The Pearson Educational Leadership Series

INSTRUCTIONAL LEADERSHIP

A Research-Based Guide to Learning in Schools

FIFTH EDITION

Anita Woolfolk Hoy
Wayne Kolter Hoy

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Dedicated to Our Students

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ABOUT THE AUTHORS

So you will know your authors a bit better, here is some information.

Anita Woolfolk Hoy was born in Fort Worth, Texas. She is a Texas Longhorn—all of her degrees are from the University of Texas, Austin, the last one a Ph.D. in Educational Psychology. After graduating, she worked as a school psychologist with students and teachers in elementary and secondary schools in fifteen counties of central Texas. She began her career in higher education as a professor of educational psychology at Rutgers University and then moved to The Ohio State University in 1994.

Wayne Kolter Hoy was born in Lock Haven, Pennsylvania. He is a Nittany Lion—his Master's and Doctorate in educational administration were earned at The Pennsylvania State University. He has served on the faculties of Oklahoma State University and Rutgers University, where he was a Distinguished Professor and Associate Dean for Academic Affairs. In 1994, Wayne was appointed the Novice Fawcett Chair of Educational Administration, an endowed professorship at The Ohio State University. Anita joined the faculty as well. Their three children, now grown and living in San Francisco and Columbus, continue to keep them informed about technology and the modern world.

As to their professional lives, Anita's research focuses on teachers' thinking and beliefs, particularly teachers' sense of efficacy, and the role of educational psychology in the preparation of teachers. For many years she was the editor of the journal *Theory into Practice*, which brings the best ideas from research to practicing educators. With students and colleagues, she has published more than 150 books, book chapters, and research articles in journals such as *Teaching and Teacher Education*, *Contemporary Educational Psychology*, *The Journal of Educational Psychology*, *Educational Psychologist*, *American Educational Research Journal*, *Review of Educational Research*, *Educational Researcher*, *Journal of Consulting and Clinical Psychology*, *The Journal of Experimental Education*, *The Journal of School Psychology*, and *The Elementary School Journal*, among others. She received the Alumni Award for Professional Research from the Rutgers University Graduate School of Education. Anita has served as Vice President for Division K (Teaching & Teacher Education) of the American Educational Research Association and President of Division 15 (Educational Psychology) of the American Psychological Association. Her textbook, *Educational Psychology* (Allyn & Bacon), is in its 14th edition and has been translated into more than a dozen different languages. She also collaborated with Nancy Perry, University of British Columbia, to write the second edition of *Child Development* (Pearson, 2015), a book for all those who work with and love children.

Wayne's primary professional interests are theory and research in administration and leadership, the sociology of organizations, and the social psychology of administration. He is the author or co-author of 12 books in the areas of educational administration, supervision of instruction, instructional leadership, organizational climate, school trust, and quantitative analysis. With students and colleagues, he has published more than 140 book chapters and research articles in journals such as *Educational Administration Quarterly*, *The Journal of Educational Administration*, *Journal of School Leadership*, *Sociology of Education*, *Journal of Educational Psychology*, *American Educational Research Journal*, *Review of Educational Research*, *Teaching and Teacher Education*, *Educational Researcher*, *The Journal of Experimental Education*, and *The Elementary School Journal*, among others. He also has served as President of the University Council for Educational Administration (UCEA) and Secretary-Treasurer of the National Conference for Educational Administration. He has received the Lindback Foundation Award for Distinguished Teaching from Rutgers University, the Alumni Award for Professional Research from the Rutgers University Graduate School of Education, and the Excellence in Education Award from The Pennsylvania State University, and in 1996, he became an Alumni Fellow of The Pennsylvania State University. In 2003, he was awarded the Roald Campbell Lifetime Achievement Award in Educational Administration. His textbook with Cecil Miskel, *Educational Administration: Theory, Research, and Practice*, is in its 9th edition.

Both Wayne and Anita have been inducted into the Ohio State College of Education and Human Ecology Hall of Fame.

PREFACE

Instructional Leadership is predicated on the assumption that teachers and principals need to work together as colleagues to improve teaching and learning in schools. Traditional supervision in which the principal rates the effectiveness of teachers is an outmoded concept, one that was always more ritual than reality. We believe that this is the first text of its kind, one written for principals to help them understand current theories of teaching and learning as well as the practical applications of these perspectives. The text uses a learning-centered approach that emphasizes making decisions based on what supports student learning.

We don't believe that instructional supervision can be effective unless the parties involved have a good understanding of how students learn. Although principals may take the lead in cooperative and professional endeavors, in the end it is the teachers who determine their success. Perhaps just as important as taking the lead in instructional matters is developing a school climate where instructional leadership flourishes and emerges spontaneously from teachers themselves.

The text addresses the critical aspects of the teaching–learning process: student differences, learning, motivation, teaching, classroom management, assessing student learning, and assessing and changing school climate and culture. Each chapter is grounded in the latest research and theory in that area and provides specific suggestions for applying that knowledge to practice. After the Introduction, each chapter begins with a ***Preview of Key Points*** and a ***Leadership Challenge***, an actual teaching problem, and ends with suggestions for projects to relate theory to practice in the form of professional ***Portfolio*** exercises. Moreover, throughout the chapters, ***Theory into Action Guidelines*** and ***A Principal's Perspective*** provide concrete suggestions. We are again grateful to Thomas Reed, a successful former principal, superintendent, and Fawcett Scholar at The Ohio State University, for sharing his knowledge for the ***Principal's Perspectives***. Also, each chapter includes an ***Instructional Leader's Toolbox***, a collection of contemporary readings, useful websites, and helpful organizations. Finally, the text concludes with ***Appendices***, which include instruments for assessing your school learning environment.

New to This Edition

We have included a revised section on technology leadership, written by Dr. Anika Ball Anthony of The Ohio State University. In addition, *more than 450* new studies and analyses enriched our examination of the crucial topics in this text. Following are specific changes to this edition:

CHAPTER 1: Introduction to Teaching and Learning

- Expanded coverage of the **Every Student Succeeds Act** (**ESSA**) and the role of testing in schools today

- New discussion of same-sex schooling
- Updated section on technology leadership

CHAPTER 2: Student Diversity
- Updated section on today's diverse classroom
- Revised discussion on dialects
- Revised and expanded discussion of second language learning and bilingual education
- New material on gender differences in the classroom, including a discussion of sexual orientation and gender expression
- Expanded cautions about learning styles
- A consideration of cultural discontinuity and effective teaching strategies for African-American students
- New and revised suggested readings

CHAPTER 3: Student Abilities and Challenges
- Revised discussion of intelligence including multiple intelligences
- Revised discussion of Sternberg's concept of successful intelligence
- Revised material on tracking and flexible grouping
- New material on teaching gifted students and students with ADHD
- Updated section on students with learning disabilities
- New section on response to intervention
- New and revised suggested readings

CHAPTER 4: Learning
- Updated material on functional behavioral analysis
- Revised discussion of working memory and cognitive load
- Updated *Point/Counterpoint* on the value of homework
- Updated discussion of cognitive views of learning and cognitive science, metacognition, and learning strategies
- Expanded discussion of constructivism, scaffolding, and problem-based learning
- Expanded discussion of inquiry, problem-based learning, and the flipped classroom
- New and revised suggested readings

CHAPTER 5: Motivation
- Updated description of classroom goal structures
- Expanded discussion self-determination theory and choice
- New discussion expectancy-value-cost theories of motivation
- New discussion mindsets and motivation
- New discussion agency and self-efficacy, including teaching efficacy
- Updated and expanded discussion emotions and interests, including flow
- New and revised suggested readings

CHAPTER 6: Teaching
- Revised description of expertise in teaching
- New discussion recent research on teaching

- New section teaching students to use learning strategies
- New section on learning targets
- Revised section on standards and objectives, including a *Point/Counterpoint* on the Common Core
- New discussion of cooperative learning including new *Theory into Action Guidelines*
- New sections on asking and answering deep questions, including new *Theory into Action Guidelines* on facilitating deep questioning
- New and revised suggested readings

CHAPTER 7: Classroom Management

- New section on creating school and classroom connections
- Updated material on class routines and rules
- Updated section on bullying and cyberbullying
- Expanded discussion of violence in schools, including a *Point/Counterpoint* on zero tolerance
- New *Theory into Action Guidelines* on disciplining students with emotional problems
- New and revised suggested readings

CHAPTER 8: Assessing Student Learning

- New discussion of formative, interim, and summative assessment
- Revised section on interpreting information from achievement tests
- Updated discussion on using high-stakes tests to hold teachers accountable and value-added measures
- New section on stereotype threat
- Updated information about formative and authentic classroom assessment
- New and revised suggested readings

CHAPTER 9: Assessing and Changing School Culture and Climate

- Revised and expanded section on academic optimism
- New section culture as shared beliefs and values
- New *Point/Counterpoint* on Grit
- New and revised suggested readings

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Our colleagues and students are important sources of ideas and criticism. We would like to thank and acknowledge them for their suggestions and encouragement in this project.

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CONTENTS

CHAPTER

1 Introduction to Teaching and Learning

Schools are about teaching and learning; all other activities are secondary to these basic goals. Teaching and learning are elaborate and complex processes; this book is about understanding those processes. It is not a book about administration, but it is a book for administrators because the fundamental purpose of schooling is student learning. School leaders are responsible for creating learning organizations. Even though we focus on principals, this text is for all school leaders who are interested in improving teaching and learning, whether they are teachers, curriculum and instructional specialists, or administrators; in the end, instructional leadership is a shared responsibility.

The centrality of student learning in the school environment is irrefutable. In fact, standards for school leaders articulated by the Council of Chief State School Officers embrace this fundamental truth, as exemplified by the title of its 2017 publication *Leadership Competencies for Learner-Centered, Personalized Education*, and the first sentence of that report: "To develop and support effective leaders in education today, we must renew and refocus our attention on learning and the learner" (CCSSO, 2017, p. 4). Effective school administrators support and encourage the success of every student. Such leaders advocate for a program of instruction that advances student learning and also develops and sustains a school culture that fosters the growth and development of everyone involved—students and staff.

We argue that school leaders cannot achieve this purpose without a clear and deep understanding of students, teaching, learning, motivation, assessment, and technology along with a nurturing school culture. Our book deals with issues pertaining to all 10 Professional Standards for Educational Leaders 2015 (http://npbea.org/psel/).

