CHAPTER 1

From Supervision to Support

Principal Supervisor June Wright scanned the faces of the four fourth-grade teachers sitting around the table.¹ She wondered how well they were following the conversation that their principal, Michael Maxwell, was leading. Principal Maxwell was trying to share what he saw when he observed their classrooms and help the teachers to discuss the quality of their teaching. He was concerned that math achievement for African American boys in the fourth grade had dipped significantly, and when he visited fourth-grade classrooms he saw the teachers talking with some African American boys in ways that likely contributed to their disengagement. But now the teachers were mostly sharing how the curriculum the central office required was not working for them, how disruptive some students were, and how a few parents were taking up their time with all sorts of complaints.

As part of his professional learning plan that he developed with Principal Supervisor Wright, Principal Maxwell was trying to get better at having such challenging conversations with teachers, but without much success. To supplement Principal Maxwell’s efforts to lead his own learning, Principal Supervisor Wright had demonstrated for Principal Maxwell how to have such conversations, showing how to share observational
data to paint a detailed picture of the quality of teaching and the implications for the school’s equity goals and the experience of individual students. In the process, Principal Supervisor Wright had modeled how to use particular questioning strategies to help teachers honestly and critically consider the quality of their teaching in ways that motivated them to try new approaches. But now that Principal Maxwell was trying those moves himself, teachers were pushing back on the data and avoiding the main discussion points.

At one point, Principal Supervisor Wright turned to Principal Maxwell and interjected, “Principal Maxwell, they are saying that not all the student results are because of the classroom teaching. Maybe they are right. What if you asked them to play out some alternative explanations and discuss their pros and cons? Try keeping them focused on better understanding the problem the data are showing you.”

As the discussion continued, Principal Maxwell invited rather than resisted the teachers’ various explanations for the student results, and then said, “Now, for just a few minutes let’s set aside what we can’t control and focus on what we can. Let’s assume these data are telling us something we care about that we may not be great at yet. You see me here with my boss helping me do something I’m clearly not great at yet. We all have those things. What do we wonder about how we might be a part of what’s going on?”

As the conversation unfolded, one teacher commented, “I didn’t even realize that I was blaming students and other things rather than looking at the data to understand what I am doing. And we just had that implicit bias training, right? And here I am, not seeing what I’m not seeing.” Another teacher said, “I think I got distracted, because you were saying I was not doing anything for those kids. I know that Myles is a challenge for me, but I don’t think that’s typical of what I am doing.”

Principal Maxwell acknowledged the importance of the group working together to sharpen what they see about their practice. He agreed that he made general comments about the experience of African American boys, based on the school’s broad test score trends, but of course each child is different and he and his staff all have to commit themselves to truly seeing each and every student. He said that for his part he would
focus the next round of his classroom observations on being even more specific about how the teachers’ engagement with individual African American boys may vary in their classrooms and help the teachers make sense of what to do next. He encouraged them to observe one another’s practice and think of other evidence they could bring to “really make their teaching visible.”

These scenes increasingly play out in school districts across the country: school principals dedicating their time to supporting their teachers’ success—especially with students of color, students who qualify for services for English language learners, students from families living in poverty, and other students public school systems have historically underserved—and principal supervisors helping principals learn how to get better at doing so. These scenes bode well for actually improving principal leadership, quality teaching, and student learning.

Educational research continues to reinforce the idea that teaching is the most important school-related influence on student learning and that principals’ leadership is essential to helping teachers succeed—a form of principal leadership sometimes called instructional leadership. Principals strengthen their instructional leadership when they take intentional steps during their regular workday to learn how to improve that leadership, often alongside others, much like how doctors and other professionals engage in ongoing on-the-job learning with various mentors throughout their careers.

Based in part on such research and their own experience as principals, some district leaders have charged Wright and other principal supervisors with helping their principals learn to lead for excellent classroom teaching for each and every student. By asking principal supervisors to focus their time in this way, district leaders are saying that the job of helping principals grow as instructional leaders is so important to students’ success that it should also be the core work of their supervisors. In some smaller districts where the superintendent supervises principals, the superintendents themselves are rethinking
how they work to maximize their time and effectiveness supporting principals’ instructional leadership.

But when Wright and other principal supervisors dedicate themselves to helping principals grow as instructional leaders, they typically are swimming against the tide of central office “business as usual.” While central offices have been around for over a century, only within the past two decades have policy and research begun to emphasize ensuring excellent teaching and learning as a main responsibility of school district central offices—almost a hundred years into central office’s history.

Wright’s principal certification program was one of the first in the country to emphasize principal leadership for teaching and learning improvement and educational equity specifically. Principal supervisors like Wright describe that when they first started out in the principalship, they were part of the new generation that took leadership for high-quality teaching and learning as a given. They loved classroom teaching and became principals in part to give other teachers the support they wished they had received from their own principals to help each student succeed.

But once they became school principals, they found little time each day to work with their teachers on teaching and learning. Instead, despite their districts’ formal emphasis on instruction, too many of their teachers, parents, central office leaders, and community members expected them to be a jack-of-all-trades, ensuring the smooth operation of their school as well as engaging parents, supervising lunch and recess, managing the school budget, dealing with discipline and conduct, and attending school and community events.

The professional development that central offices provided for principals typically reinforced this broad operations and compliance orientation to the role. As a principal, Wright met with other principals about once a month at the central office headquarters downtown as part of her professional development. In those meetings, central office staff delivered information on district policies and procedures, usually concerning operational and compliance matters such as new
safety rules, budgeting reporting templates, and graduation requirements. As their districts increased the emphasis on instructional improvement, the meetings promised professional development related to instructional matters. But the sessions still mostly focused on the delivery of information—such as updates on new state instructional standards—and not activities to strengthen principals’ ability to lead for high-quality teaching and learning.

