</tr>
<tr>
<td>Mathematics</td>
<td>$2,826,020</td>
<td>$2,485,521</td>
<td>$3,099,667</td>
<td>$1,950,516</td>
</tr>
<tr>
<td>Social Studies</td>
<td>$639,090</td>
<td>$738,981</td>
<td>$557,214</td>
<td>$1,370,633</td>
</tr>
<tr>
<td>Science</td>
<td>$2,064,019</td>
<td>$2,217,884</td>
<td>$1,967,072</td>
<td>$316,300</td>
</tr>
<tr>
<td>Total</td>
<td>$9,058,737</td>
<td>$9,152,032</td>
<td>$8,070,979</td>
<td>$5,271,665</td>
</tr>
</tbody>
</table>

Source: Dallas Independent School District98

Ithaca City School District

Ithaca City School District (ICSD) is a small, urban school district in Upstate New York enrolling nearly 5,500 students across 12 elementary, middle, and high schools. In spring 2013, ICSD administrators established a formal partnership with the Cornell Institute for Public Affairs (CIPA) at Cornell University to create an instructional coaching framework. Informed primarily by a review of the current literature base, CIPA researchers developed a comprehensive implementation, evaluation, and communications plan for ICSD’s new instructional coaching program, all with the ultimate goal of developing tangible improvement of teaching, learning, and student performance across the district.

Citing various budgetary and roll-out concerns, ICSD elected to pilot the program in a limited number of schools during the first year of implementation before further disseminating the model in subsequent years. While this type of piloting is generally advisable for educational reform measures, it does present some limitations with regard to the information presented in this report. First, since the program has just completed its first year of piloting, no information regarding the model’s efficacy is currently available. Secondly, information related to proposed changes in the implementation plan based on first-year data cannot be assessed. Nevertheless, given the publicly available information on the district’s program, as well as its partnership with a well-respected institution of higher education, we believe the ICSD example is instructive.

The ICSD plan calls for coaches to work with teachers in six-to-eight week cycles, with each cycle including planning, co-taught lessons, lesson debriefing, and post-observation conferences, similar to those presented in Figure 1.1 of this report (Knight’s seven components of instructional coaching). ICSD coaches typically work with between six and eight teachers each cycle, allowing for interaction with up to 56 teachers each academic year. ICSD coaches are also required to document a host of data associated with each teacher, including student test scores, to help determine where the relationship has been successful and where the teacher and coach can continue to improve performance.

The ICSD plan clearly establishes roles and responsibilities for each of the critical stakeholders involved in the instructional coaching model. Before the school year begins, instructional coaches perform a needs assessment to develop an understanding of the critical areas for development at their specific site, and create a generalized monthly schedule for the administration of coaching activities. Coaches then work to design a support model, including prospective data sources, and begin to communicate their plan with teachers and administrators throughout the school. Instructional coaches employed by ICSD also have an obligation to take an active role within the district’s various professional

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learning communities (PLCs), and are expected to attend PLC meetings on at least a weekly basis.

Instructional coaches at ICSD also typically meet with building-level administrators approximately once a month to check-in on teacher and student progress. While regular communication between coach and principal is required, the nature of the relationship is fairly open-ended and typically determined by mutual agreement between the two stakeholders. Informed largely by Spokane Public Schools’ model and sharing similarities with Deerfield Public Schools’ model discussed previously, ICSD suggests clear roles for all stakeholders in the instructional coaching program, as elaborated in Figure 3.2 below.