The Role of the Instructional Leader

A critical role for all principals is that of instructional leader. We are not suggesting principals alone are responsible for leadership in instruction. Clearly that is not the case. Leadership in instructional matters should emerge freely from both principals and teachers. After all, teachers deliver the instruction in the classroom, they have expertise in curriculum and teaching, and they have mastered a substantive body of knowledge. Principals, however, are responsible for developing school climates and cultures that support the very best instructional practices. Thus, it is principals who should forge a partnership with teachers with the primary goal of improving teaching and learning.

There is no one way to engage in such cooperation, but instructional leaders need to spend time in classrooms as colleagues and engage teachers in conversations about learning and teaching. Improvement is a continuous process and is not fostered by a ritual observation that principals make once or twice a year. Professional conversations and professional development should revolve around improving instruction, increasing teachers' understanding of how students learn, and applying appropriate teaching strategies for different situations. Cooperation, colleagueship, expertise, and teamwork are hallmarks of successful improvement and are substitutes for traditional supervision (DiPaola & Hoy, 2008).

Although principals may take the lead in cooperative and professional endeavors, in the end teachers are the ones who determine their success. Perhaps just as important as taking the lead in instructional matters is developing school climates and school cultures where instructional leadership flourishes and emerges spontaneously from teachers. Above all, principals must communicate clear visions of instructional excellence and continuous professional development consistent with the goal of improving teaching and learning. What does this mean? How does it get translated into action?

1. Academic excellence should be a strong motivating force in the school. Increasingly, the research is affirming that a school's academic emphasis is critical to student achievement (Goddard, Sweetland, & Hoy, 2000; Hoy & Sabo, 1998;

Hoy, Tarter, & Woolfolk Hoy, 2006a). The instructional leader should ensure a learning environment that is orderly, serious, and focused on high but achievable academic goals. The principal must demonstrate in both words and actions an optimistic belief that all students can achieve, while developing a school culture in which teachers and students alike respect hard work and academic success.

2. The pursuits of instructional excellence and continuous improvement are ongoing and cooperative activities by instructional leaders and teachers. Areas such as student growth and achievement, school climate, teacher and student motivation, and faculty morale should be monitored and assessed regularly with the aim of improvement.
3. Teachers are at the center of instructional improvement. In the end, only the teachers can change and improve their instructional practice in the classroom; hence, teacher motivation and self-regulation are critical to improvement. Teachers must decide that they want to progress.
4. Principals must provide constructive support and obtain the resources and materials necessary for teachers to be successful in the classroom; indeed, resource support is a basic principal role.
5. Principals should be intellectual leaders who keep abreast of the latest developments in teaching, learning, motivation, classroom management, and assessment as well as share best practices in each area with teachers.
6. Principals should take the lead in recognizing and celebrating educational achievement among students and teachers, because such activities reinforce a vision and culture of academic excellence.
7. Finally, principals are pivotal in developing a culture of optimism. Such a culture is one in which the faculty has a collective sense of efficacy (a belief that the faculty can do the job), one that trusts parents and students to work cooperatively, and one that focuses on academic emphasis and high performance. Optimism about the successful accomplishment of student learning in spite of obstacles is an important key to effective student performance (Hoy & Smith, 2007; Hoy, Tarter, & Woolfolk Hoy, 2006a & b; McGuigan & Hoy, 2006).

Wang, Haertal, and Walberg (1993, 1997) did a meta-analysis of more than 10,000 statistical findings on the most significant influences on learning and found a reasonable consensus: in general, direct influences have a greater impact on student learning than indirect ones. Fifty years of research contradicts the current reliance on school restructuring as the key to school reform. Classroom management, student metacognitive and cognitive processes (e.g., study skills, background knowledge, work habits), instruction, motivation, and assessment have a greater impact on learning than indirect influences such as restructuring, district policy, and school policy. One exception to the general finding was school culture. School culture does seem to make an important difference by providing a school context that reinforces important teaching and learning practices. Increasingly, the research suggests that the *key to improving student learning lies in what happens in the classroom*. The teacher is critical. Instructional leadership calls for principals to work with teachers to improve instruction by providing a school culture and climate where change is linked to the best available knowledge about student learning.

A Principal's Perspective

C. R. prided himself on being a visionary leader. An optimist who saw the good in every person in every situation, he was an inspiring, energetic, and creative principal who thrived on facing the seemingly impossible. Late in his career, he was recruited by a failing school district to deliver its once-proud high school from a malaise of underachievement and apathy by students and faculty alike. Driven by the personal improvement writing of Steven Covey (2004)*, C. R. set out to change the climate of the school one teacher at a time. He invigorated professional growth of the staff by focusing on their personal goals, ambitions, and needs. Personal mission statements and action plans dominated faculty meetings in the first semester. Predictably confronted with skepticism early on, C. R. persisted, modeling his trust of his teachers by frequently seeking authentic feedback from them through nonthreatening methods. He openly shared his personal goals and demonstrated self-regulation as he genuinely assessed his own progress. To foster cooperation and instill ownership of the school's achievement record, he enlisted committees of teachers to review all facets of the educational program, from budget allocations to curricular programming. Open to all suggestions, he harbored no sacred cows and honored the committees' work by adopting their recommendations as his own. In a short time, a talented but once divisive and uncommitted collection of teachers transformed into a trusting, efficacious faculty that systematically propelled the school toward excellence. Reflecting the newly enhanced culture and climate of the school, student achievement rose steadily while community perception and confidence in the district returned to its previously high levels.

*Covey, S. R. (2004). *The 7 habits of highly effective people: Powerful lessons in personal change*. New York, NY: Free Press. Based on a true story.

Instructional Leadership After NCLB and the Every Student Succeeds Act (ESSA)

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind (NCLB) Act. As you probably know, NCLB required that all students in grades 3–8, and once more in high school, take annual standardized achievement tests in reading and mathematics. In addition, they had to be tested in science once in each grade span: elementary, middle, and high school. Based on these test scores, schools were judged to determine if their students were making adequate yearly progress (AYP) toward becoming proficient in the subjects tested. States and schools had to develop AYP goals and report scores separately for several subgroups, including racial and ethnic minority students, students with disabilities, students whose first language is not English, and students from low-income homes. But no matter how states defined these standards, NCLB required that all students reach proficiency by the end of the 2013–2014 school year. You probably noticed—this did not happen.

For a while, NCLB dominated education. Testing expanded. Schools and teachers were penalized if they did not perform. Such high-stakes penalties pushed teachers and schools to "teach to the test" or worse. The curriculum narrowed, and much time was spent on drill and practice. Cheating was a problem, and graduation requirements were

dumbed down in some high schools so they could avoid receiving penalties (Davidson, Reback, Rockoff, & Schwartz 2015; Meens & Howe, 2015; Strauss, 2015).

With all this focus on test preparation, some schools and states seemed to make progress toward their AYP goals, but too many schools were labeled as failing. A closer look at these successes and failures showed that the states used very different formulas and procedures for calculating AYP, so we can't really compare results across states (Davidson, Reback, Rockoff, & Schwartz, 2015). All in all, NCLB was widely criticized as "blunt instruments, generating inaccurate performance results, perverse incentives, and unintended negative consequences" (Hopkins et al., 2013, p. 101). In sum, NCLB was extremely controversial, as you can see in the *Point/Counterpoint*.

POINT/COUNTERPOINT

Was the Testing That Came with NCLB a Positive Force in Schools?

After almost 15 years as the law of the land, NCLB was replaced by the Every Student Succeeds Act (ESSA). One clear legacy of NCLB is an increase in testing. Was that a positive or a negative for schools?

POINT

Yes, scores were up; students were learning.

In many ways, No Child Left Behind was the product of frustration with administrators and teachers. Educators have known for years about achievement gaps and the poor test performance of students in poverty, yet according to policymakers in Washington, no one was taking responsibility to make things better—government officials seemed to believe that educators made excuses rather than taking actions. "In a real sense, NCLB was a mighty yawp of frustration uttered by Washington policy makers tired of nicely asking educators to cooperate—and ready to ruffle some feathers" (Hess & Petrilli, 2004, p. 14).

Margaret Spellings, U.S. Secretary of Education under President George W. Bush, often noted that "what gets measured gets done." Even educators who criticized NCLB conceded that the law made it more difficult to ignore the learning needs of students who all too often were overlooked—racial minorities, students in poverty, students with special needs, and English language learners. So the successes and failures of schools, especially the failures with particular groups of students, had become much more transparent. Concern with achievement gaps grew. Low-achieving schools received greater attention, and there was more accountability in every school. And schools worked harder to align state and national content standards with their curricula. The idea of getting better-qualified teachers into all classrooms, especially classrooms for the poorest students, was important, too. More schools started creating data systems to follow students over several years. By the mid-2000s, scores were up in reading and math for about 75% of states and districts—achievement gaps were generally narrowing (Jennings & Rentner, 2006; Lewis, 2007).

COUNTERPOINT

No, more testing has hurt schools, teachers, and students.

Few educators question that what gets measured gets done. But that, say many, is the problem. More and more, the tests determine the curriculum—if it is not on the test, then there is no time or money for teaching it. That means social studies, art, music, physical education, languages, drama, and literature are not high priorities. As the educational sociologist David Labaree said more than 20 years ago, "Whatever is not on the test is not worth knowing, whatever is on the test need be learned only in the superficial manner that is required to achieve a passing grade" (1997, p. 46).

(Continued)

POINT/COUNTERPOINT Continued

Another problem is that rather than getting better at helping students learn, some schools have gotten better at getting around the rules by lowering standards, excluding students who do not test well, teaching directly to the test, or encouraging low-scoring students to be absent on testing day. This temptation to "get around the rules" should not be surprising to anyone who knows the unintended consequences of systems that rely on punishment to control children or adults—humans are clever and often find ways to avoid the punishment, including cheating and manipulating the system. Any undergraduate psychology major knows that punishment is a bad way to change behaviors.

In some schools, administrators and teachers targeted the "bubble kids," students who are almost at mastery level, and just ignored the lower-achieving students who are far from mastery. This made the school's numbers look better as more "bubble" students passed but left the lowest-achieving students even further behind. In addition, there was evidence that the higher-achieving students of all income levels and racial groups were regressing back to the mean as attention and resources were directed to lower-performing students (Lewis, 2007).