Upon their promotion to principal supervisor, leaders like Wright found that principal supervision was cut from the same mold—largely consumed with operations and compliance matters, such as tracking down requests for building repairs and evaluating principals, with little time to support principals’ leadership of teaching and learning. For example, when we asked a team of principal supervisors in a midsized district simply, “What is your job?” we filled seven pages of chart paper with comments such as:

- Help with staffing
- Graffiti removal
- Getting coaches for teachers
- The high school steering committee
- Monitoring implementation of the superintendent’s priorities
- Parent questions
- Principal hiring
- Principal evaluation
- Sounding board
- Email responder
- Budget
- Conflict mediator

Superintendents in smaller districts who served as principal supervisors also described spending most of their time on community and school board relationships as well as overall district management with very little focus on instruction. One superintendent, with a central office of ten other staff, pulled out his calendar, which showed that in the last week he had attended the football game, fixed budget issues, dealt with a school bus repair, talked with the newspaper about the summer meal program, and met with parents. These superintendents spent a great deal of time with principals in meetings in the central office and in schools generally—engaging with parents and listening to teachers and principals about their successes and concerns—but not working with principals intensively on the quality of their instructional leadership.
These principal supervisors understood that operations, compliance, and principals’ instructional leadership were not necessarily mutually exclusive. One explained that particular kinds of budgeting, school staffing models, and strategies for facilities management, for example, are fundamental to excellent teaching and learning; helping principals grow in those areas was important to principals’ development as instructional leaders. But too often, principal supervisors do not take an instructional improvement focus to that work, instead mainly helping or telling principals to get budgeting, staffing, and facilities done, rather than supporting their leadership in those areas in ways that foster teaching and learning improvement. Or, principal supervisors end up addressing operational and compliance matters themselves in an effort to free up time for focusing on instructional leadership. But absent other changes in their central offices, that work can become endless and ultimately consume their relationship with their principals.

So, when we say that principal supervisors who focus on principals’ growth as instructional leadership are swimming against the tide of central office business as usual, we mean that they are 1) teaching principals how to engage in a relatively recent and fundamental shift in their own role to center their leadership on high-quality classroom teaching and learning, 2) supporting principals’ instructional leadership growth in ways that their central office has not traditionally emphasized, and 3) doing so in a role that principals and others throughout their system have counted on for other things.

How are principal supervisors making these promising, but challenging, fundamental shifts? With what results? What conditions help or hinder their progress? This book takes up these questions, which lie at the heart of how school districts are working to ensure excellent teaching and learning for each and every student as part of their broader efforts to address inequitable educational opportunities and outcomes. Our findings come from two systematic, empirical investigations in nine school districts of various sizes where principal supervisors were charged with shifting their focus from mainly operations and
compliance to helping principals grow as instructional leaders. (See table 1.1.)

These investigations involved hundreds of hours of real-time observations of principal supervisors working with their principals. We also draw on our experience partnering with school districts across the country over the past decade, helping them use the ideas from the research to redesign principal supervision and otherwise transform their school district central offices into engines of educational equity. (For more on our research study and methods, see the Note on Methodology at the end of the book.)

Using extended cases and detailed examples, we show that some principals grew in their focus on and engagement in instructional leadership, while others either did not or did so despite their principal supervisor. The differences in their principal supervisor’s work with them were clearly aligned with these dichotomous results. The principal supervisors in the positive cases took what we call a teaching

<table>
<thead>
<tr>
<th>TABLE 1.1</th>
<th>Study sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRICT</td>
<td>APPROXIMATE NUMBER OF STUDENTS DURING STUDY PERIOD</td>
</tr>
<tr>
<td>Study 1 2007–2008</td>
<td></td>
</tr>
<tr>
<td>1A</td>
<td>200,000</td>
</tr>
<tr>
<td>1B</td>
<td>55,000</td>
</tr>
<tr>
<td>1C</td>
<td>40,000</td>
</tr>
<tr>
<td>Study 2 2011–2012</td>
<td></td>
</tr>
<tr>
<td>2A</td>
<td>50,000</td>
</tr>
<tr>
<td>2B</td>
<td>19,000</td>
</tr>
<tr>
<td>2C</td>
<td>2,000</td>
</tr>
<tr>
<td>2D</td>
<td>5,000</td>
</tr>
<tr>
<td>2E</td>
<td>5,000</td>
</tr>
<tr>
<td>2F</td>
<td>3,000</td>
</tr>
</tbody>
</table>
and learning approach to supporting principals’ growth as instructional leaders; they helped principals lead their own learning and mentored them directly using distinct teaching and learning moves such as modeling and differentiation. By contrast, the principal supervisors in the other cases tended to engage in traditional principal supervision with an emphasis on directing, monitoring, and evaluating principals.

We identify specific conditions that district leaders can put in place to increase the chances that their principal supervisors will take a teaching and learning approach over time and grow in their ability to do so. We caution districts about overrelying on outside coaches and instead highlight the importance of district leaders hiring people with the right prior knowledge, positioning the supervisor of principal supervisors as a main support for principal supervisors’ growth, and helping principal supervisors lead their own learning.

But first, in the rest of this introductory chapter, we put the work of our nine study districts—and the many others with whom we have worked—in research and historical context. This context illuminates the promise of the districts’ initiatives that emphasized principals’ growth as instructional leaders as well as the fundamentally new direction these initiatives represented for school district central offices and principal supervisors in particular. We then describe common elements of the district initiatives and how we approached our data collection and analysis to capture implementation as it unfolded in real time. We conclude by summarizing each of the next chapters and highlighting what’s ahead in this volume.

Our goals are that, by the end of this chapter, readers will: deepen their appreciation of the importance, promise, and challenge of the reforms in principal supervision our study districts set out to make; understand that the reforms centered instructional leadership as the core of a principal’s work and positioned principal supervisors as the main supports for principals’ instructional leadership growth; and learn how they might use this volume as a resource for driving deep and meaningful change in their settings, whether they are central of-
fice leaders, school principals, policy makers, funders, school support providers, or researchers, among others.

THE PROMISES AND CHALLENGES OF PRINCIPALS’ INSTRUCTIONAL LEADERSHIP

District leaders’ efforts to focus the principalship on instructional leadership are promising in that they reflect a growing base of research that, over the past two decades, has shown that principals are an important influence on teaching and student learning. For example, Leithwood and colleagues demonstrated that school leadership “is second only to teaching among school-related factors in its impact on student learning.” Other studies have associated principals’ engagement in instructionally related activities, including defining their school’s mission, managing their instructional program, and promoting a positive learning climate, with such results as sustained high student achievement on state test scores. These and other studies suggest that district efforts to focus principals on leading for high-quality teaching and learning bode well for such results.

