The seventh edition of Methods for Effective Teaching provides research-based coverage of general teaching methods while emphasizing contemporary topics such as culturally responsive teaching, differentiated instruction, and data-driven decision making. The numerous features, tables, and lists of recommendations ensure that the text is reader-friendly and practically oriented. Its unique content includes strategies to promote student understanding, differentiate instruction, manage lesson delivery, apply motivational techniques for instruction and assessment, and work with colleagues and parents. In addition, thorough coverage of classroom management and discipline is provided, along with ways to create a positive learning environment.

Intended Audience

This book is designed primarily as the core textbook for courses in K–12 general teaching methods, secondary/middle teaching methods, or elementary school teaching methods. The content is applicable for teachers at all levels—elementary, middle level, and high school. Additionally, it may be used as a supplementary book for other teaching methods courses. This book is also appropriate for courses and staff development programs for in-service teachers and as a handbook for teacher reference due to its comprehensive coverage of current classroom issues and practical teaching applications.

New to This Edition

There are a number of significant changes in this seventh edition:

- New sections in several chapters:
  - Preparing classroom assignments (in Chapter 3)
  - Communicating caring and support (in Chapter 9)
  - Supporting self-regulation (in Chapter 9)
- New and expanded content in existing chapter sections:
  - Teacher reflection and reflective strategies (in Chapter 1)
  - Culturally responsive teaching for black males (in Chapter 2)
  - Hard-to-reach students (in Chapter 2)
  - High-poverty schools (in Chapter 2)
  - The achievement gap (in Chapter 2)
  - Creating lessons with Common Core (in Chapter 3)
  - Integrating differentiated instruction with understanding by design (in Chapter 3)
  - The purposeful classroom and structuring lessons (in Chapter 4)
  - Essential questions when planning units (in Chapter 4)
  - Having interactive and engaging presentations (in Chapter 5)
  - Cooperative learning strategies (in Chapter 6)
  - The learning cycle (in Chapter 6)
Inquiry and discovery learning (in Chapter 6)
- Student motivation (in Chapter 7)
- Student engagement in urban schools (in Chapter 7)
- Inappropriate use of electronic devices (in Chapter 10)
- Working with challenging students (in Chapter 10)
- Formative and summative assessments (in Chapter 11)
- Characteristics of good assessments (in Chapter 11)
- Assessment in a differentiated classroom (in Chapter 11)
- New Classroom Case Study on Questioning Strategies (in Chapter 5)
- Updating of over 60 references to new editions
- Addition of over 90 new references to update content

Special Features

To maintain the reader's interest and to accommodate different learning styles and instructional settings, *Methods for Effective Teaching* contains a variety of pedagogical features.

- **Standards Tables.** Four tables of professional standards can be found on pages xvi–xix. These tables feature references to the chapters in this book that address each part of the standards.
- **Objectives.** Each chapter begins with a list of objectives that identify expected reader outcomes.
- **Chapter Outline.** Each chapter begins with a graphic organizer displaying chapter headings and subheadings to provide an advance organizer for the reader.
- **Voices from the Classroom.** These features are included in each chapter to provide descriptions of ways that actual elementary, middle school, and high school teachers deal with particular topics addressed in the chapter. These teachers come from all parts of the country and different community sizes. There are over 50 Voices from the Classroom features, evenly balanced among elementary and middle/high school levels, including many from urban districts.
- **Sample Standards.** Each chapter has a Sample Standards feature that lists representative performances, essential knowledge, and critical dispositions from InTASC standards that relate to the chapter in an effort to direct the reader's attention to important content and characteristics.
- **Classroom Case Studies.** Each chapter includes a case study describing a situation that a teacher may need to confront. Two or three questions following each case study require the reader to reflect on and apply chapter concepts.
- **What Would You Decide?** Several features are placed in each chapter to help readers consider the application of the content. Each feature includes several sentences describing a classroom situation related to an issue in the chapter followed by a few questions asking the reader to make decisions about the application of the concepts.
- **Key Terms.** A list of key terms at the end of each chapter draws the reader's attention to significant terms. Each term is also highlighted in the text.
- **Major Concepts.** At the end of each chapter, a list of major concepts serves as a summary of the significant chapter ideas.
- **Discussion/Reflective Questions.** Questions at the end of each chapter promote discussion and reflection in a classroom or seminar in which a number of people are considering the chapter's content.
Suggested Activities. These activities are listed at the end of each chapter both for clinical (on-campus) settings and for field (school-based) settings to enable the reader to investigate and apply issues addressed.

Further Reading. An annotated list of recommended readings at the end of each chapter suggests readings for further enrichment.

References. The references cited in the chapters to document the research base of the content are all listed at the end of the book.

Relating This Book to Standards

A variety of professional standards are listed, correlated to the book, and referenced throughout. Standards are used to guide the development of new teachers, help in-service teachers improve their performance, and assess both teacher preparation and teacher performance. Many teacher education programs are designed around the Interstate New Teacher Assessment and Support Consortium (InTASC) standards. Those standards were updated in 2011, so states using those standards will likely adjust their standards accordingly. Many states require a passing score on the Principles of Learning and Teaching test (Praxis II) before granting a teaching license. The Praxis III standards (which are consistent with Danielson’s Framework for Teaching domains) and the National Board for Professional Teaching Standards (NBPTS) are used to assess and improve the teaching of in-service teachers. A brief description of these standards is provided here, and tables of these standards can be found on pages xvi–xix.

InTASC Standards

The Interstate New Teacher Assessment and Support Consortium (INTASC) was formed as a consortium of state education agencies and national educational organizations dedicated to the reform of the preparation, licensing, and ongoing professional development of teachers. Created in 1987, INTASC’s primary constituency is state education agencies responsible for teacher licensing, program approval, and professional development. Its work is guided by one basic premise: An effective teacher must be able to integrate content knowledge with the specific strengths and needs of students to ensure that all students learn and perform at high levels. With the 2011 updating of the standards, it removed the word new from its title and made a lowercase n in the acronym (now it is InTASC). More information can be found on the Council of Chief State School Officers, CCSSO, website.

Praxis Series

The Praxis Series is a set of tests developed and disseminated by the Educational Testing Service (ETS) for assessing skills and knowledge at each stage of a beginning teacher’s career, from entry into teacher education to actual classroom performance. More information about the Praxis Series can be found at the Educational Testing Service, ETS, website.

There are three parts of the Praxis Series:

Praxis I: Pre-Professional Skills Tests (PPST). These academic skills tests are designed to be taken early in a student’s college career to measure reading, writing, and mathematics skills.

Praxis II: Subject Assessments. There are several assessments available in the Praxis II series, and they measure a teacher candidate’s knowledge of the subjects he or she will teach, as well as general and subject-specific pedagogical skills and
knowledge. One of these assessments is the Principles of Learning and Teaching (PLT) test, which many states require teachers to pass for their licensure.

- **Praxis III: Classroom Performance Assessments.** These assessments are conducted for beginning teachers in classroom settings. Assessment of teaching practice is through direct observation of classroom practice, a review of documentation prepared by the teacher, and semistructured interviews. The framework for knowledge and skills for these assessments consists of 19 assessment criteria organized within four categories: planning and preparation, the classroom environment, instruction, and professional responsibilities. Charlotte Danielson’s (2007) *Enhancing Professional Practice: A Framework for Teaching* is based on the categories of the Praxis III Classroom Performance Assessments.

*Methods for Effective Teaching* is not intended to address the preprofessional skills of reading, writing, and mathematics in Praxis I. However, it is designed to address the Praxis II test on Principles of Learning and Teaching and the Praxis III classroom performance criteria areas.

**NBPTS**

The National Board for Professional Teaching Standards (NBPTS) has established standards for highly accomplished teaching, based on five core propositions. NBPTS has a national voluntary system of certifying teachers who meet the standards in their teaching performance. Teachers meeting all of the standards are certified as National Board Certified Teachers. More information about the NBPTS standards can be found on the organization’s website: http://www.nbpts.org.

**Supplements**

**Instructor’s Resource Manual with Test Bank and PowerPoint Slides**

An instructor’s resource manual with test bank to accompany this textbook has been developed by the authors to guide teacher educators as they use this book for their courses. This manual includes multiple-choice, true–false, short-answer, and essay/discussion questions for each chapter. It also includes a sample course syllabus that is aligned to this book and teaching suggestions to introduce content for each major section of each chapter. Additionally, about 20 PowerPoint slides are provided for each chapter.

The instructor’s resource manual with test bank may be downloaded in PDF from the Instructor Resource Center at the Pearson Higher Education website (http://www.pearsonhighered.com). Your local Pearson sales representative can help you set up a password for the Instructor Resource Center.

**Invigorate Learning with the Enhanced Pearson eText**

The Enhanced Pearson eText provides a rich, interactive learning environment designed to improve student mastery of content. This enhanced eText includes video clips selected by the author that illustrate key concepts and help bridge the gap between theory and practice.

Students can experience the advantages of the Enhanced Pearson eText along with all the benefits of print for 40% to 50% less than a print bound book! Instructors, visit pearsonhighered.com/etextbooks to register for your digital examination copy.

*(Please note: enhancements are only available in the Pearson eText, and not third-party eTexts such as CourseSmart or Kindle).*
The Teacher as a Decision Maker

This Chapter Provides Information That Will Help You To:

1. Describe the basic teaching functions and the key characteristics of effective teachers.
2. Recognize the professional teaching standards and understand the purposes they serve.
3. Formulate a plan to use reflection to enhance teacher decision making.
4. Describe ways that instruction of English language learners can be enhanced in all classrooms.

EFFECTIVE TEACHING
- Decisions About Basic Teaching Functions
- Essential Teacher Characteristics
- Expectations for Effectiveness

STANDARDS FOR TEACHERS
- InTASC Standards
- Principles of Learning and Teaching
- Framework for Teaching
- National Board for Professional Teaching Standards

THE TEACHER AS A REFLECTIVE DECISION MAKER
- Reflection
- Aspects of Instructional Decision Making
- Reflection and a Constructivist Approach to Teaching
- Tools for Becoming More Reflective

INCREASING STUDENT DIVERSITY
- More English Language Learners
- Challenges of English Language Learners
- Teaching English Language Learners in All Classrooms
- The SIOP Model
Your journey to become a teacher continues. You want to be an effective teacher, but what are the characteristics of effective teachers? What do they need to know and do? To a large extent, effective teaching involves making good decisions to help students learn.

Even before instruction takes place, teachers think about and make decisions concerning content, instructional strategies, the use of instructional materials and technology, delivery techniques, classroom management and discipline, assessment of student learning, and a host of other related issues. During instruction, teachers must implement these decisions as they interact with students in a dynamic way.

Decision making involves giving consideration to a matter, identifying the desired end result, determining the options to get to the end result, and then selecting the most suitable option to achieve the desired purpose. Teacher decisions about the issues just mentioned ultimately will influence student learning.

To examine teacher decision making and its relationship to teaching methods, the discussion in this chapter centers on four questions: What is effective teaching? What are the standards used to guide the professional development of teachers? How can a teacher be a reflective decision maker? How can instruction of English language learners (ELLS) be enhanced in all classrooms?

Effective Teaching

What are teachers’ responsibilities, and what makes teachers effective in meeting these responsibilities? To answer these questions, it is useful to examine the basic teaching functions, essential teacher characteristics, and expectations for effectiveness.

DECISIONS ABOUT BASIC TEACHING FUNCTIONS

Teachers make countless decisions all day long in an effort to promote student learning. When you break the decisions down, they fall into three categories: planning, implementing, and assessing. Some decisions are made at the desk when preparing lesson or unit plans, designing an instructional activity, or grading papers. Other decisions are made on the spot during the dynamic interactions with students when delivering a lesson. Let’s briefly examine these three basic teaching functions. Each will be considered in more detail in later chapters.

Planning. Planning involves teacher decisions about student needs, the most appropriate goals and objectives, the content to be taught, instructional strategies, lesson delivery techniques, instructional media, classroom climate, and student assessment. These decisions are made before actual instruction takes place. The goal of planning is to ensure student learning. Planning occurs when teachers are alone and have time to reflect and consider issues such as short-range and long-range plans, student progress, time available, and instructional materials. Planning helps arrange the appropriate flow and sequence of instructional content and events. Planning is considered in more detail in Chapters 3 and 4.

Implementing. Implementing involves the actual enactment of the instructional plans concerning lesson delivery and assessment. Implementation occurs when
interacting with students. Teaching skills that support implementation include presenting and explaining, questioning, listening, monitoring, giving feedback, and demonstrating. Additional skills are needed to monitor student behavior, enforce rules and procedures, use instructional technology, exhibit caring and respect, and create a positive learning environment.

As you can see, a multitude of skills are required for implementation of the instructional plans, and teachers make decisions constantly during the delivery of instruction to enact those plans and to promote student learning. Several chapters in this book relate to implementation, including topics such as differentiating instruction for diverse learners, instructional strategies, motivating students, strategies to promote student understanding, managing lesson delivery, and classroom management and discipline.

Assessing. Assessing involves determining the level of student learning. Actually, many aspects of assessment are determined during the planning phase when instructional goals and content are identified. The means to measure student learning include paper-and-pencil tests, portfolios, work samples, projects, reports, journals, models, presentations, demonstrations, and various other types of product and performance assessments. Once assessment data has been gathered, the information is recorded and judgments are made. Assessment is considered in more detail in Chapters 11 and 12.

Teacher decisions about planning, implementing, and assessing matter a great deal. As attempts are made to improve schools and increase student achievement, one constant has remained: Teachers are the most important factor in improving schools. Attempts to reform or improve education depend on the knowledge, skills, and commitment of teachers. This point is made emphatically by Darling-Hammond and Baratz-Snowden (2007) in “A Good Teacher in Every Classroom: Preparing the Highly Qualified Teachers Our Children Deserve.” Teachers need to know how to implement new practices concerning the basic teaching functions, but they must also take ownership or the innovation will not succeed.

ESSENTIAL TEACHER CHARACTERISTICS

When you reflect about the most effective teachers you have had, you may think about their warmth and caring, their creative instructional strategies, their strong command of the content, or their unique presentation skills. When examining effective teachers, the essential teacher characteristics fall into three categories: knowledge, skills, and dispositions. Let’s briefly examine each of these. The descriptions provided here are closely tied to the definitions of those terms provided by the National Council for Accreditation of Teacher Education (2008).

Knowledge. Effective teachers must know the facts about the content they are teaching. That is vital, but it is not sufficient. Teachers also must have at least three other types of knowledge.

First, they must have professional knowledge related to teaching in general. This includes information about the historical, economic, sociological, philosophical, and psychological understanding of schooling and education. It also includes knowledge about learning, diversity, technology, professional ethics, legal and policy issues, pedagogy, and the roles and responsibilities of the profession of teaching.

Second, teachers must have pedagogical knowledge, which includes the general concepts, theories, and research about effective teaching, regardless of the content area. Thus, it involves general teaching methods.

Finally, teachers must have pedagogical content knowledge. This involves teaching methods that are unique to a particular subject or the application of certain strategies in
a manner particular to a subject. For example, there may be some unique ways to teach map reading skills in a social studies class. You must have a thorough understanding of the content to teach it in multiple ways, drawing on the cultural backgrounds and prior knowledge and experiences of the students.

Thus, teachers must possess rich knowledge about the content, foundational information about teaching and learning, information about teaching methods in general, and information about teaching techniques unique to particular subjects.

Skills. Teachers also must possess the necessary skills to use their knowledge effectively in the four areas just described to ensure that all students are learning. Teachers must be able to apply these skills as they plan, implement, and assess in diverse teaching settings. In listings of professional standards, the term performances is sometimes used instead of the term skills.

Dispositions. Teachers also must have appropriate dispositions to promote learning for all students. Dispositions include the necessary values, commitments, and professional ethics that influence teacher behaviors. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. Dispositions are affective, thus in the mind of teachers. But dispositions show up in teacher behaviors. For example, a teacher might be willing to use a variety of instructional strategies to promote learning for all students. This disposition could be evidenced by written plans indicating the use of cooperative learning groups, demonstrations, and a role-playing activity and by the actual use of those approaches when instruction took place.

When making decisions, you must have the necessary knowledge, skills, and dispositions to help promote learning for all students. Research has shown that teacher expertise is one of the most important factors that influences student growth and achievement. There is interest in the educational community to develop criteria for the knowledge, skills, and dispositions that teachers need to promote student achievement.

As a prospective teacher, it is important that you identify these essential teacher characteristics (knowledge, skills, dispositions) when you examine the main teaching functions of planning, implementing, and assessing. As the teaching functions are discussed in this book, several chapters have a boxed feature to indicate the knowledge, skills, and dispositions related to the chapter topic using the descriptions in the InTASC standards. For
EXAMPLE, Chapter 3 on planning will include a box of information about representative knowledge, skills, and dispositions related to planning.

EXPECTATIONS FOR EFFECTIVENESS

Over the years, there have been calls to improve the quality of teaching, the quality and substance of the K–12 curriculum, and the performance of students on standardized tests. School districts and teachers always feel some degree of pressure from the local school district, state and federal governments, professional organizations, legislators, and the public in general. Occasionally, there are major education reports with information about student performance, and then there are new calls for improving teacher education and the quality of teaching. Effective teaching is expected.

Measures of Effectiveness. Various approaches have been used to indicate the quality of teaching and its influence on student learning. One approach has been to examine student achievement test scores over a three-year time period in a so-called value-added comparison. This value-added concept compares the performance of a student against that same student’s performance at an earlier time. The difference in the two assessments is taken as a measure of student learning growth, which can also be conceptualized as the value added by the instructional effectiveness of the teacher. Students’ average annual rates of improvement are then used to estimate how much value a teacher has contributed to student achievement (Teaching Commission, 2004).