### Figures 3.2: Roles and Responsibilities of Stakeholders, ICSD

<table>
<thead>
<tr>
<th>ROLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaches</td>
<td></td>
</tr>
<tr>
<td>Classroom Supporter</td>
<td>Providing descriptive feedback based on teacher requested observation</td>
</tr>
<tr>
<td>Instructional Supporter</td>
<td>Building teacher capacity by working with intervention groups for short periods of time in elementary classrooms</td>
</tr>
<tr>
<td>Curriculum Specialist</td>
<td>Promoting implementation of state standards through adopted curricula</td>
</tr>
<tr>
<td>Data Coach</td>
<td>Facilitating conversations using data to drive instructional decisions</td>
</tr>
<tr>
<td>Resource and School Leader</td>
<td>Identifying a variety of resources to enhance classroom instruction and student achievement</td>
</tr>
<tr>
<td>Instructor</td>
<td>Reflecting, refining, and implementing effective instructional practices to increase student achievement</td>
</tr>
<tr>
<td>Learning Partner</td>
<td>Engaging in professional collaborative relationships</td>
</tr>
<tr>
<td>Assessor</td>
<td>Participating in data conversations that influence instructional decisions</td>
</tr>
<tr>
<td>Principals</td>
<td></td>
</tr>
<tr>
<td>Communicator</td>
<td>Building understanding of the interconnectedness of the coaching model school improvement plans, and district initiatives</td>
</tr>
<tr>
<td>Facilitator</td>
<td>Collaboratively planning and coordinating professional learning</td>
</tr>
<tr>
<td>Instructional Leader</td>
<td>Supporting coaches and teachers in the coaching model</td>
</tr>
</tbody>
</table>

Source: Ithaca City School District.

The ICSD plan also specifies the amount of time instructional coaches should allocate to each of their responsibilities. In general, **coaches are expected to spend approximately 50 percent of their time working in a classroom setting with teachers**, working on co-planning, skills demonstrations, co-teaching, facilitating peer observations, and collecting data. Coaches are then expected to spend 15 percent of their time working for teachers, including locating resources and planning/preparing for professional development. Finally, coaches should spend approximately 35 percent of their time working to further develop an instructional coaching toolkit and completing other necessary tasks, such as liaising with administrators and attending staff meetings.
MATHEMATICS COACHING PROGRAM

The Mathematics Coaching Program (MCP) was developed in the early-2000s by researchers at The Ohio State University (OSU), with financial support from the Ohio Department of Education (ODE). The MCP is a professional development-based intervention designed to improve teaching and learning in mathematics in Ohio’s K-12 schools. Currently working with nearly 40 districts and 50 schools across the state, the MCP pursues three primary objectives in partner schools:

- Improving student achievement;
- Strengthening teacher and coach mathematics content knowledge; and
- Strengthening teacher and coach knowledge in mathematics pedagogy.

Though administered with centralized support from OSU personnel, districts participating in the MCP generally operate a fairly generalized model of instructional coaching. Districts begin by initiating a partnership with the MCP and hiring one or more instructional coaches (Figure 3.3). The MCP then provides comprehensive professional development for these coaches, including twice-monthly seminars at the OSU campus and monthly small-group meetings with peer coaches, for a period of up to three years. Coaches then co-teach with three to four teachers over the course of six weeks. At the end of the six-week cycle, coaches begin to form a working relationship with a new set of three to four teachers.

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107 Ibid.
The MCP model is designed to be curriculum independent, providing instructional approaches that focus on critical and widely applicable features of instruction.\textsuperscript{107} The expectation is that teachers will use the existing curriculum as a framework for connecting conceptual and procedural knowledge, while using instructional techniques that are well-aligned to student needs and interests. Teachers and coaches are, however, encouraged to review curriculum and evaluate student performance on exams and work to assess if any curricular enhancements may result in greater student learning opportunities. In particular, the MCP recommends four general types of changes that coaches may use to enhance curriculum:\textsuperscript{108}

- Improving a problem within the existing curriculum;
- Adding problems or activities where there is a gap in the curriculum;
- Incorporating the National Council of Teachers of Mathematics’ Process Standards into the curriculum; and
- Adding problems or an activity where there have been recognized gaps in student learning.

School districts participating in the MCP have used a variety of methods to secure funding for instructional coaches’ salaries. Many schools use federal Title I funding or reallocate Title I funds previously used for pull-out and other professional development programs.\textsuperscript{109} Furthermore, many of the participating districts appear to hire coaches who have previously worked as math teachers in the district, but were replaced with first-year teachers and long-term substitutes as low-cost options.\textsuperscript{110}

\textsuperscript{108} Ibid.
\textsuperscript{110} Ibid.
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