Other critics complained that the required focus on basic skills testing for everyone had taken money and attention away from the advanced science, technology, engineering, and mathematics (STEM) subjects that are the foundation for innovation. The ability of any country to compete in the global economy rests on knowledge and skills in these subjects (Hess & Rotherham, 2007).

A press release from the Obama administration summed up the situation: "NCLB highlighted the achievement gap and created a national conversation about student achievement. But it also created incentives for states to lower their standards; emphasized punishing failure over rewarding success; focused on absolute scores, rather than recognizing growth and progress; and prescribed a pass-fail, one-size-fits-all series of interventions for schools that miss their goals" (Abrevaya, 2010).

NCLB was supposed to be reauthorized in 2007 or 2008, but this process was not completed until December 10, 2015, when President Barack Obama signed the **Every Student Succeeds Act (ESSA)**. The main differences between ESSA and NCLB are that the requirement for proficiency for all students by a certain date has been dropped, most control is returned to the states to set standards and develop interventions, and penalties are no longer central to the law. A few key changes include:

1. Schools still must test the same subjects in the same grades, and at least 95% of students must participate in the testing. But the local districts now can decide when to test, whether to break one big test into several smaller tests, and even how to find better tests that really capture important student learning. In these plans, test scores and graduation rates have to be given greater weight than other more subjective measures, but at least one additional measure of school quality such as school climate and safety or student engagement must be included, along with measures of progress toward English language proficiency for English learners (Korte, 2015).
2. The schools still have to gather data about different subgroups of students, but they are not penalized if the students in these groups do not perform, unless the underperformance persists over time.

3. Only schools at the bottom 5% of test scores, schools that graduate fewer than two-thirds of their students, and schools where subgroups consistently underperform will be considered failing. The states must intervene in these schools with "evidence-based" programs, but ESSA leaves the decisions about which interventions to use to the state (Strauss, 2015).
4. States are allowed to adopt the Common Core State Standards, but there are no federal incentives or pressures to do so. The goal is for high school graduates to be college and career ready.
5. States are now required to fund "equitable services" for children in private and religious schools if those students are eligible for special services. This could be a problem for many states that do not have enough money to adequately fund these services in public schools (Strauss, 2015).
6. ESSA also emphasizes increased access to preschool by including new funding for early childhood education (Wong, 2015).

Even though these seem to be major changes, the actual effects for many states and schools may not be too dramatic. By 2015, the Secretary of Education had waived the requirement to reach 100% proficiency for 42 states and the District of Columbia. To get the waivers, the states had to show that they had adopted their own testing and accountability programs and were making progress toward the goal of college or career readiness for all their graduates. In other words, these 42 states and the District of Columbia already were operating under the main provisions of ESSA (Meens & Howe, 2015; Wong, 2015).

Time will tell how the new ESSA law unfolds, especially with Donald Trump as president. Many excellent teachers still believe they are spending too much time preparing for tests and not enough time supporting student learning in subjects not tested, such as social studies, art, music, physical education, and technology (Cusick, 2014). Let's turn now to those people we are trying not to leave behind—the students.

Student Differences

We begin our analysis of teaching and learning with the students. Chapters 2 and 3 discuss the broad range of differences students bring to schools and classrooms. Students differ in ethnicity, culture, learning challenges, gender, and intelligence. Each of these differences has implications for teaching and learning.

In Chapter 2, "Student Diversity," we note that in 2015 about 25% of U.S. children under 18 were living in immigrant families (Turner, 2015). It is likely that by 2060 nearly 20% of the U.S. population will be foreign born, and people of Hispanic origin will comprise almost 30% of that population. By 2044, more than half of the U.S. population will be members of some minority group (Colby & Ortman, 2015). Teachers and administrators will have to work together to create classrooms that are good for all students. The challenge will be creating tolerance, respect, and understanding among a diverse student and teacher school community.

Almost 13 million U.S. children live in poverty, which is about 1 in 5 of our children. We have the *second-highest* rate of child poverty among the 35 economically advantaged countries of the world, just above Romania and below Bulgaria (Ann E. Casey Foundation, 2015; Children's Defense Fund, 2019a). Compared to children from affluent families, children growing up in poverty have lower average scores on achievement tests, are at least twice as likely to be kept back in school, and drop out more often. We examine some ways to support students faced with these challenges.

Cultural differences often are associated with diversity in learning styles. Although students may have different learning styles or preferences, the consequences for teaching and learning are not clear; in fact, popular programs have far outrun what we know about how to deal with such differences. Indeed, the research gives one pause.

Gender differences and sex stereotyping are two other problems that face most teachers and administrators. Gender discrimination in the classroom and students' concerns about sexual orientation are just two of the challenges facing school leaders. To act wisely is to first understand the facts and consequences; however, the issues are complex, and often there are two sides. Consider the *Point/Counterpoint* on whether boys and girls should be taught differently.

POINT/COUNTERPOINT

Should Girls and Boys Be Taught Differently?

Proponents say that students are better off learning some things with their same-gender counterparts. Critics say that gender-segregated classrooms change little for learners and may reinforce stereotypes and even lead to greater gender disparities.

POINT

Boys and girls have unique strengths and challenges and should be taught in different ways.

Many educators paid attention when the No Child Left Behind (NCLB) Act began to allow public schools to offer same-sex classes, which led to the 2006 amendment to the Title XI regulation that removed the ban on single-sex public education. In the spirit of innovation, many schools took up the call and began catering instruction to the unique needs of boys and girls. After all, findings from the 2012 PISA test revealed that among 15-year-olds worldwide, boys were disproportionately overrepresented at the lowest and highest ends of achievement in math and reading, and girls generally reported lower self-confidence and higher anxiety in math than boys (OECD, 2015, 2016). It seemed logical to examine whether all students would benefit from gender-specific instruction (Bigler, Hayes, & Liben, 2014).

Since then, more than 1,000 school districts across the United States have implemented some degree of single-sex education (Klein, Lee, McKinsey, & Archer, 2014). Some organizations, such as the Gurian Institute (http://www.gurianinstitute.com), have offered books and professional development workshops for schools focused on how best to educate each gender based on the core assumption that boys and girls have different learning "styles" (Gurian & Stevens, 2005). A staunch proponent of single-sex classrooms, Leonard Sax (2005) has suggested that these styles are rooted in fundamental biological differences between boys and girls that require different instructional approaches. Single-sex classrooms can help girls develop their own strengths and boost their self-confidence, interest, and achievement, particularly in STEM disciplines. Boys, on the other hand, can focus on strengthening their literacy skills and cooperativeness. Anecdotal findings reported by Gurian and others, primarily in popular media, have shown gains for both genders (e.g., Gurian, Stevens, & Daniels, 2009). Students and their families may have some choice in whether students attend a single-sex or a mixed-sex school, which could mean that such students are predisposed to respond well to the single-sex learning environment.

COUNTERPOINT

Girls and boys are more similar than different and should be taught together.

Researchers who have looked critically at data used to support gender-segregated educational approaches have argued that these approaches come up short of fulfilling their promise of promoting gender equity in learning and psychological well-being. In their 2011 article "The Pseudoscience of Single-Sex Schooling," Diane Halpern and her colleagues noted that research studies on same-sex education have been "deeply misguided, and often justified by weak, cherry-picked, or misconstrued scientific claims rather than by valid scientific evidence" (Halpern et al., 2011, p. 1706). For example, when researchers take into account students' initial performance levels, many students' achievement gains in single-sex classrooms disappear. These scholars argue that studies of single-sex schooling have lacked the statistical rigor of randomized assignment, and therefore findings could be due to sampling or researcher bias. In fact, Halpern and colleagues claim that separating boys and girls actually *worsens* outcomes by making gender differences (and, therefore, stereotypes) more noticeable. They point to research showing that when any group of humans is set apart from another (based on gender, eye color, or even T-shirt color), people develop intergroup biases. Single-sex education, they argue, minimizes the very opportunities needed for gender equity—namely, teaching boys and girls to work alongside each other. "Positive and cooperative interaction with members of other groups is an effective method for improving intergroup relationships" (Halpern et al., 2011, p. 1707).

But what about the evidence of biological differences between men and women? Based on findings from hundreds of studies, with some important exceptions, men and women are highly similar on numerous psychological and performance metrics (Hyde, 2005). The magnitude of these differences fluctuates across the lifespan and in different contexts, which can lead researchers to overestimate the size and stability of sex differences. For example, much of the evidence on sex differences has come from studies with adults who have had years of socialization; these sex differences are not necessarily present in children. Maybe boys and girls are pretty similar after all . . . and should therefore be educated in similar ways.

BEWARE OF EITHER/OR

So do single-sex schools or classrooms improve learning? The answer is "it depends." Pahlke, Hyde, and Allison (2014) examined results from 184 studies involving 1.6 million students in grades K–12 from 21 countries. They looked at whether students learning in single-sex schools versus those learning in coeducational schools displayed different performances and attitudes. Among studies that randomly assigned students to single-sex classrooms, only trivial differences emerged between students in the two settings. Both girls and boys performed marginally better in single-sex schools, but girls attending coeducational schools had higher educational aspirations than did girls attending same-sex schools.

In Chapter 3, "Student Abilities and Challenges," we explore the meaning of intelligence, dealing with differences in student academic abilities and the learning challenges that many students face. Intelligence is one dimension of student difference that clearly has implications for schools. There are many different conceptions about intelligence as well as some misconceptions. We examine both. We also look at how intelligence has been measured and the best ways of using the information from those assessments. Beliefs about intelligence influence the structure and design of the curriculum. Administrators invariably confront practical issues such as ability grouping and programs for the gifted when they try to organize their schools for effective learning.

There are continuing concerns about the requirements of legislation that mandate the inclusion of students with learning and behavior problems in the classroom. We discuss three of the most common challenges—students with attention deficit hyperactive disorder (ADHD), learning disabilities, and autism spectrum disorders—and then look at effective assessment and teaching for these students.

Learning

Because learning is a complex cognitive process, there is no single best explanation of learning. Different theories of learning offer more or less useful explanations depending on what is to be explained. We examine three general theories of learning—behavioral, cognitive, and constructivist—each with a different focus, as you will see in Chapter 4.

Behavioral theories of learning stress observable changes in behaviors, skills, and habits. Attention is clearly on behavior. Learning is viewed as a change in behavior brought about by experience, with virtually no concern for the mental or internal processes of thinking. Behavior is what people do. The intellectual underpinnings of behavioral theory rest with Skinner's (1950) work with operant conditioning; functional behavioral assessment and positive behavior supports are applications of this theory of learning. When specific skills and behaviors need to be learned, teaching approaches consistent with behavioral learning theory are quite effective.