A second approach to determining the quality of teaching has involved the study of teacher test scores and their relationship to the achievement of students in their classes. A series of studies correlated teachers’ basic skills tests and college entrance exams with the scores of their students on standardized tests. These studies have found that high-scoring
teachers are more likely to elicit significant gains in student achievement than their lower-scoring counterparts (Ferguson, 1998).

A third approach to determining the quality of teaching has involved the review of teachers’ content knowledge. A teacher’s deep understanding of the content he/she teaches has a positive influence on student achievement. This appears to be especially true for science and mathematics teachers. In a review of research, Michael Allen, program director for the Education Commission of the States (ECS) Teaching Quality Policy Center, found support for the necessity of teachers being knowledgeable in their subjects and on how best to teach a particular subject (Allen, 2003).

In addition, teaching experience appears to have an influence on student achievement. Teachers with less teaching experience typically produce smaller learning gains in their students compared with more seasoned teachers (Murnane & Steele, 2007). However, most of those studies have also discovered that the benefits of experience level off after the first five or so years of teaching.

No Child Left Behind. While education is often considered a local and state matter, the federal government in the past decade has increased its involvement in how teachers are prepared and certified. This effort was undertaken through the “highly qualified” teacher provisions of the No Child Left Behind Act (NCLB, 2002). There are several provisions of this act.

1. Highly qualified teachers. To be deemed highly qualified, teachers must have a bachelor’s degree, have full state certification or licensure, and prove that they know each subject they teach.

2. State requirements. NCLB requires that states (a) measure the extent to which all students have highly qualified teachers, particularly minority and disadvantaged students; (b) adopt goals and plans to ensure that all teachers are highly qualified; and (c) publicly report plans and progress in meeting teacher quality goals.

3. Demonstration of competency. Teachers (in middle and high schools) must prove that they know the subject they teach with (a) a major in the subject they teach, (b) credits equivalent to a major in the subject, (c) passage of a state-developed test, (d) meeting state standards for evaluation, (e) an advanced certification from the state, or (f) a graduate degree.

4. State standards of evaluation. NCLB allows states to develop a way for current teachers to demonstrate subject-matter competency and meet highly qualified teacher requirements. These standards must be high, objective, and uniform throughout the state. Proof may consist of a combination of teaching experience, professional development, and knowledge in the subject garnered over time in the profession.

Standards for Teachers

Each state identifies the licensure requirements for teachers. The states do not arbitrarily select criteria—they often rely on standards proposed by professional educational agencies. The following standards are among those commonly used by states: (a) InTASC standards, (b) Principles of Learning and Teaching (PLT), (c) a Framework for Teaching, and (d) National Board for Professional Teaching Standards (NBPTS). Each of these standards is outlined in detail on pages xviii–xxi of this book.

A state may use one set of standards, such as the InTASC standards, and then adapt them somewhat to serve as the basis for the teacher licensure requirements. Once a state establishes its teacher licensure requirements, these become the standards that colleges use to design their teacher education programs. Consequently, you may see that your teacher education program includes many of the topics listed in the standards. Let’s examine these four sets of standards.
CHAPTER 1 The Teacher as a Decision Maker

INTASC STANDARDS

Sponsored by the Council of Chief State School Officers, the Interstate New Teacher Assessment and Support Consortium (INTASC) asked a committee of teachers, teacher educators, and state agency officials to prepare a set of standards for competent beginning teachers. Its 1992 report on model standards served as a guide for states as they determined their own teacher licensure requirements. Many states found those standards appropriate and enacted state licensure requirements that were identical or very similar to the INTASC standards.

The INTASC standards were revised in 2011. The new standards are no longer intended only for beginning teachers, but as professional practice standards. To reflect this emphasis, INTASC removed New from its name (and made the N a lower-case letter), renaming itself the Interstate Teacher Assessment and Support Consortium (InTASC). The new InTASC Model Core Teaching Standards (Council of Chief State School Officers, 2011) reflect many contemporary goals of education. The model core teaching standards outline what teachers should know and be able to do to ensure every K–12 student reaches the goal of being ready to enter college or the workforce in today’s world. The standards outline the common principles and foundations of teaching practice that cut across all subject areas and grade levels and that are necessary to improve student achievement.

As shown in the table of standards on pages xviii–xix, there are 10 InTASC standards in four areas: (1) the learner and learning—learner development, learning differences, and learning environments; (2) content knowledge—content knowledge and application of content; (3) instructional practice—assessment, planning for instruction, and instructional strategies; and (4) professional responsibility—professional learning and ethical practice and also leadership and collaboration. For each standard, InTASC outlines the performances, essential knowledge, and critical dispositions for teachers. The identification of the dispositions makes the InTASC standards unique when comparing them to standards identified by other agencies.

PRINCIPLES OF LEARNING AND TEACHING

The Educational Testing Service (ETS) prepared several Praxis II tests to measure the knowledge of specific subjects that K–12 educators will teach, as well as general and subject-specific teaching skills and knowledge. The three Praxis II tests include Subject Assessments, Principles of Learning and Teaching, and Tests and Teaching Foundations Tests.

The Principles of Learning and Teaching (PLT) test assesses general pedagogical knowledge concerning (a) students as learners, (b) instruction and assessment, (c) communication techniques, and (d) profession and community. These topics are outlined in more detail in the PLT standards list on page xix of this book. Many states require applicants for teaching licenses to take the PLT and report a passing score before they are able to receive the teaching license. Because of this, colleges with teacher education programs often give a great deal of attention to the content of the PLT and incorporate the necessary topics into their teacher education programs.

FRAMEWORK FOR TEACHING

The Educational Testing Service (ETS) developed the Pathwise Series of Professional Development programs as a research-based approach to advance professional learning and practice for school leaders and teachers. Charlotte Danielson (2007) worked with ETS to prepare and validate the criteria for this program and then, based on the ETS program criteria, she proposed a framework for teaching in her book Enhancing Professional Practice: A Framework for Teaching.

Framework for Teaching is divided into four domains and provides a useful organizer for examining the important responsibilities of teachers. In her book, Danielson provides rubrics for each item to assess the level of teacher performance. The rubric
descriptors for unsatisfactory, basic, proficient, and distinguished provide clarity for the meaning of each item. A detailed outline of Danielson’s Framework for Teaching is displayed on page xx of this book.

Many teacher education programs give a great deal of attention to the Framework for Teaching because of its strong research support. As a result, these colleges have incorporated the domains into their teacher education programs. Here is a brief review of the four domains in Danielson’s Framework for Teaching.

**Domain 1: Planning and Preparation.** Planning provides a structure for how content is organized during the process of planning for instruction. Key concepts within this domain are (a) demonstrating knowledge of content and pedagogy, (b) demonstrating knowledge of students, (c) selecting instructional goals, (d) demonstrating knowledge of resources, (e) designing coherent instruction, and (f) designing student assessments.

**Domain 2: Classroom Environment.** The classroom environment is more than just the physical space of a classroom. It encompasses the interactions between the teacher and students, as well as the expectations for learning and achievement and the expectations for learning and behavior. Positive classroom environments are associated with a range of important outcomes for students related to motivation, achievement, and safety. Key concepts in this domain are (a) creating an environment of respect and rapport, (b) establishing a culture that promotes learning, (c) managing classroom procedures, (d) managing student behavior, and (e) organizing physical space.

**Domain 3: Instruction.** Instruction is the central focus of the teaching–learning act. It is where the teacher and the student move through an instructional sequence. Key concepts within this domain are (a) communicating with students, (b) using questioning and discussion techniques, (c) engaging students in learning, (d) using assessments in instruction, and (e) demonstrating flexibility and responsiveness.

**Domain 4: Professional Responsibilities.** Professional responsibilities focus on those dispositions and skills that the teacher uses not only to be effective in the present but also to ensure future success as a professional. Central to this domain is the ability to reflect accurately on the planning process and the implementation of instruction and then to think deeply about how to improve the teaching–learning process for students. Key concepts within this domain are (a) reflecting on teaching, (b) maintaining accurate records, (c) communicating with families, (d) participating in a professional community, (e) growing and developing professionally, and (f) showing professionalism.

**NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS**

The National Board for Professional Teaching Standards (NBPTS) was initiated in 1987 to establish “high and rigorous” standards for the teaching profession, create a voluntary system to certify accomplished teaching, create professional development opportunities, and increase the status of the teaching profession in America. The board’s work is guided by five core propositions that articulate what accomplished teachers should know and be able to do (NBPTS, 2005). These core propositions are used as a foundation to assess teaching in a variety of subjects and for teachers working with students at all grade levels.

Details of the five core propositions are outlined on pages xxi. Briefly stated, the NBPTS core propositions are as follows:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities.
These five core propositions describe the knowledge, skills, and dispositions that characterize accomplished teaching. Because of the recognized importance of these criteria, many teacher education programs incorporate features of the five core propositions in their programs.

Experienced teachers choosing to be nationally board certified must prepare portfolios and include a recording of their teaching, provide samples of student learning products, and provide analyses and reflection on their professional practice. A central goal of the NBPTS assessment process is to improve teacher performance through the collection of evidence of teaching excellence. After completion of the portfolio, teachers travel to an assessment center where they answer questions related to the subject area in which they teach. This rigorous process is voluntary. Some school districts provide a financial bonus for teachers who become certified through this process.

The Teacher as a Reflective Decision Maker

When teachers examine and reflect on their teaching, it opens a door to personal and professional development. The ultimate goal, of course, is to promote student learning, and teacher reflection is one way to achieve that goal. In this section, we examine reflection from several perspectives, aspects of instructional decision making, reflection as part of a constructivist way to teaching, and tools for becoming more reflective.

Reflection

To learn requires that a person reflect on past practice. As a consequence, reflection about one’s experiences is a cornerstone of professional competence (York-Barr, Sommers, Ghere, & Montie, 2006). Reflection can be defined as a way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those choices. Reflection requires that teachers be introspective, open-minded, and willing to accept responsibility for decisions and actions. Reflection facilitates learning and continued professional growth, and it is an important factor in the ability of teachers to be effective throughout their careers. Educators can reflect on many things, such as their dispositions, objectives, teaching strategies, and the effect each factor has on student achievement.

As reflective practitioners, teachers need to be willing to analyze their own traits and behaviors in relation to the events that take place in the classroom. Teachers, therefore, need to observe and attempt to make sense of situations by checking their insights against prior experience. Information they receive from their students can also be helpful. Marzano (2012) maintains that teachers must identify their strengths and weaknesses, set goals, and engage in focused practice to meet their goals, and a systemic approach to their reflection will help serve these purposes and improve instructional practice.

Some schools arrange for two or more teachers to meet to address issues and reflect on their practice. Reflective practice is a problem-solving strategy by which individuals or groups can work to improve practice by reviewing routines and the procedures and other aspects of the instructional environment. To engage in reflective practice requires an environment of support. It requires an organizational climate that encourages open communication, critical dialogue, risk taking, and collaboration (Osterman & Kottkamp, 2004).

We next examine the relationship between effective teaching and reflection, reflection in the professional standards, approaches to reflection, characteristics of reflective teachers, and benefits of reflection.

Effective Teaching and Reflection.

There is a relationship between effective teaching and reflection. An effective teacher draws on education and experience to make
decisions about what to teach, how to teach, and how to provide an atmosphere that supports student learning (Cooper, J. M., 2014; Jensen & Kiley, 2005). Thus, effective teachers reflect on and examine their own teaching and the success of their students. Each of these skills is essential to an effective teacher who is focused on students’ achievement and meeting intended learning outcomes. The relationship of these topics is displayed in Figure 1.1.

1. **What to teach.** Effective teachers have a strong command of the subject matter they are assigned to teach. In addition, they have the ability to make decisions about the selection of materials and examples used to introduce the subject matter to their students.

2. **How to teach.** Effective teachers have a large collection of teaching strategies that they can draw on to maximize student achievement. Expert teachers recognize that they need to use a variety of methods and strategies to meet the varied learning needs of their students and to capture and maintain student interest and motivation. This is especially important when teachers realize that the strategy they are using has not led to success for all students and that a different strategy needs to be employed.

3. **How to provide an atmosphere that supports student learning.** Knowing the content and knowing about instructional strategies are not sufficient to promote student learning. Effective teachers also must create the necessary classroom conditions to enable student learning; they must create a positive learning community.

**Reflection in the Professional Standards.** Reflection by teachers to improve their practice is included in the NBPTS and InTASC standards. Core Proposition 4 of the NBPTS states that “teachers think systematically about their practice and learn from experience.” With this standard, teachers critically examine their practice on a regular basis to deepen knowledge, expand their repertoire of skills, and incorporate new findings into their practice. When reflecting on how a lesson went, teachers answer two reflective questions: (1) What would I do differently? and (2) What are my next steps to improve my teaching and student learning?

The InTASC standards also offer a vision for teacher reflection. Standard #9, Professional Learning and Ethical Practice, is especially relevant to being a reflective teacher. This standard calls for teachers to engage in ongoing professional learning and use evidence to continually evaluate their practice and adapt their practice to meet the needs of each learner. Representative statements from Standard #9 for performances, essential knowledge, and critical dispositions are displayed in the Sample Standards table in this chapter on page 5.
The InTASC standards are also embraced by the National Council for Accreditation of Teacher Education (2008). The council asserts that teacher candidates should be able to work with students, families, and communities to reflect the dispositions of professional educators as delineated in professional, state, and institutional standards.

**Approaches for Reflection.** Three commonly used approaches that teachers use as a basis for reflection are (1) classroom observations by supervisors and peers, (2) digital tapes of their teaching, and (3) document analysis. Reviewing a digital tape of one’s teaching, for example, can bring focus and clarity to what worked and what did not. Building on what worked can make a real difference for students. Along with the digital tapes, analyzing related documents facilitates reflection. Examples of documents that may be collected and analyzed include daily lesson plans, long-term plans, samples of student work, instructional materials, and assessment instruments.

All of these pieces of evidence can be evaluated against specific criteria related to instructional behaviors, classroom management, and teacher expectations for their students’ performance. The main approaches used in reflective thought are written reflections, verbal reflections, and mental self-reflections (Harris, Bruster, Peterson, & Shutt, 2010).

The following six activities also can provide a focus for reflection:

1. Classroom visitations to a master teacher’s classroom to view a lesson being taught, along with an opportunity to reflect and debrief.
2. Reading an article on a new strategy and discussing it with colleagues in a study group.
3. Reviewing sample lesson plans and adapting them for your classroom.
4. Co-planning and co-teaching lessons with a coach or knowledgeable peer.
5. Planning with colleagues to implement new practices, such as students’ exhibits of their work.
6. Digitally taping a lesson and requesting collegial review and feedback.

Learning takes place when teachers reflect on their own practice and when they are formally evaluated. Learning also happens for supervisors and peers who serve as mentors or evaluators of teachers during this reflective process (Darling-Hammond, 2010).

**Characteristics of Reflective Teachers.** Reflective teachers share characteristics that enable them to grow and improve as they learn from experience. Teachers make decisions about both big and small issues, such as how to organize students in groups, how to motivate students and promote positive behaviors, and how to focus students on the tasks and assess their learning.

Reflective teachers exhibit the following qualities:

- *They have a disposition toward reflection.* They have a good sense of when they need to think deeply about their teaching. They are purposeful and committed to improving their craft.
- *They ask questions and are curious.* They have inquisitive minds. Reflective thinking in teaching is associated with the work of Dewey (1933, 1938), who suggested that reflection begins with a dilemma. Effective teachers suspend making conclusions about a dilemma in order to gather information, study the problem, gain new knowledge, and come to a sound decision. This deliberate contemplation brings about new learning.
- *They seek deep understanding of the issues.* Reflective thought is the opposite of superficial thinking, which is thinking that lacks evidence, is based on false beliefs or assumptions, or mindlessly conforms to custom or authority. The experience of teaching and the events that transpire in classrooms have value. When reflected on, these experiences can shape the future for both teachers and their students.
Reflective teachers seek deep understanding of all issues related to curriculum and instruction.

- **They take responsibility for their teaching decisions.** Reflective teachers accept the consequences of their decisions. They seek out better solutions for challenges or problems.
- **They are purposeful and committed to improving their craft.** Reflective teachers are not satisfied with the status quo. They want to continually improve themselves and their teaching.

**Benefits of Reflection.** The primary benefit of reflection is that it helps teachers improve their ability to teach and meet the needs of the students in their classes. A recent study of preservice teachers found that higher levels of reflection by the teachers were related to higher final student teacher evaluations (Pultorak & Barnes, 2009). Novice teachers also report that they value and benefit from reflecting on teaching (Cruickshank, Jenkins, & Metcalf, 2012).

There are many benefits for teachers who reflect on their practice. Reflective teaching can enhance your learning about teaching, increase your ability to analyze and understand classroom events, help you establish an inviting and thoughtful environment, help you become self-monitoring, and promote personal and professional development (Cruickshank et al., 2012).

Minott (2007) points out that reflective teaching leads to a number of positive effects for teachers, including the development of the following:

- Self-directed critical thinking inquiry skills
- Contextualized knowledge about teaching and learning that can be applied in similar situations (e.g., when to change instructional strategies or lesson pacing)
Willingness to question, take risks in learning, and try new strategies and ideas
- Higher-order thinking skills and the ability to reflect on one's own learning process
- Both cognitive (e.g., knowing how to ask questions that help students engage and think deeply) and affective skills (e.g., valuing students as individuals capable of learning)
- Increased ability to react, respond, assess, and revise while teaching
- Ability to implement new activities and approaches on the spot
- Improved self-awareness and knowledge
- Improved coping strategies (e.g., the ability to redirect inappropriate student behaviors rather than respond in a way that will escalate the situation)

See Figure 1.2 for a sample teacher reflection written after viewing a recorded lesson.