But calls for principals to operate as able instructional leaders come relatively recently in the history of the principalship and therefore likely pose challenges for districts trying to realize high-quality principal instructional leadership at scale. For much of the history of public schooling, principals have been expected to operate as strong school managers—making sure teachers were licensed, students attended class, cabinets remained stocked, and hallways were safe—not as leaders of teaching quality, let alone the kind of teaching that interrupts centuries-old educational inequities and ensures excellent educational opportunities and outcomes for each and every student. Larry Cuban famously called this dynamic the “managerial imperative,” where administrative work overrode other commitments for school leaders, including those related to the quality of teaching and learning.

Only starting in the 1990s did research on the principalship gain steam and begin to identify principals’ instructional leadership as a
key element in school improvement.\textsuperscript{12} In 1996, the Council of Chief State School Officers, the National Governors Association, colleges of education, and school support organizations codified some of this research in the first-ever national standards for principals. These standards defined instructional leadership as including tasks such as setting a widely shared vision for learning, developing a school’s culture and instructional program, and managing the school to ensure a safe and effective learning environment for each and every student.\textsuperscript{13}

And though the federal government significantly increased its role in education starting in the 1960s and 1970s, not until the early 2000s did federal policy make funding available specifically to support the quality and effectiveness of principal leadership for excellent teaching and learning.\textsuperscript{14}

So district efforts to define and support the principalship as instructional leadership now have the support of national standards and new funding. But these efforts still come nearly a century into the history of the school principalship. Some principals currently in the role likely were teachers in schools whose principals did not emphasize instructional leadership and participated in principal preparation programs that did not either. Those principals are now being asked to focus their leadership on instruction after many years of preparation and focus elsewhere.

Even if you are a principal who has always understood your role as leading for high-quality teaching and learning, engaging in such leadership is no simple task. Research has come to identify a progressively challenging array of tasks and activities that instructional leadership entails. For instance, this research shows that principals operate as able instructional leaders not just when they foster a positive culture but also when they cultivate a “learning climate” characterized by safety, rigor, and an emphasis on college-going for all students; “program coherence” among the instructional initiatives at a school; and “quality professional development.”\textsuperscript{15} Early studies called on principals to visit classrooms and observe teaching as a main part of professional development. More recent work clarifies that such observations can support high-quality teaching when they
help principals give teachers intentional feedback over time about their strengths and areas for growth in instruction.\textsuperscript{16}

Instructional leadership involves fostering the leadership of others—teachers, high school department heads, and other staff—to support the schools’ overall approach to teaching and learning improvement.\textsuperscript{17} Similarly, principals operate as able instructional leaders when they support teachers working in teams, sometimes called professional learning communities (PLCs), to strengthen the quality of their teaching and student learning.\textsuperscript{18} For instance, principals positively influence teachers’ participation in PLCs and other teacher teams by shaping a school vision that encourages all teachers to work collaboratively toward school goals and setting up space and time for teachers to collaborate.

Research further suggests that principals operate as able instructional leaders when they not only develop the teachers they have, but also pay careful attention to how they recruit, select, and place teachers to ensure that the teachers are the right fit for both the school and the position.\textsuperscript{19} Such leadership often means engaging in “strategic retention,” or creating school conditions that encourage a school’s most effective teachers to stay and thrive while also helping teachers who are less effective or less of a fit with the school to move on.\textsuperscript{20}

More recently, scholars working from a critical race perspective have emphasized the importance of an antiracist, culturally responsive approach to school leadership.\textsuperscript{21} When principals take such an approach, they intentionally identify and actively dismantle school practices and systems that have perpetuated educational inequalities and rebuild them in ways that center support for students who have historically experienced disparities based on race, class, ability, gender, sexuality, or language and other identity markers.\textsuperscript{22} In this view, principals play pivotal roles in continually interrogating and reflecting on how their own racial, gender, and other positionalities influence their leadership, modeling for other staff how to engage in such critical self-reflection, helping teachers use culturally responsive pedagogy and curricula, and forging trusting, honest, and collaborative relationships with families and communities that value each student’s cultural strengths.\textsuperscript{23}
And despite calls to end the managerial imperative, principals with strong orientations to their role as instructional leaders still struggle to protect their time for instructional matters. For example, in one study such principals talk about being buried in paperwork, including hundreds of emails, and other administrative and largely regulatory demands, and spending considerable time on non-instructional matters such as health screenings.

In sum, district calls for principals to operate as instructional leaders are promising for realizing high-quality teaching and learning districtwide. Yet, due to the relative newness of that emphasis, the various tasks and activities instructional leadership entails, and the persistent demands on principals’ time, realizing high-quality principal instructional leadership in individual schools and throughout entire districts poses significant challenges.

WHAT’S THE CENTRAL OFFICE (AND PRINCIPAL SUPERVISORS) GOT TO DO WITH IT?

The leaders of the districts we feature in this book understood the promise of principal instructional leadership. They knew that if their principals were to operate as able instructional leaders, their central offices had to step up and support them in doing so. Some knew well the successes in New York City District #2 in the 1990s, where Superintendent Tony Alvarado and others developed comprehensive supports for principals’ instructional leadership, and they took inspiration from that example. But actually providing that support also posed significant challenges for central offices that more typically had little success in promoting teaching and learning improvement generally, let alone principal instructional leadership specifically.

A common refrain in studies of various school improvement efforts—including effective schools, comprehensive school reform, site-based management, school autonomy initiatives, and standards-based reform—is that district central offices interfere with implementation, even in cases where district leaders themselves launched the initiative. In some instances, district central offices got too involved with implementation by placing demands on schools that interrupted their
improvement efforts. In others, the district central offices hampered instructional improvement by providing too little oversight, training, and support.

Central office administrators’ limited understanding of teaching and learning also has impeded the implementation of various standards-based curriculum reform initiatives across subject matter areas. Long-standing norms in central offices have clashed with initiatives to promote educational equity. Weak and inequitable channels of communication and trust between central offices and schools frustrate school improvement efforts and actually negatively impact a district’s lowest performing schools.

Superintendents and other individual central office leaders frequently bear the blame for implementation failures. But these leaders work in central office systems that were not designed to drive instructional improvement in the ways that policy and research now demand or to support principals’ instructional leadership specifically. Turning back to history reveals that school district central offices were set up in urban areas at the turn of the last century to handle the “Americanization” of immigrants and bring Progressive Era ideas about the managerial imperative into the running of school systems. Then new federal funding streams for rural schools likewise fueled the creation of school districts to manage finances as well as to raise local funds on which receipt of federal funds was contingent. And over the first half of that century, in tandem with the principalship, school district central offices across the country built up their expertise with basic business functions such as managing enrollments and the regulatory work of ensuring proper teacher licensing and monitoring use of funds and other resources.