Cognitive theories of learning deal with thinking, remembering, creating, and problem solving. The way information is remembered and processed as well as how individuals use their knowledge to regulate their thinking are critical in this perspective. New views of working memory and cognitive load play prominent roles in current cognitive theories. These theories also provide ways to give students more control over their own learning by developing and improving their self-regulated learning strategies. Some of the most important applications of cognitive theories are teaching students how to learn and remember by using learning tactics such as note taking, mnemonics, and visual organizers. Teaching strategies based on cognitive views of learning, particularly on information processing, highlight the importance of attention, organization, practice, and elaboration in learning. The emphasis of the cognitive approach is on what is happening "inside the head" of the learner.

Constructivist theories of learning are concerned with how individuals make meaning of events and activities; hence, learning is viewed as the construction of knowledge. In general, constructivism assumes that people create and construct knowledge rather than internalize it from the external environment, but there are different approaches to constructivism. Some constructivist views emphasize the shared and social construction of knowledge while others see social forces as less important. Constructivist perspectives on learning and teaching, which are increasingly influential today, are grounded in the research of Piaget, Bruner, Dewey, and Vygotsky. Inquiry and problem-based learning, cognitive apprenticeships, and cooperative learning are typical teaching strategies that are consistent with constructivist approaches. The essence of the constructivist approach is that it places the students' own efforts at the center of the educational process—thus the notion of student-centered teaching.

Each of these approaches to learning (Chapter 4) has much to offer; in fact, each brings with it advantages and disadvantages. We think of these main learning theories as three pillars for teaching. Students must first understand and make sense of the material (constructivist); then they must remember what they have understood

(cognitive–information processing); and then they must practice and apply (behavioral) their new skills and understanding to make them more fluid and automatic, a permanent part of their repertoire. Failure to attend to any part of the process means lower-quality learning. It is not sufficient to know one perspective; indeed, knowledgeable teachers and administrators should understand, remember, and apply all of these perspectives appropriately.

Motivation

Effective teaching and learning depend on motivated students; hence, teachers must know how to stimulate, direct, and maintain high levels of interest among students, discussed in Chapter 5. Teachers can create intrinsic motivation by stimulating students' curiosity and making them feel more competent as they learn, but that is easier said than done because some tasks simply are not inherently interesting. Teachers cannot count on intrinsic motivation to energize all of their students all of the time. There are times when teachers must use extrinsic means to motivate students without undermining intrinsic aspects of learning. To do this, teachers need to know the factors that influence motivation.

Behaviorists tend to emphasize extrinsic motivation caused by incentives, rewards, and punishment. Thus, according to the behavioral view, understanding student motivation begins with a careful analysis of the incentives and rewards present in the classroom. Cognitive views stress a person's active search for meaning, understanding, and competence and the power of the individual's attributions and interpretations. Finally, sociocultural theories of motivation stress engaged participation in learning communities. Such theories focus on developing and maintaining group identities through authentic participation in the activities of the group.

Teachers and administrators must understand all these perspectives if they are to be effective in improving student learning. To organize the many ideas about motivation in a way that is useful for teaching, we examine six broad areas or approaches. Most contemporary explanations of motivation include a discussion of needs and self-determination, goals, expectancies and values, attributions, self-beliefs, and, finally, the emotional "hot" side of motivation—interests, curiosity, and anxiety. To explore the role of needs, we consider Maslow's hierarchy of needs as well as the need for self-determination. To understand how goals affect teaching and learning, we discuss the four goal orientations of mastery, performance, work-avoidant, and social. In expectancy-value theories, the important questions are "If I try hard, can I succeed?" "If I succeed, will the outcome be valuable or rewarding to me?" and "What will it cost me to make the effort?" Self-beliefs such as attributions for success and failure, mindsets, self-efficacy, and self-worth are particularly strong influences on individual motivation. Today many researchers are focusing on the roles of emotions such as interests, curiosity, flow, boredom, and anxiety in motivation. We examine all these complex and interacting influences on motivation.

In sum, student motivation to learn is enhanced when teachers use strategies that help students develop confidence in their ability to learn, see the value of the learning, stay focused on learning without resorting to self-protective and self-defeating beliefs and actions, and feel connected to the classroom and the school. We will explore both the current explanations of motivation as well as the development of strategies to enhance motivation and performance.

Teaching

Good teaching matters. It is the sine qua non of schooling. In fact, good teaching is what instructional leadership is about—finding ways to improve teaching and learning—so we have devoted Chapter 6 to teaching. There are no simple answers to what good teaching is, but we know it is anchored in expertise. Expert teachers work from integrated sets of principles instead of dealing with each new event as a discrete and novel problem. They have broad professional knowledge in academic subjects as well as that unique form of knowledge, pedagogical content knowledge, which combines mastery of *academic content* with knowing *how to teach* the content and how to match instruction to *student differences*. We will look at successful teachers from a variety of settings and examine their similarities and differences.

Effective teachers are also warm and enthusiastic in their teaching. Warmth, friendliness, and understanding seem to be the teacher traits most strongly related to student attitudes. In other words, teachers who are warm and friendly tend to have students who like them and the class in general; however, being warm, friendly, and enthusiastic is not enough to guarantee student achievement. Research has identified teacher clarity and organization as important characteristics of effective teachers. Recent large-scale longitudinal research has identified three aspects of class climate that are related to positive student outcomes in preschool and elementary school students: teacher *emotional support*, similar to teacher warmth and enthusiasm; a *cognitive* dimension, instructional support, which includes concept development (activities and discussions that promote student higher-order thinking) and quality feedback that is specific and focused on the learning process; and *behavioral* concerns such as classroom and lesson management, with clear activities and routines that make more time for student learning and are really engaging—similar to the teacher characteristics of clarity and organization (Allen et al., 2013; Hafen et al., 2012; Jerome, Hamre, & Pianta, 2009; Luckner & Pianta, 2011). We will examine the practical implications of these findings for the classroom.

Effective teachers are creative and organized, and the basis for their organization is planning. Planning influences what students will learn because planning transforms the available time and curriculum materials into activities, assignments, and tasks for students. There is, however, no one model for effective planning. For experienced teachers, planning is a creative problem-solving process of determining how to accomplish many lessons and segments of lessons. Experienced teachers know what to expect and how to proceed, so they don't necessarily follow the detailed lesson-planning models that are so useful for beginning teachers. For all teachers,

regardless of experience, clear objectives—both cognitive and affective—are a key to successful planning.

In the end, students have to do the learning, but teachers can create situations that guide, support, stimulate, and encourage learning, just as administrators can do for teachers. In spite of the debates and different viewpoints, it remains clear that there is no one best way to teach. Different goals require different methods. Teacher-centered instruction leads to better performance on achievement tests, whereas the open, informal methods like discovery learning or inquiry approaches are associated with better performance on tests of creativity, abstract thinking, and problem solving. In addition, open methods are better for improving attitudes toward school and for stimulating curiosity, cooperation among students, and lower absence rates.

Our goal is to help teachers and administrators understand the complexities of teaching and learning so that they can make better, more reasoned decisions in these areas.

Classroom Management

Chapter 7 focuses on classroom management. Classrooms are distinctive environments that affect participants regardless of how students are organized for learning or what educational philosophy the teacher espouses (Doyle, 1986, 2006). Classrooms are crowded with people, tasks, and time pressures. There are many students—all with differing goals, preferences, and abilities—who must share resources, accomplish various tasks, and use and reuse materials. In addition, actions typically have multiple effects. Calling on low-ability students may encourage their participation and thinking, but it also may slow the discussion and lead to management problems if the students cannot answer. Moreover, everything happens at once, and the pace is fast. Teachers have literally hundreds of exchanges with students during a single day. In this rapid-fire existence, events are unpredictable and public. Finally, classrooms have histories. The meaning of a particular action depends in part on what has happened before. To manage these complex places is a challenge for all, but an especially major one for beginning teachers.

No productive activity can take place in a group without the cooperation of members; hence, a fundamental task of teaching is to enlist students' support in activities that will lead to learning, and the first step in achieving cooperation is to organize the learning environment in a productive way. But order for its own sake is a hollow ritual. There are at least four reasons why classroom management is important: to make more time for learning, to include everyone in learning, to foster supportive relationships between teachers and students, and to develop systems that help students better manage their own learning.

Research on effective elementary and secondary classroom managers shows that these teachers have carefully planned rules and procedures (including consequences) for their classes and that they teach these rules and procedures early in the school year using explanations, examples, practice, correction, and student involvement. In fact, getting started with a careful system of rules and procedures the first week of school

sets the tone for the rest of the year. One area that requires good rules and procedures today involves managing technology. In Chapter 7, we also will give some useful guidelines and considerations.

Rules and procedures are a start, but not enough. Teachers need to establish a climate of trust and respect to create a positive community for learning. Once a good classroom environment is established, it must be maintained by encouraging student engagement and by preventing management problems. "With-it-ness," overlapping, group focus, and movement management are the skills of teachers who prevent problems. For special or more difficult situations, positive behavior supports often are helpful in preventing disruptive classroom episodes. Another way to prevent discipline problems is to create caring relationships and classroom communities for students and teachers.

Even with the best prevention practices, there will be discipline problems in the classroom. Conflicts between students, though potentially dangerous, can become occasions for learning conflict negotiation and peer-mediation strategies. One possible source of conflict is management that is unresponsive to students' cultural background and perceptions of schools. Establishing a positive learning context includes understanding teachers' and students' beliefs about respect as well as focusing attention on the factors that support motivation to learn. Our goal is to give teachers and principals the tools to succeed in that endeavor.

Assessing Student Learning

The teaching–learning cycle is not complete without evaluation and assessment—the topic of Chapter 8. In fact, all teaching involves assessing and evaluating learning. Increasingly, evaluation and measurement specialists are using the term *assessment* to describe the process of gathering information about student learning. Assessment is broader than testing and measurement. Assessments can be formative or summative and may be designed by classroom teachers or by local, state, or national agencies such as school districts or the Educational Testing Service. Today's assessments can go well beyond paper-and-pencil exercises to observations of performances and the development of portfolios and artifacts.