ASPECTS OF INSTRUCTIONAL DECISION MAKING

The classroom teaching environment is complex and multifaceted, and dealing with complex problem situations is a dominant element in the life of a teacher. The complex life of teachers can be better understood by considering the relationship of teachers' decision making and the conditions and purposes they are trying to address in the classroom. Four aspects of decision making in the teaching environment are considered here.

First, teachers make decisions when planning, implementing, and assessing instruction and when creating proper conditions for a positive learning environment. Each step involves multifaceted classroom conditions and student characteristics. When planning for instruction, for example, teachers must decide on goals and objectives, needs assessments, appropriate instructional strategies, materials and technology, and evaluation of student performance. Numerous factors must be considered when making decisions about each step.

Second, teachers make moment-by-moment decisions to adjust their plans to fit the continually changing and uncertain conditions found in classrooms. Teachers learn to make these adjustments through the knowledge they have gained within the context of their classrooms, the interactive nature of their thinking, and their speculations about how these adjustments will affect the classroom environment.

Third, teachers make decisions to achieve varied academic, social, and behavioral goals. For instance, a teacher might make decisions about monitoring student behavior while working with a single small group of students. At the same time, the teacher might have expectations for students' social and academic performance. Thus, the teacher must consider these varied goals and decide on ways to plan and implement the goals simultaneously.

Fourth, teachers make decisions to interact with students in a variety of ways in a complex environment. For example, teachers do a number of things to monitor and respond to students' off-task behavior. Effective teachers have a high degree of withitness, which is their ability to be aware of what is happening in the classroom and to communicate that awareness to the students through their actions (Kounin, 1970). Decisions related to withitness are continually made by teachers.

REFLECTION AND A CONSTRUCTIVIST APPROACH TO TEACHING

A related concept to teacher decision making and reflection is constructivist theory. Constructivist theory holds that individuals construct meaning and understanding through their prior knowledge and then apply this knowledge in new current situations. In a constructivist classroom, the teacher searches for students' understandings of concepts and then structures learning opportunities for students to refine or revise these understandings by posing contradictions, presenting new information, asking questions, encouraging research, and/or engaging students in inquiries designed to challenge current concepts.
Figure 1.2

A Sample Teacher Reflection

The Scenario
Ms. P, a third-year eighth-grade science teacher, wrote the following reflection after viewing her recorded lesson on the effectiveness of common stomach antacids. Students were required to test the initial pH of a solution representing stomach acid and then attempt to counteract the “heartburn” by adding doses of various liquids and tablet antacids. She digitally recorded the lesson and asked her school principal to observe the lesson and provide feedback.

The Teacher’s Reflection
After viewing myself in front of the classroom, I noticed several things about my methods, technique, and delivery of instruction. For example, I think of myself as being quite mobile in the classroom, visiting with students in small groups during independent work and circulating around the room when I am engaging the whole class in instruction. I feel this helps my classroom management and keeps students more on task and engaged in the lesson. In the video, however, I was not as mobile as I typically think I am.

I also noticed that I tend to repeat myself frequently. I always considered this to be a positive aspect of my teaching, as I am sure that most students benefit from repeated instruction. My principal’s feedback suggested that I rephrase information and present it in multiple ways. This way, I am still providing the information repeatedly, but in such a way that a wider range of students will be able to access the material.

Before viewing this video, I prided myself on being on top of the students and keeping their attention focused for the entire length of the class. My opinion of my strengths has changed since viewing my lesson. Throughout the video, I noticed students who were totally uninterested, making faces behind my back and uneasy to take risks when answering questions. I was surprised to notice that even when they were involved in hands-on activities, some students were as uninterested as they were during direct instruction.

I know that I need to increase my students’ interest and motivation during instruction, but at this point I am unsure how to proceed. That’s the area I want to focus on. I need to think about that and look at the research literature.

Follow-Up Questions for the Reader
What steps can Ms. P take to improve her teaching?
What strategies could she utilize to maximize student interest?
How can constructive criticism from colleagues help teachers improve their practice?
What value can digitally recording lessons contribute to helping teachers reflect on their practice?

Comments Concerning the Teacher’s Reflection
By digitally recording her lesson and asking the principal to observe and provide feedback, Ms. P was open to gaining new insights about her teaching and expressed interest in reflecting on her experiences in the lesson. The recording and the principal’s feedback provided information that she might not otherwise have had.

Ms. P next wanted to focus on increasing student interest and motivation. She spoke to peers and researched this topic. She found one particularly useful article on the topic and decided to apply motivational concepts and strategies recommended in that article (Pintrich, 2003). The first motivational concept was supporting...
the students' belief that they can succeed. If students believe they are able to do well, they are likely to be motivated in terms of effort and persistence. Confident students will also be more cognitively engaged in thinking and learning. To apply this motivational concept, Ms. P provided opportunities for students to build skills and master the course material, and she also provided clear and accurate feedback to students on their performance. She designed tasks that challenge students but also offered the support they need to be successful.

In a later laboratory experience, students conducted a survey of the school grounds and developed appropriate classification keys to group plants and animals by shared characteristics. After the project was finished, a student mentioned that the assignment was hard but she learned a lot. Ms. P was pleased and saw this as a sign that she was providing a supportive but rigorous classroom atmosphere.

The second motivational concept was for students to practice self-control and choice during activities and for the teacher to develop relationships with her students and to promote the development of a community of learners who support each other. Ms. P began emphasizing the importance of previous lessons and their link to current and future lessons; students then connected more readily with the material. She also stressed that students need to work hard every day and that effort, planning, and self-control lead to classroom success. She worked to build an atmosphere where students felt responsible for their learning and rejected the perception that they are "helpless learners" with no control over their engagement or achievement.

While doing this, Ms. P worked to build personal relations with her students. She did this through a series of routines, including moving around the room and engaging students on a personal level during independent work time. Her engagement had an academic focus (e.g., feedback and correctives) but also provided an opportunity for her to show students that she values them as individuals and that she cares about their personal and educational success. She also wanted to take more opportunities to praise students and refer to their work products or behaviors, for example, "Ella you were a great scribe today for your group" and "Aiden your hypothesis and research design in today's activity was very well thought out."

The third motivational concept was recognizing that goals motivate and direct student success. Ms. P continues to have her students work in cooperative groups for laboratory activities but now incorporates practices into the labs that her students follow, such as students agreeing to take on a specific responsibility (e.g., organizer, timekeeper, recorder), agreeing to work together on a common activity, and everyone taking responsibility for supporting the learning of everyone in the group.

As Ms. P continues to ask questions about how she teaches and what she expects from students, she continues to use reflection and research to improve her teaching, her classroom climate, and her students’ mastery and deep understandings of science. It is not unusual for Ms. P to feel that while she is perceived as being effective, she is not satisfied. However, she plans to continue to engage in reflection about her teaching and to expand her repertoire of teaching skills. She is modeling being a reflective teacher.

©Pearson Education
In a constructivist classroom, there are five overarching principles: (1) Teachers seek and value their students’ points of view, (2) classroom activities challenge students’ suppositions, (3) teachers pose problems of emerging relevance, (4) teachers build lessons around primary concepts and “big” ideas, and (5) teachers assess student learning in the context of daily teaching. As you can see, when using this instructional approach, a tremendous amount of teacher decision making and reflection is needed to establish and maintain a constructivist classroom in an effort to meet students’ academic needs.

Students should be challenged by the activities and stimulated by questions from both the teacher and themselves. A key feature of this model is that students are encouraged to actively seek understanding and knowledge by relating new investigations to previous understandings (Gagnon & Collay, 2006; Marlowe & Page, 2005).

Teachers who reflect on their own practice employ a constructivist perspective. They constantly review significant events that take place in the classroom and try to clarify and improve their understanding of teaching and learning. In a study of beginning teachers (McCombs, 2003), the teachers reported that the process of reflection and self-assessment helped them identify areas for improvement and assisted them in implementing practices to be more effective in reaching students. As you read this text, you will encounter many concepts related to teaching, and you will have the opportunity to reflect on how these concepts can help you become a better teacher and help your students become better learners.

TOOLS FOR BECOMING MORE REFLECTIVE

Teachers can improve their ability to reflect on practice by using a variety of methods. Your willingness to use these techniques can promote your professional growth. Marzano (2012) suggests that teachers use a variety of approaches to gather information and reflect on their practice. These may include self-audits, video data, student survey data, student achievement data, and other sources.

1. Portfolio development. The development of portfolios in which teachers collect and organize materials and artifacts such as lesson plans, videotapes of lessons with self-critiques, and examples of analysis of students’ work is fast becoming the norm in teacher preparation and professional licensure. Purposefully collecting and analyzing sets of artifacts demonstrates the ability to reflect on important indicators of success.

Many of the current portfolio review processes share common features with National Board Certification. Using the InTASC standards, a number of states—including California, Colorado, Connecticut, and Oregon—have begun requiring a portfolio as the basis for
granting an initial teacher license or for beginning teachers as part of a mentoring and
induction process. The Council for the Accreditation of Educator Preparation (CAEP), the
national organization that accredits college and university teacher education programs,
also uses a performance-based model of assessments to provide evidence that teachers
meet teaching standards.

The portfolio process calls for you to document your plans and instructional strate-
gies within a unit of instruction; videotape a lesson and analyze your teaching; provide
students with an assessment; and evaluate whether students met objectives and if not, how
you will move students to higher levels of learning. The reflection section calls for careful
thought on what worked and what did not, along with an analysis and description of how
you would change or improve your unit and lessons in the future.

2. **Journaling.** It has long been known that writing can help to clarify your thoughts
and enhance your ability to think about your classroom and improve your teaching. A
dialogue journal (Cruickshank et al., 2012) takes the journaling process and makes it
interactive. A conversation about teaching can provide you with feedback on your analyses
of your teaching and your next steps to improve your teaching or classroom procedures.

Advances in technology have made sharing journals and receiving feedback electroni-
cally fast and easily implemented. Social networking software has also expanded the num-
ber of people who can respond to a posted reflection. As the audience for a reflection is
expanded, it becomes important that your journal entry include enough information about
the event you are reflecting on to be helpful. These steps of journal writing are also valuable
to ensure you reflect fully:

1. **What happened?** A brief description of the incident or event central to your
reflection.

2. **Why did it happen?** Why do you think this event, student behavior, or situation
occurred?

3. **What could I have done differently?** What strategy could you use in the future to be
a more effective teacher?

4. **What might it mean for student learning?** Think about what this classroom event or
incident might mean and what might you change in the future to improve student
learning.

3. **Action research.** Action research is systematic inquiry by teachers with the pur-
pose of improving their practice. It often is done collaboratively by a group of colleagues
who are searching for solutions to the everyday problems they face. These real problems
frequently center on improving curriculum, instruction, student achievement, or other
issues related to school improvement. Many school districts use action research as a pow-
erful professional development strategy for teachers. Teachers work alongside colleagues
in their buildings to collect and analyze data to gain insights into their question, take
action based on what they learn in the process, and share their learning with others so that
the entire education community can benefit (Dana, 2009).

Action research projects may focus on one teacher’s classroom or on broader, school-
wide concerns. In a single classroom, a teacher may conduct an action research project
concerning questioning techniques, the effects of a certain teaching strategy, the effects
of the use of technology, or other curriculum and instruction topics. Action research proj-
ects also may focus on school improvement efforts such as assessing the impact of efforts
with low-performing students, exploring alternatives to suspension as a disciplinary con-
sequence, determining the effects of a newly implemented inclusion model for students
with special needs, or other schoolwide issues.

Data collected in action research often includes measures of student achievement
such as standardized test scores, grades, and dropout rates. Each of these measures can
have significant implications for deciding if a program or strategy is effective. Action
research also focuses on why certain program results were achieved, not just what was
achieved. Therefore, many forms of data are collected and analyzed, including faculty
and student interviews, student work samples, reflective journals, surveys, and other
measures.
4. **Student journal writing.** Just as teachers can gain greater understanding from reflecting through journal writing, so can their students. Student journal writing can serve a number of goals (e.g., recording events or notes, personal reflections on experiences, or developing questions for future study). For our purposes, we are focusing on journals in which students construct knowledge or demonstrate understanding of what they learned and how it relates to class goals and objectives.

Journal writing can become an important tool for student learning when they are asked to write about what they learned. It promotes students’ critical thinking and serves as a record of students’ ability to focus on critical aspects of their education. It also reinforces the importance of writing across the curriculum and serves as a record of student thought. Journal writing helps students unpack how and what they learned and encourages students to take ownership of their learning.

Reflective journal writing has advantages for both students and teachers. For students, journal writing serves as a permanent record of thoughts and experiences, establishes and supports a relationship with the teacher, provides a safe outlet for frustrations and concerns, and aids students’ ability to reflect about important class objectives. For the teacher, reflective journal writing serves as a window into student thinking and learning, establishes and maintains a relationship with the student, and can also serve as a dialog between teacher and student to enhance learning for both. Reflective journal writing provides an opportunity for both teachers and students to assess and learn.

### Increasing Student Diversity

Students in your classroom will vary in many ways. This **diversity** may be in ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and even geographical area (National Council for Accreditation of Teacher Education, 2008). Many of these characteristics will be examined in Chapter 2. Of course, this diversity has always been evident in U.S. classrooms.

There are two areas of diversity that demand special attention—students with disabilities and English language learners. The Individuals with Disabilities Education Act (IDEA) addresses educators’ responsibilities concerning students with disabilities. Disabilities include visual, hearing, speech, or physical impairments; emotional or behavioral disorders; intellectual disabilities; autism; and other classifications. The number of students identified as disabled has increased over the years, and regular classroom teachers have a responsibility to work with these students.

The number of English language learners, however, has increased even more. Over the past 25 years, the characteristics of the U.S. population have changed, and consequently, the characteristics of the K–12 student population also have changed. The most apparent changes in schools are the increasing number of students from ethnic and racial minority groups and the significant increase in the number of students whose first language is not English. Consider the following facts about the current U.S. student population (most from Kober & Usher, 2012, unless noted otherwise):

- Children of color account for 45% public school students—a proportion that is expected to increase in coming years (55 percent white, 22 percent Latino, 17 percent African American, 5 percent Asian/Pacific Islander, 1 percent other).
- Children of color make up the majority of public school enrollments in eleven states and many districts.
- Hispanics, African Americans, and Asians combined make up the majority of the population in 48 of the 100 largest U.S. cities (Macionis, 2015).
- About one in five school-age children is a child of immigrants.
- English language learners—students whose first language is not English and who are learning English—account for 1 in every 10 public school students.
More than one third of public school students are from low-income families.

Almost 14 percent of public school students receive special services because they have a disability. Three fourths of these students with disabilities were educated in regular classrooms with other children for a significant part of the school day.

MORE ENGLISH LANGUAGE LEARNERS

As just noted, English language learners (ELLs) are students whose first language is not English and who need help learning to speak, read, and write in English. Due to immigration and the higher levels of ethnic diversity in the U.S. student population, it is not surprising that the number of ELLs has also increased significantly in the past 15 to 20 years. There are many different types of ELLs, ranging from students who are very educated to those with limited schooling, from children of professional families to children of migrant workers, from recent arrivals to the United States to those born here. In addition to functioning in two languages, ELLs also navigate two cultures.

According to statistics compiled by the National Clearinghouse for English Language Acquisition (NCELA, 2011), the number of ELLs increased by 51 percent from 1999 to 2011 totaling more than 5.3 million students, or almost 11 percent of the student population. The largest numbers of ELLs are in seven states: California, Arizona, Texas, Florida, Illinois, North Carolina, and New York. There are almost 1.5 million ELLs in California schools, representing almost 23 percent of the student enrollment (California Department of Education, 2014). From 1999 to 2009, high rates of growth in ELL enrollments took place in many Southern and Midwestern states (NCELA, 2011). Even small cities and rural areas are now home to immigrant families and their children.

Currently, over 400 different languages are spoken in the United States, with the most common language groups being Spanish (representing over 79 percent of all ELLs), Vietnamese, Hmong, Chinese, and Korean (NCELA, 2004, 2005, 2008).

You should expect to have students in your classroom who are learning English, and you should be prepared to meet their learning needs. In a national study, most new teachers ranked reducing class size and preparing teachers to adapt or vary their instruction to meet the needs of a diverse classroom as the top ways to improve teaching (Public Agenda, 2008).
CHALLENGES OF ENGLISH LANGUAGE LEARNERS

Imagine what it would be like to have limited knowledge of English when attending school. It would be difficult to understand the teacher and the other students, and it would affect your ability to understand teacher directions, participate in the instructional activities, and complete classroom assessments. Your overall school performance would be affected. In fact, ELLs often experience challenges in school, as indicated by the following facts:

- On state and national measures of achievement, a dramatic, lingering divide in achievement exists between white students and those from culturally and linguistically diverse groups (California Department of Education, 2004; Grigg, Daane, Jin, & Campbell, 2002; Kindler, 2002).
- ELLs have some of the highest dropout rates and are more frequently placed in lower-ability groups and academic tracks than language-majority students (Ruiz-de-Velasco & Fix, 2000; Steinberg & Almeida, 2004).
- Only 10 percent of young adults who speak English at home fail to complete high school, but the percentage is three times higher (31 percent) for young adult ELLs (NCES, 2005).