As the federal and state funding for math and science as well as particular student populations grew in the 1960s and 1970s, district central offices responded by increasing the number of staff and functions related to teaching and learning. But they typically did so unstrategically, adding staff and programs in a piecemeal fashion. For instance, as Title I funds for “disadvantaged” students became available, central offices generally either created new positions or assigned
existing staff to manage those funds. When the Individuals with Disabilities Education Act (IDEA) started to provide funding for schools and districts, central offices likewise added responsibilities, positions, or offices to support it. This process continued as districts became increasingly responsible for funds related to particular curriculum content areas.

Not surprisingly, by the 2000s, central offices of all sizes reflected what we call a “Frankenstein effect.” Central offices, generally meaning well, added on functions as resources and policy priorities emerged. But like Frankenstein, they typically lumbered along with little coordination within or across functions and sometimes worked against themselves. For instance, districts can only allocate so much time for teacher professional development. So if you are a central office director of mathematics, you are competing for that finite amount of time against colleagues responsible for Title I, bilingual education, and English language arts, among others in your same Teaching and Learning unit. Different human resources (HR) staff typically handle discrete aspects of personnel processes from hiring to retirements. These functions are often highly specialized with little opportunities for collaboration and leave some teachers and principals feeling like the left hand doesn’t know what the right hand is doing.

Recognizing a Systemic Challenge

Leaders in the districts we studied understood these challenges and that the challenges were systemic—so deeply rooted in the institutional fabric of their central offices that typical reform efforts would have limited success. For instance, one director of Teaching and Learning explained that if you think it is okay that every year directors of different curricular and service programs compete with one another for time with teachers, then the district’s system for professional development works extremely well; but if you think that those resources should work together to support each and every school well, then the system is fundamentally broken. The head of HR in an urban district said that if you are a school principal who knows which HR staff to call when, then you probably don’t have problems with how HR
works. But such a system was extremely inequitable, favoring veteran principals with strong ties throughout his department who tended to be in the higher rather than lower performing schools.\textsuperscript{34}

In this context, district leaders began to ask: If we are serious about ensuring excellent teaching and learning for each and every student, how can we remove the systemic barriers to those results within our central office and proactively support all of our schools? Isn’t it fundamentally inequitable that some school principals receive better services and supports from the central office because they know whom to call while others do not?

\textit{Redesigning to Support High-Quality Teaching and Learning}

Given such concerns, the districts we studied set out to rebuild their entire central offices to focus on high-quality teaching and learning districtwide. As one superintendent said, “When I arrived . . . it was clear that our goal had to be nothing less than a total district transformation.” In the words of another, “We aim to retool the entire district to support instruction and leadership in the buildings.” A third said, “We are really trying to transform the culture of the district and schools . . . [to] focus on instruction . . . It’s a shift in their culture . . . saying that’s what most important.”

One district leader referred to the work as fundamentally “rewiring” each and every central office function to support educational equity. Some of these leaders literally sat down with their staff and a blank chalkboard or poster paper and asked questions such as, “What is the central office that we would build if we could start over from scratch and create an organization whose every fiber works in powerful and coordinated ways to support teaching and learning for each and every student?”

Leaders’ new designs for their central offices left no one untouched. One central office leader in a midsized urban district explained that she had “hard conversations” with each and every staff person. She said that if each person could not demonstrate that they contributed to a system of support that led to demonstrable improvements in the quality of teaching, then they needed to rethink their work:
Throughout the central office, everyone was required to sit down and figure out how their job related to student achievement. Each one of us had to do that. And it was very difficult for some people on my staff. I remember my secretary said, “Well, I don’t have anything to do with it.” I said, “Well, if you don’t, then go home . . . Go home and think about it and come back.” And so she did and she says, “Well, you know, I did do the [coordination of resources for the school board], and if I don’t do it well, then the board gets mad and maybe they won’t approve something that the school needs.” Bingo—there you go . . . That’s our first business: How do we make ourselves relevant to schools?

The superintendent in a small district used a similar strategy. As he explained, “We had a series of meetings last year where I gave all of the district office folks opportunities to think about their job, and what they do here, and its impacts on various things as kind of a baseline model . . . And we did this over about a six-to-eight-month period—think about ways that the things they do could help teaching and learning, or hinder it. And for many of them it was kind of the first time of ever even thinking about stuff like that.”

An underlying tenet of the transformation efforts in all of the districts was to rebuild every central office function, in tandem, in ways that supported high-quality instructional leadership and teaching and learning in each of their schools. For example, new designs for the Teaching and Learning unit focused on collaboration and impact: helping staff work together to identify selective and strategic—not exhaustive—supports to help each school build on its strengths to realize its school improvement goals. HR leaders called for streamlining and predictability; eliminating unnecessary paperwork, redesigning and automating most transactions to save central office and school staff time, and maximizing staff time on strategic hiring—recruiting teachers and leaders who fit the district’s vision and streamlining screening so principals received a manageable, well-selected group of applicants for each position. Operational units such as custodians worked to increase their responsiveness to save principals’ and teachers’ time on such matters. They also began to design new
ways of working to ensure that they contributed to the instructional mission of each school, for example, by identifying ways to enhance the physical space and interacting with students in intentional and positive ways.35

**Envisioning Principal Supervision as an Anchor and Driver of Central Office Transformation**

As part of these central office transformation efforts, district leaders began to shine a particularly bright light on principal supervision. They asked questions such as: What do our principal supervisors do day-to-day? How does doing those things contribute to a system of support for high-quality teaching and learning in each and every school? Isn’t the job of helping principals grow as instructional leaders so important that we should make it the main responsibility of the staff to whom they report?

As leaders of midsized to large districts explored these questions, they surfaced what June Wright and other principal supervisors across the country knew well from experience. Namely, principal supervisors with titles such as Assistant Superintendent or Executive Director typically had little interaction with principals around instruction, let alone principals’ leadership of instruction. The engagement of these executive-level staff in other central office functions had few if any regular benefits in terms of improving teaching and learning—and actually seemed to take pressure off other central office staff to rethink and improve their core work. And when principal supervisors worked in those ways, they sent the wrong message about their district’s commitment to high-quality teaching and learning and the principals’ pivotal role in leading for such results.