Teachers and administrators are increasingly being called on to make assessments of student learning and to interpret the results of tests. Hence, they need to know the difference between norm-referenced and criterion-referenced tests. They must understand the concepts and language of test makers—*sample*, *mean*, *mode*, *median*, *standard deviation*, *reliability*, *validity*, *normal distribution*, *percentile scores*, *standard scores*, *grade-equivalent scores*—because they will be called on to interpret test results to parents and policymakers.

Several kinds of standardized tests are used in schools today. There are three broad categories of standardized tests: achievement, diagnostic, and aptitude (including interest). Principals and teachers will probably encounter achievement and aptitude tests most frequently because they are important tools for diagnosing learning problems and measuring the success of schooling. Today, many important decisions about

students, teachers, and schools are based in part on the results of standardized tests. Because the decisions affected by test scores are so critical, many educators call this process *high-stakes testing;* in fact, all states have statewide mandated testing for public school students.

Although standardized tests are important and will likely increase in their significance, most tests given to students to evaluate their performance are teacher-made tests. In the end, teachers are the ones who give grades and decide who will be promoted and who will repeat in addition to what and how to teach. Teachers are concerned with *formative* assessment, diagnosing the strengths and weaknesses of students so they can build an instructional program that will be effective. Teachers also must make *summative* assessments at the end of instruction to determine the level of accomplishment.

We will consider a number of critical questions about standardized tests. For example, what role should testing play in making decisions about people? What effects do high-stakes tests have on the curriculum? Do some students have an unfair advantage in taking tests? How might stereotype threat affect testing and schooling for some students? One of the main criticisms of standardized tests—that they control the curriculum, emphasizing recall of facts instead of thinking and problem solving—is a major criticism of classroom tests as well. What can be done? One proposed solution is authentic assessment. Authentic tests require students to apply skills and abilities as they would in real life. For example, they might use fractions to design a floor plan for a student lounge. If our instructional goals for students include the abilities to write, speak, listen, create, think critically, solve problems, or apply knowledge, then our tests should ask students to write, speak, listen, create, think, solve, and apply. The concern with authentic assessment has led to the development of several new approaches based on the goal of *performance in context.* Facts are used in a context where they apply; for example, the student uses grammar facts to write a persuasive letter to a software company requesting donations for the class computer center.

Portfolios and exhibitions are two approaches to assessment that require performance in context. With these approaches, it is difficult to tell where instruction stops and assessment starts because the two processes are interwoven. A portfolio is a purposeful collection of student work that demonstrates the student's efforts, progress, and achievements. An exhibition is a performance test that has two additional features. First, it is public, so students preparing exhibitions must take the audience into account; communication and understanding are essential. Second, an exhibition often requires many hours of preparation because it is the culminating experience of a whole program of study. Another alternative is informal assessments such as journals that gather information from multiple sources to help teachers make decisions.

Finally, it is important to consider the effects of grades and grading on students. Teachers and administrators need to learn how to take advantage of the positive functions of grading and feedback while avoiding their negative consequences. That is no mean feat, but it is possible. Which do you think are better, traditional tests or authentic assessments? Take a look at the *Point/Counterpoint* arguments. Chapter 8 deals with the issues of assessment and grading in more detail.

POINT/COUNTERPOINT

Which Are Better: Traditional Tests or Authentic Assessments?

We have seen the advantages and disadvantages of standardized tests, but what about classroom testing? Are traditional multiple-choice and essay tests useful in classroom assessment?

POINT

Traditional tests are a poor basis for classroom assessment. Years ago, in his article "Standards, Not Standardization: Evoking Quality Student Work," Grant Wiggins (1991) made a strong case for giving students standards of excellence against which they can judge their accomplishments. But these standards should not be higher scores on multiple-choice tests. When scores on traditional tests become the standard, the message to students is that only right answers matter and the thinking behind the answers is unimportant. Wiggins noted that we don't judge major companies like Apple or Procter & Gamble by giving their employees multiple-choice tests. We don't judge the Philadelphia Eagles by giving their players and managers an essay test. For companies and sports teams, banks, singers, actors, hairstylists—you get the idea—we look at the quality of their work. How does their performance compare to standards of excellence in their field?

In a second article, Wiggins (1993) continues to argue for assessment that makes sense, that is, assessment that tests knowledge as it is applied in real-world situations. Understanding cannot be measured by tests that ask students to use skills and knowledge out of context. They must apply those skills in diverse contexts to solve authentic problems.

COUNTERPOINT

Traditional tests can play an important role. Most psychologists and educators would agree with Wiggins that setting clear, high, authentic standards is important, but many also believe that traditional tests are useful in this process. Learning may be about more than knowing the right answers, but right answers are important. Even though schooling is about learning to think and solve problems, it is also about knowledge. Students must have something to think about—facts, ideas, concepts, principles, theories, explanations, arguments, images, opinions. One reason that American students, compared to students in many other developed countries, lack essential knowledge may be because American schools emphasize process—critical thinking, self-esteem, problem solving—more than content. To teach more content, teachers will need to determine how well their students are learning the content. Well-designed traditional tests can evaluate students' knowledge effectively and efficiently (Russell & Airasian, 2012). In fact, taking more frequent tests improves learning, even if there is no feedback from the test—bad teaching, but a powerful result (Carpenter, 2012; Pashler et al., 2007; Roediger & Karpicke, 2006).

Assessing and Changing School Culture and Climate

The school is a complex social system. Teachers teach in classrooms, but classrooms are only a part of the broader social system of the school. Just as a positive classroom climate is critical for effective teaching and learning, so too are the culture and climate of the school. The concepts of culture and climate are two ways to capture the feel or atmosphere of the school workplace. These two approaches to examining the collective identity of the workplace, its culture and climate, come from different intellectual traditions, but both perspectives are attempts to understand the influence of social context

on school life. Thus, both should be useful to teachers and principals as they grapple with the way social conditions in the school affect teaching and learning.

Organizational culture is a pattern of shared orientations that binds the unit together and gives it a distinctive identity. To understand the culture of a school, one must comprehend the meanings and the shared orientations of the school at four levels: its artifacts, norms, values, and tacit assumptions. Although there is no one culture that is best for every school, there are some tacit assumptions that facilitate the process of supervision as improvement of instruction. Consider the following set of basic assumptions that Schein (1992) labels the heart of a learning culture.

1. Teachers and students are proactive problem solvers and learners.
2. Solutions to problems derive from a pragmatic search; knowledge is found in many forms: scientific research, experience, trial and error, and clinical research in which teachers and supervisors work things out together.
3. Teachers are basically good and are amenable to change and improvement.
4. Creativity and innovation are central to learning.
5. Both individualism and teamwork are important aspects of human interaction.
6. Diversity is a resource that has the potential to enhance learning.

Schools anchored with such assumptions have created learning cultures that encourage learning and improvement among all participants—students, teachers, and administrators. A culture of academic optimism is one important school property that links shared beliefs of the faculty with student achievement. The current conception of academic optimism, however, includes cognitive (efficacy), affective (trust), and behavioral components (academic emphasis). Academic optimism is a collective set of beliefs about strengths and capabilities in schools that paints a rich picture of human agency in which optimism is the overarching idea that unites efficacy and trust with academic emphasis. A school culture permeated with such beliefs has a sense of the possible.

Another way to view and measure school culture is in terms of control, especially the shared values and beliefs of the school for controlling students. The model of the **humanistic culture** views a school as an educational community in which students learn through cooperation, experience, and self-control. The faculty believes that students should be self-regulated learners who take responsibility for their actions. Misbehavior is viewed in sociological and psychological terms; causes for deviant behavior are sought. The goal is for each student to be a responsible citizen of a learning community. Optimism, understanding, self-direction, and close friendly relations are hallmarks of the humanistic school. The model for the **custodial culture** is a traditional school, with a focus on control, status, and power. Teachers believe that control is critical, teacher status is important, communication is one way downward, and student misbehavior is a personal affront against teachers. Cynicism, strict teacher direction, mistrust, impersonality, and strong teacher control imbue the custodial school.

Another aspect of the school context that sets the scene for effective teaching and learning is organizational climate. Teachers' performance in schools is determined in part by the climate in which they work. Climate is a general concept that refers to teachers' perceptions of the school's work environment; it is affected by the formal organization,

informal organization, and politics, all of which, including climate, affect the motivations and behavior of teachers. School climate is a relatively enduring quality of the school environment that is experienced by teachers, influences their behavior, and is based on their collective perceptions. Climate is to a school what personality is to an individual.

We examine organizational climate from several perspectives: *openness*, that is, the extent to which behaviors in the school are authentic and real; the *health* of the interpersonal dynamics among the students, teachers, and principal; and the *collective efficacy* of the school—that is, the extent to which the teachers as a group believe their ability to organize and teach will enable them to overcome extant student difficulties and help students achieve academically. Each of these climate perspectives brings with it a set of reliable and valid measures that teachers and principals can use to assess the functionality of the climate of their school.

Organizations are in a constant state of flux. Their change can be progressive, regressive, or aimless. Schools can develop their own learning procedures to solve their problems. They can become places where teachers and principals can continually expand their capacity to create the results they desire, where emergent patterns of thinking are nurtured, where collective aspiration is liberated, and where people are constantly learning how to learn (Senge, 1990). We will illustrate how teachers and administrators can use the climate framework and its measures as bases for organizational change. Using an organizational development approach, we will demonstrate how one school identified a climate problem, established a problem-solving team, diagnosed potential causes of the problem, developed an action plan, and set the stage for improving teaching and learning (see Chapter 9).