TEACHING ENGLISH LANGUAGE LEARNERS IN ALL CLASSROOMS

Because of the large number of ELLs in schools today, all teachers are teachers of English. There are four major instructional models for serving ELLs, characterized by the degree to which they incorporate a student’s native language and the approach they take to delivering academic content (Rothenberg & Fisher, 2007): (1) instructional methods using the native language, (2) instructional methods using the native language as support, (3) instructional methods using English as a second language (ESL), and (4) content-based or sheltered instruction.

The last approach, sheltered instruction, has been widely used in the United States. Sheltered instruction is an approach to teaching content to ELLs in strategic ways that make subject-matter concepts comprehensible while promoting the students’ English language development. There are two well-known sheltered instruction programs: the cognitive academic language learning approach (CALLA) and the sheltered instruction observation protocol (SIOP).

WHAT WOULD YOU DECIDE?

HOW YOU ADDRESS STUDENT DIVERSITY

In your first year of teaching, you will likely have students with many different characteristics. Student diversity is evident in many ways, such as by language, disability, or cognitive ability. Some types of diversity are easily recognized or noticed, other types are less obvious. Nevertheless, effective teachers need to promote learning by all of their students.

1. In what ways are you similar to other students in your current college class? In what ways are you different?
2. What challenges do you envision when you address the diversity of students in your first year of teaching? What can you do during your teacher preparation program to minimize these challenges?
CALLA is a program that integrates content-area instruction with language development activities and explicit instruction in learning strategies (Chamot, 2009). It helps ELLs become active learners who focus on concepts and meanings, rather than language forms. CALLA teachers develop five-phase lesson plans that include preparation, presentation, practice, evaluation, and expansion. This approach has been used successfully by many teachers in sheltered classes, but some teachers have found the planning to be difficult. In addition, ELLs with low levels of English proficiency and limited background knowledge still struggle to learn grade-appropriate content in English (Freeman & Freeman, 2011). Of the sheltered instruction programs, the SIOP model is widely adopted and is emphasized here.

The SIOP Model

One of the best researched and most highly developed models to teach ELLs is the sheltered instruction observation protocol (SIOP) model (Echevarria, Vogt, & Short, 2013). The SIOP model was originally a lesson plan observation protocol, but it has evolved to an effective lesson planning and delivery system. It is a way to plan and teach content in a way that is understandable for ELLs and that also promotes their English language development. With increasing student diversity in language, meeting the needs of ELLs can be facilitated by the SIOP model because it provides more flexibility in the design and delivery of instruction.

The SIOP model may be used as a lesson planning guide for sheltered content lessons, and it embeds features of high-quality instruction into its design. The model is not an add-on responsibility for teachers but rather a planning framework that ensures effective practices are implemented to benefit all learners (Echevarria et al., 2013). The SIOP model has eight components and 30 features, as displayed in Figure 1.3. Other than the lesson preparation component being first, there is no particular hierarchy or order to the eight SIOP components. The components and features of the SIOP model are interrelated and integrated into each lesson.

Even students who are not struggling readers or English learners will benefit when a teacher plans and delivers instruction using the SIOP model (Echevarria et al., 2013). Mainstream teachers at all grade levels can effectively use the SIOP model to benefit all learners in their classrooms. Because of this, various components of the SIOP model will be more fully described in other chapters in this book. For example, information in the SIOP model concerning lesson delivery will be discussed in Chapter 8, “Managing Lesson Delivery.” Other topics will be considered in the appropriate chapters to provide guidance in using the SIOP model components to meet the needs of all learners.

Figure 1.3

Components of the SIOP Model

Lesson Preparation

■ Clearly define, display, and review content objectives with the students.
■ Clearly define, display, and review language objectives with the students.
■ Select content concepts that are appropriate for age and educational background of the students.
■ Use supplementary materials to a high degree, making the lesson clear and meaningful.
■ Adapt content to all levels of student proficiency.
■ Provide meaningful activities that integrate lesson concepts with language practice opportunities.
Figure 1.3 (continued)

<table>
<thead>
<tr>
<th>Components of the SIOP Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Background</strong></td>
</tr>
<tr>
<td>● Explicitly link concepts to students’ background experiences.</td>
</tr>
<tr>
<td>● Make explicit links between past learning and new concepts.</td>
</tr>
<tr>
<td>● Emphasize key vocabulary.</td>
</tr>
<tr>
<td><strong>Comprehensible Input</strong></td>
</tr>
<tr>
<td>● Speak appropriately for students’ proficiency levels.</td>
</tr>
<tr>
<td>● Provide clear explanations of academic tasks.</td>
</tr>
<tr>
<td>● Use a variety of techniques to make content concepts clear.</td>
</tr>
<tr>
<td><strong>Strategies</strong></td>
</tr>
<tr>
<td>● Provide ample opportunities for students to use learning strategies.</td>
</tr>
<tr>
<td>● Consistently use scaffolding techniques to assist and support student understanding.</td>
</tr>
<tr>
<td>● Use a variety of questions or tasks that promote higher-order thinking skills.</td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
</tr>
<tr>
<td>● Provide frequent opportunities for interaction and discussion.</td>
</tr>
<tr>
<td>● Group students to support language and content objectives of the lesson.</td>
</tr>
<tr>
<td>● Consistently provide sufficient wait time for student responses.</td>
</tr>
<tr>
<td>● Give ample opportunities for students to clarify key concepts in their first language.</td>
</tr>
</tbody>
</table>

**Practice/Application**

| Supply hands-on materials for students to practice using new content knowledge. |
| Provide activities for students to apply content and language knowledge. |
| Integrate all language skills into each lesson. |

**Lesson Delivery**

| Clearly support content objectives by lesson delivery. |
| Clearly support language objectives by lesson delivery. |
| Engage students during 90–100 percent of the lesson. |
| Appropriately pace the lesson to the students’ ability levels. |

**Review and Assessment**

| Provide comprehensive review of key vocabulary. |
| Supply comprehensive review of key content concepts. |
| Provide regular feedback to students on their output. |
| Conduct assessments of student comprehension and learning of all lesson objectives throughout the lesson. |

CHAPTER 1 The Teacher as a Decision Maker

Major Concepts

1. Teachers make decisions concerning three basic teaching functions: planning, implementing, and assessing.
2. Essential teacher characteristics fall into three categories: knowledge, skills, and dispositions.
3. Teachers are expected to be effective, and many surveys, reports, and state and federal guidelines address ways for them to achieve this.
4. Professional teaching standards are used to guide the selection of state teaching licensure requirements and the development of teacher education programs at colleges and universities.
5. Teaching is centrally the act of decision making. Teachers plan and act through the process of thought and reflection.
6. Reflection can be defined as a way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those choices.
7. The strategies in the SIOP model can be used to reach English language learners in all classrooms.

Discussion/Reflective Questions

1. Which is the most important teaching function: planning, implementing, or assessing? Why?
2. Give some examples of dispositions related to teaching. Why are dispositions important?
3. How might teacher reflection help teachers improve their practice?
4. What are some of the strengths of the SIOP model?

Suggested Activities

FOR CLINICAL SETTINGS

1. Select a significant event from a class you have attended on campus during the past three weeks. Use one of the teacher standard tables discussed in this chapter as you reflect on what worked well in that class. (The standard tables with the complete list of items and subitems are displayed in this book just before Chapter 1.)
2. Teach a brief lesson to a small group of peers. Write and reflect about a significant event that took place during your lesson. Consider how you could improve the lesson if you were to teach it again.
3. Imagine that you will be teaching a lesson on your state’s history to eighth graders. Identify ways that you might apply at least five aspects of the SIOP model (see Figure 1.3) in that lesson.

FOR FIELD EXPERIENCES

1. Talk with several teachers to see how they have continued their professional development since beginning to teach (e.g., staff development programs, graduate courses). Show them the Framework for Teaching table (just before Chapter 1) and ask them to identify and discuss the areas where they have improved.
2. Ask several teachers to discuss how they think about their teaching and then decide to make improvements. Do they have a regular process for this? What suggestions do they have for your reflective process?
3. Ask several teachers to describe how they teach English language learners in their classroom.
Further Reading


Explains reflective practice and offers practical strategies to integrate reflective practice into daily work.


Provides details about each SIOP component, rubric rating forms on SIOP use, lesson plan formats, and guidelines for use.


A thorough presentation of strategies for instilling reflective practices in educators. The tasks and tools provided were specifically designed to help teachers become critical thinkers.


A very useful guide that provides a framework for reflective thinking and acting. Offers examples of strategies to guide individual, small group, or school-wide reflection.
This Chapter Provides Information That Will Help You To:

1. Describe multiple ways in which diversity is exhibited in students.
2. Select ways to create an inclusive, multicultural classroom.
3. Apply various ways to differentiate instruction.
4. Differentiate instruction based on the principles of the universal design for learning.
5. Select ways to know your students.
6. Prepare a contextual factors classroom analysis.

IMPLICATIONS FOR DIVERSE CLASSROOMS

SOURCES OF STUDENT DIVERSITY
- Developmental Differences by Age
- Cognitive Area
- Affective Area
- Physical Area
- Learning Styles
- Gender
- Sexual Orientation
- Language
- Cultural Diversity
- Exceptionalities
- Students at Risk
- Socioeconomic Status

CREATING AN INCLUSIVE, MULTICULTURAL CLASSROOM
- Create a Supportive, Caring Environment
- Offer a Responsive Curriculum
- Vary Instruction
- Provide Assistance when Needed

DIFFERENTIATING INSTRUCTION
- Elements of the Curriculum That Can Be Differentiated
- Student Characteristics That Teachers Can Differentiate
- Differentiating With the Universal Design for Learning

GETTING TO KNOW YOUR STUDENTS
- Types of Information
- Sources of Information
- Using the Information

CONTEXTUAL FACTORS TO GUIDE PLANNING
Just think about the diversity apparent in a typical urban classroom. There may be a wide range of student cognitive and physical abilities. Students may have different degrees of English proficiency, and some may have a disabling condition such as a hearing disorder. A wide range of ethnic characteristics may be evident, and various socioeconomic levels are likely to be represented. The students may prefer to learn in different ways, such as in pairs, in small groups, or independently. Some may prefer written work; others may learn best when performing an activity.

These examples are just a few of the human and environmental variables that create a wide range of individual differences and needs in classrooms. Individual differences need to be taken into account when instructional methods and procedures are selected. What are the sources of student diversity? How can our understanding of these student characteristics help teachers to create an inclusive, multicultural classroom? How can you differentiate your instruction to meet the learning needs of all students? These issues are explored in this chapter.

Implications for Diverse Classrooms

Students who are in the classroom affect classroom management and instruction. Schools in the United States are very diverse, with students from different economic, cultural, ethnic, and linguistic backgrounds. In addition, you may find that your classroom has students with a range of ability or achievement levels, groups of students with skills below grade level, and students with special needs. All of these factors contribute to the diversity in your classroom.

For you and your students to be successful, you may need to make adjustments in instructional and management practices to meet the needs of different groups in your class. For example, you may find a wide variety of academic abilities in your classroom and consequently need to vary your curriculum, instruction, and assessments. You also may have several students whose primary language is not English, and similar adjustments may need to be enacted. Your job is to enhance student learning, and adjustments based on student characteristics will be necessary.

Understanding of your students will likely influence your decisions about ways that you will organize the physical environment, manage student behavior, create a supportive learning environment, facilitate instruction, and promote safety and wellness. To be an effective classroom manager in a diverse classroom, you should make a commitment to do these things:

- Get to know all of your students.
- Create an inclusive classroom by making instructional and management modifications based on an understanding of your students.
- Create a classroom environment that promotes positive behavior and enhances student learning.

Sources of Student Diversity

Individual differences abound, and adapting instruction to student differences is one of the most challenging aspects of teaching. The first step in planning to address the diversity of students is to recognize those differences. This section explores differences in development by age; differences in cognitive, affective, and physical areas; differences
due to gender, sexual orientation, ethnicity, learning style, language, or creative potential; differences due to exceptionalities and at-risk characteristics; and other types of differences (Gollnick & Chinn, 2013). In the classroom, students rarely fall cleanly into one category or another and may exhibit characteristics from several categories.

DEVELOPMENTAL DIFFERENCES BY AGE

Any elementary teacher can tell you that kindergarten students are profoundly different from sixth-grade students, and those differences need to be taken into account when planning and teaching. Similarly, any middle-level or secondary teacher can tell you that eighth graders are quite different from seniors.

Students at the grade level you teach will be of a certain age and will possess certain developmental characteristics of that age. Those characteristics must be taken into account when planning and delivering instruction. Part of your review of contextual factors in your classroom, examined later in this chapter, includes careful identification of the characteristics of the students in your class.

It is beyond the scope of this book to review developmental characteristics of students at various age levels. However, it is important to alert prospective teachers that those developmental characteristics must be taken into account when planning for instruction. College courses in human development examine characteristics of children as they grow older. Educational psychology courses also consider various theories of development. Recall some of those developmental concepts: (1) Jean Piaget’s four stages of cognitive development, (2) Eric Erikson’s eight stages of psychosocial development, (3) Lawrence Kohlberg’s three levels and six stages of moral reasoning, and (4) additional perspectives on the development of language, memory, and physical and emotional development.

Seek out resources that provide information about the developmental characteristics of children at the age of the grade level you teach. One such resource is Yardsticks: Children in the Classroom, Ages 4–14 by Chip Wood (2007). In a separate chapter for each age, Wood describes the social, physical, and cognitive characteristics of children of that age. Dig out your educational psychology books (e.g., Ormrod, 2014) to find useful reviews of developmental characteristics by age. All of these are useful resources to help you understand developmental characteristics by age and to take those characteristics into account when planning and delivering instruction.

COGNITIVE AREA

Cognitive activity includes information processing, problem solving, using mental strategies for tasks, and continuous learning. Children in a classroom will differ in their cognitive abilities to perform these tasks. Thus, there may be a range of low-academic-ability to high-academic-ability students in a classroom. Intelligence involves the capacity to apprehend facts and their relations and to reason about them; it is an indicator of cognitive ability.

Howard Gardner (1983, 1995, 1999) believes that all people have multiple intelligences. He has identified eight independent intelligences: linguistic, musical, logical–mathematical, spatial, bodily kinesthetic, naturalistic, interpersonal, and intrapersonal. According to this theory, a person may be gifted in any one of the intelligences without being exceptional in the others. Gardner proposes more adjustment of curriculum and instruction to individuals’ combinations of aptitudes. Do not expect each student to have the same interests and abilities or to learn in the same ways.

The work of Gardner and other cognitive psychologists provides ideas for teachers when selecting instructional techniques and differentiating instruction. When considering the cognitive differences of your students, you should do the following:

1. Expect students to be different.
2. Spend the time and effort to look for potential.
3. Realize that student needs are not only in deficit areas. Development of potential is a need, too.
4. Be familiar with past records of achievement.
5. Be aware of previous experiences that have shaped a student's way of thinking.
6. Challenge students with varied assignments and note the results.
7. Use a variety of ways of grading and evaluating.
8. Keep changing the conditions for learning to bring out hidden potential.
9. Occasionally challenge students beyond what is expected.
10. Look for something unique that each can do.

There are many useful resource guides for addressing the diversity of students by applying the multiple intelligences to lesson activities (e.g., Campbell, B., 2008; Campbell, Campbell, & Dickinson, 2004; Fogarty & Stoehr, 2008; Lazear, 2003).

Struggling Learners. A student who is considered a struggling learner cannot learn at an average rate from the instructional resources, texts, workbooks, and materials that are designated for the majority of students in the classroom. This student often has a limited attention span and deficiencies in basic skills such as reading, writing, and mathematics. He or she needs frequent feedback, corrective instruction, special instructional pacing, instructional variety, and perhaps modified materials (Protheroe, 2004). In Helping Struggling Learners Succeed in School, Harriet Porton (2013) takes a comprehensive approach by considering planning, grouping, management, instructional strategies, and assessment.

In How to Support Struggling Students, Jackson and Lambert (2010) state that effective support is ongoing, proactive, targeted, accelerative (rather than remedial), learning focused, and managed by the teacher as an advocate. They suggest strategies to support struggling students at certain points of instruction:

- **Before instruction**: Activate and create background knowledge, prepare students with advance organizers, and help students prelearn key vocabulary.
- **During instruction**: Select “red flags” to identify when a student's struggle to learn has become destructive and link the red flags to interventions that quickly get struggling students back on course.
- **After instruction**: Provide meaningful remediation for the few students who do not achieve mastery even with acceleration and intervention.

Marlowe and Hayden (2013) maintain that the best way to teach children who are hard to reach is to have a relationship-driven classroom. Positive teacher-student and student-student relationships influence discipline, classroom dynamics, and student engagement in learning.

In Teaching Boys Who Struggle in School, Kathleen Cleveland (2011) examines what causes boys to struggle in school and offers recommendations. She suggests (1) replacing an underachieving boy's negative attitudes about learning; (2) reconnecting each boy with school, with learning, and with a belief in himself as a competent learner; (3) rebuilding learning skills that lead to success in school and life; and (4) reducing the need for unproductive and distracting behaviors as a means of self-protection.

For the struggling learners in your class, you should (1) frequently vary your instructional technique; (2) develop lessons around students' interests, needs, and experiences; (3) provide for an encouraging, supportive environment; (4) use cooperative learning and peer tutors for students who need remediation; (5) provide study aids; (6) teach content in small sequential steps with frequent checks for comprehension; (7) use individualized materials and individualized instruction whenever necessary;
possible; (8) use audio and visual materials for instruction; and (9) take steps to develop each student's self-concept (e.g., assign a task where the student can showcase a particular skill).