These district leaders came to view a new principal supervisor–principal relationship as the anchor for their theory of central office improvement. They argued that if principal supervisors focus their time on helping principals grow as instructional leaders, then principals will come to value their own growth in that area as the definition of professional success and, in fact, improve their instructional leadership over time. Looking outward from the principal supervisor role, they also
Posited that if principal supervisors stop doing various tasks that are actually the responsibility of other central office units, then those other units will face increasing pressure to rethink how they serve schools and more fully engage in the central office transformation process.

In the smaller districts, the superintendent or head of Teaching and Learning generally supervised principals on top of various other responsibilities such as working with the school board and communicating with families and community members. Most superintendents of these smaller systems reported that they began to rethink their central offices in part in response to examples from larger systems, but that they initially struggled to relate to the changes in principal supervision. As one said in an early interview, “We don’t have a lot of layers of administrative support, so that [example from a larger district] didn’t seem to resonate for a small district.” But over time, they realized that the examples about principal supervision applied to how they carried out their role as a superintendent who also supervised principals. These leaders said that given the small size of their central offices, they would not be able to shed their other responsibilities completely, but that they could rethink how they supervise principals to emphasize principals’ growth as instructional leaders and dedicate more of their own time to that important work. As one small-district superintendent explained, “You don’t want a manager in this [superintendent] role; you do want an instructional leader and initiator . . . I have to focus on quality instruction as the theory of action to get our kids school-transition and college-/work-ready—to get to those ends.” Another superintendent explained that he launched central office transformation including principal supervision “because we wanted to shift the focus from the management things to what we were all about, which was teaching and learning. Because we weren’t getting the results, and we knew we wouldn’t get the results in our school district [unless we worked very differently].”

Elevating and Focusing Principal Supervision
In taking action on these ideas, leaders in the larger districts eliminated the position of Assistant or Associate Superintendent and re-
placed it with a new executive-level role focused on helping principals grow as instructional leaders. In smaller systems, the superintendents assumed full responsibility for principal supervision and recast their own relationships with school principals from a traditional, top-down supervisory relationship to one in which they worked intensively with principals on their instructional leadership. Their definitions of instructional leadership varied on the margins, but all focused on the importance of principals supporting teachers directly and indirectly to strengthen the quality of their teaching for each and every student.

The new role for principal supervisors included working with principals intensively, one-on-one, in their schools to support their growth as instructional leaders. District leaders also charged principal supervisors with convening principals in groups specifically to help principals learn together how to strengthen their instructional leadership. According to one districtwide professional development plan, the district

invested heavily in creating small networks of schools, in which principals participate every two weeks in professional development activities led by [principal supervisors] . . . These activities are grounded in a cycle of inquiry, with principals analyzing data from their schools, learning about effective instructional practices, and working with their peers to develop strategies for accelerating student achievement . . . The meetings are designed to develop individual principals’ capacity as well as the capacity of the group of principals as their own professional learning community.

To support principal supervisors’ success with their new responsibility, the midsized and larger districts reduced the number of principals each principal supervisor oversaw. These leaders argued that while the reforms streamlined principal supervisors’ responsibilities, the work of supporting principals’ growth as instructional leaders was extremely time-intensive and would be hard to accomplish by any one principal supervisor responsible for more than about fifteen principals. Leaders also paid careful attention to how they grouped principals, with a focus on compositions that seemed particularly
conducive to principal learning. Most districts stopped organizing principals into groups based on their attendance-area feeder patterns, with elementary, middle, and high school principals from a geographic area all meeting together, since instructional leadership differs at each school level. Instead, district leaders grouped principals by school level, main schoolwide approach (e.g., experiential learning), or another category that made sense from the standpoint of building a learning community of principals.

In smaller districts, superintendents traditionally convened their principals with other members of their leadership team for meetings that addressed various district matters. With the transformations in principal supervision, these superintendents explored convening just their principals in learning community meetings at rotating schools to focus specifically on their instructional leadership. Other superintendents reassessed the work of their entire leadership team, moving most of the information items into brief written memos, and focusing progressively more of their time on learning together what counts as high-quality teaching and learning and how principals and others can support those results.

As we studied these changes, we sought to determine: To what extent did principal supervisors actually succeed in shifting their roles to focus on principals’ growth as instructional leaders? With what results for principals? And what conditions helped or hindered them in the process?

A FRAMEWORK FOR UNDERSTANDING PRINCIPAL SUPERVISORS AS SUPPORTS TO PRINCIPALS’ GROWTH AS INSTRUCTIONAL LEADERS

The dynamics of principal supervision, and central office transformation more broadly, are complex, so we needed a framework to focus our attention on how principal supervisors were working with their principals in ways that may have mattered to shifts in principals’ leadership (see table 1.2). We knew from research on principal learning that school principals, like other professionals, especially benefit from authentic, sustained, job-embedded professional learning opportunities—those
<table>
<thead>
<tr>
<th>TEACHING MOVE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fostering learners’ agency</td>
<td>Moves that help learners operate with progressively more independence or agency in leading their own learning, for example, by assisting learners to:</td>
</tr>
<tr>
<td></td>
<td>• assess their own proficiency with new practices;</td>
</tr>
<tr>
<td></td>
<td>• develop and implement their own professional learning plan;</td>
</tr>
<tr>
<td></td>
<td>• identify and pursue learning supports on the job.</td>
</tr>
<tr>
<td>Joint work moves</td>
<td>Moves that help learners embrace new challenging work as a defined set of practices that they and their colleagues collectively value, for example, by:</td>
</tr>
<tr>
<td></td>
<td>• using a specific shared definition of the new work as common guides for their growth; and</td>
</tr>
<tr>
<td></td>
<td>• learning alongside learners and opening up their own practice.</td>
</tr>
<tr>
<td>Modeling</td>
<td>Demonstrations of new work practices using metacognitive strategies—explicit explanations of what they are modeling and why.</td>
</tr>
<tr>
<td>Talk moves</td>
<td>Forms of talk that engage learners in making sense of what new work entails and how to engage in it, for example, by:</td>
</tr>
<tr>
<td></td>
<td>• verbally challenging learners’ understandings of situations;</td>
</tr>
<tr>
<td></td>
<td>• offering competing theories about underlying problems and potential solutions; and</td>
</tr>
<tr>
<td></td>
<td>• prompting learners to question long-standing practices that have not been effective.</td>
</tr>
<tr>
<td>Brokering</td>
<td>Bridging moves that connect learners to new ideas, understandings, and other resources to advance their learning. Buffering moves that protect learners from potentially unproductive external interruptions to their learning.</td>
</tr>
<tr>
<td>Recognizing all learners as learning resources</td>
<td>Moves that help each learner learn from and teach the others in their learning community, identify as on a trajectory toward mastery, and understand learning as an ongoing developmental process for all.</td>
</tr>
<tr>
<td>Differentiation</td>
<td>Moves that meet each learner where they are, for example, by:</td>
</tr>
<tr>
<td></td>
<td>• using evidence to understand each learner’s strengths and areas for growth, and how they vary; and</td>
</tr>
<tr>
<td></td>
<td>• setting and tailoring assistance in ways that build on learners’ strengths to leverage their growth in weaker areas.</td>
</tr>
</tbody>
</table>
available while principals are leading their schools in real time, rather than delivered through workshops outside their regular work. For example, studies of New York City Community School District #2 demonstrate the importance of intentional learning opportunities during the regular workday to help principals grow as instructional leaders. These learning opportunities included monthly principal meetings that were often held at school sites and focused on instruction, as well as individualized coaching “apprenticeships” from their supervisor and other coaches in real time. Community School District #2 principals also benefited from “visitations” other principals’ schools so they could learn from one another. Another research team reinforced these findings by showing that job-embedded professional development had a statistically significant relationship with the time principals spent on instructional leadership tasks such as engaging with teachers outside the classroom to improve instruction.