Instructional Leadership for 21st Century Learning

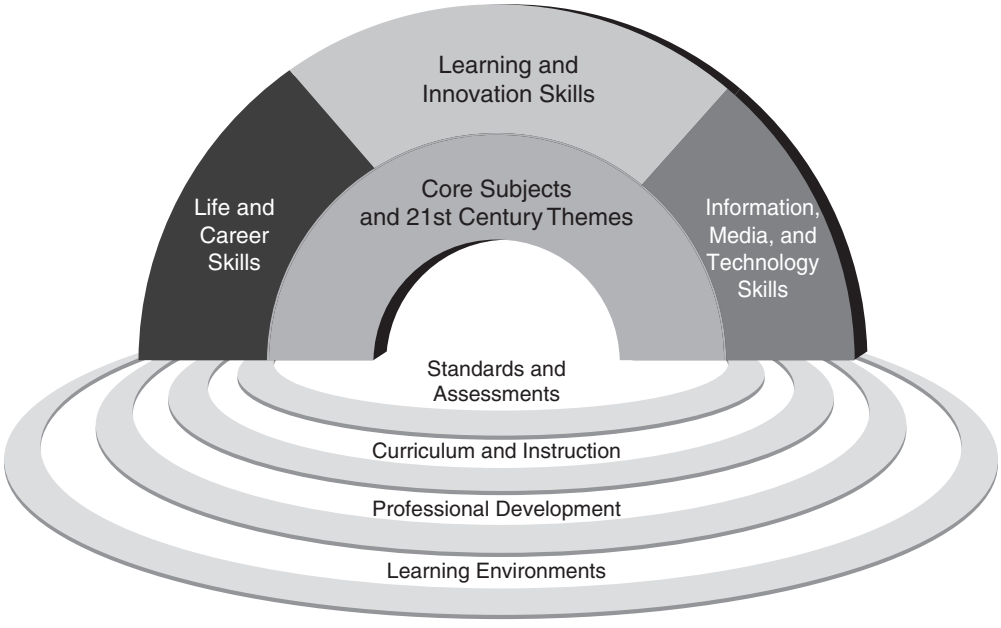
In 2008, the Association for Supervision and Curriculum Development issued a position statement about the type of education students need today (ASCD, 2008).

Educating Students in a Changing World

As educators in the 21st century, we are charged with teaching students to be successful in a complex, interconnected world. This responsibility requires schools to prepare students for technological, cultural, economic, informational, and demographic changes.

To accomplish these goals, the Partnership for 21st Century Learning—a national organization with representatives from the National Education Association, educational publishers, technology companies, the American Association of School Librarians, the Educational Testing Service, the National Academy Foundation, toy companies, private foundations, the Walt Disney Company, and others—has developed a framework that describes what is needed for 21st century learning (see Figure 1.1). The emphasis is on a blending of core subject knowledge and expertise with specific *learning and innovation skills* (creativity, innovation, critical thinking, problem solving, communication, and collaboration); *information*, *media*, *and technology*

FIGURE 1.1 A Framework for 21st Century Learning
The rainbow arch sections represent critical 21st century student outcomes, and the pools at the base of the rainbow represent support systems.



Source: "21st Century Student Outcomes and Support Systems" from Partnership for 21st Century Skills website. Copyright © by Partnership for 21st Century Skills. Reprinted with permission.

skills (information literacy, media, and information and communications technology literacy); and *life and career skills* (adaptability, self-direction and initiative, social and cross-cultural skills, productivity and accountability, leadership and responsibility). Tools for instructional leaders are available from the Partnership for 21st Century Skills (http://www.p21.org).

Technology and Instructional Leadership[1]

K–12 investment in digital technologies has continued to increase since the late 1980s when there were computers in 90% of U.S. public schools (Becker, 1991) Between 1998 and 2005, the ratio of students to instructional computers decreased from 12.1 to 1 to 3.8 to 1 (Wells, Lewis, & Green, 2006). By 2010, more than 99% of schools had Internet access (Gray, Thomas, Lewis, & Tice, 2010). Recently, the fastest area of growth in K–12 computing has been mobile learning, with 52% of building leaders worldwide reporting one-to-one device programs in their schools (Project Tomorrow, 2017a). Another growth area has been e-learning and blended learning (Patrick, Kennedy, & Powell, 2013). Schools' continued investments in

[1]This section was written by Anika Ball Anthony and Lauren Acree, the Ohio State University.

digital technologies have been influenced by a number of factors, including advancements in digital technologies and data systems (Freeman, Adams Becker, Cummins, Davis, & Hall Giesinger, 2017), the growing role technology serves in daily life (Lenhart, Arafeh, Smith, & Macgill, 2008; National Center for Education Statistics, 2016), federal and state policies aimed at improving equitable access to educational resources and learning environments (Jenkins, 2017; Patrick, Worthen, Frost, & Gentz, 2015; SETDA, 2016), and vendors' marketing of hardware, software, and digital content to K–12 schools (Molnar, 2017).

Despite increased access to digital technologies, many schools struggle with ensuring that technology investments translate to meaningful uses that support improvements in teaching, learning, and student performance (Freeman et al., 2017; Rebora, 2016). For example, although 99% of schools report having access to technology, only 13% of teachers report using technology at least once a week to support instruction (Gray et al., 2010). One explanation for the underutilization of technology is that in many schools, investments in new hardware far exceed investments in educational software and teacher professional development (Consortium for School Networking, 2001; Schaffhauser, 2016). Across multiple surveys, teachers have reported a need for more professional development to support students' needs (Project Tomorrow, 2017b; Rebora, 2016; Roland, 2016). Instructional leaders can serve a critical role in ensuring that teaching and learning goals inform technology purchases, strategically aligning such initiatives to curriculum and professional development efforts, and monitoring achievement of educational improvement goals.

Current and Future Uses of Technology. Technology can and has been used across a variety of school settings in pursuit of goals such as increasing student achievement (Keengwe & Hussein, 2014; Lara-Alecio et al., 2012), improving student engagement and motivation (Huang, Su, Yang, & Liou, 2017), personalizing education to meet students' individual learning needs (Friend, Patrick, Schneider, & Vander Ark, 2017; Pane, Steiner, Baird, & Hamilton, 2015), and supporting reform-oriented instruction aimed at developing higher-order thinking skills such as critical thinking and problem solving (Freeman et al., 2017). Online communities (Fishman et al., 2013; Whitaker, Zoul, & Casas, 2015), e-coaching (Anthony, Gimbert, & Fultz, 2013), and badges or micro-credentials (Acree, 2016) have been used to supplement and personalize educators' job-embedded professional learning. Table 1.1 offers examples of a variety of ways technology can be used to support teaching and learning.

No one can predict exactly the shape of technology's impact on education, yet most agree that the classroom teacher will remain a key element of teaching and learning in public education, even if the teacher's role changes to take advantage of expanding technological options. We view the technological revolution in schools as an opportunity to improve teaching and learning. There is growing evidence that teacher beliefs and school culture (Collins & Halverson, 2009; Ertmer & Ottenbreit-Leftwich, 2010), shared instructional leadership (Dexter, 2011; Yuen, Law, & Wong, 2003), restructuring efforts (Cuban, Kirkpatrick, & Peck, 2001), and systemic alignment (Anthony, 2012; Hew & Brush, 2007) help schools effectively implement technology in pursuit of educational goals. Table 1.1 summarizes the current uses of technology in schools, but we

TABLE 1.1 Uses of Technology to Achieve Teaching and Learning Goals

Teaching and Learning Goals	Technological Tools
Improve students' knowledge acquisition or mastery learning	Tutorials and individualized programmed instruction Digital textbooks
Increase student motivation	Educational games Applications for goal attainment monitoring and self-reflection Virtual reality, videos, and images
Support reform-oriented instruction for critical thinking, problem solving, collaboration, and identity development	Virtual labs and simulations Concept mapping applications Electronic probes and sensors for data collection Spreadsheets, databases, and graphing calculators for data analysis Cloud-based applications for collaboration
Support innovation, creativity, and workplace readiness	Coding, robotics, and technology-supported maker spaces Data visualization tools Devices and applications for creating and editing graphics, videos, and music Productivity and scheduling software
Provide educators a variety of resources to support preferred instructional approaches	Lectures: Presentation and video conferencing tools Inquiry: Data collection, analysis, communication applications Deduction and inference: Web searches for information gathering and argument mapping software
Improve system-wide capacity, efficiency, and accountability	Devices and applications for communication Technology-supported professional learning (e.g., professional learning networks, e-coaching, badges) Assessment, analytics, and reporting systems

Source: A. B. Anthony and L. Acree (2018), created for this book.

predict that as software and hardware become more user friendly and less expensive, and as more principals and teacher leaders become technology leaders, the integration of technology in schools will increase dramatically.

Technology Leadership. In the modern information explosion environment, educational technology becomes increasingly vital day by day, and leaders with efficient technology leadership skills are the key to creating and implementing successful policies and technology education plans (Anderson & Dexter, 2005; Chang, 2012; Flanagan & Jacobsen, 2003; Neyland, 2011). **Technology leadership** is an emerging role focused on fostering school conditions that support technology integration. Associated roles and responsibilities often include providing visionary leadership; promoting a school culture for digital learning; modeling technology use; leading schools and districts in developing plans for school-based technology initiatives; budgeting, selecting, and working with vendors; organizing technology professional development; and collecting data on how technology supports school restructuring

efforts (Davidson, 2003; International Society for Technology in Education, 2009; McLeod, Richardson, & Sauers, 2015; Schrum & Levin, 2015). Technology leaders also attend to legal issues surrounding the use of technology in schools (Phillips & Sianjina, 2013; Quinn, 2003).

One Example of Technology Leadership: Supervision. Instructional leaders should and can be on the cutting edge of technological innovations to improve teaching and learning. Michael DiPaola (mfdipa@wm.edu) and his associates have developed a toolbox composed of data collection systems and digitized forms to improve the supervision process. Supervisors use the digitized form on a tablet or laptop to collect classroom data focused on specific research-based, high-yield instructional strategies (Hattie, 2008; Hattie & Timperley, 2007). At the conclusion of the observation period, the completed form can be emailed to the teacher as a PDF file to provide immediate and authentic feedback about their instruction.

Teachers and supervisors select from a variety of electronic forms targeting specific instructional strategies to focus the observation. These tools are unique because they are linked to a computer server so that not only is feedback quick and focused on a particular instructional strategy, but also the data from every observation are accumulated in a searchable database. Principals and supervisors have the ability to analyze a cumulative record of observations to review data collected by different observers and track teacher progress over time.

The teacher and supervisor, for example, might want to observe and analyze the cognitive level of questions that are being asked in a particular class by a teacher in terms of Bloom's taxonomy: remembering, understanding, applying, analyzing, evaluating, and creating (see Chapter 7). The supervisor using either a laptop or electronic tablet records on the digitized form (see Figure 1.2) the number and type of each question as it is raised as well as the wait time for the question. These data are recorded electronically and before classes are over for the day, and, as noted previously, the teacher is supplied a PDF summarizing the number and kinds of questions asked that day in that class. The feedback can then be used to develop strategies to improve questioning skills.