Struggling learners may also be struggling readers. McEwan (2007) offers a number of strategies to support struggling readers in content classrooms in grades 6–12. These strategies focus on specific reading problems (e.g., students who are overwhelmed with too many concepts, students who lack vocabulary) and on strategies of reading instruction (e.g., using graphic organizers, vocabulary instruction).

**Gifted or Talented Learners.** Gifted or talented learners are those with above-average abilities, and they need special instructional consideration. Unfortunately, some teachers do not challenge high-ability students, and these students just “mark time” in school. Unchallenged, they may develop poor attention and study habits, form negative attitudes toward school and learning, and waste academic learning time. Many resources for teaching gifted students are available (e.g., Karnes & Stephens, 2008; Smutny & von Fremd, 2009).

---

**Sample Standards**

**Differentiating Instruction for Diverse Learners**

There are 10 InTASC standards (see pages xviii–xix), and each standard in the original document includes a list of performances, essential knowledge, and critical dispositions to indicate more clearly what is intended in the standard.

Because this chapter deals with differentiating instruction for diverse learners, some representative statements from InTASC Standard #2 on Learning Differences, Standard #3 on Learning Environments, and Standard #6 on Assessment are listed here concerning topics in this chapter.

**Performances**

- The teacher designs, adapts, and delivers instruction to address each student’s diverse learning strengths and needs, and creates opportunities for students to demonstrate their learning in different ways. (InTASC #2)
- The teacher uses a variety of methods to engage learners in evaluating the learning environment and collaborates with learners to make appropriate adjustments. (InTASC #3)
- The teacher effectively uses multiple and appropriate types of assessment data to identify each student’s learning needs and to develop differentiated learning experiences. (InTASC #6)

**Essential Knowledge**

- The teacher knows about second-language acquisition processes and knows how to incorporate instructional strategies and resources to support language acquisition. (InTASC #2)
- The teacher understands how learner diversity can affect communication and knows how to communicate effectively in differing environments. (InTASC #3)
- The teacher understands how to prepare learners for assessments and how to make accommodations in assessment and testing conditions, especially for learners with disabilities and language learning needs. (InTASC #6)

**Critical Dispositions**

- The teacher respects learners as individuals with differing personal and family backgrounds and various skills, abilities, perspectives, talents, and interests. (InTASC #2)
- The teacher is a thoughtful and responsive listener and observer. (InTASC #3)
- The teacher is committed to the ethical use of various assessments and assessment data to identify learner strengths and needs to promote learner growth. (InTASC #6)
For these students, you should (1) not require that they repeat material they already have mastered; (2) present instruction at a flexible pace, allowing those who are able to progress at a productive rate; (3) condense the curriculum by removing unneeded assignments to make time for extending activities; (4) encourage students to be self-directing and self-evaluating in their work; (5) use grading procedures that do not discourage students from intellectual risk taking or penalize them for choosing complex learning activities; (6) provide resources beyond basal textbooks; (7) provide horizontal and vertical curriculum enrichment; (8) encourage supplementary reading and writing; and (9) encourage the development of hobbies and interests.

**AFFECTIVE AREA**

Education in the affective area focuses on feelings and attitudes. Emotional growth is not easy to facilitate, but sometimes the feelings students have about their skills or a particular subject are at least as important as the information they learn (Slavin, 2015). Self-esteem, time management, confidence, and self-direction are typical affective education goals.

Though affective goals have played a secondary role to cognitive goals in school, they should be given an important place when planning and carrying out instruction. Love of learning, confidence in learning, and cooperative attitudes are important objectives that teachers should have for students. You may find a range of affective characteristics exhibited in the classroom, from low to high self-esteem, confidence, cooperation, self-direction, and the like.

**PHYSICAL AREA**

Perhaps the best place to observe the wide range of physical differences among students is the hallway of any junior high or middle school. Tall and short, skinny and heavy, muscular and frail, dark and fair, active and quiet describe just a few of the extremes one can see there.

Physical (psychomotor) differences among students have sometimes been overlooked by teachers who are not involved in physical education (Woolfolk, 2013). Psychomotor skills involve gross motor skills and fine motor skills, such as dribbling a basketball and drawing a fine line. These skills are integral parts of most learning activities. Indeed, psychomotor and affective objectives often overlap.

Physical demands on learning are obvious in the areas of handwriting, industrial arts, sewing, typing, art, and driver education. However, they must not be minimized in less obvious areas such as science labs, computer classes, speech and drama, and music. Vision and hearing deficiencies also contribute to individual differences. You should recognize the importance of physical skills to the total learning program and explore the possibilities for including psychomotor development activities in classroom objectives.

**LEARNING STYLES**

A learning style is an individual’s preferences for the conditions of the learning process that can affect his or her learning (Woolfolk, 2013), including where, when, and how learning takes place, and with what materials. These styles may play an integral role in determining how the student perceives the learning environment and responds to it. Therefore, knowledge about learning styles can allow teachers to provide options in the classroom that can enhance students’ learning.

Theories and research studies about learning styles are tentative and ongoing, but several promising areas of instructional assistance have emerged. These include cognitive style, brain-compatible learning, and sensory modalities. Students’ learning styles can be addressed by using differentiated instructional techniques (Gregory, 2005).
Cognitive Style. Cognitive style should be considered in planning. Cognitive style refers to the way people process information and use strategies in responding to tasks. Conceptual tempo and field dependence/field independence are two categories of cognitive style that educators may consider when planning instruction.

First, conceptual tempo deals with students being impulsive or reflective when selecting from two or more alternatives. For example, impulsive students look at alternatives only briefly and select one quickly. They may make many errors because they do not take time to consider all the alternatives. However, not all cognitively impulsive students are fast and inaccurate. On the other hand, reflective students deliberate among the alternatives and respond more slowly.

Second, field dependence/field independence deals with the extent to which individuals can overcome the effects of distracting background elements (the field) when trying to differentiate among relevant aspects of a particular situation. You can expect field-dependent students to be more people oriented, to work best in groups, and to prefer subjects such as history and literature. Field-independent students often prefer science, problem-solving tasks, and instructional approaches requiring little social interaction (Slavin, 2015). Field-dependent students respond more to verbal praise and extrinsic motivation, while field-independent students tend to pursue their own goals and respond best to intrinsic motivation.

Brain-Compatible Learning. In How the Brain Learns, David Sousa (2011) examines how the brain processes information and how teachers can promote student memory, retention, and learning. He supports the use of many instructional approaches and recommends a fairly explicit type of lesson delivery. Based on the neuroscience of the brain, Sousa and Tomlinson (2010) suggest ways to differentiate certain curricular, instructional, and assessment choices to support a learner-friendly classroom.

In Designing Brain-Compatible Learning, Gregory and Parry (2006) review the cognitive research and pedagogical theory of learning in relation to the brain. Many of the suggestions are consistent with those about differentiating instruction reviewed later in this chapter. Among the strategies they review and endorse are: (1) creating

---

**Voices from the Classroom**

**EDIE GUERRA, middle school science teacher, Las Vegas, Nevada**

**STUDENT INVENTORY SHEETS ABOUT LEARNING STYLES**

At the beginning of the year, I give my students a Student Inventory Sheet. There are eight sections, each focusing on a different learning style—visual, logical-mathematical, visual-spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic. I do this to see how my students learn best, and then I tailor my lessons to their preferred learning styles.

By knowing my students’ learning styles, I am able to develop lessons that appeal to their interests. I want my students to be highly engaged in their learning. By altering and adapting to their preferred styles, I have more student buy-in for basic grade-level concepts. I think of it as adding the bells and whistles to an otherwise dry curriculum.
classroom climates that support thinking, (2) activating prior knowledge, (3) using advance organizers, (4) implementing cooperative group learning, (5) providing direct teaching of thinking, (6) using higher-order questioning, (7) promoting creative problem solving, (8) using strategies for advancing concept development (e.g., concept attainment and concept development strategies), and (9) teaching metacognition (e.g., students learning to examine and monitor how they think). Gregory and Kaufeldt (2011) offered additions suggestions to differentiate instruction in a brain-friendly classroom.

**Brain hemisphericity** is another aspect of student preferences for learning environments. The two halves of the brain appear to serve different functions, even though they are connected by a complex network that orchestrates their teamwork (Sousa, 2011). Each side is dominant in certain respects. Left-brain-dominant people tend to be more analytical in their orientation, being generally logical, concrete, and sequential. Right-brain-dominant people tend to be more visually and spatially oriented and more holistic in their thinking.

Teacher presentations focusing on left-hemisphere activity include lecture, discussion, giving verbal clues, explaining rules, and asking yes–no and either–or questions in content areas. Useful materials include texts, word lists, workbook exercises, readings, and drill tapes. To develop left-hemisphere functions, teachers should (1) introduce and teach some material in the linear mode, (2) sequence the learning for meaning and retention, (3) conduct question-and-answer periods, (4) emphasize the meanings of words and sentences, and (5) increase student proficiency with information-processing skills such as note taking, memorization, and recall.

Teacher presentations featuring right-hemisphere activity involve demonstration, experiences, open-ended questions, nonverbal clues, manipulations, and divergent thinking activity. Useful materials for these activities include flashcards, maps, films, drawings, and manipulatives. To develop right-hemisphere functions, teachers should (1) encourage intuitive thinking and “guesstimating,” (2) allow for testing of ideas and principles, (3) introduce some material in the visual–spatial mode, (4) use some nonsequential modes for instruction, and (5) integrate techniques from art, music, and physical education into social science, science, and language arts disciplines.

**Sensory Modality.** Sensory modality is a third factor in students’ preferences for a learning environment. A sensory modality is a system of interacting with the environment through one or more of the basic senses: sight, hearing, touch, smell, and taste. The most important sensory modalities for teachers are the visual, auditory, and kinesthetic modes. Information to be learned is first received through one of the senses. The information either is forgotten after a few seconds or, after initial processing, is placed in short-term or long-term memory. Learning may be enhanced when the information is received through a preferred sensory modality. Use a variety of instructional approaches that enable students to receive content through one or more of the basic senses.

**GENDER**

There are obviously differences between males and females, and some of those differences influence students’ performance at school. Researchers have found that females generally are more extroverted, anxious, and trusting; are less assertive; and have slightly lower self-esteem than males of the same age and background. Females’ verbal and motor skills also tend to develop faster than those of males (Berk, 2012, 2014; Sadker & Silber, 2007).

Gender differences are caused by a combination of genetics and environment. These differences are examined in *Boys and Girls Learn Differently* (Gurian & Henley, 2010), which includes discussions concerning elementary, middle, and high school classrooms. Concerns about boys’ performance in school are examined in sources such
as *The Minds of Boys* (Gurian & Stevens, 2007) and *Teaching the Male Brain* (James, 2007).

In a study by Auwarter and Aruguete (2008), teachers’ perceptions and expectations for students were shaped by students’ gender and socioeconomic status (SES). Teachers rated high-SES boys more favorably than low-SES boys but low-SES girls more favorably than high-SES girls. Teachers perceived that low-SES students have less promising futures than do high-SES students. Findings suggest that teachers are likely to develop negative attitudes toward low-SES students in general but especially boys. The study did not find that all teachers have these preconceived attitudes but suggests that teachers should be cautious about holding differing expectations for students based on gender or SES.

There are also gender differences in career preparation and career choice. Teachers should keep both boys and girls academically motivated, especially in science, technology, engineering, and math areas, where gender-based differences in career choices still exist. To address this, you take the following actions (Tsui, 2007):

- Provide students with a mix of successful male and female role models.
- Make sure that girls take an active part in math and science classes, especially given boys’ tendency to be more assertive in such settings.
- Use more hands-on experiments and group activities and less teaching by telling and lecturing.
- Allow students to investigate real-world problems, both large and small.
- Encourage students to see that academic achievement is more a product of effort than of natural ability.
- Help parents recognize the importance of having gender-neutral expectations for their children’s education.

**Voices from the Classroom**

**KNOWING YOUR STUDENTS’ LEARNING STYLES**

At the beginning of each school year, I have my students identify their own particular learning styles with the use of checklists, questionnaires, and other tools I have collected. When we discuss the results, my students realize that they have their own unique learning style and that every other student in the room does as well.

We then consider how to use this information to help them be successful. We discuss various study skills that work well for their learning style. For example, we know that many of the boys identify themselves as kinesthetic learners, so I suggest making flashcards as a study aid. We also discuss how having choices in the way they demonstrate what they have learned allows them to use their learning style strengths. For instance, they might choose to write and present a song for a book report project or create an illustrated storyboard.

For me, the benefit of this process is having the students accept themselves and each other as unique, and it helps me select content, strategies, and assessments that better meet their learning needs.
What can you do to prevent gender inequity in your classroom? First, be aware that you may have stereotypical attitudes that influence the ways you interact with boys and girls. Research indicates that teachers interact with boys more often and ask them more questions; boys are also more likely to ask questions and volunteer comments about ideas being discussed in class (Good & Brophy, 2008). These patterns can lead to girls being less involved in learning activities and ultimately having lower achievement.

You can make your classroom more gender friendly for all students by following these guidelines: (1) incorporate movement in instruction, (2) make learning visual, (3) give students choice and control, (4) provide opportunities for social interaction, (5) find ways to make learning real, (6) blend art and music into the curriculum, (7) connect with your students, (8) promote character development for the benefit of the individuals and the classroom environment, and (9) encourage equal participation (Gurian, Stevens, & King, 2008; James, 2007).

SEXUAL ORIENTATION

It is estimated that 5 to 10 percent of the population is lesbian, gay, bisexual, or transgender (LGBT) (Ost & Gates, 2004). As adults, LGBT individuals face discrimination in housing, employment, and social institutions. Society’s prejudices and discriminatory policies result in many gays and lesbians hiding their sexual orientation. Early indicators of sexual orientation may show up in students in the elementary grades.

During adolescence, about 8 percent of boys and 6 percent of girls report engaging in some same-sex activity or feeling strong attractions to same-sex individuals (Steinberg, 2014). Most models describing the development of an identity as gay, lesbian, or bisexual follow these stages (Yarhouse, 2001):

- **Feeling different.** Beginning around age six, the child may be less interested in the activities of other children who are the same sex. Some children may find this troubling and fear being “found out.” Others do not experience these anxieties.

- **Feeling confused.** In adolescence, students may be confused, upset, lonely, or unsure what to do if they feel attracted to someone of the same sex.

- **Acceptance.** As young adults, many of these young people sort through sexual orientation issues and identify themselves as gay, lesbian, or bisexual. They may or may not make their sexual orientation public but may share the information with a few friends.

Loneliness and isolation are experienced by many gay and lesbian youth. If gays and lesbians openly acknowledge their sexual orientation or appear to be LGBT, they are likely to be harassed or bullied by peers. Sixty-four percent of LGBT students fear for their safety in schools. They feel more comfortable and safer in a school when faculty and staff are supportive, gay-straight alliance or similar clubs exist, and a comprehensive policy on harassment is enforced (Ost & Gates, 2004).

Teachers need to reach out to help students who are struggling with sexual identity and to address harassment and bullying. First, listen to the students to allow them to vent or to express what is going on in their lives. Second, affirm to them that they are not alone and that others are dealing with the same issues. Third, refer the students to someone who is trained to deal with the issues. Fourth, address any verbal or physical harassment or bullying related to sexual orientation. Finally, follow up to be sure students’ situations have improved and to see whether there is anything further you may be able to do. In addition to interacting with students who are addressing these issues, teachers may need to interact with parents who are gay or lesbian.

LANGUAGE

Some students come from homes where English is not the primary language or is not spoken at all. They may have limited proficiency in English. In descending order, Spanish,
French, German, Italian, and Chinese are the top five languages other than English spoken at homes in the United States. This fact has bearing on teachers’ decisions about management and work.

There are four major instructional models for serving English language learners (ELLs) (Rothenberg & Fisher, 2007), each varying in the degree to which it incorporates a student’s first language and the approach it takes in delivering academic content:

1. Instructional methods using the student’s first language (which are transitional programs)
2. Instructional methods using the first language as support
3. Instructional methods using English as a second language
4. Content-based instruction or sheltered instructional methods

Presently, one in nine students in U.S. public schools, or over 5 million students, have limited English proficiency. This is an increase of 150 percent over the last decade. Some estimates claim that by 2025, one in four public K–12 students will come from a home where a language other than English is spoken (NCELA, 2005, 2006). Many students will have limited English proficiency when they begin school, and some will remain less than completely fluent for years (Goldenberg, 2008).

As an educator, it is increasingly likely that you will have ELLs in your classes. To help address the learning needs of ELLs, apply the following principles:

1. Instruction in the primary language aids achievement. Academic instruction in a student’s home language should be part of the educational program of an ELL when possible. The National Literacy Panel conducted a meta-analysis of experimental studies and concluded that teaching reading skills in the first language is modestly more effective in terms of second-language achievement than immersing children in English (August & Shanahan, 2006).

2. Good instruction for ELLs is similar to good instruction for other English-speaking students. Primary-language instruction is often not feasible for various reasons, including the fact that over 400 different languages are spoken in the United States (NCELA, 2008). The best evidence researchers have suggests that ELLs learn in much the same way as other students and that good instruction for students in general tends to be good instruction for ELLs in particular. Thus, ELLs benefit from (a) clear goals and objectives, (b) well-designed instructional routines, (c) active engagement and participation, (d) informative feedback, (e) opportunities to practice and apply new learning and transfer it to new situations, (f) periodic review and practice, (g) opportunities to interact with other students, and (h) frequent assessments, with reteaching as needed (Marzano, 2007).