Researchers also underscore the importance of principals having access to differentiated supports—those specifically tailored to their strengths and areas of growth—in both one-on-one settings as well as in groups or PLCs. For example, Anderson and colleagues (2012) highlighted the importance of developing the capacity of principals and their schools to understand and solve their own problems, and of intentionally facilitating principal peer networks for schools to learn from one another.

In light of these important findings and our own experience with leading the learning of school system leaders, we turned to socio-cultural theories of learning as the basis for our conceptual framework, since these theories elaborate the kinds of real-time supports that foster professional growth over time, consistent with principal supervisors’ charge to create such conditions for principals. Socio-cultural learning theories also are robust—meaning they rest on many investigations across different settings and professions that show how specific common conditions enable learning. This line of scholarship suggested that those principals in our research who grew as instructional leaders would be those whose supervisors worked in ways consistent with socio-cultural theories of learning. What are those ways?
Socio-cultural learning theory starts from the research-based premise that learners improve their performance with particular target tasks, such as instructional leadership, by doing—that is, by performing in real time the target tasks with the support of a mentor who takes what we call a teaching and learning approach. In such an approach, the mentor works with a learner one-on-one and in group settings or “communities of practice” using particular teaching moves; in the process, mentors deepen their own understanding of the target task and how to engage in progressively better mentoring. Teaching moves include practices that foster learners’ agency over their own learning, “joint work” moves, modeling, talk moves, brokering, recognizing all learners as learning resources, and differentiation. Next we explain each of these moves as a preview of the practices we expected to see principal supervisors engaging in as they helped their principals grow as instructional leaders. Because these ideas distinguished principal supervisors in the positive and negative cases, we use them in the following three chapters to organize our findings.

**Fostering learners’ agency.** Mentors support learning in one-on-one and group settings when they intentionally help learners operate with progressively more independence or agency in leading their own learning. Through leading their own learning, learners develop self-regulating behaviors that help them actively make sense of the new work, without which their behavior will not change in meaningful ways. Such self-regulating behaviors prompt learners to continue to practice and seek out help with the new work even when the mentor is not present. Agency for learning seems especially important in the context of the school principalship, since principals spend most of their time working without mentors in their individual schools and therefore likely need strong, internal models of the new work or “target tasks” to fall back on.

Mentors reinforce learners’ agency over their own learning through such strategies as helping learners assess their own proficiency with a target task, using that experienced-based data to identify and pursue learning supports on their own, and continuously monitoring their own progress. Mentors also model how to learn
while doing—for instance, by showing learners strategies they use themselves to connect with learning supports.

**Joint work moves.** Joint work moves are those that help learners embrace new challenging work, such as instructional leadership, as a defined set of practices that they and their colleagues collectively value. Such moves include principal supervisors’ efforts to help their principals use a specific, shared definition of instructional leadership as a guide for their growth. Joint work moves may also include principal supervisors dedicating their own time to principals’ growth as instructional leaders and learning alongside them in the process—to reinforce that principals’ growth as instructional leaders is their shared valued outcome.45

This complex idea often makes intuitive sense to practitioners who know from experience that they are more likely to deepen their engagement in new work practices if they have a progressively clearer sense of the new work and if they see that their success at that work is important not just to themselves but to colleagues and the collective good of their organization.

When their mentors are learning alongside them in a reciprocal manner, learners increase their motivation to learn and also build trust with their mentors through repeated interactions and their mentors’ opening up their own practice for growth.

This conception of trust differs from some other treatments that call for building trust as a precondition for change.46 In the socio-cultural view, trust is situational; that is, learners need to trust their mentors not generally but specifically as guides for learning the new target practice. Such trust gets built not in advance but over time as learners work with mentors to deepen their engagement in the particular new work.

**Modeling.** Mentors support learning when they model or demonstrate the target tasks in practice rather than, for example, talking about those practices in a lecture-like manner or directing people to participate in them.47 By observing demonstrations, learners develop “a conceptual model of the target task”—literally a mental picture of what it would look like if they were, in this case, exercising instruc-
tional leadership in a particular setting that they can emulate. Such conceptual models also provide “an interpretive structure for making sense of the feedback, hints, and connections” from the target task and an “internalized guide for the period when the apprentice is engaged in relatively independent practice.” In other words, a model allows learners to ask themselves questions important to their learning, such as, “Based on the images of instructional leadership I can picture in my mind, how should I act in this case?” Or, “Does what I am doing resemble the models of instructional leadership that I have seen, and how can I adjust what I am doing to get closer to the model or intentionally deviate from it?”

Models are particularly powerful learning guides when mentors demonstrate the target tasks and also explain what they are doing and why—moves sometimes called metacognitive strategies or “making thinking visible.” Such strategies help learners look for the right things during a demonstration. These strategies also allow learners to hear what their mentor is thinking as he performs a particular task, which is important to deepening their understanding of the task and how to perform it.