The point is that, increasingly, teachers and principals are going to be using computer technology to study and improve teaching in the classroom. The data will be collected electronically, stored "in the cloud," and available immediately for analysis. Teaching and learning will become more student centered, and eventually everyone, including students, will use computer apps to create, understand, improve, design, and customize entire courses.

Over the short term, most students and teachers will continue to use conventional textbooks, but little by little, textbooks will give way to electronic formats augmented by student-centric learning tools, which will create learning tool modules to generate entire courses designed for a variety of learners (Christensen, Horn, & Johnson, 2008). Instructional leaders of the future face not only a myriad of everyday problems but also the technological challenges of the future.

FIGURE 1.2 Sample Form for Teacher Evaluation

Cognitive Levels of Questions and Wait Time

Teacher: _____ **Administrator:** _____

Date: _____ **Observation:** *Start Time:* _____ *End Time:* _____

Class Observed: _____ **Number of Students in the Class:**_____

Follow up Dialogue Date: _____

Directions: The purpose of this form is to record the cognitive level of each question the teacher poses during a lesson or lesson segment. For each question, identify the level of the question and count the number of seconds the teacher waits until letting a student respond. Record the number of seconds in the corresponding row in each question's column.

	Wait Time in Seconds											
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	
Cognitive Level												**Total Questions Asked**
Remembering												
Understanding												
Applying												
Analyzing												
Evaluating												
Creating												

Sample Stems

Remembering
What is the definition for...
What happened after...
How many...
Who did...
When was...
Define the word...
Which is true or false?

Understanding
Explain what happened after...
Provide a definition of...
What is the purpose of...
Explain why___caused___
What are some examples?
Who was the key character?
How are these ideas different?
What do you think could happen?

Applying
What is another instance of...
Demonstrate the way to...
Which one is most like...
Could this have happened in...
How would you organize these ideas?
Which factors would you change?

Analyzing
What steps are important in the process of...
The solution would be to...
What's the relationship between...
What other conclusions can you reach about...
If____, then___
What do you see as other possible outcomes?

Evaluating
How would you have handled...
How would you feel if...
Defend your position about...
What do you think should be the outcome?
What changes would you recommend?

Creating
Devise your own way to...
Develop a proposal for...
How would you deal with...
Can you see a solution to...
What would happen if...
How many ways can you...
Design a___to___

Summary

This is a book about understanding and improving teaching and learning. We have provided an overview of our strategy for accomplishing that goal in this chapter. We began with a discussion of the role of instructional leadership and then examined the impact of NCLB and ESSA on instructional leadership. Then we turned to the students: how they differ in intelligence, emotion, learning styles, gender, and race. Each of these differences has implications for teaching and learning that are explored in some detail later (Chapters 2 and 3). Most experts agree that learning occurs when there is a stable change in an individual's skill, knowledge, or behavior, but some emphasize behavior and skills while others emphasize cognition and knowledge. Because learning is a complex cognitive process, there is no single best explanation of learning. Different perspectives are more or less useful depending on what kind of learning is to be explained. We examine three general explanations of learning—behavioral, cognitive, and constructivist—each with a different focus and each with different consequences (Chapter 4).

Effective teaching and learning depend on motivated students; hence, teachers must know how to stimulate, direct, and maintain high levels of student engagement. Motivation to learn is enhanced when teachers use strategies that help students develop confidence in their ability to learn, see the value of the learning, and stay focused on learning without resorting to self-protective and self-defeating beliefs and actions. Five approaches to motivation are important in this regard: behavioral, humanistic, cognitive, social cognitive, and sociocultural theories. Each perspective has something to offer to improve teaching and learning (Chapter 5). In the end, students have to do the learning, but teachers must create situations that guide, support, stimulate, and encourage learning. Good teaching is critical to student learning, but there is no one best way to teach. Different goals require different methods. Teacher-centered, student-centered, discovery, and inquiry methods are all more or less effective depending on the task and goal (Chapter 6).

Teachers not only have to motivate and teach but also must be able to manage the classroom. Inevitably there will be discipline problems in the classroom. When conflicts arise, teachers can deal more effectively with the situation if they first determine who "owns" the problem and then respond appropriately with empathetic listening and problem solving. Establishing a positive learning context also includes giving attention to the factors that support motivation to learn, such as tasks, autonomy, recognition, grouping, evaluation, and time (Chapter 7). All teaching involves assessing and evaluating learning. Assessment involves standardized and teacher-made tests, objective and essay tests, local and national tests, reliability and validity, traditional and innovative tests, and portfolios and exhibitions. Appropriate assessment is becoming increasingly more important for teachers and administrators as pressure mounts for school accountability (Chapter 8).

Teaching and learning are affected by the organizational context: the culture and climate of the school. Open, healthy, optimistic, and efficacious school environments are pivotal in improving teaching and learning. Administrators and teachers need to assess their school environment and then work together to develop and improve the learning environment (Chapter 9).

Finally, administrators today must exercise technology leadership to take advantage of the educational possibilities in cloud computing for data storage and analysis, collaborative learning environments (e.g., wikis, group blogging systems, digital textbooks, virtual reality, databases, concept mapping, video conferencing, e-coaching, etc.), game-based learning, and mobile learning. Technology leadership is an emerging role focused on fostering school conditions that support technology integration. Associated roles and responsibilities often include providing visionary leadership, promoting a school culture for digital learning, modeling technology use, leading schools and districts in developing plans for school-based technology initiatives, budgeting, selecting and working with vendors, organizing technology professional development, and collecting data on how technology supports school restructuring efforts.

In sum, we will address the critical aspects of the teaching–learning process: student differences, learning, student and teacher motivation, teaching, classroom management, assessing student learning, and assessing and changing school climate and culture. Each chapter is grounded in the latest research and theory in that area and provides specific ideas for applying that knowledge to practice, including many *Theory into Action* guidelines with concrete suggestions and *A Principal's Perspective*, a true story of how one principal solved a problem of practice related to the ideas in the chapter. The following chapters begin with a *Preview of Key Points* and a *Leadership Challenge*, an actual school problem. They conclude with suggestions of projects to relate theory to practice in the form of professional *Portfolio* exercises and an *Instructional Leader's Toolbox*, a collection of contemporary readings, useful websites, and helpful organizations.

KEY TERMS

custodial culture (17)
Every Student Succeeds Act (ESSA) (6)
humanistic culture (17)
technology leadership (21)

DEVELOPING YOUR PORTFOLIO

Portfolios are increasingly being used for the licensure, hiring, and evaluation of principals; thus portfolios serve many purposes. There are two major uses for portfolios. The first is for the professional growth and reflection of the individual who is developing the portfolio. The second is as an assessment for external audiences—college and university programs, state licensure boards, and districts that are hiring principals.

At the end of every chapter in this book, you will read suggestions for possible entries into your professional portfolio. Each idea asks you to create a product that incorporates the knowledge from the chapter into a plan, newsletter, presentation, or policy statement. A portfolio is not a scrapbook of clippings, notes, transcripts, and awards. Rather, it is a planned collection that reveals your philosophy, skills, and accomplishments. Often portfolios are developed to demonstrate competence in the Interstate School Leaders Licensure Consortium (ISLLC) Standards: development and implementation of a vision of learning; creation of a school culture that supports student learning; management of a safe, efficient, and effective learning environment; appropriate collaboration with families and the community; ethical practice; and understanding of the larger context of schooling. The exercises in this book will help you, especially with the first two standards.

For your first exercise, decide how you will organize your portfolio. Examine other principals' portfolios and develop ideas for your own.

INSTRUCTIONAL LEADER'S TOOLBOX

Readings

Anthony, A. B. (2011). Innovation in educational organizations: Implications for research and administrative practice. In M. DiPaola & P. Forsyth (Eds.), *Leading research in educational administration: A festschrift for Wayne K. Hoy* (pp. 163–182). Greenwich, CT: Information Age.

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Woolfolk, A. E., & Perry, N. E. (2015). *Child and adolescent development* (2nd ed.). Columbus, OH: Pearson.

Websites

www.bestevidence.org
: Best Evidence Encyclopedia, Johns Hopkins University

http://electronicportfolios.com/portfolios.html
: Using Technology to Support Alternative Assessment and Electronic Portfolios

www.proteacher.com
: The Vent—a discussion group for new teachers

www.kappanmagazine.org
: *Phi Delta Kappan* (see the September issue for the Annual PDK/Gallup Poll of the Public's Attitudes toward the Public Schools)

Organizations

http://ascd.org
: Association for Supervision and Curriculum Development (ASCD)

www.ccsso.org
: Council of Chief State School Officers

www.iel.org
: Institute for Educational Leadership

www.naesp.org
: National Association of Elementary School Principals

www.nassp.org
: National Association of Secondary School Principals

CHAPTER

2 Student Diversity

PREVIEW: KEY POINTS

1. In 2020, children of color will be the majority of *all* children in the United States.
2. One in five American children lives in poverty; 70% are children of color. A child is born into poverty in the United States every 37 seconds.
3. In general, students of all ethnic groups with high SES show higher average levels of achievement on test scores and stay in school longer than students with low SES, and this difference widens with the student's age from 7 to 15.

4. A dialect is a variety of language spoken by a particular group; it is important that teachers remember that differences in dialect are not errors.
5. Bilingualism is an asset, not a liability, provided there is balance—equal fluency in both languages. It takes about 2 to 3 years to master the basics of a language but 6 to 9 years to master academic language.
6. In 2015, about 15% of the people living in the United States were born in another country. Many of these children are immigrants. *Immigrants* are people who voluntarily leave their country to become permanent residents in a new place. People from Mexico are the largest U.S. immigrant group.
7. An individual's identity in terms of gender and sex is multifaceted and includes three important facets: gender identity, gender roles, and sexual orientation. Students can experience discrimination based on any or all three of these facets.
8. There appear to be some gender differences in spatial and mathematical abilities, but these do not hold across all cultures and situations.
9. Teachers are in a position to reinforce or challenge gender stereotypes through their choice of materials and interactions with students.
10. To create a culturally compatible classroom, teachers must take into account social organization, learning values and preferences (but be aware of the cautions about learning styles research), sociolinguistics, and cultural discontinuities.
11. Several researchers have identified strategies for designing culturally relevant pedagogy.