3. ELLs require instructional accommodations. While general principles of effective instruction should be the basis for instructing ELLs, these students need certain accommodations. The National Literacy Panel found that the impact of instructional interventions is weaker for English learners than it is for English speakers, suggesting that additional supports or accommodations are needed for ELLs to derive as much benefit from effective instructional practices. These additional supports or accommodations include the following:

- Using the primary language strategically
- Providing predictable, clear, and consistent instructions, expectations, and routines
- Offering extended explanations and additional opportunities for practice
- Providing redundant information, such as visual cues and physical gestures
- Focusing on the similarities/differences between English and the native language
- Building on students’ knowledge and skills in the native language
Identifying and clarifying difficult words and passages
- Consolidating text knowledge through summarization
- Providing extra practice in reading words, sentences, and stories
- Providing opportunities to have students work in pairs or small groups with tutors
- Discriminating and manipulating the sounds of the language (phonemic awareness)
- Decoding words (phonics)
- Targeting vocabulary and checking comprehension frequently
- Paraphrasing students’ remarks and encouraging expansion

Instruction in English language development and opportunities to extend oral English skills are critical for ELLs. Every lesson should target both course content and English language development. Students must make rapid progress in their oral English skills if they are to enter the educational mainstream and derive maximum benefit from classroom instruction delivered in English. To do so, they must have a supportive learning environment (Goldenberg, 2008; Slavin, Cheung, Groff, & Lake, 2004).

CULTURAL DIVERSITY

Cultural diversity is reflected in the wide variety of values, beliefs, attitudes, and rules that define regional, ethnic, religious, and other culture groups. Minority populations wish their cultures to be recognized as unique and preserved for their children. The message from all cultural groups to schools is clear: Make sure that each student from every cultural group succeeds in school.

Culturally responsive teaching is instruction that acknowledges cultural diversity (Gay, 2005, 2010). It attempts to accomplish this goal in three ways: (1) accepting and valuing cultural differences, (2) accommodating different cultural interaction patterns, help struggling readers and English language learners negotiate meaning from the material.

Mr. Kulpinski has seen many of his hesitant readers grow in confidence after they have read several short texts and have been able to comprehend the content. Class discussions also have been enhanced by the use of short texts.

FOCUS QUESTIONS

1. How does Mr. Kulpinski’s strategy of using short texts help him teach diverse learners?
2. How do all learners in the classroom benefit from this strategy?
and (3) building on students’ cultural backgrounds. Culturally responsive teachers use the best of what is known about good teaching, including strategies such as the following (Irvine & Armento, 2001):

- Connecting students’ prior knowledge and cultural experiences with new concepts by constructing and designing relevant cultural metaphors and images
- Understanding students’ cultural knowledge and experiences and selecting appropriate instructional materials
- Helping students find meaning and purpose in what is to be learned
- Using interactive teaching strategies
- Allowing students to participate in planning
- Using familiar speech and events
- Helping learners construct meaning by organizing, elaborating, and representing knowledge in their own way
- Using primary sources of data and manipulative materials

In a culturally responsive classroom, the student’s culture is seen as a source of strength on which to rely, not as a problem to be overcome or as something to be overlooked (Ladson-Billings, 2009). Teachers can weave a range of cultural perspectives throughout the curriculum to make education more relevant for students who see their cultures recognized. In doing so, teachers need to be aware of a variety of cultural experiences to understand how different students may learn best. Learning about the various cultures is important. Resources such as Through Ebony Eyes (Thompson, G. L., 2007a) and Up Where We Belong (Thompson, G. L., 2007b) provide information about helping African American and Latino students in school.

When motivating black males to achieve in school and in life, Kafele (2009) maintains that teachers need to recognize that the challenges of educating black male students are different from educating other student populations and then make adjustments in classroom experiences to promote black male self-identify and academic success. Based on the tenets of culturally responsive teaching, McKinley (2010) provides guidelines for raising black students’ achievement through:

- Instructional practices that instill content mastery by scaffolding to students’ home cultures and responding to student traits and needs
- Classroom contexts that support learning through positive interactions, culturally matched discipline, and productive learning environments
- Assessment practices that provide constructive feedback to students to help them excel on high-stakes tests

Each cultural group teaches its members certain lessons about living. Differences exist among cultures in the way members conduct interpersonal relationships, use time, use body language, cooperate with group members, and accept directions from authority figures. You need to treat each student as an individual first because that student is the product of many influences. Many resources are available concerning cultural diversity (e.g., Banks, 2006; Gollnick & Chinn, 2013; Rothstein-Fisch & Trumbull, 2008). As you consider individual differences produced by cultural diversity, you should do the following:

1. Examine your own values and beliefs for evidences of bias and stereotyping.
2. Regard students as individuals first, with membership in a culture group as only one factor in understanding individuals.
3. Learn something about students’ family and community relationships.
4. Consider nonstandard English and native languages as basic languages for students from culturally diverse populations to support gradual but necessary instruction in the majority language.
Exceptional students include those who need special help and resources to reach their full potential. Exceptionalities include both disabilities and giftedness. More than 10 percent of students in the United States are identified as having disabling conditions that justify placement in a special education program (Turnbull & Turnbull, 2013). This figure increases to 15 percent when gifted children are counted as special education students. Categories for special education services include learning disabilities, speech or language impairment, mental retardation, emotional or behavioral disabilities, other health impairments, multiple disabilities, hearing impairment, orthopedic impairment, visual impairment, deafness or blindness, traumatic brain injury, and autism spectrum disorder.

The Individuals with Disabilities Education Act (IDEA) committed the United States to a policy of mainstreaming students who have handicapping conditions by placing them in the least restrictive environment in which they can function successfully while having their special needs met. The degree to which they are treated differently is to be minimized. The least restrictive environment means that students with special needs are placed in special settings only if necessary and only for as long as necessary; the regular classroom is the preferred least restrictive placement.

Teachers often make accommodations and modifications to their teaching to meet the learning needs of students with exceptionalities (Haager & Klingner, 2005). An accommodation is an adjustment in the curriculum, instruction, learning tasks, assessments, or materials to make learning more accessible to students. For example, a student might have an adapted test with fewer test items. The student may also have the same test but take it orally in a one-on-one situation with the teacher, or he or she might be given extra time to take a test. Different materials might be used to teach the same content, or additional practice or various instructional approaches may be used. In any case, accommodation is not a watering down of or change in the content or a change in expected learner outcomes.

A modification is a change in the standard learning expectations so that they are realistic and individually appropriate. The curriculum or instruction is altered as needed. Modifications are used for students for whom all possible accommodations have been
considered and who still need additional measures to help them progress. For example, students with skill deficits in reading or math may need modifications in assignments or the level of the content and reading materials, or they may need an alternative assessment or test.

STUDENTS AT RISK

Other environmental and personal influences may converge to place a student at risk. Students at risk are children and adolescents who are not able to acquire and/or use the skills necessary to develop their potential and become productive members of society. Conditions at home, support from the community, and personal and cultural background all affect students’ attitudes, behaviors, and propensity to profit from school experiences. Students potentially at risk include children who face adverse conditions beyond their control, those who do not speak English as a first language, talented but unchallenged students, those with special problems, and many others. At-risk students often have academic difficulties and thus may be low achievers.

Students at risk, especially those who eventually drop out, typically have some or all of the following characteristics (Ormrod, 2014): (1) a history of academic failure, (2) older age in comparison with classmates, (3) emotional and behavioral problems, (4) frequent interaction with low-achieving peers, (5) lack of psychological attachment to school, and (6) increasing disinvolve-ment with school.

Effective use of classroom instructional strategies can help reach at-risk students (Snow, 2005). These strategies include whole-class instruction, cognitively oriented instruction, small groups, tutoring, peer tutoring, and computer-assisted instruction.

Here are some general strategies to support students at risk (Ormrod, 2014):

- Identify students at risk as early as possible.
- Create a warm, supportive school and classroom atmosphere.
- Communicate high expectations for academic success.
- Provide extra academic support.
- Show students that they are the ones who have made success possible.
- Encourage and facilitate identification with school.

SOCIOECONOMIC STATUS

Socioeconomic status (SES) is a measure of a family’s relative position in a community, determined by a combination of parents’ income, occupation, and level of education. There are many relationships between SES and school performance (Woolfolk, 2013). SES is linked to intelligence, achievement test scores, grades, truancy, and dropout and suspension rates.

Students’ school performance is correlated with their socioeconomic status: higher-SES students tend to have high academic achievement, and lower-SES students tend to be at greater risk for dropping out of school (Books, 2004; Lee & Bowen, 2006; Ormrod, 2014). As students from lower-SES families move through the grade levels, they fall further and further behind their higher-SES peers. Students from higher-SES families, however, may face pressure from their parents to achieve at a high level, which can lead to anxiety and depression.

To better address the learning needs of students living in poverty, some educators seek to understand the characteristics of the students and their culture and then make appropriate decisions about curriculum and instruction. In A Framework for Understanding Poverty, Ruby Payne (2005, 2008) strongly advocates seeking this understanding. However, others have been critical of this approach as stereotyping students living in poverty (e.g., Bomer; Dworin, May, & Semingson, 2008; Gorski, 2008).
Taking these factors into account, you should (1) capitalize on students’ interests; (2) make course content meaningful to the students and discuss the practical value of the material; (3) give clear and specific directions; (4) arrange to have each student experience some success; (5) be sure that expectations for work are realistic; and (6) include a variety of instructional approaches, such as provisions for movement and group work. Additional useful resources include Engaging Students with Poverty in Mind by Eric Jensen (2013) and Why Culture Counts: Teaching Children of Poverty by Donna Tileston and Sandra Darling (2008).

There is a gap in academic achievement for students in lower socioeconomic groups and those living in poverty compared to the larger student population. The achievement gap related to minorities and urban students has received considerable attention. Drawing on evidence from successful schools, Boykin and Noguera (2011) offer strategies for increasing minority student engagement and boosting their levels of achievement. Increasing student engagement is the first success factor they identified, which happens on three levels: behavioral engagement, cognitive engagement, and affective engagement. The second success factor is strengthening student self-efficacy (“I can do this task”), goal setting, and a belief that working hard at an intellectual task will lead to mastery. The third success factor is to build positive classroom dynamics between teachers and students to develop a culture of learning in which students see themselves as having a significant role to play.

When trying to close the achievement gap and create success for urban students, Rajagopal (2011) identified many strategies to engage learners and promote success, as illustrated by the following examples. Incorporate learning styles, culture, background, prior knowledge, vocabulary, music, and sports into the curriculum. Make success personal and visible by using individualized student contracts and rewards that enforce high expectations. Scaffold content to individual student’s abilities and make sure each student “gets it” before moving on. Use cooperative learning and one-on-one tutoring for students who have the most difficulty completing the in-class assignments. Additional resources are available to address the achievement gap in urban schools and with high-poverty schools (e.g., Barr & Parrett, 2010; Curwin, 2010; Parrett & Budge, 2012).

Creating an Inclusive, Multicultural Classroom

Understanding the sources of student diversity is not enough. You must use this information as the basis for many classroom decisions when creating a positive learning environment, selecting a responsive curriculum, determining instructional strategies, and providing assistance. A number of useful resources offer guidance about these issues, including Culturally Proficient Instruction (Nuri-Robins, Lindsey, Lindsey, & Terrell, 2012), Building Culturally Responsive Classrooms (Gaitan, 2006), and How to Teach Students Who Don’t Look Like You (Davis, 2012).

CREATE A SUPPORTIVE, CARING ENVIRONMENT

How students feel about the classroom can make a big difference in how they participate. Your attitude toward students and the curriculum can influence these student feelings. To create a supportive, caring environment, you should translate your attitude into the following actions:

1. Celebrate diversity. Student diversity exists in many ways, as reviewed earlier in this chapter. Students do not want to be criticized because they have some characteristic that is different from others. Through your actions, recognize that each student
contributes to the rich variety of ideas and actions in the classroom. Show that you appreciate and value the diversity that is reflected in the students in the classroom. In turn, students will feel appreciated, rather than different, and this will make them feel more comfortable in the classroom.

2. **Have high expectations for students and believe that all students can succeed.** Teachers sometimes consider certain sources of student diversity—cognitive ability, language, disabilities, socioeconomic status, for example—as having a negative effect on student performance. Thus, teachers may lower expectations and adjust the content and activities accordingly. However, this is a disservice to the students when they are not given the opportunity to address meaningful and challenging content and to develop their knowledge and skills. It is important to hold high expectations for all students and to believe that all students can succeed. Students appreciate the challenge and will find the classroom more stimulating and worthwhile as compared to a classroom with lowered expectations.

3. **Encourage all students.** Students who perform well academically often receive words of praise, reinforcement, and encouragement from teachers. There may be many students in a classroom who do not perform at the highest academic levels, but they would appreciate hearing encouraging statements as well. Encouraging words and guiding suggestions will help all students to feel that they are being supported in their efforts.

4. **Respond to all students enthusiastically.** When students see that their teacher is welcoming and enthusiastic about each student, they feel more comfortable in the classroom and more willing to participate fully. Warm greetings when students enter the classroom, conversations with individual students, and positive reactions when students contribute to classroom discussion are just a few ways that enthusiasm might be expressed. The main thing is that each student needs to feel valued and that each sees this through enthusiastic teacher responses.

5. **Show students that you care about them.** When students know that you care for them and that you are looking out for them, it makes all the difference in the world. Students then feel valued, regardless of their characteristics, and are more likely to actively participate in the classroom. Even when a teacher needs to deal with a student concerning a problem, the student recognizes that the teacher’s actions are well intentioned.

6. **Create an antibias educational environment.** Sometimes when students interact with others who are different from them, they may talk or act in ways that express disapproval. Teachers need to take steps to overcome this bias. In an anti-bias classroom, teachers intervene with immediate actions and follow-up activities to counter the cumulative, hurtful effects of these messages. In an anti-bias classroom, children learn to be proud of themselves and of their families, to respect human differences, to recognize bias, and to speak up for what is right (Derman-Sparks & Edwards, 2010). Anti-bias teachers are committed to the principles that every child deserves to develop to his or her fullest potential. Derman-Sparks and Edwards (2010) identified four goals of antibias education:

   1. Each child will demonstrate self-awareness, confidence, family pride, and positive social identities.
   2. Each child will express comfort and joy with human diversity; accurate language for human differences; and deep, caring human connections.
   3. Each child will increasingly recognize unfairness, have language to describe unfairness, and understand that unfairness hurts.
   4. Each child will demonstrate empowerment and the skills to act, with others or alone, against prejudice and/or discriminatory actions.
OFFER A RESPONSIVE CURRICULUM

Students feel that they are valued when the curriculum is fair and relevant and when the content and curriculum materials reflect the diversity of learners in the classroom. Consider the following ways to offer a responsive curriculum.

1. **Use a fair and relevant curriculum.** Teachers can make decisions to ensure that the curriculum is inclusive, relevant, and free of bias. Using the district-approved curriculum guide as a starting point, teachers can select appropriate instructional content to demonstrate that their students are valued as people and that they offer a challenging, culturally relevant curriculum. This content may involve integrating subject areas from diverse traditions, and the content may even arise out of students’ own questions so that they can construct their own meaning.

2. **Consider differentiating curriculum materials.** Curriculum materials must also reflect the diversity of learners in the classroom. Books and other instructional materials should be free of bias, and they should provide the voices and perspectives of diverse people.

   Once appropriate curriculum materials have been selected, teachers may allow students options in the use of these materials. Learning activity packets, task cards, and learning contracts are examples of differentiated materials that address individual differences by providing curriculum options. Learning centers, for example, include differentiated materials with several kinds and levels of goals and activities. Centers, packets, and cards can be made for a particular student’s needs and then stored until another student has need of them. When prepared properly, these materials accommodate different rates of learning and different cognitive styles.

VARY INSTRUCTION

To meet the needs of diverse students, instruction cannot be one-dimensional. A variety of instructional approaches are needed to challenge all students and to meet their instructional needs. Several ways to vary your instruction are highlighted here.

1. **Challenge students’ thinking and abilities.** Students have various learning styles, and they may learn best with their preferred learning style. However, should teachers always try to match student preferences and instructional methods? Probably not.

   You should (a) start where the learner is (i.e., in concert with the pupil’s level of development), (b) then begin to mismatch (i.e., use a different approach than what the student

---

**WHAT WOULD YOU DECIDE?**

**DIFFERENTIATED MATERIALS**

Various types of materials can be used to meet the instructional objectives of a lesson and meet the learning interests of the students. Let’s say that you are planning to teach a lesson on soil erosion.

1. How might you vary your instructional materials to accommodate students’ individual differences?
2. How can you relate this topic to students’ lives and make it interesting?
3. How might students’ individual differences affect your planning decisions?
prefers) by shifting to a slightly more complex level of teaching to help the student to develop in many areas, and (c) have faith that students have an intrinsic drive to learn. These practices complement the recommendations of Lev Vygotsky, Lawrence Kohlberg, and others to nudge students beyond comfort zones of learning into just enough cognitive dissonance to facilitate growth.

2. **Group students for instruction.** Grouping makes differentiation of instruction more efficient and practical. When each group is challenged and stimulated appropriately, students are motivated to work harder. Differentiated materials can be used more easily. On the other hand, labeling can be stigmatizing if grouping is based on variables such as ability or achievement. Grouping too much and changing groups too infrequently can obstruct student integration and cooperation.