Talk moves. As the discussion of metacognitive strategies suggests, certain kinds of talk enables learning at deep levels. When mentors and learners verbally challenge each other’s understandings of situations and offer competing theories about underlying problems and potential solutions, they increase the individual and collective knowledge they bring to bear on situations important to constructing new mental models of their day-to-day work. Such talk moves include those that prompt learners to see and question their long-standing practices that have not been effective, such as when a principal supervisor asks a principal, “How do you know that the way you engage with teachers is helping improve the quality of student learning in classrooms? What’s your evidence?” Such talk moves also prompt learners to actively make sense of new ideas and how to integrate them into their practice, such as when a principal supervisor explores with a principal what instructional leadership moves might help particular teachers improve student engagement and the rigor of classroom tasks.
Brokering. Mentors also assist with learning by brokering or strategically bridging learners to and buffering them from outside influences.\textsuperscript{53} Bridging involves bringing new ideas, understandings, and other resources into the community in ways that advance participants’ learning. Absent such infusions of outside influences, participants can become isolated or repeat old patterns in ways that make them passive rather than active learners.

Bridging can be particularly effective when a mentor actively translates, tailors, or otherwise curates the resources to ensure they support the learners in their specific contexts. Translation involves, for example, not simply passing along a new book or article to learners but framing why the resource may be helpful and possibly offering specific reflection questions to focus the reading and time to discuss it with colleagues and apply it to their work. Similarly, a mentor might work with an outside guest in advance to ensure that how the guest works with the group is especially likely to serve as a learning resource.

On the flip side, buffering involves shielding learners from potentially unproductive external interruptions to their learning.\textsuperscript{54} Especially in complex work environments, opportunities for learning can get put off as tasks emerge with the promise of more immediate results. Buffering not only protects learning time but also reinforces for learners that—especially since it can take time for learning efforts to produce results—learners must consistently prioritize protection of their learning time themselves.

Recognizing all learners as learning resources. Sometimes important learning resources within a group of learners go untapped because learners do not know one another’s strengths or see one another as learning resources. Mentors enable learning when they recognize each learner as important and valuable to the learning of others in the community and help each community member learn from and teach the others.\textsuperscript{55} Such efforts increase the learning resources available to learners by helping them see the resources right under their own noses. In addition, when a mentor recognizes a learner as a resource for others, that learner comes to see herself as on her way to becom-
ing more expert in particular work practices—a form of identity development important to realizing ambitious performance goals.

In recognizing the value of all learners, mentors actively resist fixed definitions of “expertise” as an individual trait or an ability that a learner has across tasks. Rather, they view expertise as always in development and variable by task. As an example of the latter, a principal supervisor would not view a given principal as an overall expert in instructional leadership. Instead, the supervisor would distinguish that, for example, the principal is advanced in certain aspects of instructional leadership such as providing teachers with feedback or leading school improvement planning but more novice at designing professional development for teachers. The supervisor would then help the principal build on his strengths to grow in his weaker areas and do so continuously—because growth is a process, not a destination.

Differentiation. Learners’ abilities to engage in target tasks differ and mentors support learners’ growth when they meet each learner where she is and tailor assistance to her particular strengths and areas for growth. Mentors differentiate for these and other learners by first using evidence to understand those specific differences and how they vary by setting, since people who can engage in a task at a high level in one context may not be able to do so in another one. Differentiation that supports growth also proceeds from a strengths-based approach—deepening learners’ engagement in their growth areas as a strategy to support their development in weaker areas.

Markers of Learning
According to socio-cultural learning theories, learning involves the progression from novice to more expert practice. But how would we know if principals and their supervisors were progressing in their instructional leadership and a teaching and learning approach to support it? We adapted Grossman and colleagues’ (1999) “degrees of appropriation” scale to make such distinctions because it, too, uses socio-cultural learning theories about stages of typical progression from novice to expert practice—in this case, the depth to which principals’ practice
reflected instructional leadership and the depth to which principal supervisors’ practice was consistent with taking a teaching and learning approach. Figure 1.1 represents these distinctions.

According to this scale, learners begin as novices who have not yet begun to talk about their practice or engage in practices consistent with the new ways of working. As novices progress, they first will talk about their practices in ways consistent with the new ways of working but still engage in the old ways of working in practice. These learners are not trying to be deceitful. Instead, novices’ limited understanding of what the new work involves can lead them to misunderstand the degree to which they are already engaging in the new ways of working. David Cohen captured this phenomenon in the classic case of Mrs. Oublier, a classroom teacher who had to implement ambitious new standards for teaching mathematics. Mrs. Oublier genuinely believed her practice was reflecting those standards when her practice actually demonstrated that she did not understand the difference between familiar strategies and what the new standards demanded.

As learners continue to practice using the new ideas, their work may reflect their engagement with the new ideas at a surface level. At this stage, learners’ practice begins to reflect the new ways of working, but not regularly, and learners still mostly work in the old ways. These learners begin to express some understanding of the new work and why to engage in it.

With further practice, learners engage with understanding—their practice often reflects what the new work entails and why to engage in it. After working at this level over time, learners may reach “mastery”—a state of practice at which they engage with understanding across multiple contexts and years. At mastery, a learner can improvise—create new ways of working consistent with but beyond the once-new ideas, such that they improve on the repertoire of practice itself in ways that contribute to progressively more powerful results.

Supportive Conditions
Socio-cultural learning theories led us to hypothesize that principal supervisors would also benefit from the kinds of mentoring we just
FIGURE 1.1 Degrees of appropriation

Not adopting
Does not yet talk about their practice or engage in practices consistent with the new work.

Adopting the talk
Talks about their practice in ways consistent with the new work, but actual practice does not yet reflect it.

Engaging at a surface level
Practice begins to reflect the new work, but does not yet demonstrate deep understanding of which practices are consistent with it or why to engage in those practices.

Engaging with understanding
Practice often reflects the new work and demonstrates deepening understanding of what practices are consistent with it and why to engage in those practices.