Leadership Challenge

You are the principal of a fairly homogeneous elementary school. In fact, most of your students are middle- or upper-middle class and white. In January, a new student enters your school, the daughter of an African American professor who recently moved to the nearby college. After a few weeks, one of your third-grade teachers comes to you with a potential problem. She has noticed that the new student is not being included in many activities. She sits alone in the library and plays alone at recess. All these things are troubling to your teacher, but most disturbing of all is that yesterday the teacher overheard two of her higher-achieving girls talking about their "White Girls Club." Your teacher is shocked and has turned to you for advice.

1. Would you investigate to learn more about this "club"? How?
2. What advice do you give this teacher?
3. Should you formulate a plan of action? What should you do? What should the teacher do?
4. If you find that the students have created a club that excludes nonwhite students, what would you do?
5. Do you need a school policy on this matter? If so, what should the policy be? If not, why not?

Schools and instructional leaders today must deal with a wealth of student differences. These differences pose challenges (as evident in the preceding situation) but

provide opportunities as well. This chapter examines student differences in culture and gender. We begin with the differences the principal faces in dealing with the "White Girls Club."

Today's Diverse Classrooms

Who are the students in American classrooms today? Here are a few statistics (taken from Allen, 2017; Children's Defense Fund, 2015; Common Sense Media, 2012; Dewan, 2010; Freisen, 2010; Layton, 2015; Lenhart, 2015a; Turner, 2015; U.S. Census Bureau, 2010a).

- About 25% of U.S. children under 18 are living in immigrant families. It is likely that by 2060, nearly 20% of the U.S. population will be foreign born, and people of Hispanic origin will comprise almost 30% of that population.
- In 2020, children of color will be the majority of *all* children in the United States.
- A child is born into poverty in America every 37 seconds. In fact, one in five American children lives in poverty, defined in 2017 by the U.S. Department of Health and Human Services as an income of $24,600 for a family of four ($30,750 in Alaska and $28,290 in Hawaii). About half of the students in U.S. public schools come from low-income homes, but in most Southern and Western states, the rate is higher, 80% in Arkansas for example.
- In the 2014–2015 school year, more than 1.3 million students were homeless in the United States (National Center for Homeless Education, 2016).
- In 2012, for children ages birth to 17, 20% had parents who were divorced or separated, 11% were living with someone who had an alcohol or drug problem, 7% had a parent who had served time in jail, and 9% lived with someone who was mentally ill (Child Trends, 2013).

In contrast, because of the effects of mass media, these diverse students share many similarities today, particularly the fact that most are far more technologically literate than their teachers. For example:

- According to a 2015 Pew Research survey, 92% of 13- to 17-year-olds said they went online daily, and 24% were online "almost constantly." This is possible because 88% of teenagers have access to some kind of mobile phone, and most of these (73%) are smartphones. And 71% of teens use more than one social media site; Facebook, Instagram, and Snapchat are the most popular (Lenhart, 2015).
- The students in the Project Tomorrow survey reported that the two greatest obstacles to their using technology in school were filters that stopped them from accessing the websites they needed for homework and bans on using their own mobile devices (namely cell phones) at school.

Poverty and School Achievement

One in five American children under the age of 18 lives in poverty. That means about 13 million children. But the rate of poverty is higher for African American, Native American, and Latino children—33% of African American, 33% of Native American, and 26% of Latino children lived in poverty in 2017, whereas 11% of Asian and non-Hispanic White children were poor (Annie E. Casey Foundation, 2017). Contrary to many stereotypes, more poor children live in suburban and rural areas than in central cities (Semuels, 2015). If we add children living in low-income families (earning about $48,000 for a family of four), then 44% of all children in the United States live in low-income or poor families and 30 million students qualified for free or reduced-price lunches at school in 2016 (Jiang, Ekono, & Skinner, 2016; U.S. Department of Agriculture, 2016).

In general, students of all ethnic groups with high SES show higher average levels of achievement on test scores and stay in school longer than students with low SES, and this difference widens with the student's age from 7 to 15 (Berliner, 2005; Cutuli et al., 2013). One troubling trend is that the achievement gap is growing between children from privileged families (income at the 90th percentile) and children from poor families (income at the 10th percentile). This gap is *30% to 40% greater* for children born in 2001 compared to children born in 1976. These increasingly dramatic income differences between wealthy and poor have led to greater segregation of low-income children in lower-quality schools. Economic resources available to wealthy children allow them to reap tremendous advantages from informal learning opportunities, such as travel, specialized summer camps, and tutoring services—resources that poor families can't afford (Berliner, 2013b). This has led some researchers to refer to differences in the educational performance of rich and poor students as an "opportunity gap" rather than an achievement gap (Gorski, 2013; Milner, 2010, 2015).

What are the effects of poverty that might explain the lower school achievement of these students? It is not low income itself but the material hardships that come with poverty that lead to greater parental stress and fewer resources for children's achievement (Gershoff, Aber, Raver, & Lennon, 2007). The negative effects of poverty begin even before a child is born. Families in poverty have less access to good prenatal and infant health care and nutrition. More than half of all adolescent mothers receive no prenatal care at all. Poor mothers and adolescent mothers are more likely to have premature babies, and prematurity is associated with many cognitive and learning problems. Children in poverty are more likely to be exposed to both legal drugs (nicotine, alcohol) and illegal drugs (cocaine, heroin) before birth. Children whose mothers take drugs during pregnancy can have problems with organization, attention, and language skills.

Poor children are four times as likely to experience chronic stress due to evictions, lack of food, overcrowding, or utility disconnections. Increased stress is related to increased school absences, decreased attention span and concentration ability, problems with memory and thinking, reduced motivation and effort, and increased depression (Evans & Kim, 2013; Jensen, 2013). In the early years, children in poverty experience higher levels of stress hormones than children in middle-class and

wealthy families. High levels of these hormones can interfere with the flow of blood in the brain, decrease the development of synaptic connections, and deplete the body's supply of tryptophan, an amino acid that calms impulsive and violent behaviors (Hudley & Novak, 2007; Richell, Deakin, & Anderson, 2005; Shonkoff, 2006). As they grow, poor children breathe more polluted air and drink more contaminated water—remember the scandal surrounding the water in Flint, Michigan. Poor children are at least twice as likely as non-poor children to suffer lead poisoning, which is associated with lower school achievement and long-term neurological impairment (Evans, 2004; McLoyd, 1998).

Poor children have less access to books, computers, high-quality day care, libraries, trips, and museums. On average, these children read less and spend more time watching television; they have less access to books, computers, libraries, and trips—opportunity gaps again (Kim & Guryan, 2010). Not all low-income families lack resources, however. Many families provide rich learning environments for their children. When parents of any SES level support and encourage their children—by reading to them, providing books and cognitively stimulating toys, taking the children to the library, making time and space for learning—the children tend to become better, more enthusiastic readers (Cooper, Crosnoe, Suizzo, & Pituch, 2010).

Home and neighborhood resources seem to have the greatest impact on children's achievement when school is not in session—during the summer or before children enter school. Even though both groups make comparable achievement gains during the school year, every summer vacation creates about a 3-month reading achievement gap between poor and advantaged children (Kim & Guryan, 2010; Kim & Quinn, 2013). One study suggested that the four summer vacations between second and sixth grades accounted for 80% of the achievement differences between poor and advantaged students (Allington & McGill-Frazen, 2003, 2008). This truly is a case of the rich getting richer.

In addition, low-income students are more likely to attend schools with inadequate resources and less-effective teachers or teachers who expect less of them (Evans, 2004). Without a high school diploma, these students find few rewards awaiting them in the work world. Many available jobs barely pay a living wage. In his 2015 book *Rac(e)ing to Class*, Richard Milner describes the ways in which the intersection of poverty and race have led to chronic inequalities in the educational opportunities of poor students of color.

What can teachers do? See the *Guidelines* on the next page for ideas.

Next we turn to another kind of diversity, one based on language.

Language Differences in the Classroom

In the classroom, quite a bit happens through language. In this section, we will examine two kinds of language differences—dialect differences and bilingualism.

A **dialect** is a variation of a language spoken by particular group. The dialect differences could be based on region of a country, social class, age ("teen talk"), or even gender. The dialect is part of the group's collective identity. The English language has several dialects, including Australian, Canadian, British, and American. Within each of

THEORY INTO ACTION GUIDELINES

Supporting Teachers to Work Effectively with Students Who Live in Poverty

Educate yourself about the effects of poverty on student learning.

Examples

1. Read articles from good journals.
2. Seek diverse sources such as Eric Jensen's (2013) *Engaging Students with Poverty in Mind: Practical Strategies for Raising Achievement* and Paul Gorski's (2013) *Reaching and Teaching Students in Poverty: Strategies for Erasing the Opportunity Gap*.

Set and maintain high expectations for all students.

Examples

1. Guard against feeling sorry for students, excusing poor work, and expecting less. Replace pity with empathy based on solid knowledge of your students.
2. Communicate to students that they can improve and succeed with good effort.
3. Engage higher-order thinking skills that validate students' intellectual capacities.
4. Provide constructive criticism because you believe your students can do quality work.
5. Add challenging subjects and AP classes.

Develop caring relationships with your students (see the 2015 Center for Promise report "Don't Quit on Me" available online at https://www.americaspromise.org/report/dont-quit-me).

Examples

1. Use inclusive language—"our class," "our projects," "our school," "our efforts."
2. Talk to students outside class. Make a point to identify their interests and abilities.
3. Attend sports or other events in which your students participate.
4. Create a class welcome center for families (see Chapter 5).
5. Help a student connect with a mentor, tutor, and/or coach.

Build learning and self-regulation skills as part of the curriculum.

Examples

1. Teach students how to organize work, focus attention, or seek appropriate help.
2. Include conflict management and social problem-solving skills in lessons.

Notice health problems.

Examples

1. Notice who seems to be absent or tardy often.
2. Check to see whether some students struggle to hear the class discussions. Can they see from the back of the room?
3. Model healthy eating and physical activity.

Assess student knowledge; start where they are, but don't stay there (Milner, 2010).

Examples

1. Use short, ungraded assessments that target the learning objectives for each unit.
2. Differentiate instruction (Chapter 14) based on results.

Sources: Jensen, E. (2013). *Engaging students with poverty in mind: Practical strategies for raising achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.; Gorski, P. (2013). *Reaching and teaching students in poverty: Strategies for erasing the opportunity gap*. New York, NY: Teachers College Press; Center for Promise. (2015). *Don't quit on me: What young people who left school say about the power of relationships*. America's Promise Alliance: Washington, DC.