   With the proper planning, structure, and supervision, grouping is a useful way to provide for individual differences. When using grouping arrangements, you should follow these guidelines:

   - Make liberal use of activities that mix group members frequently.
   - Adjust the pace and level of work for each group to maximize achievement. Avoid having expectations that are too low for low groups. Students tend to live up or down to teachers’ expectations.
   - Provide opportunities for gifted students to work with peers of their own level by arranging cross-age, between-school, or community-based experiences.
   - Form groups with care, giving attention to culture and gender.
   - Structure the experience and supervise the students’ actions.
   - Prepare students with the necessary skills for being effective group members, such as listening, helping, cooperating, and seeking assistance.

3. **Consider differentiated assignments.** Alternative or differentiated assignments can be provided by altering the length, difficulty, or time span of the assignment. Alternative assignments generally require alternative evaluation procedures.

   Enrichment activities qualify as alternative assignments when directed toward an individual student's needs. There are three types of enrichment activities. First, relevant enrichment provides experiences that address the student's strengths, interests, or deficit areas. Second, cultural enrichment might be pleasurable and productive for the student even if not particularly relevant to his or her needs. An example would be an interdisciplinary study or a global-awareness topic. Third, irrelevant enrichment might provide extra activity in a content area without really addressing student needs.

4. **Consider individualized study.** Individualized study can be implemented through learning contracts or independent studies as a means to address individual needs. Such plans are most effective when developed by the student with your assistance. Individualized study facilitates mastery of both content and processes. Not only can the student master a subject, but he or she can also master goal setting, time management, use of resources, self-direction, and self-assessment of achievement. Independent study is ideal for accommodating student learning styles. Individual ability is nurtured, and students often learn more than the project requires.

   Independent study encourages creativity and develops problem-solving skills. It can be used in any school setting and all curricular areas. Most important, this method of learning approximates the way that the student should continue to learn when no longer a student in school.

   This method requires varied, plentiful resources, and it may not provide enough social interaction. The student may spend too long on the study, and parents may complain that nothing is being accomplished.
When considering individualized study, you should do the following:

- Include the student in all phases of planning, studying, and evaluating.
- Encourage the student to ask higher-order questions (analysis, synthesis, evaluation) as study goals.
- Encourage the student to develop a product as an outcome of the study.
- Provide the student with an opportunity to share the product with an interested audience.
- Emphasize learner responsibility and accountability.

5. **Provide opportunities for students to try different types of activities.** Although certain class activities and instructional strategies may seem well suited for a particular student, it is important to involve the student in many different types of activities to challenge the student and the student's thinking and understanding.

6. **Use authentic and fair assessment strategies.** Some students demonstrate their learning better through certain types of assessment. Since there are many types of students in classrooms, a variety of methods for evaluating student learning should be used. Using a variety of approaches—such as written or oral tests, reports or projects, interviews, portfolios, writing samples, and observations—will circumvent bias. In addition, evaluation of student learning should be at several levels: recall, comprehension, application, analysis, synthesis, and evaluation.

**PROVIDE ASSISTANCE WHEN NEEDED**

Many classrooms include students who can benefit from special assistance in their learning. In an inclusive, multicultural classroom, these students must not be overlooked because they may not advance in their learning without such assistance.

1. **Provide special individualized assistance to all students.** Teachers often provide individualized assistance to students who have difficulty learning. This assistance can make a big difference in helping students overcome hurdles and can lead to better understanding. However, other students can benefit from this type of assistance as well. By providing assistance to all types of diverse learners, teachers express their interest in students, provide support for student learning, and have the opportunity to challenge students in new ways.

2. **Work with students with special needs.** As a first step, teachers need to know district policies concerning students with special needs and what their responsibilities are for referrals, screening, and the preparation of individualized educational plans (IEPs). Learning materials and activities can be prepared commensurate with the abilities of students with special needs. Positive expectations for student performance are a means to promote student learning.

**Differentiating Instruction**

Differentiated instruction is a principle-guided method to approach teaching and learning in which the teacher adjusts the learning environment, curriculum, assessment, and instruction to meet the needs of all learners (Tomlinson & Imbeau, 2010). **Differentiation** is classroom practice with a balanced emphasis on individual students and course content.

With differentiation, a teacher actively plans a variety of ways for students to learn the content and to express their learning, taking into account the range of learner
characteristics. The teacher adjusts the nature of the content and assessments rather than just adding more. Differentiated instruction is rooted in assessment to determine the learner’s needs in relation to the unit goals. Thus, differentiation is consistent with data-driven decision making. Differentiated instruction provides multiple approaches to content, process, and product. It is student centered, and it includes a blend of whole-class, small-group, and individual instruction (Tomlinson, 2014b).

How might teachers differentiate their instruction? As Figure 2.1 indicates, differentiation can take place when planning, grouping students, using instructional activities and materials, identifying assignments, and determining which assessments to use. The discussion of the vehicles of differentiation is organized in three areas: the curriculum, student characteristics, and instructional strategies.

Figure 2.1

What a Differentiated Classroom Looks Like

**Planning should:**
- Be based on understanding student characteristics and needs
- Be based on ongoing, diagnostic assessments to make instruction more responsive to students
- Be based on a understanding of student readiness, interest, and learning profiles
- Include students working with the teacher to establish whole-class and individual learning goals

**Grouping of students should:**
- Include many types of groupings (whole class, small group, independent)
- Allow for flexible groups

**Instructional activities should:**
- Permit multiple approaches to the content, activities, and products demonstrating student learning
- Guide students in making interest-based learning choices
- Permit many learning profile options
- Use time flexibly based on student needs
- Permit students to share multiple perspectives on ideas and events
- Encourage students to be more self-reliant learners
- Support students helping other students and the teacher to solve problems

**Materials should:**
- Be many and varied, including instructional technology

**Assignments should:**
- Vary in content, based on student need
- Vary in difficulty, based on student readiness
- Allow for choice based on student interests and strengths
- Vary in time allotted
- Contain directions that are clear and direct enough for students to understand
- Provide a mechanism for students to get help when the teacher is busy with other students

**Assessments should:**
- Be used to guide initial planning
- Be conducted throughout instruction of a unit to guide teacher decisions when making adjustments for the students
- Be conducted in multiple ways
- Define excellence in large measure as individual growth from a starting point
ELEMENTS OF THE CURRICULUM THAT CAN BE DIFFERENTIATED

The curriculum can be differentiated in three ways: (1) the content—the curriculum and the materials and approaches used for students to learn the content, (2) the process—the instructional activities or approaches used to help students learn the curriculum, and (3) the products—the assessment vehicles through which students demonstrate what they have learned (Tomlinson & Imbeau, 2010).

Content. Content includes the knowledge, skills, and attitudes related to a subject and the materials and mechanisms through which learning is accomplished. In practice, many districts have curriculum guides outlining objectives and content that are expected for all students at a particular grade level or subject area. So there may not be much variation in the content to be taught, but differentiation in the materials could be used in instruction (Gregory & Chapman, 2013).

Some ways that a teacher might differentiate access to the content include the following (Tomlinson, 2005, 2014b; Tomlinson & Allan, 2000):

- Use texts or novels at more than one reading level.
- Present instruction through both whole-to-part and part-to-whole approaches.
- Use texts, computer programs, videos, and other media to convey key concepts to varied learners.
- Focus on teaching the concepts and principles, rather than on all the minute facts about the subject.
- Have advanced students work on special, in-depth projects, while the other students work on the general lessons.
- Use varied texts and resource materials.
- When reteaching is necessary, alter the content and delivery based on student readiness, interests, or learning profile.
- Provide various types of support for learning, such as using study buddies, note-taking organizers, and highlighted printed materials.

Process. Process includes the instructional activities or approaches used to help students learn the curriculum. Process is how students come to make sense of and understand the key facts, concepts, generalizations, and skills of a subject. An effective activity involves students using an essential skill to understand an essential idea, and the activity is clearly focused on the learning goal.

Some ways that a teacher might differentiate process or activities include the following (Tomlinson, 2014b; Wormeli, 2007):

- Provide options at differing levels of difficulty or options based on differing student interests.
- Give students choices about how they express what they learn in a project (e.g., create a newspaper article report or display key issues in some type of graphic organizer).
- Differ the amount of teacher and student support for a task.

Products. Products are the vehicles through which students demonstrate what they have learned. Products can also be differentiated, and they may include actual physical products (e.g., portfolios, reports, diagrams, or paper-and-pencil tests) that students prepare, as well as student performances designed to demonstrate a particular skill. Performance-based assessment, including student products and performances, is discussed more thoroughly in Chapter 11. A good product causes students to rethink what they have learned, apply what they can do, extend their understanding and skill, and become involved in both critical and creative thinking.
Examples of ways to differentiate products include the following:

- Allow students to help design products around essential learning goals.
- Provide product assignments of varying degrees of difficulty to match student readiness.
- Use a wide variety of assessments.
- Work with students to develop rubrics that allow for demonstration of both whole-class and individual goals.
- Provide or encourage the use of varied types of resources in preparing products.

Particular attention often needs to be paid to struggling learners so that they have challenging products to create and the support systems that lead to success. Here are some suggestions (Tomlinson, 2005):

- Be sure product assignments for learners require them to apply and extend essential understandings and skills for the unit or other product span.
- Use product formats that allow students to express themselves in ways other than written language alone.
- Give product assignments in smaller increments, allowing students to complete one portion of a product before introducing another.
- Think about putting directions on audio- or videotape so that students can revisit explanations as needed.
- Prepare or help students to prepare time lines for product work so that tasks seem manageable and comfortably structured.
- Provide mini workshops on particular skills, such as note taking, conducting interviews, and various study skills.

At first, creating different versions of a test may be more work for the teacher, but it is worth it when you have greater student success. In fact, some textbook companies provide computer programs with premade tests in different formats.

I also provide students with a little orientation about how to take different types of tests. This includes teaching a simple testing strategy and giving a few practice problems. The results have been great.

**LET YOUR STUDENTS SELECT THE TEST FORMAT**

One way that I accommodate various student learning styles is to offer students a choice of test formats. I usually offer my tests in three formats: multiple choice, short essay (or fill in the blank), and matching questions. Each student can then select the test format that he or she prefers. The test questions are similar, but the way that the student needs to respond to the questions addresses various ways that students learn and retain information.

I knew that this was a good idea when I heard the students say, “I want to do the matching test; that is a breeze.” But another student will say the same thing about one of the other test formats.

At first, creating different versions of a test may be more work for the teacher, but it is worth it when you have greater student success. In fact, some textbook companies provide computer programs with premade tests in different formats.

I also provide students with a little orientation about how to take different types of tests. This includes teaching a simple testing strategy and giving a few practice problems. The results have been great.

**LET YOUR STUDENTS SELECT THE TEST FORMAT**

One way that I accommodate various student learning styles is to offer students a choice of test formats. I usually offer my tests in three formats: multiple choice, short essay (or fill in the blank), and matching questions. Each student can then select the test format that he or she prefers. The test questions are similar, but the way that the student needs to respond to the questions addresses various ways that students learn and retain information.

I knew that this was a good idea when I heard the students say, “I want to do the matching test; that is a breeze.” But another student will say the same thing about one of the other test formats.

Examples of ways to differentiate products include the following:

- Allow students to help design products around essential learning goals.
- Provide product assignments of varying degrees of difficulty to match student readiness.
- Use a wide variety of assessments.
- Work with students to develop rubrics that allow for demonstration of both whole-class and individual goals.
- Provide or encourage the use of varied types of resources in preparing products.

Particular attention often needs to be paid to struggling learners so that they have challenging products to create and the support systems that lead to success. Here are some suggestions (Tomlinson, 2005):

- Be sure product assignments for learners require them to apply and extend essential understandings and skills for the unit or other product span.
- Use product formats that allow students to express themselves in ways other than written language alone.
- Give product assignments in smaller increments, allowing students to complete one portion of a product before introducing another.
- Think about putting directions on audio- or videotape so that students can revisit explanations as needed.
- Prepare or help students to prepare time lines for product work so that tasks seem manageable and comfortably structured.
- Provide mini workshops on particular skills, such as note taking, conducting interviews, and various study skills.

At first, creating different versions of a test may be more work for the teacher, but it is worth it when you have greater student success. In fact, some textbook companies provide computer programs with premade tests in different formats.

I also provide students with a little orientation about how to take different types of tests. This includes teaching a simple testing strategy and giving a few practice problems. The results have been great.

**LET YOUR STUDENTS SELECT THE TEST FORMAT**

One way that I accommodate various student learning styles is to offer students a choice of test formats. I usually offer my tests in three formats: multiple choice, short essay (or fill in the blank), and matching questions. Each student can then select the test format that he or she prefers. The test questions are similar, but the way that the student needs to respond to the questions addresses various ways that students learn and retain information.

I knew that this was a good idea when I heard the students say, “I want to do the matching test; that is a breeze.” But another student will say the same thing about one of the other test formats.
Provide templates or organizers that guide students through each step of doing research.

With challenging tasks, help set up groups so that students can work together.

Help students analyze sample products from prior years so that they develop an awareness of what is expected.

Provide time, materials, and partnerships at school for students who do not have resources and support at home for project completion.

When students speak a primary language other than English, be sure that they have access to information in their first language.

**Advanced learners** need to be stretched in their learning as they prepare products. Here are some suggestions to do so (Tomlinson, 2005):

- Structure product assignments for advanced learners so that they move forward in a number of ways.
- Consider having advanced learners study the key issues or questions across time periods, disciplines, or cultures.
- As much as possible, include advanced-level research and information.
- Let each advanced learner help you develop criteria for expert-level content and production.

**STUDENT CHARACTERISTICS THAT TEACHERS CAN DIFFERENTIATE**

Students vary in at least three ways that make modifying instruction a wise strategy for teachers. Students differ (1) in their readiness to work with a particular idea or skill at a given time, (2) in the topics that they find interesting, and (3) in learning profiles that may be shaped by gender, culture, learning style, or intelligence preference (Tomlinson & Imbeau, 2010).

**Readiness.** Readiness is a student’s entry point into a particular content or skill. To differentiate in response to student readiness, teachers can construct tasks or provide learning choices at different levels of difficulty.

Some general strategies to adjust for readiness include these:

- Adjust the degree of difficulty of a task to provide an appropriate level of challenge.
- Make the task more or less familiar based on the proficiency of the learner’s experiences or skills for the task.
- Add or remove teacher or peer coaching, use of manipulatives, or presence or absence of models for a task. This varies the degree of structure and support being provided.
- Vary direct instruction by small-group need.

When planning lessons, consider the various dimensions of the content and the learning tasks as they relate to readiness. For example, simple concepts should be taught before students are ready for complex concepts.

Students with less-developed readiness may need the following (Tomlinson, 2014b):

- Someone to help them identify and make up gaps in their learning so that they can move ahead
- More opportunities for direct instruction or practice
- Activities or products that are more structured or concrete, with fewer steps, closer to their own experiences, and that call on simpler reading skills
- A more deliberate pace of learning
Advanced students may need these opportunities (Tomlinson, 2014b):

- Ability to skip practice with previously mastered skills and understandings
- Activities and products that are quite complex, open ended, abstract, and multifaceted, drawing on advanced reading materials
- A brisk pace of work or perhaps a slower pace to allow for greater depth of exploration of a topic

**Interest.** *Interest* refers to a student’s affinity, curiosity, or passion for a particular topic or skill. To differentiate in response to student interest, a teacher aligns key skills and material for understanding from a curriculum segment with topics or pursuits that intrigue students. Some ways to differentiate in response to student interest include the following:

- Provide broad access to a wide variety of materials and technology.
- Give students a choice of tasks and products, including student-designed options.
- Provide a variety of avenues for student exploration of a topic or expression of learning.
- Encourage investigation or application of key concepts and principles in student interest areas.

**Learning Profiles.** The term *learning profile* refers to the ways in which we learn best as individuals. This profile may be shaped by intelligence preferences, gender, culture, or learning style (Tomlinson & Imbeau, 2010). Integrating issues related to learning styles and multiple intelligences provides additional guidance for ways to differentiate instruction.

Some ways that teachers can differentiate in response to student learning profiles include the following:

- Create a learning environment with flexible spaces and learning options.
- Present information through auditory, visual, and kinesthetic modes.
- Encourage students to explore information and ideas through auditory, visual, and kinesthetic modes.
- Allow students to work alone or with peers.
- Ensure a choice of competitive, cooperative, and independent experiences.

**DIFFERENTIATING WITH THE UNIVERSAL DESIGN FOR LEARNING**

Teachers at any grade level can use the *universal design for learning (UDL)* to meet the needs of all students by adapting the curriculum and delivery of instruction. UDL is an instructional approach that helps meet the challenge of diversity by suggesting flexible instructional materials, techniques, and strategies that empower educators to meet students’ varied needs (National Center on Universal Design for Learning, 2011; Hall, Meyer, & Rose, 2012). Version 2.0 of the UDL Guidelines was released in 2011. To create the flexible design and delivery of instruction in UDL, teachers must provide multiple means of representation, expression, and engagement.

**Provide Multiple Means of Representation.** Teachers should provide multiple means of representation to give learners various ways of acquiring information and knowledge. Students differ in the ways they perceive and comprehend information presented to
them. For example, students with learning disabilities or language or cultural differences may require different ways of approaching content.

There is no single means of representation that is optimal for all students. Providing options in representation is essential and can be facilitated with the following strategies:

1. **Provide options for perception.** To be effective in diverse classrooms, curricula must be presented in ways that are perceptible to all students. To reduce barriers to learning, teachers can (a) provide the same information through different sensory modalities (e.g., vision, hearing, or touch) and (b) provide information in a format that will allow for adjustability by the student (e.g., text that can be enlarged, sounds that can be amplified). For example, when the same information is presented in both speech and text, the complementary representations enhance comprehension for most students. To facilitate the perception of content, teachers can (a) offer ways to customize the display of information, (b) offer alternatives for auditory information, and (c) offer alternatives for visual information.