Mastery
Practice routinely reflects the new work at the level of “engaging with understanding” across multiple contexts and years. Practice across settings and over time demonstrates ability to improvise—to develop new ways of working likely to contribute to progressively more powerful results.
highlighted. We hypothesized that such assistance likely would not yet be available within central offices, given the newness of central office transformation and the reforms of the principal supervisor role specifically. Perhaps as a result, all our study districts had been working with an outside organization to support them with the transformation process and to provide professional development to principal supervisors. Research in education suggested that these arrangements boded well; outside organizations, sometimes called intermediaries, can bring important expertise into a school district, especially to support the implementation of new partnership relationships with schools and new ideas about teaching and learning.64

Prior knowledge also matters in terms of how assistance relationships and communities of practice play out. Such knowledge is not simply a function of experience or years of service; rather, it emphasizes that professionals approach situations with particular mental models or frames that help them understand what is happening and what they should do. For instance, Mrs. Oublier interpreted the new mathematics standards in light of her existing frame or mental model and, otherwise uninterrupted, basically continued working as she always had. Extensive training and work experiences of particular kinds can shape a person’s prior knowledge, but sometimes fewer, yet profound, experiences can as well. Since frames tend to be taken for granted, they often become apparent not through leaders’ self-reports but as leaders make decisions in real time about how to approach particular situations.

OVERVIEW OF THE BOOK
In the rest of this volume, we use these ideas to organize and explain our findings about how principal supervisors went about their work and the conditions that mattered to how they did so. Here, as in all our research and partnerships with school districts, we take a strengths-based approach, focusing on districts where principal supervisors were likely to be successful and seeking to understand how they understood and carried out their challenging charge. We do not evaluate individual principal supervisors, but offer lessons we learned from and with them as they worked with principals in ways more or
less consistent with that charge. We provide examples from our study districts and also those from our partner districts where we think the latter illustrate our research findings in ways particularly useful to practitioners.

As we will elaborate in the coming chapters, the crux of what we found is that our conceptual framework got it right. As socio-cultural learning theories suggest, principal supervisors who worked from a teaching and learning approach—either consistently or more often and better over time—were those whose principals demonstrated positive outcomes such as spending time on instructional leadership and handling progressively more challenging instructional leadership work over time. Other principal supervisors engaged in traditional forms of principal supervision—including monitoring, compliance, and supporting operational matters—either consistently or increasingly over the study period, and their principals did not demonstrate engagement or growth in instructional leadership. In some cases, those principals reported that their supervisor actually impeded their focus on instructional leadership. The difference between these two groups was stark and consistent.

Chapter 2 elaborates how principal supervisors in the positive cases took a teaching and learning approach while working with principals one-on-one, and chapter 3 describes how they did so while leading principal PLCs. We show that across both of these settings, these principal supervisors helped principals lead their own learning through such strategies as developing and implementing formal professional learning plans. The principal supervisors supplemented these plans with one-on-one visits with principals and how they led the principal meetings. We share specific examples of the teaching and learning moves principal supervisors made in those settings, including modeling and talk moves to support principals’ growth as instructional leaders. Throughout, we also offer some examples of principal supervisors in the negative cases to highlight differences between the teaching and learning approach and traditional principal supervision, as well as to illustrate specific practices principal supervisors would do well to actively avoid.
In chapter 4, we explore why some principal supervisors persisted and grew in taking a teaching and learning approach to their work with principals while others assumed a more traditional supervisory stance, either consistently or over time. Prior knowledge clearly mattered to these results. Surprisingly, we did not associate high-quality outside coaching with positive results—and actually saw no changes in principal supervisors’ practice when principal supervisors participated in the higher-quality outside coaching. Instead, we show that supervisors of principal supervisors played key roles in coaching principal supervisors themselves and helping them protect their time and connect to other resources important to their success. Principal supervisors in the positive cases also led their own learning—by making time to learn from and with colleagues and protecting their own time—in ways that help them persist and grow in taking a teaching and learning approach. We remind readers that each district aimed to recast principal supervision as one part of a broader effort to transform its central office into a driver of educational equity. The districts likely would not have seen the success with principal supervision that they did absent those broader changes.

This work offers some clear directions for leaders, policy makers, researchers, and others who seek to similarly elevate the school principalship and district central offices as main drivers of educational equity. In chapter 5, we elaborate some of those directions. These recommendations encourage school district leaders to recognize the pivotal role principal supervisors can play in a districtwide system that supports high-quality teaching and learning for each and every student. Doing so successfully does not involve adding support for principal instructional leadership onto principal supervisors’ already loaded plates. District leaders must fundamentally recast their traditional principal supervisory function, and support for it, so that a teaching and learning approach to helping principals grow as instructional leaders is at its core. In the process, district leaders should heed the example of these pioneering districts that understood the shifts in principal supervision as part of a broader strategic effort to transform their outmoded central office into a driver of educational equity.
Policy makers, funders, and others can help by encouraging this work and strategically investing in central office leadership for school improvement. Such investments could initially focus on principal supervision but will not see success with that strategy absent support for deeper shifts throughout the central office.

School principals and their success in ensuring their teachers and students grow and thrive is ultimately what the findings in this volume are all about. In chapter 5, we also discuss the importance of principals starting to let go of what in some cases are well-developed and well-justified strategies for limiting their engagement with their supervisor and central office. School principals can be main agents of positive change in their supervision by understanding how their principal supervisor could support them through a teaching and learning approach and opening themselves up to that new relationship. Principals could also put important pressure on the central office to change by suspending their work-arounds—including not asking their supervisors to help with staffing, operations, and other matters. Such pressure can come in the form of escalating examples of both helpful and disappointing central office performance beyond their supervisors and to their superintendent or others in a position to lead a broader central office transformation.

The book concludes with an appendix that provides specific tools principal supervisors can use to support their own growth in the ways we discuss here. These tools include performance standards to help principal supervisors and their own supervisors track their growth and help principals and central office colleagues understand what to expect of their principal supervisors (exhibit 1). We share items district leaders can use to develop surveys that capture information about principal supervisors’ work that is important to their growth (exhibit 2). The Professional Growth Planning tool (exhibit 3) guides principal supervisors in using their performance standards to lead their own learning in ways vital to their success.

We also hope this volume will serve as a useful tool for principal supervisors and their principals to help them see and understand examples of principal supervision in practice to which they may aspire.
To support that process, we tried to maximize examples throughout this book. In exhibit 4, we offer reflection and discussion questions that principal supervisors, principals, and others could use to deepen their engagement with the findings and examples in each chapter.

In that spirit, we begin by introducing Principal Bernice Johnson. Principal Johnson’s story represents the kind of experiences principals had with their supervisors when their supervisors worked with them from a teaching and learning approach at a high level.