2. **Provide options for language, mathematical expressions, and symbols.** Students vary in their facility with different forms of representation, both linguistic and nonlinguistic. A graph that illustrates the variables between two concepts may be helpful to one student but puzzling to another. Similarly, vocabulary may clarify concepts to one student but not another. Inequities arise when information is presented to all students through one approach. Provide alternative representations for accessibility, clarity, and comprehensibility for all students. To vary the use of language and symbols, provide options that (a) clarify vocabulary and symbols; (b) clarify syntax and structure; (c) support decoding text, mathematical notations, and symbols; (d) promote understanding across languages; and (e) illustrate through multiple media.

3. **Provide options for comprehension.** In addition to perceiving the information, students need to use information-processing skills, such as integrating new information with prior knowledge, using strategic categorization, and practicing active memorization. Because students differ in information-processing skills, teachers can provide cognitive "ramps" to help all students gain access to the information. To facilitate comprehension, use options that (a) activate or supply background knowledge; (b) highlight patterns, critical features, big ideas, and relationships; (c) guide information processing, visualization, and manipulation; and (d) maximize transfer and generalization.

Provide Multiple Means of Action and Expression. Teachers should also provide multiple means of expression to provide learners with alternatives for demonstrating what they know. Students differ in the ways they can navigate a learning environment and express what they know. For example, students with attention deficit disorder or those who have language barriers may approach learning tasks and demonstrate mastery very differently. Some may be able to express themselves in writing but not in oral speech, and vice versa.

There is no single means of expression that will be optimal for all students. Again, providing options for expression is essential and can be done via the following methods:

1. **Provide options for physical action.** A textbook or workbook in a print format provides limited means of navigation or physical interaction (e.g., turning the pages, writing in a workbook). Navigating and interacting in limited ways may be a barrier for some students, such as those who are physically disabled, are blind, or have other disorders. Teachers can (a) vary the methods for response and navigation and (b) optimize access to tools and assistive technologies.

2. **Provide options for expression and communication.** There is no medium of expression that is equally suited for all students. Also, some types of media may be
poorly suited for some kinds of expression and for some kinds of students. A student with dyslexia, for example, might excel at storytelling in conversation but have a difficult time writing the story. Alternative approaches to expression should be used. Teachers can (a) use multiple media for communication, (b) use multiple tools for construction and composition, and (c) build fluencies with graduated levels of support for practice and performance.

3. **Provide options for executive functions.** Higher-level brain functioning permits people to overcome impulsive, short-term reactions to their environment and instead set long-term goals, plan effective strategies for reaching those goals, monitor their progress, and modify strategies as needed. The UDL approach involves efforts to expand these executive functions by scaffolding lower-level skills to promote higher levels of development. Provide options that (a) guide effective goal setting, (b) support planning and strategy development, (c) facilitate managing information and resources, and (d) enhance capacity for monitoring progress.

**Provide Multiple Means of Engagement.** Teachers should provide multiple means of **engagement** to tap learners’ interests, offer appropriate challenges, and increase motivation. Students differ markedly in the ways in which they can be engaged or motivated to learn. Some students are highly engaged by spontaneity and novelty, while other students are not affected by these aspects.

No single means of representation will be optimal to engage students in learning. Providing multiple options for engagement is essential. Teachers can employ the following strategies to achieve this goal:

1. **Provide options for recruiting interest.** Students do not learn information that does not attract their attention or engage their understanding. Also, students differ significantly in what attracts their attention and engages their interest. Provide options that (a) optimize individual choice and autonomy; (b) optimize relevance, value, and authenticity; and (c) minimize threats and distractions.

2. **Provide options for sustaining effort and persistence.** Many kinds of learning require sustained attention and effort. However, students differ considerably in their ability due to their initial motivation, their capacity and skills for self-regulation, their susceptibility to interference, and other reasons. Provide options that (a) heighten the importance of goals and objectives, (b) vary demands and resources to optimize challenge, (c) foster collaboration and communication, and (d) increase mastery-oriented feedback.

3. **Provide options for self-regulation.** The ability to **self-regulate**—to modulate one’s emotional reactions to increase effectiveness at coping and engaging with the environment—is a critical aspect of human development. Students benefit from self-regulation. It can be promoted by providing alternatives to support learners with very different aptitudes and prior experiences in learning how to regulate themselves (Germeroth & Dav-Hess, 2013). Provide options for self-regulation that (a) promote expectations and beliefs that optimize motivation, (b) facilitate personal coping skills and strategies, and (c) develop self-assessment and reflection.

**Getting to Know Your Students**

The more information teachers have about their students, the better they are able to meet students’ needs and support student learning. With a better understanding of their students, teachers can be more effective in their selection of instructional strategies, their adjustments for individual differences, and their interactions with students and their families.
Several types of information would be useful for teachers to achieve these purposes. Teachers would benefit from information about each student concerning:

1. **Academic abilities, needs, and interests.** Is the student a gifted or a struggling learner? What is the student’s reading level? What is the student’s performance on achievement tests? What are the student’s strengths and weaknesses in relation to the academic work? What are the student’s academic interests?

2. **Special needs, learning problems, or disabilities.** Are there any emotional or physical disabilities? Does the student have a learning disability of any kind? What accommodations or modifications are needed? Are there any health problems?

3. **Personal qualities related to diversity.** What is the student’s preferred learning style? Is the student an English language learner? How does the student’s culture or socioeconomic status influence behavior or learning? Are there any gender or sexuality issues that might influence the student? Is the student considered at risk for any reason?

4. **The student’s life and interests.** What are the student’s interests? How do the family and community influence the student? What does the student like to do in his or her spare time? What are the student’s ambitions?

5. **Problematic or atypical parent custodial arrangements.** Many family arrangements and conditions exist, and it is useful for teachers to know which family member to contact, along with any other special considerations. One parent may have custody of a child with conditions to limit contact with the other parent. The student may be living with grandparents or other relatives. The student may have a parent away from the home due to military obligations, prison, or other reasons. The student may have gay or lesbian parents.

**SOURCES OF INFORMATION**

Some information about your students can be obtained from existing records, such as the student’s cumulative record. Much information can be obtained directly from students.
and their families. While there are many ways you can obtain information about the students in your class, here are some commonly used sources.

**Viewing Cumulative Records.** The school office will have a cumulative record folder for each student. That folder includes personal information, home and family data, school attendance records, scores on standardized achievement tests, year-end grades for all previous years of schooling, and other teachers’ anecdotal comments. Other types of additional information may be included, such as which family member to contact (or not to contact). Collectively, the cumulative record provides considerable information.

**Using Student Questionnaires.** Asking students to fill out a questionnaire can provide much insight into their actions, interests, and skills. Include questions that provide information helpful to you as you (1) select curricular content, instructional activities, and strategies; (2) determine your way of interacting with the students in the class; (3) identify how to address the diversity of learners in the class; (4) address any challenges, problems, or disabilities the students may have; and (5) try to get to know each student to enable their successful learning. Some open-ended questions can yield useful information (e.g., It helps me learn when . . . or What I appreciate about my family is . . .).

**Using Family Questionnaires and Contacts.** Information from families about their own children also can provide great insight into the qualities and needs of the students in your class. A brief questionnaire may be prepared for parents at the start of the school year. Items may include asking how parents describe their children, what makes their children special, what their children do at home, their children’s strengths and weaknesses, and parents’ hopes for their children during the school year. In addition, teachers may see some parents at back-to-school night or at parent–teacher conferences.

**Observing and Interacting with Students.** Arrange for icebreaker activities for students to get to know each other at the start of the school year. Much information about each student can be learned simply by watching students interact during these icebreakers. Informal observation and interaction with students also provide opportunities to learn more about each student.

**USING THE INFORMATION**

To know how to use the information you gather, think about the reasons you wanted that information in the first place—to be more effective in your selection of instructional strategies, adjustments for individual differences, and interactions with the students and their families. Gathering information is not sufficient. You must read, review, and mentally process the information to guide the decisions you will make in the classroom.

It may be useful to first summarize the information you have on each student, and perhaps on the class as a whole. Whether you have a class of 22 fifth-grade students or 143 high school students in several classes makes a big difference in how you might summarize the information. Some teachers may read through the information about each student from the various sources reviewed earlier and then simply make mental notations. Other teachers may want to summarize results of each question on a student questionnaire, for example, to get a picture of the entire class. Still other teachers may have a card for each student, with key information listed. For certain types of
information (e.g., the preferred type of learning approaches or styles), it may be helpful to make a list of students so that you pay proper attention to the students on that issue.

**Contextual Factors to Guide Planning**

Teachers must know their students before they can effectively plan instruction. The sources of diversity reviewed earlier in this chapter are among the student characteristics that need to be taken into account. But there are more factors to consider in the planning process.

Many teacher education programs require their students to prepare a teacher work sample at some point in the program, often during student teaching. Various names may be used for the teacher work sample, such as the student teaching portfolio, comprehensive unit plan, or other variations. The required sections also may vary somewhat.

A teacher work sample is a report describing how the student has planned, taught, and assessed a multiday instructional unit, and it includes several specific sections. The Renaissance Teacher Work Sample Consortium (2011) is a group of organizations that developed guidelines for the teacher work sample and endorsed and supported its use in member universities. The work of this consortium was well received, and their guidelines for teacher work samples have been used by many universities.

Teacher work samples have seven sections: contextual factors, learning goals, the assessment plan, the design for instruction, instructional decision making, analysis of student learning, and reflection and self-evaluation. The section on contextual factors includes information the teacher uses about the teaching–learning context and students’ individual differences to set learning goals and plan instruction and assessment. The written report on contextual factors includes a discussion of the relevant factors and how they affect the teaching and learning process. The discussion also identifies any supports and challenges that affect instruction and student learning. Considering the contextual factors is the critical first step in the planning process.

The contextual factors discussion is organized in the following four categories, with pertinent information needed in each category (Renaissance Teacher Work Sample Consortium, 2011):

1. **Community, district, and school factors.** Address geographic location, community and school population, socioeconomic profile, and race/ethnicity. Address stability of the community, political climate, community support for education, and other environmental factors.

2. **Classroom factors.** Address physical features, availability of technology equipment and resources, and the extent of parental involvement. Address other relevant factors such as classroom rules and routines, grouping patterns, scheduling, and classroom arrangement.

3. **Student characteristics.** Address student characteristics to consider in designing instruction and assessing learning. Include factors such as age, gender, race/ethnicity, special needs, achievement/development levels, culture, language, interests, learning styles/modalities, or students’ skill levels. Address students’ skills and prior learning that may influence the development of learning goals, instruction, and assessment.

4. **Instructional implications.** Address contextual characteristics of the community, classroom, and students that have implications for instructional planning and assessment.
### Figure 2.2

#### Contextual Factors: Student Characteristics in a Class

<table>
<thead>
<tr>
<th>Classroom Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ Grade level</td>
</tr>
<tr>
<td>_____ Age range of students</td>
</tr>
<tr>
<td>_____ Percentage of students receiving free or reduced lunch</td>
</tr>
</tbody>
</table>

**Contextual Factors**

Indicate the number of students from your class for each item. On a separate paper, describe how you will provide student learning adaptations to meet your students’ needs for each category.

**Gender**

- _____ Females
- _____ Males

**Ethnicity**

- _____ White
- _____ Black or African American
- _____ Hispanic of any race
- _____ Asian
- _____ American Indian or Alaska Native
- _____ Native Hawaiian or Pacific Islander
- _____ Two or more races
- _____ Race or ethnicity unknown

**Language Proficiency**

- _____ Fluent in English
- _____ English language learner

**Academic Proficiency**

- _____ Below grade level
- _____ At grade level
- _____ Above grade level

**Special Needs**

- _____ Specific learning disability
- _____ Visually impaired
- _____ Hearing impaired
- _____ Speech/language impaired
- _____ Physically impaired
- _____ Deaf/blind
- _____ Other health impaired
- _____ Traumatic brain injury
- _____ Multiple disabilities
- _____ Emotional or behavioral disorders (EBD)
- _____ Autism
- _____ Intellectual disabilities
- _____ Gifted or talented
- _____ Developmentally delayed
- _____ Other (specify)

---

©Pearson Education

---

**Developmental Characteristics of Your Students**

Look at your class as a whole. For each type of development listed in this section, on a separate paper describe: (1) specific characteristics of that type of development and (2) specific implications for instruction in your class.

- Cognitive development (e.g., cognitive abilities, learning needs, readiness)
- Physical development (e.g., developmental level, size, energy)
- Emotional development (e.g., self-concept, security and structure)
- Social development (e.g., socializing, peer influence, working preferences)
Preparation of a report on contextual factors enables teachers to gather much pertinent information and apply that information to the planning process. As noted earlier in this discussion, one part of the contextual factors section includes information on the characteristics of students and the corresponding implications for making accommodations and modifications to instruction. Figure 2.2 displays a sample reporting format for student characteristics.

**Key Terms**

<table>
<thead>
<tr>
<th>Accommodation</th>
<th>Cultural diversity</th>
<th>Individualized study</th>
<th>Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced learners</td>
<td>Culturally responsive teaching</td>
<td>Intelligence</td>
<td>Self-regulate</td>
</tr>
<tr>
<td>Affective area</td>
<td>Differentiated materials</td>
<td>Interest</td>
<td>Sensory modality</td>
</tr>
<tr>
<td>Alternative or differentiated assignments</td>
<td>Differentiation</td>
<td>Learning profile</td>
<td>Socioeconomic status (SES)</td>
</tr>
<tr>
<td>Brain hemisphericity</td>
<td>Engagement</td>
<td>Learning style</td>
<td>Struggling learner</td>
</tr>
<tr>
<td>Cognitive activity</td>
<td>Exceptional students</td>
<td>Least restrictive environment</td>
<td>Students at risk</td>
</tr>
<tr>
<td>Cognitive style</td>
<td>Expression</td>
<td>Modification</td>
<td>Teacher work sample</td>
</tr>
<tr>
<td>Conceptual tempo</td>
<td>Field dependence/independence</td>
<td>Process</td>
<td>Universal design for learning (UDL)</td>
</tr>
<tr>
<td>Content</td>
<td>Gifted or talented learners</td>
<td>Products</td>
<td>Psychomotor skills</td>
</tr>
<tr>
<td>Contextual factors</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Major Concepts**

1. Individual differences need to be taken into account when instructional methods are selected and procedures are determined.

2. Diversity can be due to influences of learning style, creative potential, gender, language, cultural diversity, disabilities, conditions placing the student at risk, and socioeconomic factors.

3. Information about the sources of student diversity can be used as the basis for classroom decisions to create a supportive, caring learning environment.

4. A variety of instructional approaches is needed to challenge all students and to meet their instructional needs.

5. Differentiation is simply attending to the learning needs of a particular student or group of students, rather than the more typical pattern of teaching the class as though all individuals in it were basically alike.

6. Teachers can adapt one or more of the curricular elements (the content, the learning process, and the products students prepare) based on student characteristics (readiness, interests, and learning profiles) at any point in a lesson or unit using a range of instructional and management strategies.

7. Universal design for learning (UDL) is a way to adapt a curriculum and the delivery of instruction to meet the needs of all learners.

8. In an effort to get to know students, teachers can select the types of information they need, identify the sources for that information, and then use that information to be more effective in their selection of instructional strategies, their adjustments for individual differences, and their interactions with the students and their families.

9. Preparing a report on contextual factors enables teachers to gather and organize much pertinent information and apply that information to the planning process.
Discussion/Reflective Questions

1. What types of student diversity were evident in classrooms in your own K–12 schooling experience? In what ways did your teachers take these student characteristics into account in the selection of content and the use of instructional approaches?

2. Are you enthusiastic or skeptical about the relevance of learning style theory and brain hemisphere research for classroom instruction? Why?

3. What are some challenges that you might experience in dealing with students who have limited English proficiency? What could you do to overcome these challenges to promote student learning?

4. What challenges might teachers face when trying to differentiate the curriculum and the techniques of delivering the content?

5. What is the value of preparing a contextual factors report for the class that you will be teaching?

Suggested Activities

FOR CLINICAL SETTINGS

1. Make a list of 10 or more questions that you would like to ask an effective teacher about addressing the diversity of students in the classroom.

2. Examine a unit from a textbook you might use and identify ways that you might differentiate elements of the curriculum.

3. Make a list of several ways that you could provide accommodations when students take a test.

FOR FIELD EXPERIENCES

1. Using the categories of differences addressed in this chapter as a guide, ask several teachers to describe individual differences that they notice in their students. How do the teachers take these differences into account?

2. Ask several teachers how they vary instruction to better meet the needs of their students.

3. For one classroom, prepare a contextual factors report describing the characteristics of the students and the ways that student learning adaptations might be made to address the diversity of learners.

Further Reading


Describes the three principles of universal design and provides examples to apply them in teaching.


Examines differences in students based on class, ethnicity and race, gender, exceptionality, religion, language, and age. Considers ways that education can be multicultural.


Provides reasons for and examples of various ways to differentiate. Considers learner characteristics,
assessment techniques, grouping, instructional strategies, and curricular approaches.


Describes ways that teachers can differentiate content, process, and product according to a student’s readiness, interests, and learning profile.


Provides reasons and background for differentiating classrooms. Offers specific ideas for managing a differentiated classroom with the learning environment, routines, and other suggestions.